

State of California  
The Resources Agency  
CALIFORNIA BAY-DELTA AUTHORITY

**Initial Study  
and  
Proposed Mitigated Negative Declaration  
for the  
Fish Barrier Weir and Ladder Modification  
at the Coleman National Fish Hatchery**

**May 3, 2005**

Arnold Schwarzenegger  
Governor  
State of California

Mike Chrisman  
Secretary  
The Resources Agency

Patrick Wright  
Director  
California Bay-Delta Authority

**DATE:** May 3, 2005

**TO:** Responsible and Trustee Agencies, Interested Parties, and Organizations

**SUBJECT:** NOTICE OF AVAILABILITY AND INTENT TO ADOPT AN INITIAL STUDY/MITIGATED  
NEGATIVE DECLARATION FOR FISH BARRIER WEIR AND LADDER MODIFICATION,  
COLEMAN NATIONAL FISH HATCHERY PROJECT

The California Bay-Delta Authority (CBDA) prepared and intends to adopt a Mitigated Negative Declaration for the proposed project in compliance with the California Environmental Quality Act (CEQA) and CEQA Guidelines. CBDA is the lead agency for the proposed project under CEQA.

**Project Location:** The proposed project would be implemented at the Coleman National Fish Hatchery (CNFH) on Battle Creek on the boundary of Shasta and Tehama counties. The hatchery is about 11 miles southeast of Anderson, California.

**Description of the Proposed Project:** CBDA is proposing to fund the modifications to the existing weir and associated fish ladders of the CNFH to allow fish and wildlife agencies better control of upstream fish passage, monitoring of fish passage during all in-bank flows, and add new capabilities to capture adult fish for broodstock.

CBDA prepared an Initial Study (IS) and proposed Mitigated Negative Declaration on the proposed project in accordance with the requirements of CEQA. The IS and proposed Mitigated Negative Declaration describes the project and its potential impacts on the environment and preliminarily concludes that any significant impacts that may result from the proposed project can be avoided, eliminated, or reduced to a level that is less than significant by the adoption and implementation of specified mitigation measures.

**Public Review Period:** The IS and proposed Mitigated Negative Declaration is being circulated for public review and comment for a review period of 30 days starting May 4, 2005. Written comments should be submitted no later than June 3, 2005, to the following address:

Rhonda Reed, Ecosystem Restoration Program  
California Bay-Delta Authority  
John E. Moss Federal Building  
650 Capitol Mall, 5th Floor  
Sacramento California 95814

Copies of the IS and proposed Mitigated Negative Declaration may be reviewed at the same address during normal business hours or at <http://calwater.ca.gov/>. Your views and comments on how the project may affect the environment are welcome.

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Initial Study  
and  
Proposed Mitigated Negative Declaration  
for the  
Fish Barrier Weir and Ladder Modification at the Coleman  
National Fish Hatchery

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**CALIFORNIA BAY-DELTA AUTHORITY**

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# 1 Introduction

## Introduction and Regulatory Guidance

This Initial Study (IS) and proposed Mitigated Negative Declaration addresses the environmental impacts of the Fish Barrier Weir and Ladder Modification, Coleman National Fish Hatchery, in Shasta and Tehama counties, California. This IS was prepared according to the California Environmental Quality Act (CEQA) (Pub. Res. Code Section 21000 *et seq.*) and the CEQA *Guidelines* (Title 14 California Code of Regulations [CCR] Section 15000 *et seq.*). A lead agency prepares an IS to determine if a project requires an environmental impact report (EIR) or a negative declaration. The IS may rely on expert opinion based on facts, technical studies, or other substantial evidence to document its findings. However, an IS is neither intended nor required to include the level of detail included in an Environmental Impact Report (EIR).

In accordance with CEQA *Guidelines* Section 15064(a), an EIR must be prepared if there is substantial evidence that a project may have a significant effect on the environment. A Negative Declaration is prepared if the lead agency finds that a proposed project would not have a significant effect on the environment, if the lead agency prepares a written statement supporting that finding. A Mitigated Negative Declaration shall be prepared if the IS identifies potentially significant effects, but revisions made to the project, or mitigation measures applied to the project, and agreed to by the project applicant would avoid or mitigate the effects of the project, or when there is no substantial evidence that the project as revised or mitigated may have a significant effect on the environment.

## Lead Agency

The lead agency is the public agency with primary responsibility over the proposed project. The lead agency for the proposed project is the California Bay-Delta Authority (CBDA). CBDA, as the lead agency for this project, after completing this IS, determined that a Mitigated Negative Declaration is the appropriate environmental documentation for this proposed project.

## Purpose and Document Organization

This IS and proposed Mitigated Negative Declaration for the Fish Barrier Weir and Ladder Modification, Coleman National Fish Hatchery in Shasta and Tehama counties, California, evaluates the potential environmental impacts of the proposed project. Mitigation measures are recommended to reduce or eliminate identified significant and/or potentially significant impacts.

This document is divided into the following sections:

- < Chapter 1 describes the purpose and organization of this document and summarizes the findings of the IS.
- < Chapter 2 presents the purpose and need for the proposed project, describes the proposed project and its objectives, identifies measures incorporated into the project to minimize

environmental impacts, provides background information regarding the proposed project and lists agencies that may need to use the IS to grant permits or otherwise approve the project.

- < Chapter 3 summarizes the environmental setting and the findings from the environmental checklist required under CEQA.
- < Chapter 4 is the proposed Mitigated Negative Declaration for the proposed project.

## Summary of Findings

Appendix A reproduces the environmental checklist that identifies potential environmental impacts (presented by subject area) and presents a brief discussion of each impact that would result from implementing the proposed project. Based on the environmental checklist and the supporting analysis provided in this document, development of the proposed project would result in the following impacts:

- < **No Impact.** No impact is anticipated to the following resource categories: aesthetics, agricultural resources, land use and planning, mineral resources, population and housing, public services, and utilities and service systems.
- < **Less-than-Significant Impacts.** Less-than-significant impacts are anticipated to the following resource categories: air quality, geology and soils, hazards and hazardous materials, noise, recreation, and transportation.
- < **Less-than-Significant Impacts with Mitigation Incorporated.** In completing its IS, the CBDA determined that less-than-significant impacts with mitigation incorporated are anticipated for the following resource categories: biological resources, cultural resources, and hydrology and water quality.

In accordance with CEQA Guidelines Section 15070, a Mitigated Negative Declaration was prepared since the proposed project will not have a significant effect on the environment after mitigation measures are included into the project. There is no substantial evidence that the proposed project, with the identified mitigation measures, would have a significant effect on the environment, based on the available project information and the environmental analysis presented in this document. Therefore, a Mitigated Negative Declaration is proposed to be adopted in accordance with CEQA and the CEQA Guidelines.

## **Public Participation**

This IS and proposed Mitigated Negative Declaration is available for a 30-day public review period beginning May 4, 2005, and ending June 3, 2005. Written comments may be submitted by June 2, 2005, to:

Rhonda Reed, Ecosystem Restoration Program  
California Bay-Delta Authority  
John E. Moss Federal Building  
650 Capitol Mall, 5th Floor  
Sacramento California 95814

Comments submitted on the IS and proposed Mitigated Negative Declaration will be taken into consideration by CBDA when the project is considered for approval.

## 2 Project Description

This chapter states the need for the fish barrier weir and ladder modification project, describes the project and its objectives, provides background information, and lists the alternatives considered as well as the coordination, permits and approvals needed before the project can be completed.

The Fish Barrier Weir and Ladder Modification at Coleman National Fish Hatchery will improve fish management capabilities on Battle Creek. The CALFED agencies supporting this project consider it a critical step for the Battle Creek Salmon and Steelhead Restoration Project (Restoration Project), identified in the CALFED Programmatic Record of Decision (ROD) as important to recovery for special status species. The Restoration Project proposes to restore 42 miles of anadromous fish habitat in Battle Creek and its tributaries upstream of the Coleman National Fish Hatchery to fishery use while retaining most of the renewable energy production from the Battle Creek Hydroelectric Project. This barrier weir and fish ladder modification is considered a critical interim step to the ultimate success of the Restoration Project.

The proposed action consists only of modifying the weir and associated ladders. Ladder modification includes provisions to allow installation of monitoring/trapping/sorting facilities in the ladder at a later date. Cofferdams and water by-pass structures are required for construction. The proposed action does not include any changes in hatchery operations or installing the as yet unspecified trapping and sorting equipment. The analysis in this IS assumes hatchery operations would remain unchanged; any operational changes would be separately proposed and approved by the appropriate agencies after completion of separate environmental compliance. The U.S. Fish and Wildlife Service (FWS) is currently consulting on future hatchery operations with NOAA's National Marine Fisheries Service (NMFS) under Section 7 of the Federal Endangered Species Act (FESA).

### **Purpose and Need for the Project**

The Coleman National Fish Hatchery (CNFH) in Shasta County was built as part of the mitigation for Shasta Dam construction and operation. Originally the CNFH provided many benefits for the original project, but over the years both the hatchery and the hydroelectric project have affected fish passage and natural fisheries in Battle Creek. The proposed weir and ladder modification is one of several improvements needed to address these inadvertent effects to fisheries and to restore the watershed to as near to natural conditions as possible. The proposed project will allow fish and wildlife agencies more effective fish blockage and passage capabilities at this site.

There are four runs of Chinook salmon and a steelhead population that will benefit from the proposed project. The four Chinook salmon runs are the winter-run, spring-run, fall-run and late fall-run. The winter-run and spring-run Chinook salmon and the steelhead are listed under State or Federal Endangered Species Acts; winter-run is listed as endangered, the others are listed as threatened. The fall-run and late-fall run are listed as candidate species under FESA.



*Purpose.* The proposed project will provide safe downstream passage of adult and juvenile fish in addition to providing the fish and wildlife agencies the capability to either block or assist in fish passage up Battle Creek. The proposed modification to the weir will assist in the recovery of protected species by providing the capability to block fish migration up Battle Creek at flows up to 800 cubic feet per second (cfs). The ladder modifications will assist in the recovery of these species by allowing the fish and wildlife agencies to promote fish migration up Battle Creek at least equal to that provided by the proposed ladders planned for upstream dams at flows up to 3,000 cfs, the flow at which the stream overflows its banks.

*Need.* The proposed project is necessary to protect the breeding success and genetic composition of wild salmon and steelhead populations upstream of the barrier weir. Having a selectively impassable weir is essential for hatchery operations and the improvements to the weir are needed to ensure these facilities will not adversely affect the proposed Restoration Project, should it be implemented. Without the weir and ladder improvements, the fish and wildlife agencies consider the risk of undesired movement of fall-run Chinook upstream of CNFH unacceptable high.

## **Project Description**

There are two elements to the proposed modifications: the weir and the fish ladder. The proposed modifications for each will be discussed separately; however, the construction work description applies to both.

Modifying the existing weir includes building a crest cap and a 10.5-foot wide overshot gate with a 2-ft leaf on the right side of the weir. A section of the existing barrier weir, measuring about 10.5-feet wide by 1-foot high by 2-foot long, would be removed and the overshot gate elevation would be equal to the existing barrier weir elevation (see Figure 2.3). The gate would be operated either pneumatically or hydraulically to provide an adjustable attraction flow system to enhance fish attraction to the ladder. The overshot gate's travel angle would be field adjustable from approximately 75 (full closed) to 15 degrees (full open) from the horizontal. Maximum flow would occur at 15 degrees and is expected to be about 80 cfs based on the equations provided by Obermeyer, an overshot gate manufacturer (Concept Study Report Supplement, November 2003). A gate stop for the overshot gate would be designed with a deflector plate at the end of the 2-foot gate leaf to provide a barrier for upstream passage. A side wing wall would be provided on the left side of the overshot gate to restrict fish passage.

Work on the ladders needs to be done in dry conditions, therefore the initial task after access is established to the left bank would be to construct a temporary 800 cfs diversion channel. The diversion channel will only be used during the June through September in-stream construction window. The diversion channel may be lined with geotextile and armored with spawning gravel or riprap. Depending upon when the contract is awarded, this work could begin before the in-stream work starts, otherwise the diversion channel construction would happen concurrently with the sheet piling or other coffer dam material used to isolate the weir from the stream. The isolated area would include both the weir and the mouth of the fish ladder since work would need to be completed on both during the summer so the ladder leading into the hatchery could be operational by the start of the fall-run salmon spawning season in September.

The proposed project likely will require construction of two temporary coffer dams, one upstream and one downstream of the barrier weir; these dams will be 250 to 350 feet from the barrier weir. The project also will include a temporary stream diversion channel on the left bank for use during construction, and the permanent use of roughly 200 square yards of land adjacent to the current fish viewing platform for expanded facilities at the new ladder (see Figure 2.4). Work would be staged to allow for normal operation of the CNFH. The diversion channel would be approximately 60-feet wide by 740-feet long. Construction details are left to the contractor, who will be following parameters set by the Bureau of Reclamation, the US Fish and Wildlife Service, the Bureau of Land Management (BLM) and other appropriate regulatory agencies.

The sequencing of tasks are the contractor's prerogative, however, if the work for the weir modification is based on the right bank, site circumstance make it unlikely that the modifications to the weir and ladder can happen simultaneously. There are facilities that must remain intact and vegetation that is protected under FESA which leave too little space for work on both ladder and weir if it is based on the right bank. Either the excavation on the right bank for the new ladder would be deferred until the in-stream work is completed or the work on the weir would have to be conducted from the left bank.

Considerable work would be required from both banks, so the existing ford, about 200 yards upstream of the barrier weir, would probably require modification to provide easy entrance and exit for construction equipment. At a minimum, this would involve modest reshaping of the left bank to provide a moderate slope for equipment access, or more likely, installing a gravel berm with culverts to provide an elevated roadway. Such a crossing, if used, would probably be built of spawning gravels to minimize the need to remove all gravels after the work is completed and avoid adverse affects if some gravel moves during high flows.

The hatchery would make paved areas and disturbed uplands areas adjacent to the work site available for construction staging. The largest of these, the likely principal staging area, is a weedy field surrounding large earthen spoil piles immediately upstream of the ford. This site is approximately 150-yards upstream of the barrier weir.

The equipment used for the proposed project would include the usual assortment of excavators, trucks, cranes, pumps, air compressors, and jack hammers required for demolitions, excavation, and construction of civil works. The associated noise levels and work hours would be similar to those associated with the CNFH ozone plant construction. However, activities may be performed around the clock from June 1 to September 30 because of the brief 4-month period for working in the water and the need to have the ladder operational for the fall-run salmon. If the contractor chooses to use pile driving, that activity would be limited to non-sleep hours. Alternatively, the contractor may use spawning gravel for the coffer dams since it is readily available; the downstream coffer dam might have to be opened at least once during construction to let the fall-run adults into the hatchery.

Water pumped from the work area would either be discharged to nearby uplands or directed into settling ponds before being discharged back to the creek. Water discharged to nearby ponds would be allowed to percolate back into the shallow groundwater table. The method actually selected would be left to the contractor as long as it is acceptable to the California Regional Water Quality Control Board. The contract is also required to use standard erosion control measures.

Some limited riparian vegetation disturbance would occur, primarily at the existing stream ford or crossing. Little vegetation removal would be needed at the weir abutments because these are riprapped and mostly vegetation-free. Vegetation that is to remain undisturbed would be clearly marked with safety fencing.

Most access to the work and staging areas would be by existing roads used for construction and maintenance equipment servicing both CNFH and the PG&E Coleman Power Plant (Coleman PP). If permission cannot be obtained from the regulatory agencies for early, limited crossings of the creek by the existing ford, some early access to the left bank may use alternative land routes to access the left bank. These alternative routes could potentially lead to more vegetation disturbance. After construction is completed, the topography on the left bank would be graded to a stable configuration and revegetated unless otherwise requested by BLM.

## **Project Background**

CNFH was part of a mitigation program for Shasta Dam construction and operation and was placed on Battle Creek because that stream had large, high quality flows of water. CNFH, the nation's largest fish hatchery, has been successfully operated for more than 50 years and supplies a major portion of the salmon supporting the commercial and recreational salmon fisheries offshore California and southern Oregon. However, CNFH and the hydroelectric project have both affected the fish passage and natural fisheries in Battle Creek.

Operation details for CNFH can be obtained in the *Biological Assessment of Artificial Propagation at CNFH and Livingston Stone National Fish Hatchery: Program Description and Incidental Take of Chinook Salmon and Steelhead Trout*, listed in the reference section of this report. Details of the biology of the salmonid fisheries in Battle Creek can be found in the *Biological Assessment of Artificial Propagation at CNFH and Livingston Stone National Fish Hatchery: Program Description and Incidental Take of Chinook Salmon and Steelhead Trout*, and *Battle Creek Salmon and Steelhead Restoration Project, Draft Environmental Impact Statement/ Environmental Impact Report*, also listed in the reference section.

The Restoration Project includes removing dams; constructing fish screens, fish ladders, stream gauges, and other facilities; and changing stream flow to assist in the recovery of steelhead and four distinct runs of Chinook salmon. The barrier weir and ladder modification analyzed in this IS would remove potential impediments to the success of the Restoration Project and facilitate more effective management of the brood stock harvest at CNFH.

The proposed modifications of the existing barrier weir and fish ladders are designed to more effectively block the passage of fall-run Chinook salmon and to improve the upstream fish ladder for better fish passage management at this site. The existing fish barrier weir and upstream fish ladder are less effective than desired in light of the watershed specific fish restoration goals. Fall-run Chinook salmon is identified in the restoration goals for Battle Creek; however, fall- and late fall-run Chinook salmon will likely be excluded from the project area until viable populations of winter- and spring-run Chinook salmon are established. The time frame and the abundance/distribution triggers for the next phase will be discussed in detail in the Fishery Management Strategy for the Battle Creek watershed.

Until then, blocking fall-run Chinook salmon at the barrier weir site is an important interim goal, but the existing barrier weir allows an unacceptable number of fall-run Chinook salmon to pass upstream. Unmodified, the current upstream ladder at the weir is likely to be less effective than the ladders planned for other locations as part of the Restoration Project.

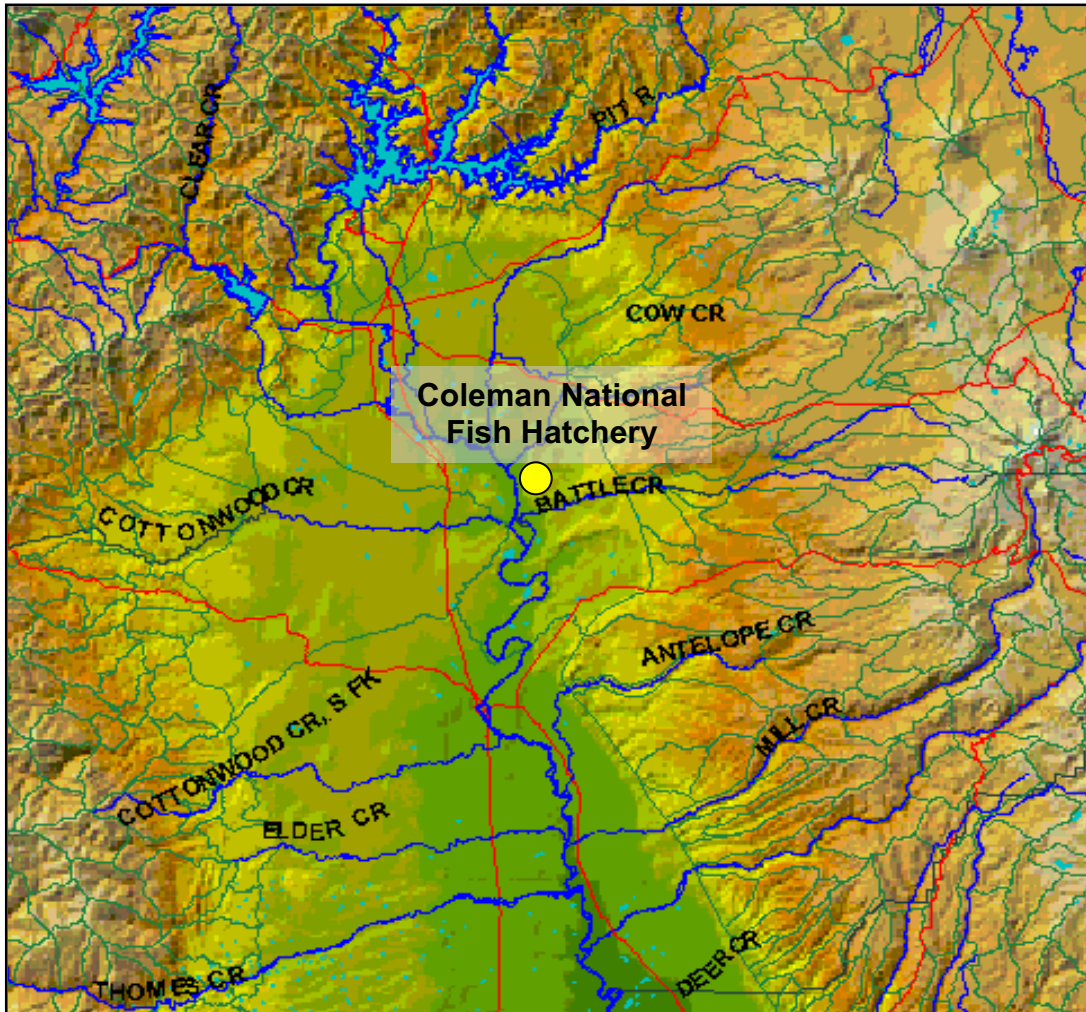


Exhibit 2-1. Regional Map.

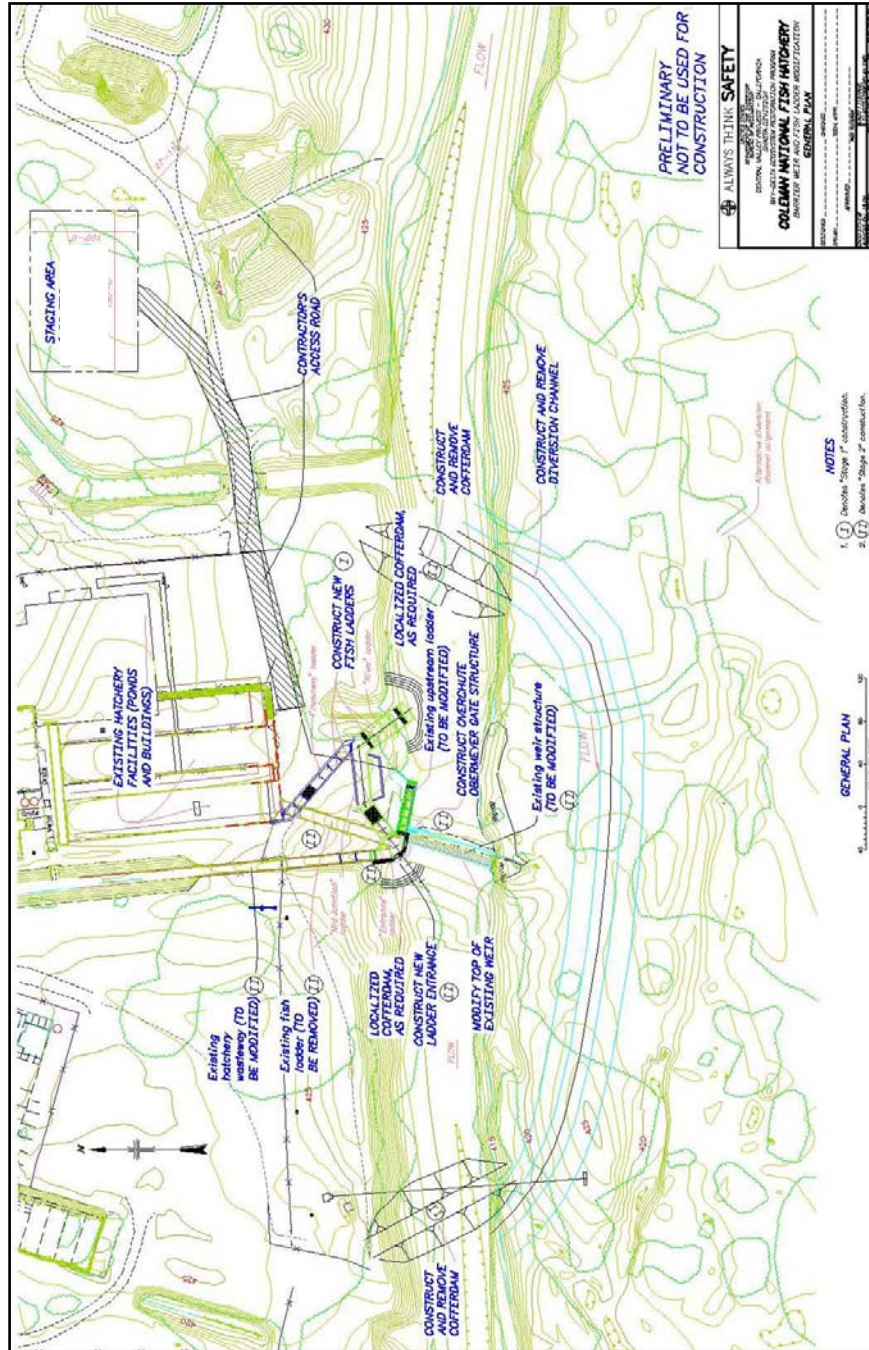


Exhibit 2-2. Project Site map – plan view.





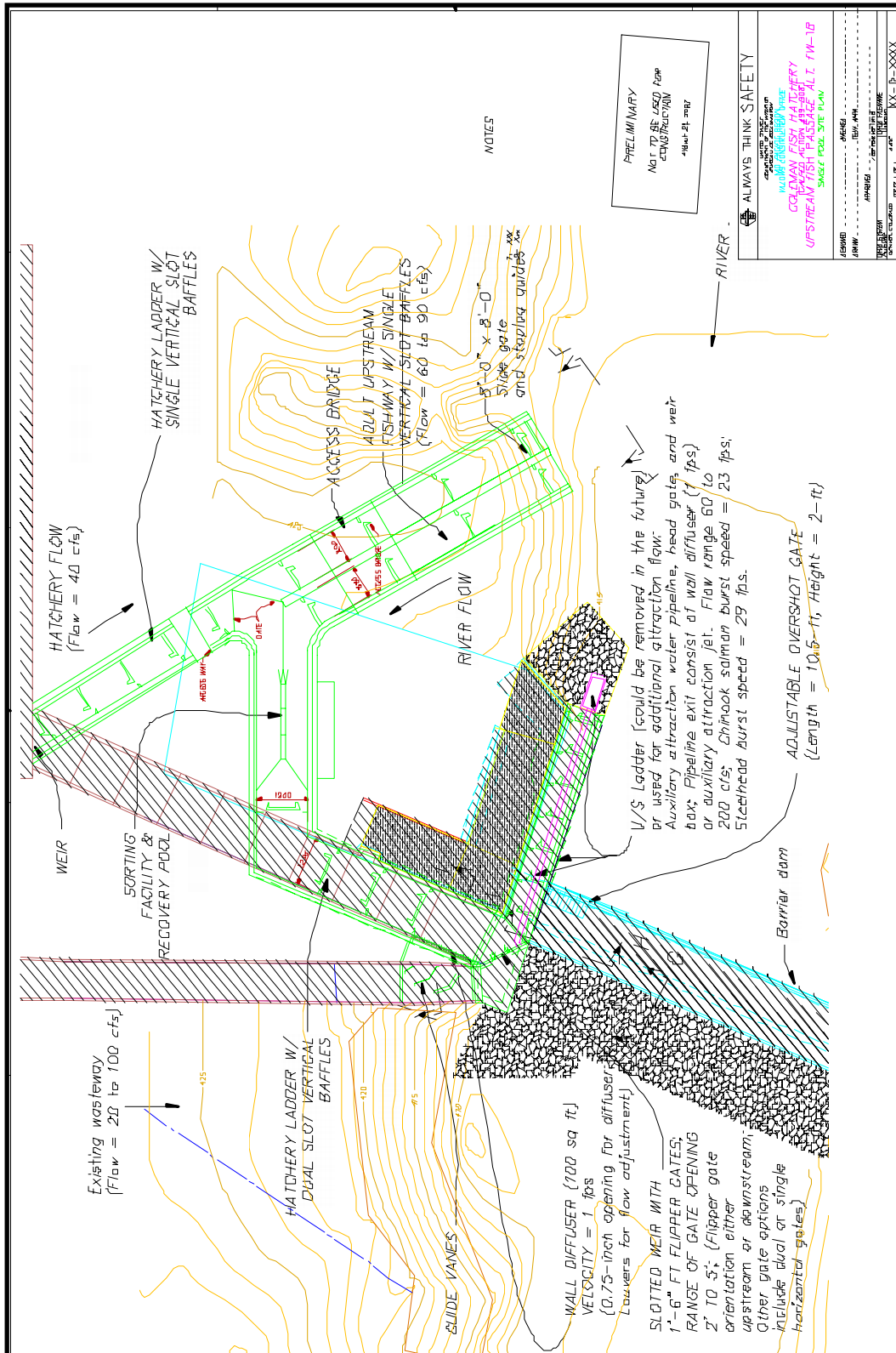


Exhibit 2.4. Weir and fish ladder modifications detail, plan view.

## Alternatives to the Proposed Project

Five action alternatives were considered and eliminated from further consideration in their original form due to cost concerns and doubts regarding their effectiveness. However, two alternatives, (1) the crest cap and (2) the 1-foot crest raise alternatives, were modified by the addition of a 10.5-foot wide overshot gate to reduce the risk of injury to fish, increase operational flexibility, and shift the thalweg to the right bank to increase fish attraction to the ladder. These two modified alternatives were then carried forward for analysis (*Coleman National Fish Hatchery Barrier Weir: Preliminary Concept Study Report, December 11, 2002; Coleman National Fish Hatchery Barrier Weir and Fishway [CALFED Action #99-B08]: Concept Study Report Supplement, November 17, 2003*).

The alternatives considered and eliminated were:

1. Raise the weir crest 1 foot.
2. Install a finger-shaped lip on the crest.
3. Install an ungated, solid lip on the crest.
4. Modify the crest to an Ogee shape.
5. Install eight pneumatically operated overshot gates.

The No-Action Alternative would leave the existing facilities and their undesirable features intact. It would leave the risk of interbreeding of fall-run and spring-run Chinook salmon stocks intact and preclude optimal monitoring of the restoration program upstream of the hatchery.

The Proposed Action would fulfill the purpose and need of the proposed project. It would allow greater control of upstream fish passage, monitoring of fish passage during all in-bank flows, and add new capabilities for capture of adult fish.

## Coordination, Permits, and Approvals

The following approvals, permits, and amendments could be required before the proposed project is constructed or implemented:

- < A final biological opinion by NOAA NMFS and USFWS under FESA;
- < A Memorandum of Understanding between BLM and Bureau of Reclamation
- < Letter of permission (or, if required, Section 404 permit) regarding discharge or fill into jurisdictional waters of the United States from the Army Corps of Engineers;
- < Water quality certification (if required) by the SWRCB through the Central Valley Regional Water Quality Control Board (RWQCB) under Section 401 of the federal Clean Water Act;



- < A CWA 401 permit for dewatering and construction activity storm water from the Central Valley RWQCB under the National Pollutant Discharge Elimination System (NPDES) program;
- < Lake or Streambed Alteration Agreement from the California Department of Fish and Game; and
- < Completion of the CEQA process and project approval by CBDA;

The draft IS and proposed Mitigated Negative Declaration was distributed to the following agencies that may exercise some permitting authority over the project:

Mr. Wayne White, Field Supervisor  
U.S. Fish and Wildlife Service  
Sacramento Field Office  
2800 Cottage Way, Suite W-2605  
Sacramento, CA 95825

Mr. Tom Cavanaugh  
U.S. Army Corps of Engineers,  
Sacramento District  
Attn: Regulatory Branch  
1325 J Street  
Sacramento, CA 95814-2922

Ms. Shirley Witalis  
NOAA Fisheries  
650 Capitol Mall, S-8-600  
Sacramento, CA 95814

Mr. Mike Berry  
California Department of Fish and Game, Region I  
601 Locust Street  
Redding, CA 96001

Mr. Dave Carlson  
Central Valley Regional Water Quality Control Board  
Sacramento Main Office  
3443 Routier Road, Suite A  
Sacramento, CA 95827-3003

Mr. Robert L. Lynch, Division Chief  
Land Management Division  
State Lands Commission  
100 Howe Avenue, Suite 100-J  
Sacramento, CA 95825-8202

## Chapter 3: Environmental Setting and Summary of Impact Evaluation

This chapter provides a summary of the Environmental Checklist (see Appendix A) and the results of the initial evaluation for the Fish Barrier Weir and Ladder Modification at the CNFH. The CBDA, as lead agency, proposed that a Mitigated Negative Declaration needs to be prepared for this project.

### Environmental Topic Areas

The CBDA completed the Environmental Checklist for this project. The checklist addresses 17 environmental topic areas that need to be considered when determining what level of environmental documentation is required for a project.

For this project, this is no impact or less than significant impact in most of the areas; however, some of the actions associated with the project that could have a significant impact can be mitigated to be less than significant. These actions, potential impacts and possible mitigations are what need to be addressed in the proposed Mitigated Negative Declaration.

*Aesthetics:* No impact to aesthetics is anticipated from this project, which is not located within a state scenic highway corridor. There may be a temporary and short-term impact to public viewing during construction, but these are considered insignificant.

*Agricultural Resources:* No impact to agricultural resources will result from this project since it is modifying an existing facility.

*Air Quality:* Less than significant impact on air quality is expected with this project. The proposed project does not conflict or obstruct the standards established by the local air quality management organizations. There are no sensitive receptors within the proposed project's area, and preventative measures and best management practices will ensure that air quality impacts are less than significant.

*Biological Resources:* There will be some temporary impact to biological resources during construction, but these can be mitigated to less than significant. Specifically, during construction there will temporary impact to less than an acre of wetlands; other remaining wetlands in the area will be fenced if near construction traffic. The proposed project also includes constructing a temporary fish passage (diversion) channel around the project site to facilitate anadromous fish passage upstream. Clearly marking and avoiding sensitive areas, as well as conducting biological monitoring, ought to reduce the potential impacts to less than significant.

*Cultural Resources:* Although the proposed project is modifying an existing site, the Bureau of Reclamation has investigated a small archeological site within the proposed project area. A small lithic scatter was identified on the same terrace as the stream diversion channel. Identification efforts still are being conducted to determine the extent of this archeological site and whether or not it is eligible for inclusion in the National Register of Historic Places. If the site is determined to be not eligible, then the Bureau of Reclamation will make a determination that no historic properties are affected by construction of the bypass channel. If the site is determined eligible, then a Memorandum of Agreement (MOA) will be developed in consultation with the State Historic Preservation Office and

appropriate Indian Tribe, if necessary. Mitigation measures identified in the MOA will be implemented prior to any surface disturbances.

*Geology and Soils:* Less than significant impacts are expected to geology and soils from this project. There is potential soil erosion during construction, but the total area of disturbance is small and standard sediment and erosion control would minimize any impacts from construction activities.

*Hazards and Hazardous Materials:* Less than significant impacts are expected from hazards and hazardous materials at the project site. Construction materials will be prohibited from storage near sensitive areas such as creeks, and site monitoring will help ensure that these construction practices are met.

*Hydrology and Water Quality:* There is potential significant impacts regarding erosion or sediment that could be associated with the proposed project, however, standard runoff and sediment control strategies will mitigate these to less than significant impacts. There may be some water quality issues during construction regarding erosion of disturbed areas, but these are less than significant.

*Land Use and Planning:* No impact to current land use and planning will occur from the proposed project since it is a modification to an existing facility.

*Mineral Resources:* No impact to mineral resources will occur from this proposed project.

*Noise:* Less than significant impacts regarding noise are anticipated from this proposed project. There will be a temporary and short-term increase in ambient noise levels in the immediate vicinity of the project site during construction.

*Population and Housing:* No impact to population and housing will occur because of the proposed project.

*Public Services:* No impact to most public services is associated with the proposed project. The CNFH is a public facility that carries out necessary and beneficial services that may be impacted during the construction and operation of the modifications, however, these impacts will be less than significant.

*Recreation:* Less than significant impacts to recreation are associated with the proposed project, but are short-term and associated with construction.

*Transportation:* Less than significant impacts to transportation are expected from the proposed project. There will be some additional traffic associated with construction.

*Utilities and Service Systems:* No impacts to utilities and service systems are expected from the proposed project.

*Mandatory Findings of Significance:* Temporary potentially significant impacts during modification construction can be minimized by mitigation measures. The proposed project itself is designed to benefit several species of special concern and the agencies involved are committed to managing and monitoring the operation of the proposed weir modifications to assure those benefits are achieved. Impacts to other species of special concern are less than significant. Chapter 4 lists the mitigation measures that will be implemented to avoid or minimize potential environmental impacts. Implementation of these mitigation measures would reduce the environmental impacts of the proposed project to a less-than-significant level.

## 4 Proposed Mitigated Negative Declaration

### Mitigated Negative Declaration

**PROJECT:** Fish Barrier Weir and Ladder Modification, Coleman National Fish Hatchery Project

**LEAD AGENCY:** California Bay-Delta Authority

**AVAILABILITY OF DOCUMENTS:** The Initial Study (IS) and proposed mitigated negative declaration is available for review at the California Bay-Delta Authority and at <http://calwater.ca.gov/>.

**PROJECT DESCRIPTION:** CBDA is proposing to fund the modification of the existing weir and associated fish ladders of the CNFH to allow fish and wildlife agencies better control of upstream fish passage, monitoring of fish passage during all in-bank flows, and add new capabilities to capture adult fish for broodstock.

CBDA prepared an IS and proposed mitigated negative declaration on the proposed project in accordance with the requirements of CEQA. An IS and proposed Mitigated Negative Declaration describes the project and its potential impacts on the environment and preliminarily concludes that any significant impacts that may result from the proposed project can be avoided, eliminated, or reduced to a level that is less than significant by the adoption and implementation of specified mitigation measures.

**FINDINGS:** An initial study has been prepared to assess the proposed project's potential effects on the environment and the significance of those effects. Based on the initial study, the CBDA determined that the proposed project would not have any significant effects on the environment once mitigation measures are implemented. This conclusion is supported by the following findings:

- The project would have no environmental effect related to aesthetics, agricultural resources, land use and planning, mineral resources, population and housing, or utilities and service systems.
- The project would have less than significant impacts related to air quality, geology and soils, public services, recreation, and transportation.
- Mitigation would be implemented to reduce potentially significant impacts on biological resources (possible disturbance of special-status species or their habitat), cultural resources (a small archeological site is within the project area, though not in the construction zone), hazards and hazardous materials (spills during construction), and hydrology and water quality (effects from erosion and spills during construction) to less-than-significant levels.
- The project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, reduce the number or restrict the range of a special-status species, or eliminate important examples of California history or prehistory.

- The project would not achieve short-term environmental goals to the disadvantage of long-term environmental goals.
- The project would not have environmental effects that are individually limited but cumulatively considerable.
- The project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.
- No substantial evidence exists that the project would have a negative or adverse effect on the environment.
- The project incorporates all applicable mitigation measures, as listed below and described in the initial study.
- This mitigated negative declaration reflects the independent judgment of the lead agency.

The following mitigation measures will be implemented by the Agency to avoid or minimize potential environmental impacts. Implementation of these mitigation measures would reduce the environmental impacts of the proposed project to a less-than-significant level.

- Biological Resources Mitigation Measure BR-1: Under direction of the fisheries agencies cooperating with this project (NOAA's National Marine Fisheries Service, US Fish and Wildlife Service, and the California Department of Fish and Game), implement applicable measures to avoid, eliminate or reduce to less than significant impacts to biological resources including sensitive species, their habitats, and to wetlands.
- Cultural Resources Mitigation Measure CR-1: Using a qualified archeologist, finalize investigation of archeological site within project area, and monitor construction and related activities to avoid impacts during construction.
- Hazards and Hazardous Materials Mitigation Measure HM-1: Prepare and implement a Hazardous Materials Control Plan to reduce the likelihood and the potential extent of impacts from accidental releases of hazardous materials during construction.
- Hydrology and Water Quality Mitigation Measure HWQ-1: Implement standard runoff and sediment control strategies for impacts associated with construction and related activities as required by the Clean Water Act Section 401 and as directed by the Regional Water Quality Control Board. These mitigations include standard runoff and sediment control strategies consistent with best management practices.
- Hydrology and Water Quality Mitigation Measure HWQ-2: After construction, top dressing of disturbed soils will be placed where needed to avoid any long-term erosive conditions.

Questions or comments regarding this proposed mitigated negative declaration and initial study may be addressed to:

Rhonda Reed, Ecosystem Restoration Program  
California Bay-Delta Authority  
John E. Moss Federal Building  
650 Capitol Mall, 5th Floor  
Sacramento California 95814

Copies of the IS and proposed Mitigated Negative Declaration may be reviewed at the same address during normal business hours or at <http://calwater.ca.gov/>.

In accordance with Section 21082.1 of the California Environmental Quality Act, the California Bay-Delta Authority has independently reviewed and analyzed the initial study and mitigated negative declaration for the proposed project and finds that the initial study and mitigated negative declaration reflects the independent judgment of the Agency. The lead agency further finds that the project mitigation measures will be implemented as stated in the mitigated negative declaration.

I hereby approve this project:

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Rhonda Reed, Program Manager  
Ecosystem Restoration Program  
California Bay-Delta Authority

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Date



## 5 References

- Bureau of Reclamation, *Coleman National Fish Hatchery Barrier Weir: Preliminary Concept Study Report, December 11, 2002*, Bureau of Reclamation, Denver, Colorado, 2002.
- Bureau of Reclamation, *Coleman National Fish Hatchery Barrier Weir and Fishway (CALFED Action #99-B08): Concept Study Report Supplement, November 17, 2003*, Bureau of Reclamation, Denver, Colorado, 2003.
- Bureau of Reclamation and State Water Resources Control Board, *Battle Creek Salmon and Steelhead Restoration Project, Draft Environmental Impact Statement/ Environmental Impact Report*, Bureau of Reclamation and State Water Resources Control Board, 2003.
- Bureau of Reclamation and United States Fish and Wildlife Service, *Draft Environmental Assessment, Fish Barrier Weir and Ladder Modification, Coleman National Fish Hatchery, Shasta and Tehama Counties, California*. Bureau of Reclamation, Mid-Pacific Region, Shasta Lake, California, 2004.
- CALFED Bay-Delta Program, *CALFED Bay-Delta Program Final Programmatic Environmental Impact Statement/Environmental Impact Report (PEIS/EIR) State of California*. Sacramento, CA. July 2000.
- CALFED Bay-Delta Program, *Multi-Species Conservation Strategy*. Prepared by Jones & Stokes. Sacramento, CA. July 2000.
- CALFED Bay-Delta Program. *Programmatic Record of Decision*. State of California. Sacramento, CA. August 2000.
- CALFED Bay-Delta Program, *Guide to Regulatory Compliance for Implementing CALFED Actions*. 2002.  
<http://calwater.ca.gov/CALFEDDocuments/GuideToRegulatoryCompliance.shtml>
- CALFED Bay-Delta Program, *Coleman National Fish Hatchery Barrier Weir: Preliminary Concept Study Report, December 11, 2002; Coleman National Fish Hatchery Barrier Weir and Fishway (CALFED Action #99-B08): Concept Study Report Supplement, November 17, 2003*. U.S. Department of the Interior, U.S. Bureau of Reclamation. Denver, CO. November 2003.
- California Bay-Delta Authority Act of 2002. (Water Code Section. 2. Division 26.4) as available at [http://calwater.ca.gov/AboutCalfed/adobe\\_pdf/Booklet\\_DeltaAct.pdf](http://calwater.ca.gov/AboutCalfed/adobe_pdf/Booklet_DeltaAct.pdf)



U.S. Fish and Wildlife Service, *Biological Assessment of Artificial propagation at Coleman National Fish Hatchery and Livingston Stone National Fish Hatchery: Program Description and Incidental Take of Chinook Salmon and Steelhead Trout*, U.S. Fish and Wildlife Service, 2001.

## Appendix A. Environmental Checklist

### Environmental Checklist Form

1.	<b>Project Title:</b> Fish Barrier Weir and Ladder Modification, Coleman National Fish Hatchery, Shasta and Tehama Counties, California		
2.	<b>Lead agency name and address:</b> Ecosystem Restoration Program California Bay-Delta Authority Sacramento, California		
3.	<b>Lead Agency contact person and phone number:</b> Rhonda Reed, Ecosystem Restoration Program California Bay-Delta Authority (916) 445-0781  <b>Federal Lead Agency Contact under NEPA:</b> Sandy Osborn Bureau of Reclamation (916) 978-5129		
4.	<b>Project Location:</b> The proposed project is at the Coleman National Fish Hatchery (CNFH), near Anderson, California. CNFH is on the north bank of Battle Creek, a tributary to the Sacramento River, approximately 3 miles east of Sacramento River, and 20 miles southeast of the City of Redding.		
5.	<b>Project Sponsor's Name and Address:</b> Ecosystem Restoration Program California Bay-Delta Authority Sacramento, California  U.S. Department of the Interior U.S. Fish and Wildlife Service Coleman National Fish Hatchery Anderson, California  Bureau of Reclamation Mid-Pacific Region Northern California Area Office Shasta Lake, California		
6.	<b>General Plan Designation:</b> Agricultural Cropland (AC)	7.	<b>Zoning:</b> Public Facility (PF)
8.	<b>Description of Project:</b> The proposed project consists of modifying the existing weir and associated ladders. These modifications will allow future monitoring, trapping, and sorting facilities to be installed in the ladder; these facilities will make possible a range of management options to benefit the species of special concern. The range of management options are from complete blockage of up-stream migration at flows up to 800 cfs to fish passage at least equal to that to be provided by the proposed Battle Creek Salmon and Steelhead Restoration Project (Restoration Project) at upstream dams. However, the proposed action itself will not necessitate any other changes in hatchery facilities or any changes in hatchery operations. Any such changes would be separately proposed and approved by the agencies following separate Federal Endangered Species Act consultations and environmental analyses, as appropriate.		
9.	<b>Surrounding Land Uses and Setting (briefly describe the project's surroundings):</b>		

	The proposed project is in an unincorporated area of Shasta County. The immediate area has limited residential and industrial development, and is considered rural. Land uses surrounding the project area include operations of the hatchery, limited agriculture, open space, and a few residences. The landscape consists of a valley created by Battle Creek and its associated riparian corridor. The creek valley gives way to rolling hills containing various grasses and few trees.
10.	<p><b>Other Public Agencies Whose Approval Is Required:</b></p> <ul style="list-style-type: none"> <li>• The California Department of Fish and Game require consultation under the California Endangered Species Act (Fish and Game Code 2080) for species listed by the state as endangered or threatened.</li> <li>• The California Regional Water Quality Control Board requires a construction storm water permit, a dewatering permit, and a §401 water quality certification.</li> <li>• The U.S. Army Corps of Engineers requires a Clean Water Act §404 permit or compliance under their Nationwide certification process.</li> <li>• The U.S. Fish and Wildlife Service and National Marine Fisheries Service (NOAA Fisheries) require consultations for Federal Endangered Species Act (Section 7) for species listed as endangered, threatened, or proposed, as well as designated critical habitat.</li> <li>• Advisory Council on Historic Preservation/State Historic Preservation Officer (SHPO), Section 106 of the National Historic Preservation Act compliance.</li> </ul>

### Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Agriculture Resources		Air Quality
	Biological Resources		Cultural Resources		Geology /Soils
	Hazards & Hazardous Materials		Hydrology / Water Quality		Land Use / Planning
	Mineral Resources		Noise		Population / Housing
	Public Services		Recreation		Transportation/Traffic
	Utilities / Service Systems		Mandatory Findings of Significance		

**Determination:**

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

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Signature

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Date

**Evaluation of Environmental Impacts:**

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a) Earlier Analysis Used. Identify and state where they are available for review.
  - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
  - a) the significance criteria or threshold, if any, used to evaluate each question; and
  - b) the mitigation measure identified, if any, to reduce the impact to less than significance

## Environmental Topic Areas

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. <b>Aesthetics</b> -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

### Explanation:

The proposed project is not within a state scenic highway corridor. Although there will be some construction related, temporary impacts to the weir area at the Coleman National Fish Hatchery, which does host the public for viewing, these impact are not significant and will be short term. Once construction is complete, the aesthetics of the area will be of the same quality or higher as before.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
II. <b>Agricultural Resources:</b> Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X

### Explanation:

The proposed project would not convert any farmland since it is a modification to an existing facility.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
III. <b>Air Quality</b> -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				X
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?				X

**Explanation:**

The proposed project would not conflict with or impede air quality standards established by the Shasta County Air Quality Management or the Tehama County Air Pollution Control District. Preventative measures and best management practices would ensure that air quality impacts are less than significant. No sensitive receptors (i.e., long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, or athletic facilities) are within the proposed project area.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
IV. <b>Biological Resources:</b> Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

**Explanation:**

This project is designed specifically to benefit several species of special concern: four runs of Chinook salmon and the steelhead. The lead, responsible, and cooperating agencies have analyzed these special status species and consider this project critical in recovering these runs of Chinook salmon and steelhead in this system. The proposed project would accomplish one of the priority actions for CALFED. This project is intended to give the fish and wildlife agencies the flexibility in managing the movements of Chinook salmon and steelhead for the species benefit. Managing these movements is needed to assist in the Battle Creek watershed restoration as analyzed and reported in the programmatic environmental documentation upon which this Initial Study is tiered. Biological monitoring of this and related projects will be extensive. This monitoring is instrumental in carrying out CALFED's adaptive management practices that to ensure these weir modifications function properly.

Significant impacts to wetlands will be avoided and will be permitted by the U.S. Army Corps of Engineers through either a Nationwide or individual Section 404 permits. The proposed project includes constructing a temporary fish passage (diversion) channel around the project site to facilitate anadromous fish passage upstream. This construction may temporarily impact less than an acre of wetlands; other wetlands in the area will be fenced if near construction traffic.



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>V. Cultural Resources:</b> Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?				X

**Explanation:**

The propose project is a modification to an existing facility. The Bureau of Reclamation investigated a small archeological site in the area of the proposed project, and the site requires some additional work to determine site content. A small lithic scatter was identified on the same terrace as the stream diversion channel. Identification efforts still are being conducted to determine the extent of this archeological site and whether or not it is eligible for inclusion in the National Register of Historic Places. If the site is determined to be not eligible, then the Bureau of Reclamation will make a determination that no historic properties are affected by construction of the bypass channel. If the site is determined eligible, then a Memorandum of Agreement (MOA) will be developed in consultation with the State Historic Preservation Office and appropriate Indian Tribe, if necessary. Mitigation measures identified in the MOA will be implemented prior to any surface disturbances.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>VI. Geology and Soils:</b> Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?				X

iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

**Explanation:**

The proposed project consists of improvements to an existing facility. During construction related activities, the construction area itself will be exposed to potential soil erosion. The total area of disturbance will be minimal and the contractor will incorporate standard sediment and erosion avoidance and minimization practices during project construction. These practices may include aerial disturbance minimization, sediment catchments and top dressing of areas disturbed. These practices will be incorporated into the CWA 401 permit issued by the Regional Water Quality Control Board.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>VII. Hazards and Hazardous Materials:</b> Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the				X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
environment?				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

**Explanation:**

The proposed project will not have any significant impacts associated with hazards and hazardous materials. During construction, construction-related equipment and materials will be on site. Required construction practices will prohibit storage of materials near sensitive areas such as the creek, wetlands, or ponds and materials storage will be closely monitored by construction inspectors. This project is modifies an existing government facility that has hazard reduction procedures in place that may also apply.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>VIII. Hydrology and Water Quality:</b> Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or situation on- or off-site?		X		
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?				X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X	
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X

**Explanation:**

The proposed project will not have a significant adverse impact on the existing hydrology even though the weir structure is within the stream channel and 100 year flood zone. The project could potentially impact water quality during construction with erosion of disturbed areas. Mitigation has been incorporated into the project design specifications and will be regulated by the Regional Water Quality Control Board under their CWA 401 permit. These mitigations include standard runoff and sediment control strategies consistent with the best management practices. The potential for these impacts are restricted to the time of active construction. After construction, top dressing of disturbed soils will be placed where needed to avoid any long-term erosive conditions.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>IX. Land Use and Planning:</b> Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

**Explanation:**

The proposed project modifies an existing facility and will not conflict with any current land use. The project is consistent with the goals and objectives of the CALFED *Multi-Species Conservation Strategy and Record of Decision*.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>X. Mineral Resources:</b> Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

**Explanation:**

The proposed project will not affect any mineral resources.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XI. <b>Noise:</b> Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

**Explanation:**

The proposed project will temporarily increase the ambient noise levels in the immediate vicinity of the project site during construction. This increase will be short term and not significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>XII. Population and Housing:</b> Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

**Explanation:**

The proposed project will not have any effects on populations and housing.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>XIII. Public Services:</b> Would this project:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				X
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?			X	

**Explanation:**

The proposed project will not impact most public services. The Coleman National Fish Hatchery is a public facility that carries out necessary and beneficial services which will be potentially impacted during construction and operation of the modifications, but these impacts will be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>XIV. Recreation:</b> Would this project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

**Explanation:**

The reason for the proposed project is to increase the native fisheries in Battle Creek. As such, increased recreational use is inferred, but the level of increase is unlikely to have a significant impact. The Coleman National Fish Hatchery does provide recreation opportunities for general public and educational visitors. Other than short-term and less than significant impacts during construction, this project should not impact the opportunities for the public and educational groups using this facility.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>XV. Transportation and Traffic:</b> Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			X	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

**Explanation:**

The proposed project will not have any significant impacts on transportation or traffic. There will be some addition traffic associated with constructing the modifications, but these will be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>XVI. Utilities and Service Systems:</b> Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project=s projected demand in addition to the provider=s existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project=s solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

**Explanation:**

This proposed project will not have any impacts to utilities and service systems.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>XVII. Mandatory Findings of Significance:</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X

**Explanation:**

XVII a) This proposed project is designed specifically to benefit several species of special concern: four runs of Chinook salmon and steelhead. The lead, responsible, and cooperating agencies have analyzed these special status species and consider this project critical in recovering these runs of Chinook salmon and steelhead in this system. These agencies will continue to manage and monitor the operation of the modified weir to assure the proper benefits to these special status species. Impacts to other species of special concern are less than significant.

XVII b) Although cumulative impacts of this project were analyzed and discussed in the first-tier CEQA document, the *Battle Creek Salmon and Steelhead Restoration Project, Draft Environmental Impact Statement/ Environmental Impact Report*, this action itself likely will not added significantly to the cumulative impacts of the larger project.

**Appendix B: California Natural Diversity Database Report for Shasta and Tehema Counties**

State, Federal, and California Native Plant Society Species of Special Concern from the California Department of Fish and Game Web site (<http://imap.cdfg.ca.gov>), May 2005.

Group	Scientific Name	Common Name	California Listing Status	Federal Listing Status	CDFG Species of Concern	CNPS LIST
Amphibians	<i>Ascaphus truei</i>	western tailed frog	--	--	SC	--
	<i>Hydromantes shastae</i>	Shasta salamander	Threatened	--	--	--
	<i>Rana aurora draytonii</i>	California red-legged frog	--	Threatened	SC	--
	<i>Rana boylei</i>	foothill yellow-legged frog	--	--	SC	--
	<i>Rana cascadae</i>	cascades frog	--	--	SC	--
	<i>Spea (=Scaphiopus) hammondii</i>	western spadefoot	--	--	SC	--
Birds	<i>Accipiter gentilis</i>	northern goshawk	--	--	SC	--
	<i>Agelaius tricolor</i>	tricolored blackbird	--	--	SC	--
	<i>Ardea alba</i>	great egret	--	--	--	--
	<i>Ardea herodias</i>	great blue heron	--	--	--	--
	<i>Athene cucularia</i>	burrowing owl	--	--	SC	--
	<i>Buteo swainsoni</i>	Swainson's hawk	Threatened	--	--	--
	<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	Endangered	Candidate	--	--
	<i>Cypseloides niger</i>	black swift	--	--	SC	--
	<i>Dendroica petechia brewsteri</i>	yellow warbler	--	--	SC	--
	<i>Elanus leucurus</i>	white-tailed kite	--	--	--	--
	<i>Empidonax traillii</i>	willow flycatcher	Endangered	--	--	--
	<i>Falco mexicanus</i>	prairie falcon	--	--	SC	--
	<i>Falco peregrinus anatum</i>	American peregrine falcon	Endangered	Delisted	--	--
	<i>Grus canadensis tabida</i>	greater sandhill crane	Threatened	--	--	--
	<i>Haliaeetus leucocephalus</i>	bald eagle	Endangered	Threatened	--	--
	<i>Icteria virens</i>	yellow-breasted chat	--	--	SC	--
	<i>Pandion haliaetus</i>	osprey	--	--	SC	--
<i>Riparia riparia</i>	bank swallow	Threatened	--	--	--	
Fish	<i>Cottus asperimus</i>	rough sculpin	Threatened	--	--	--
	<i>Cottus klamathensis macrops</i>	bigeye marbled sculpin	--	--	SC	--
	<i>Lavinia symmetricus mitrulus</i>	Pit roach	--	--	SC	--
	<i>Mylopharodon conocephalus</i>	hardhead	--	--	SC	--
	<i>Oncorhynchus mykiss ssp. 2</i>	McCloud River redband trout	--	--	SC	--
	<i>Oncorhynchus tshawytscha spring-run</i>	spring-run chinook salmon	Threatened	Threatened	--	--
	<i>Oncorhynchus tshawytscha winter run</i>	chinook salmon winter run	Endangered	Endangered	--	--
	<i>Salvelinus confluentus</i>	bull trout	Endangered	Threatened	--	--
Mammals	<i>Corynorhinus townsendii pallescens</i>	pale big-eared bat	--	--	SC	--
	<i>Gulo gulo</i>	California wolverine	Threatened	--	--	--
	<i>Lasiurus blossevillii</i>	western red bat	--	--	--	--
	<i>Lepus americanus klamathensis</i>	Oregon snowshoe hare	--	--	SC	--
	<i>Lepus americanus tahoensis</i>	Sierra Nevada snowshoe hare	--	--	SC	--
	<i>Martes americana</i>	American (=pine) marten	--	--	--	--
	<i>Martes pennanti pacifica</i>	Pacific fisher	--	Candidate	SC	--
	<i>Perognathus inornatus inornatus</i>	San Joaquin pocket mouse	--	--	--	--
	<i>Taxidea taxus</i>	American badger	--	--	SC	--
	<i>Vulpes vulpes necator</i>	Sierra Nevada red fox	Threatened	--	--	--
Reptiles	<i>Emys (=Clemmys) marmorata marmorata</i>	northwestern pond turtle	--	--	SC	--
Invertebrates	<i>Anthicus antiochensis</i>	Antioch Dunes anthicid beetle	--	--	--	--
	<i>Anthicus sacramento</i>	Sacramento anthicid beetle	--	--	--	--
	<i>Atractelmis wawona</i>	Wawona riffle beetle	--	--	--	--
	<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	--	Endangered	--	--
	<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	--	Threatened	--	--
	<i>Cryptochia shasta</i>	confusion caddisfly	--	--	--	--
	<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	--	Threatened	--	--
	<i>Ecclisomyia bilera</i>	Kings Creek ecclisomyian caddisfly	--	--	--	--
	<i>Gonidea angulata</i>	Western Ridged Mussel	--	--	--	--
	<i>Hydroporus leechi</i>	Leech's skyline diving beetle	--	--	--	--
	<i>Lepidurus packardii</i>	vernal pool tadpole shrimp	--	Endangered	--	--
	<i>Linderiella occidentalis</i>	California linderiella	--	--	--	--
	<i>Pacifastacus fortis</i>	Shasta crayfish	Endangered	Endangered	--	--
	<i>Parapsyche extensa</i>	King's Creek parapsyche caddisfly	--	--	--	--
	<i>Rhyacophila lineata</i>	Castle Crags rhyacophilan caddisfly	--	--	--	--
	<i>Rhyacophila mosana</i>	bilobed rhyacophilan caddisfly	--	--	--	--
Plants	<i>Agrostis hendersonii</i>	Henderson's bent grass	--	--	--	3
	<i>Anisocarpus scabridus</i>	scabrid alpine tarplant	--	--	--	1B
	<i>Arctostaphylos canescens ssp. sonomensis</i>	Sonoma manzanita	--	--	--	1B
	<i>Arctostaphylos klamathensis</i>	Klamath manzanita	--	--	--	1B
	<i>Arctostaphylos manzanita ssp. elegans</i>	Konociti manzanita	--	--	--	1B
	<i>Asplenium septentrionale</i>	northern spleenwort	--	--	--	2
	<i>Astragalus pulserae var. suksdorfii</i>	Suksdorf's milk-vetch	--	--	--	1B
	<i>Astragalus rattanii var. jepsonianus</i>	Jepson's milk-vetch	--	--	--	1B
	<i>Balsamorhiza macrolepis var. macrolepis</i>	big-scale balsamroot	--	--	--	1B
	<i>Betula pumila var. glandulifera</i>	resin birch	--	--	--	2

Appendix B: California Natural Diversity Database Report for Shasta and Tehema Counties

Plants	Botrychium ascendens	upswept moonwort	--	--	--	2
	Botrychium crenulatum	scaloped moonwort	--	--	--	2
	Botrychium manganense	mingan moonwort	--	--	--	2
	Botrychium montanum	western goblin	--	--	--	2
	Brodiaea coronaria ssp. rosea	Indian Valley brodiaea	Endangered	--	--	1B
	Calochortus longebarbatus var. longebarbatus	long-haired star-tulip	--	--	--	1B
	Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	--	--	--	1B
	Campanula shetleri	Castle Crags harebell	--	--	--	1B
	Campanula wilkinsiana	Wilkin's harebell	--	--	--	1B
	Carex comosa	bristly sedge	--	--	--	2
	Carex scoparia	pointed broom sedge	--	--	--	2
	Carex vulpinoidea	fox sedge	--	--	--	2
	Castilleja rubicundula ssp. rubicundula	pink creamsacs	--	--	--	1B
	Chamaesyce hooveri	Hoover's spurge	--	Threatened	--	1B
	Chamaesyce ocellata ssp. rattanii	Stony Creek spurge	--	--	--	1B
	Chlorogalum pomeridianum var. minus	dwarf soaproot	--	--	--	1B
	Clarkia borealis ssp. arida	Shasta clarkia	--	--	--	1B
	Clarkia borealis ssp. borealis	northern clarkia	--	--	--	1B
	Colligyrus convexus	Canary Duskysnail	--	--	--	--
	Collomia larsenii	talus collomia	--	--	--	2
	Cordylanthus tenuis ssp. pallescens	pallid bird's-beak	--	--	--	1B
	Cryptantha crinita	silky cryptantha	--	--	--	1B
	Downingia pusilla	dwarf downingia	--	--	--	2
	Draba aureola	golden draba	--	--	--	1B
	Drosera anglica	English sundew	--	--	--	2
	Eleocharis quadrangulata	four-angled spikerush	--	--	--	2
	Epilobium oregonum	Oregon fireweed	--	--	--	1B
	Epilobium siskiyouense	Siskiyou fireweed	--	--	--	1B
	Eriastrum brandegeae	Brandegee's eriastrum	--	--	--	1B
	Eriastrum tracyi	Tracy's eriastrum	Rare	--	--	1B
	Eriogonum pyrolifolium var. pyrolifolium	pyrola-leaved buckwheat	--	--	--	2
	Erodium macrophyllum	round-leaved filaree	--	--	--	2
	Erythronium citrinum var. roderickii	Scott Mountains fawn lily	--	--	--	1B
	Fluminicola seminalis	Nugget Pebblesnail	--	--	--	--
	Fritillaria eastwoodiae	Butte County fritillary	--	--	--	3
	Fritillaria pluriflora	adobe-lily	--	--	--	1B
	Gratiola heterosepala	Boggs Lake hedge-hyssop	Endangered	--	--	1B
	Harmonia doris-nilesiae	Niles's harmonia	--	--	--	1B
	Harmonia stebbinsii	Stebbins's harmonia	--	--	--	1B
	Helisoma newberryi	Great Basin rams-horn	--	--	--	--
	Hesperolinon tehamense	Tehama County western flax	--	--	--	1B
	Hierochloa odorata	vanilla-grass	--	--	--	2
	Hulsea nana	little hulsea	--	--	--	2
	Iliamna bakeri	Baker's globe mallow	--	--	--	1B
	Ivesia longibracteata	Castle Crags ivesia	--	--	--	1B
	Juga acutiflora	topaz juga	--	--	--	--
	Juga occata	Scalloped juga	--	--	--	--
	Juncus leiosterneus var. ahartii	Ahart's dwarf rush	--	--	--	1B
	Juncus leiosterneus var. leiosterneus	Red Bluff dwarf rush	--	--	--	1B
	Lanx patelloides	Kneecap Lanx	--	--	--	--
	Layia septentrionalis	Colusa layia	--	--	--	1B
	Legenere limosa	legenere	--	--	--	1B
	Leptosiphon nuttallii ssp. howellii	Mt. Tedoc leptosiphon	--	--	--	1B
	Lewisia cantelovii	Cantelow's lewisia	--	--	--	1B
	Limnanthes floccosa ssp. bellingeriana	Bellinger's meadowfoam	--	--	--	1B
	Lotus rubriflorus	red-flowered lotus	--	--	--	1B
	Lupinus antoninus	Anthony Peak lupine	--	--	--	1B
	Mielichhoferia tehagensis	Lassen Peak copper-moss	--	--	--	1B
	Mimulus evanescens	ephemeral monkeyflower	--	--	--	1B
	Mitella caulescens	leafy-stemmed mitrewort	--	--	--	2
	Monadenia troglodytes	Shasta sideband (snail)	--	--	--	--
	Navarretia leucocephala ssp. bakeri	Baker's navarretia	--	--	--	1B
	Navarretia myersii ssp. myersii	pincushion navarretia	--	--	--	1B
	Nemophila breviflora	Great Basin nemophila	--	--	--	2
	Neviusia cliftonii	Shasta snow-wreath	--	--	--	1B
	Orcuttia pilosa	hairy orcutt grass	Endangered	Endangered	--	1B
	Orcuttia tenuis	slender orcutt grass	Endangered	Threatened	--	1B
	Paronychia ahartii	Ahart's paronychia	--	--	--	1B
	Penstemon filiformis	thread-leaved beardtongue	--	--	--	1B
	Phlox muscoides	moss phlox	--	--	--	2
	Picea engelmannii	Engelmann spruce	--	--	--	2
	Pinguicula vulgaris ssp. macroceras	horned butterwort	--	--	--	2
	Pogogyne floribunda	profuse-flowered pogogyne	--	--	--	1B
	Potamogeton praelongus	white-stemmed pondweed	--	--	--	2
	Potamogeton zosteriformis	eel-grass pondweed	--	--	--	2
	Puccinellia howellii	Howell's alkali grass	--	--	--	1B
	Pyrgulopsis archimedis	Archimedes Pyrg	--	--	--	--
	Pyrgulopsis rupinicola	Sucker Springs Pyrg	--	--	--	--
	Rhynchospora capitellata	brownish beaked-rush	--	--	--	2
	Rupertia hallii	Hall's rupertia	--	--	--	1B
	Sagittaria sanfordii	Sanford's arrowhead	--	--	--	1B
	Scirpus heterochaetus	slender bulrush	--	--	--	2
	Scirpus subterminalis	water bulrush	--	--	--	2
	Scutellaria galericulata	marsh skullcap	--	--	--	2
	Sedum paradisum	Canyon Creek stonecrop	--	--	--	1B
	Senecio indecorus	rayless mountain ragwort	--	--	--	2
	Silene occidentalis ssp. longistipitata	long-stiped campion	--	--	--	1B

**Appendix B: California Natural Diversity Database Report for Shasta and Tehema Counties**

<b>Plants</b>	Silene suksdorfii	Cascade alpine campion	--	--	--	2
	Smelowskia ovalis var. congesta	Lassen Peak smelowskia	--	--	--	1B
	Smilax jamesii	English Peak greenbriar	--	--	--	1B
	Stachys palustris ssp. pilosa	marsh hedge nettle	--	--	--	2
	Stellaria longifolia	long-leaved starwort	--	--	--	2
	Thelypodium howellii ssp. howellii	Howell's thelypodium	--	--	--	1B
	Trimorpha acris var. debilis	northern daisy	--	--	--	2
	Tuctoria greenei	Greene's tuctoria	Rare	Endangered	--	1B
	Vespericola shasta	Shasta hesperian	--	--	--	--
	Viburnum ellipticum	oval-leaved viburnum	--	--	--	2

**California Listing Status**

*California State listing status: State of California legal status*

CODE	Description
Endangered	State listed as Endangered
Threatened	State listed as Threatened
Rare	State listed as Rare
Candidate	Candidate for state listing
--	None - no state status
Delisted	Delisted - previously listed

*(See Fish and Game code, sections 1901, 2062, 2067, and 2068 for legal definitions of*

**Federal Listing Status**

*Federal Listing Status: United States legal status under the Federal Endangered Species Act*

CODE	Description
Endangered	Federally listed as Endangered
Threatened	Federally listed as Threatened
Candidate	Candidate for federal listing
--	None - no federal status
Delisted	Delisted - previously listed

*(See Federal Register for legal definitions of Federal status)*

**CDFG Species of Concern**

Indicates whether the species is a California Department of Fish and Game Species of Concern. This applies to animals only. For the plant equivalent, see CNPSLIST.

**CNPS List**

*California Native Plant Society (CNPS) List. This field applies to plants only. The California Native Plant Society currently tracks 2,073 plant species, subspecies, and varieties as rare in California. They are assigned to one of five "lists" in an effort to categorize their degree of rarity and endangerment:*

CODE	Description
1A	Plants presumed extinct in California
1B	Plants rare, threatened, or endangered in California and elsewhere
2	Plants rare, threatened, or endangered in California, but more common elsewhere
3	Plants about which we need more information - a review list
4	Plants of limited distribution - a watch list

*See: CNPS, 2001. Inventory of Rare and Endangered Plants of California (sixth edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California*