

CANYON CREEK SUITE OF REHABILITATION SITES: TRINITY RIVER MILE 73 TO 78

Environmental Assessment/Draft Environmental Impact Report

Volume I: Draft FONSI, Executive Summary

February 2006

*Project Applicant and Federal
Lead Agency for NEPA*

Trinity River Restoration Program
U.S. Department of the Interior
Bureau of Reclamation



Federal Cooperating Agencies for NEPA

U.S. Department of Agriculture
Forest Service

U.S. Department of Interior
Bureau of Land Management



California Lead Agency for CEQA

North Coast Regional Water
Quality Control Board



Applicant's Consultant

North State Resources





Trinity River Restoration Program

P.O. Box 1300, 1313 South Main Street, Weaverville, California 96093
Telephone 530-623-1800, Fax: 530-623-5944

FEB - 7 2006

Subject: Environmental Assessment/Draft Environmental Impact Report for the Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

Interested Parties:

Working together under guidance of the Trinity River Restoration Program (TRRP), the Federal lead agency, Bureau of Reclamation, and the State lead agency, the North Coast Regional Water Quality Control Board, announce the publication and distribution of an Environmental Assessment/Draft Environmental Impact Report (EA/DEIR) which fully discloses and evaluates the environmental impacts associated with implementation of the proposed Canyon Creek Suite of Rehabilitation Sites Project. This joint environmental document meets California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) requirements and fulfills evaluation needs stipulated under Executive Orders 11988 (floodplain management), 11990 (protection of wetlands), and 12898 (environmental justice).

The purpose of the proposed Project is to conduct river rehabilitation activities at four locations downstream of the recently constructed Hocker Flat channel rehabilitation project at Junction City, California. These projects are identified in the Interior Secretary's December 19, 2000 Record of Decision (ROD) as a necessary step towards restoration of the Trinity River's anadromous fishery. The Hocker Flat Project represented the first TRRP effort to implement the mechanical channel rehabilitation component of the 2000 ROD. Together these two projects encompass work at five sites which will not only work to enhance river processes at their discrete locations, but are also expected to synergistically work together for enhancement of river processes and ultimately to increase and maintain fisheries habitat throughout the reach below Canyon Creek. The project will accomplish this by re-contouring bank and floodplain features.

A 45-day public review period has been established for review of the Draft EA/DEIR. The review period begins on February 9, 2006, and ends March 27, 2006. Electronic copies of the EA/DEIR are available for public review on the TRRP's website at www.trrp.net - select Canyon Creek Complex. Hard copies of the document are available at the Trinity County Planning Department at 190 Glen Road in Weaverville, the Trinity River Restoration Program Office at 1313 South Main Street in Weaverville, and at the Trinity County Library in Weaverville California. All referenced materials will be available at the Trinity River Restoration Program office. Electronic CD copies of the EA/DEIR, and a limited number of paper copies, may be obtained at the Trinity River Restoration Program Office free of charge (subject to availability).

The EA/FONSI and Final EIR (FEIR) will be used by federal and state agencies to decide which project actions will be implemented, the Proposed Action, Alternative 1, or a mixture

Executive Director
Douglas P. Schleusner

of these. These final documents are planned for publication in April 2006. A Draft FONSI is included with the EA/EIR. A Notice of Completion is attached to this cover letter. Written comments must be received by the Trinity River Restoration Program, P.O. Box 1300, Weaverville, CA 96093 no later than 5:00 p.m., Monday March 27, 2006. Emailed comments may be sent to Brandt Gutermuth, TRRP Environmental Specialist, at bgutermuth@rmp.usbr.gov.

Sincerely,



Douglas Schlausner

Executive Director

Trinity River Restoration Program

NEPA - Lead Agency

Attachment - Notice of Completion

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If you would like a copy of the final EA/EIR, Please detach and mail to the Trinity River Restoration Program, PO Box 1300, Weaverville, CA 96093

I would like a copy of the Final EA/EIR in the following format:

- Canyon Creek Suite of Rehabilitation Sites EA/EIR Executive Summary (50 pages & Document CD)
- Canyon Creek Suite of Rehabilitation Sites EA/EIR (approximately 300 pages)

Name _____
Address _____
City, State, Zip Code _____

CANYON CREEK SUITE OF REHABILITATION SITES: TRINITY RIVER MILE 73 TO 78

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February 2006

***State Clearinghouse
SCH#2005102025***

Project Applicant and Federal Lead Agency for NEPA

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BUREAU OF RECLAMATION
MID-PACIFIC REGION
NORTHERN CALIFORNIA AREA OFFICE
TRINITY RIVER RESTORATION PROGRAM
WEAVERVILLE, CALIFORNIA

DRAFT - FINDING OF NO SIGNIFICANT IMPACT – DRAFT

In accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, and with the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508), the Trinity River Restoration Program (TRRP) Office of the U.S. Bureau of Reclamation (Reclamation) has found that Alternative 1, supported by the Canyon Creek Suite of Rehabilitation Sites Environmental Assessment/Environmental Impact Report (EA/EIR) will result in no significant impacts on the human environment. Preparation of an Environmental Impact Statement to further analyze possible impacts is not required pursuant to Section 102(2) of the National Environmental Policy Act of 1969.

Reference: Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

Environmental review by:

E. Brandt Gutermuth _____ Date _____

Environmental Specialist, Trinity River Restoration Program

Recommended by:

Ed Solbos _____ Date _____

Implementation Branch Chief, Trinity River Restoration Program

Approved by:

Douglas P. Schleusner _____ Date _____

Executive Director, Trinity River Restoration Program

FONSI No. TR0106

FINDING OF NO SIGNIFICANT IMPACT

Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

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BACKGROUND AND NEED

The 2000 Record of Decision (ROD) for the Trinity River Mainstem Fishery Restoration Final Environmental Impact Statement/Environmental Impact Report (FEIS/EIR) directed Department of the Interior (DOI) agencies to implement the Preferred Alternative identified in the ROD for the FEIS/EIR to restore the Trinity River's anadromous fishery. The ROD directed the U.S. Bureau of Reclamation (Reclamation), through the Trinity River Restoration Program (TRRP), to restore the Trinity River fishery by implementing a combination of higher releases from Lewiston Dam (up to 11,000 cubic feet per second [cfs]), floodplain infrastructure improvements, channel rehabilitation projects, fine and coarse sediment management, watershed restoration, and an Adaptive Environmental Assessment and Management (AEAM) Program. The Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78 (Project) is part of the Channel Rehabilitation component of the ROD and is designed to increase shallow, low-velocity edge habitat for rearing salmonid fry over a wide range of flows. This Project would selectively remove fossilized river edge berms (berms that have been anchored by extensive woody vegetation root systems and consolidated sand deposits); provide revegetation and conditions for reestablishment and survival of native riparian vegetation; and recreate alternate point bars and complex fish habitat similar in form to those that existed prior to the construction of Lewiston Dam, although smaller in scale.

The Project would be the second, after the 2005 construction of the Hocker Flat Rehabilitation project, to implement the ROD's mechanical rehabilitation component and rework the Trinity River floodplain based on pre-dam channel morphology characteristics. The Project would expand the TRRP rehabilitation activities implemented at the site authorized in the Hocker Flat EA/EIR to include activities at four downstream locations. Collectively, the Hocker Flat and Canyon Creek Suite projects are intended to enhance river processes at their discrete locations and to synergistically enhance river processes in order to increase channel complexity and fisheries habitat throughout the mainstem Trinity River reach below Canyon Creek.

As a demonstration effort, the Hocker Flat Project provided design and implementation data that was incorporated in the Project. Certain aspects of the Hocker Flat Project are ongoing (i.e., revegetation) and will be used to refine the implementation of the Project.

Consequently, monitoring will continue and needed design/implementation adjustments will be incorporated into project design and implementation of future Trinity River channel rehabilitation efforts.

The Canyon Creek Suite of Rehabilitation Sites EA/EIR considered three alternatives: the Proposed Action, Alternative 1, and the No-Action Alternative. Under NEPA, no significant impacts were determined under any of these alternatives. However, under the California Environmental Quality Act, an unavoidable impact was determined for the Proposed Action during review of potential Aesthetics impacts. The planned work on private property would have been unacceptable to landowners. Details concerning the Proposed Action, Alternative 1, the No-Action Alternative, and alternatives considered but not carried forward for evaluation, are included within the Environmental Assessment/Draft Environmental Impact Report (EA/Draft EIR) (Volume 1, Chapter 2).

Alternative 1 is identical to the Proposed Action at two of the sites, Valdor Gulch and Pear Tree Gulch. However, Alternative 1 reflects stakeholder involvement and was developed to reduce impacts to private landowners at the Conner Creek and Elkhorn sites. Consequently, Alternative 1 minimizes aesthetic impacts and is preferred for implementation. The impacts of Alternative 1 are summarized below.

ALTERNATIVE 1

Alternative 1 from the Canyon Creek Suite of Rehabilitation Sites EA/DEIR was designed to provide suitable rearing habitat for anadromous salmonids and to reestablish geomorphic processes typical of an alluvial river. By removing on-site riparian berms and lowering the floodplain elevation in certain locations, Alternative 1 would allow some degree of channel migration and increase the likelihood of an inundated floodplain in association with 1.5-year recurrence interval flood flows (approximately 6,600 cfs for this project). In addition, several features have been designed to provide fisheries habitat and channel complexity at flows which are lower than the 1.5-year recurrence interval (e.g., low water side channels, benches, and alcoves).

Alternative 1 includes up to 11 activity types that may occur within the boundaries of one or more of the sites. Defined rehabilitation activities are:

- A – Recontouring;
- B – Feathered Edge Construction and Riparian Berm Removal;
- C, D, and E – Floodplain Construction for 450 cfs, 2,000 cfs, or 6,600 cfs inundation;
- F and G – Side channel creation for 450 cfs or 6,600 cfs inundation;
- H – Alcove Construction for 450 cfs inundation;
- I – Excavation and Placement of Materials;
- J – Staging/Use Areas/Road building; and
- K – Revegetation.

Activities A–H would all occur within riverine areas included for rehabilitation activities under Alternative 1. Because these riverine areas extend for more than 3.5 miles along the Trinity River, the type and degree of activity would differ for each area. Under Alternative 1, more than 14 acres of riverine area would be affected and more than 80,000 cubic yards would be excavated. Activities I-K would be associated with the transfer, placement, and stabilization of material excavated from the riverine areas. The location and extent of material stockpiled, transported, and placed would differ for each area. The revegetation plan developed for Alternative 1 would be specific to each rehabilitation area and would include elements to ensure success over time. Monitoring of the Project over time will allow critical evaluation in order to adjust future rehabilitation plans to incorporate those practices that perform best in the field.

More detailed discussions of activities A-K are provided in Chapter 2 of the Project EA/DEIR.

FINDINGS

The Proposed Action and Alternative 1 were evaluated in the EA/DEIR with respect to their impacts in the following issue areas: land use; geomorphic environment; water resources; water quality; fishery resources; vegetation, wildlife, and wetlands; recreation; socioeconomics, population, and housing; tribal trust; cultural resources; air quality; environmental justice; aesthetics; hazardous waste and materials; noise; public services and utilities/energy; and transportation/traffic circulation. Based upon the following summary of the implementation effects of Alternative 1 (as discussed fully in the EA/DEIR), accomplishment of Alternative 1 would result in no significant impacts to the quality of the human environment.

Land Use

The Project is located within the Junction City Community Planning Area. Land use impacts resulting from Alternative 1 would be consistent with Trinity County’s development standards for lands within the Junction City community and lying within the Flood Hazard Overlay zoning district.

Geology, Fluvial Geomorphology, and Soils

Construction activities and disturbance would increase the potential for short-term wind and water erosion; however, sediment control measures would be implemented to ensure that construction impacts to the river are minimal. Implementation of Alternative 1 is consistent with the 10 Trinity River healthy river attributes that provide a basis for the TRRP channel rehabilitation program in support of fish and wildlife populations.

Water Resources

Implementation of Alternative 1 would generally decrease the elevation of the Trinity River 100-year flood through the project reach as a result of project activities, including excavation on the floodplain. However, local increases in flood elevation of less than 1 foot are possible. The project is expected to have minimal, if any, effects on groundwater elevations or groundwater quality.

Water Quality

Project construction near the river channel could temporarily increase turbidity and total suspended solids in the water column. It could also result in a spill of hazardous materials (e.g., grease, solvents) into the Trinity River. Construction activities will be staged to minimize potential water quality effects, and appropriate measures will be implemented to minimize water quality impacts.

Fisheries Resources

To comply with Section 7 of the Endangered Species Act (ESA) for anadromous fishes, Reclamation initiated informal consultation with NOAA Fisheries concerning project effects to the federally and state-listed (threatened) Southern Oregon/Northern California Coast (SONCC) evolutionarily significant unit (ESU) of coho salmon. NOAA Fisheries affirmed that certain non-flow measures, including the mechanical rehabilitation projects identified in the ROD, were considered in the National Marine Fisheries Service's (NMFS') 2000 Biological Opinion issued in response to the FEIS/EIR. In that Biological Opinion, NMFS identified the mechanical rehabilitation projects as reasonable and prudent measures to minimize project effects on SONCC ESU coho salmon. Consequently, implementation of Alternative 1 is covered by the NMFS' 2000 Biological Opinion and no additional consultation was required. Reclamation will continue to coordinate with NOAA Fisheries as it implements the Terms and Conditions of the 2000 Biological Opinion.

Any temporary construction impacts on fish rearing habitat are expected to be offset by permanent beneficial changes to physical rearing habitat associated with implementation. Improved river access to the floodplain during elevated spring time flows is expected to increase the availability of slow, shallow edge habitat preferred by salmonid fry. Collective improvements in fluvial channel dynamics contributed by Alternative 1 and by planned future channel rehabilitation projects throughout the upper Trinity River are ultimately expected to improve rearing habitat diversity for all anadromous salmonids.

Vegetation, Wildlife, and Wetlands

Construction activities associated with Alternative 1 would result in a temporary loss of riparian vegetation, but the value provided by this vegetation would be offset by restoring floodplain function and riverine values. The revegetation of alluvial features (i.e., floodplains) would speed reestablishment of riparian vegetation, and long-term changes in river inundation periods would increase both seasonal and perennial riparian habitats.

Informal consultation with the U.S. Fish and Wildlife Service (USFWS) concerning effects to the ESA-listed northern spotted owl was conducted by Reclamation. Habitat surveys for this species were conducted in the general project vicinity. While the majority of the habitat surveyed was not suitable for nesting, roosting, or foraging, some suitable habitat was determined. Consequently, protocol northern spotted owl surveys were conducted within 0.5 mile of each Canyon Creek project site during spring 2004. No owls were detected. Consequently, Reclamation determined that a biological assessment was not required since implementation of Alternative 1 would have no effect on northern spotted owls.

Recreation

The Trinity River was federally designated as a National Wild and Scenic River in 1981. Construction and implementation of Alternative 1 would not permanently affect the scenic or recreational values of the Trinity River for which it was protected. Implementation of Alternative 1 would result in a long-term benefit to the form and function of the Trinity River, thereby enhancing the Outstanding Recreational Values of its Wild and Scenic River status, including its anadromous fishery.

Socioeconomics, Population, and Housing

Alternative 1 could directly generate short-term income growth through the payment of wages and salaries, but would result in little increased long-term economic activity. A short-term increase in demand for housing in the general vicinity (i.e., Weaverville) could also occur as construction workers would seek lodging during the construction period.

Tribal Trust

The need to restore and maintain the natural production of anadromous fish in the Trinity River mainstem originates partly from the federal government's trust responsibility to protect fishing rights for ceremonial, subsistence, and commercial purposes of the region's Indian tribes. Construction-related impacts to Tribal Trust resources are expected to be short-term and to be outweighed by long-term increased numbers of anadromous fishes and rejuvenation of other trust assets, which are an expected beneficial by-product of the improved riverine health that would result from project implementation.

Cultural Resources

No cultural resources, other than dredger tailings, were identified within the Area of Potential Effect (APE) defined for the project; any unrecorded cultural resources are assumed to have been previously inundated, destroyed, or substantially damaged. If cultural materials or human remains are encountered during work for the project, the impacts would be negligible because construction would be halted and the proper agency contacted.

Air Quality

Construction associated with Alternative 1 requires the use of equipment that would temporarily contribute to air pollution in the Trinity River basin in the form of ozone precursors and particulate matter (PM₁₀). Reclamation will include provisions in construction contract documents that would minimize construction-related dust and PM₁₀ emissions.

Environmental Justice

There is no evidence to suggest that Alternative 1 would cause a disproportionately high adverse human health or environmental effect on minority and low-income populations, compared to other project area or Trinity County residents.

Aesthetics

Implementation of Alternative 1 would complement the visual resources of the Canyon Creek area and would meet landowner approval. Design of Alternative 1 incorporates diversity of the landscape and vegetation types into the character of the rehabilitated riverine and upland areas. Excavated material would be placed in a manner that blends into the contours of existing tailings piles while not changing the nominal heights of the piles. Retention of existing topographic features would lessen the degree of visual impact and improve the aesthetic quality of this reach of the Trinity River.

Hazardous Materials

Implementation of Alternative 1 would potentially expose hazardous materials that could pose a public hazard. However, construction specifications will ensure that the contractor follows Best Management Practices to contain hazardous materials from release into the environment (e.g., oils, gasoline, etc.).

Noise

Construction activities would be scheduled between 7:00 a.m. and 7:00 p.m. Monday through Saturday. During working hours, the contractor would operate all equipment to minimize noise impacts to nearby sensitive receptors (residences, etc.).

Public Services and Utilities/Energy

Construction work and temporary road closures would be staged in a manner to allow for access by emergency service providers. If closures are required, they would occur during non-peak hours.

Transportation/Traffic Circulation

The use of heavy construction equipment to transport material to and from the project work site would be minimized. Equipment would be staged on site during construction. Since local roads are built to service occasional heavy equipment traffic, no measurable road wear would result. For safety reasons, the contractor would implement a traffic control plan to protect the public during construction.

SUMMARY

Implementation of Alternative 1, including the mitigation measures included to comply with CEQA requirements, would contribute to the long-term environmental quality and sustainability of the Trinity River ecosystem with no significant impacts to the environment.

Executive Summary

Introduction

This Environmental Assessment/Draft Environmental Impact Report (EA/DEIR) for the Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78 addresses the environmental issues, alternatives, and impacts associated with the modification of the banks of the Trinity River at four specific sites between Junction City and Helena (Proposed Action). These rehabilitation measures are required for the restoration of the Trinity River mainstem fishery. The Proposed Action is specifically designed to benefit anadromous fish and their habitat by developing a properly functioning, diverse floodplain and main river channel habitat. The four rehabilitation sites are associated with alluvial features along a 5-mile reach of the Trinity River upstream of the North Fork Trinity River and downstream of the community of Junction City, Trinity County, California.

The U.S. Bureau of Reclamation (Reclamation) and the Regional Water Quality Board – North Coast Region (Regional Water Board) prepared this EA/DEIR in cooperation with the Bureau of Land Management (BLM) and the Forest Service (USFS). This document meets the legal requirements of the National Environmental Policy Act (NEPA) (42 United States Code [USC], Section 4321 et seq.) and the California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000 et seq.). Reclamation will be responsible for the construction of the Proposed Action and will function as the federal lead agency for NEPA compliance and federal Endangered Species Act requirements. The Regional Water Board will function as the state lead agency for CEQA compliance. Due to their extensive experience and land holdings along the Trinity River below Lewiston, the BLM and the USFS will function as NEPA Cooperating Agencies. These agencies have assisted in the preparation of this EA/DEIR. As the manager of the Wild and Scenic Corridor established for the designated reach of the Trinity River, BLM is responsible for complying with Section 7 of the Wild and Scenic Rivers Act to ensure that the Outstandingly Remarkable Values (ORV's) for which the Trinity River was designated under the federal Wild and Scenic River Act are protected or enhanced.

In addition to BLM and USFS, the primary cooperating (NEPA) agencies and responsible and trustee (CEQA) agencies are:

- National Marine Fisheries Service (NOAA Fisheries)
- U.S. Army Corps of Engineers (Corps)
- U.S. Environmental Protection Agency (EPA)
- U.S. Fish and Wildlife Service (USFWS)
- California Department of Fish and Game (CDFG)

The Record of Decision (ROD) for the Trinity River Mainstem Fishery Restoration Final Environmental Impact Statement/Environmental Impact Report (FEIS/EIR), dated December 19, 2000, directed Department of the Interior (DOI) agencies to implement the Preferred Alternative identified in the FEIS/EIR. In addition to the Flow Evaluation Alternative, elements of the Mechanical Restoration Alternative were included in the decision (U.S. Department of Interior 2000). The ROD set forth prescribed Trinity River flows for five water-year types: extremely wet (815,200 acre-feet annually [afa]; wet (701,000 afa); normal (646,900 afa); dry (452,600 afa); and critically dry (368,600 afa).

After the ROD was issued, a series of legal challenges occurred in federal court; ultimately, the ROD was upheld by the United States Court of Appeals for the Ninth Circuit. Although Trinity County was the lead agency under CEQA for the FEIS/EIR, the Trinity County Board of Supervisors chose not to “certify” the EIR portion of the joint NEPA/CEQA document because of the litigation in federal court. Therefore, the EIR portion of this document cannot be “tiered” from the FEIS/EIR. The EIR portion functions as a stand-alone document and is in no way dependent for its legal adequacy—for CEQA purposes only—on the FEIS/EIR. Additional information on the legal challenges and ultimate outcome are incorporated by reference from the Hocker Flat Rehabilitation Site: Trinity River Mile 78 to 79.1 EA/EIR (U.S. Bureau of Reclamation 2004).

Based on the outcome of the litigation in federal court, the flows authorized by the 2000 ROD are deemed to constitute the “existing [hydrological] environment” for CEQA purposes, and are considered the basis for the environmental analysis of the Proposed Action under both NEPA and CEQA.

Copies of all of the above-referenced documents, as well as the December 19, 2000 ROD, and the documents that, taken together, constitute the FEIS/EIR, are available for public review at:

Trinity River Restoration Program Office
United States Department of the Interior – Bureau of Reclamation
P.O. Box 1300
1313 South Main Street
Weaverville, California 96093

Project History and Background

Completion of the Trinity and Lewiston Dams in 1964 blocked migratory fish access to habitat upstream of Lewiston Dam, eliminated sediment transport from over 700 square miles of the upper watershed, and restricted anadromous fish populations to the remaining habitat below Lewiston Dam. Trans-basin diversions from Lewiston Reservoir to the Sacramento River altered the hydrologic regime of the Trinity River, resulting in riparian encroachment and fossilization of point bars and riparian berms from Lewiston to near the North Fork Trinity River. Encroachment of riparian vegetation into the former active channel promoted the deposition of fine-textured sediments, resulting in the formation of linear berms that further confined and simplified the channel, reduced the diversity of riparian age classes and riparian vegetation species, impaired floodplain access, and adversely affected fish habitat.

In 1981, in response to these adverse impacts on fish habitat and subsequent declines in salmon runs, the Secretary of the Interior directed the USFWS to initiate a 12-year flow study to determine the effectiveness of flow restoration and other mitigation measures for impacts of the Trinity River Diversion (TRD) of the Central Valley Project. Then, in 1984, Congress enacted the Trinity River Fish and Wildlife Program to further promote and support management and fishery restoration actions in the Trinity River basin. Between 1990 and 1993, various restoration actions were implemented, including nine pilot bank rehabilitation projects. These projects were constructed on the Trinity River between Lewiston Dam and Helena.

In 1992, Congress enacted the Central Valley Project Improvement Act (CVPIA). One purpose of the CVPIA (Section 3406) was to protect, restore, and enhance fish, wildlife, and associated habitats in the Trinity River basin. The act also directed the Secretary to finish the 12-year Trinity River Flow Evaluation Study (TRFES) and to develop

recommendations “regarding permanent instream fishery flow requirements, TRD operating criteria, and procedures for the restoration and maintenance of the Trinity River fishery.” The Trinity River Flow Evaluation Final Report was ultimately published in 1999 by the USFWS and the Hoopa Valley Tribe (HVT), providing a framework for restoration activities below Lewiston Dam.

In 1994, the USFWS as the NEPA lead agency and Trinity County as the CEQA lead agency began the public process for developing the Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Trinity River Mainstem Fishery Restoration Program. The FEIS, published in October 2000, functions as a project-level NEPA document for policy decisions associated with managing Trinity River flows and as a programmatic NEPA document providing first-tier review of other potential actions, including the Proposed Action. As noted previously, the Trinity County Board of Supervisors has never certified the EIR portion of the FEIS/EIR for the Trinity River Mainstem Fishery Restoration Program.

Simultaneously with the planning and implementation of the Canyon Creek and Hocker Flat Rehabilitation Projects, the Trinity River Restoration Program (TRRP) in conjunction with Trinity County has issued a Notice of Preparation for the Indian Creek Channel Rehabilitation Project. This project is intended to provide juvenile fish habitat in the Indian Creek reach (Trinity River Mile 93.7 to 96.5), while reducing flow impacts during ROD flows. Meanwhile, design options and implementation of other proposed Trinity River restoration components, including coarse sediment/spawning gravel supplementation, infrastructure improvement projects to protect private and public property from damage by ROD flows, and watershed improvement projects are proceeding. The TRRP in cooperation with the Trinity Management Council (TMC) is making a concerted effort to ensure that the models, data, assumptions, and analyses for these projects are fully coordinated.

Numerous other watershed restoration projects are being planned and implemented throughout the Trinity River basin. The Trinity County Resource Conservation District (TCRCD), the BLM, and the Shasta-Trinity National Forest (STNF), with funding provided by the California Department of Fish and Game’s (CDFG’s) Coastal Salmon Recovery Program, the State Water Resources Control Board (State Water Board), the U.S. Department of Agriculture, the BLM’s Jobs in the Woods Program, and the National Fish and Wildlife Foundation, are implementing numerous upslope watershed restoration projects throughout the basin, including the South Fork Trinity River watershed.

Trinity County, with grant funding provided by CDFG and the State Water Board, has inventoried all county road crossings of fish-bearing streams in the Trinity River basin and is currently implementing the highest ranked migration barrier removal projects. Trinity County has also completed a sediment source inventory on county roads and is prioritizing and implementing projects to reduce road-related sediment sources. The BLM has completed a similar inventory of its roads in the Trinity River watershed. As needed, road rehabilitation projects will occur based on these inventories. USFS plan development and environmental review are underway for timber management and fuels reduction, and watershed improvement projects in the Weaver Creek and Rush Creek watersheds. NEPA and CEQA review for these projects is being provided on a project-by-project basis by the appropriate agencies. State, regional, or local entities could be the CEQA lead agency for those projects requiring CEQA compliance. In general, the STNF acts as the NEPA lead agency for projects on National Forest lands and BLM acts as NEPA lead agency for projects on BLM lands.

Purpose and Need for Action

The purpose of the Proposed Action is to implement a suite of channel and riparian rehabilitation measures to provide juvenile fish habitat on the mainstem Trinity River between Junction City and Helena, California. The ROD identified 47 discrete mechanical channel rehabilitation sites (including three side-channels) on the mainstem Trinity River between Lewiston and Helena. The Proposed Action will continue to advance the implementation efforts of the TRRP and provides the opportunity to:

- increase the diversity and area of habitat for salmonids, particularly habitat suitable for rearing;
- increase rearing habitat for juvenile salmonids, including coho and Chinook salmon and steelhead;
- increase the structural and biological complexity of habitat for various species of wildlife associated with riparian habitats;
- increase hydraulic and fluvial geomorphic diversity and complexity;
- measure/demonstrate the ecological response to changes in flow regimes, morphological features, and aquatic, riparian, and upland habitats; and
- provide a self-maintaining project where adequate maintenance flows are likely to occur independent of future TRD flows.

The need for the Proposed Action results from:

- requirements in the ROD (U.S. Department of the Interior 2000) to restore the Trinity River fishery through a combination of higher releases from Lewiston Dam (up to 11,000 cubic feet per second [cfs]), floodplain infrastructure improvements, channel rehabilitation projects, fine and coarse sediment management, watershed restoration, and an Adaptive Environmental Assessment and Management (AEAM) Program.
- the expectation that the AEAM Program will continue to incorporate the experience provided through the planning, design, and implementation of the Proposed Action into future restoration and rehabilitation efforts proposed by the TRRP

The approach and methods incorporated into the Proposed Action used information gained by constructing the Hocker Flat Rehabilitation Project. On-going monitoring at Hocker Flat will continue to be incorporated into the AEAM Program for future restoration and rehabilitation efforts.

1.7.2 GOALS AND OBJECTIVES OF THE PROPOSED ACTION

GOALS AND OBJECTIVES OF THE PROPOSED ACTION

The goals of the TRRP outlined in the Trinity River Restoration Program Strategic Plan (2003-2008) provide the framework for the specific goals and objectives used to develop the action alternatives for this EA/DEIR. The following goals and objectives support the Proposed Action, and provided the structure for development of the alternatives:

- protect and/or enhance the outstandingly remarkable values associated with the designation of a Wild and Scenic River (federal and California);
- induce changes in channel geometry in response to constructing channel and floodplain features designed for the river's current and future hydrologic regime;

- evaluate the evolution of channel planform features in response to designing and implementing the Proposed Action at a river segment (1 mile) scale;
- evaluate the biological response (aquatic, riparian, upland) to changes in the physical environment and incorporate this information into the AEAM Program;
- expand the understanding of the role that tributaries such as Canyon Creek play in terms of accretion flow relative to mainstem flows;
- provide safe and reasonable access to the site for project planning, implementation, and monitoring;
- develop partnerships with willing participants and encourage positive landowner interest and involvement;
- design the project to function with the river's current hydrology (post-ROD) estimated at the site;
- integrate known fluvial and ecological theories and relationships with the site's measured physical and biological attributes and evaluate the response over a definitive time frame;
- avoid in-stream work to reduce construction-related impacts, maximize the river's ability to rehabilitate itself during high flows, and reduce implementation cost and complexity; and
- attempt to preserve unique and valuable geomorphic and biological features wherever practicable (e.g., hydraulic controls, high-quality spawning or adult holding habitat, cottonwood galleries).

The following objectives apply to the responsible and trustee agencies for the Proposed Action, including the Regional Water Board, the SLC, CDFG, and the HVT:

- compliance with the California Water Code and Basin Plan to ensure the highest reasonable quality of waters of the state and allocation of those waters to achieve the optimum balance of beneficial uses;
- protection of the public trust assets of the Trinity River watershed;
- conservation, restoration, and management of fish, wildlife, and native plant resources; and
- compliance with the Water Quality Control Plan for the Hoopa Valley Indian Reservation to preserve and enhance water quality on the Reservation, and to protect the beneficial uses of water.

Similarities and Differences between NEPA and CEQA

This document meets the legal requirements of NEPA (42 *United States Code* [USC] Section 4321 et seq.) and CEQA (*California Public Resources Code*, Section 21000 et seq.). NEPA and CEQA are laws requiring that governmental agencies evaluate the environmental impacts of their proposed decisions before making formal commitments to carry them out and that such evaluation be done in detail, with public involvement. NEPA is a federal law that applies to federal agencies, whereas CEQA is a California law that applies to state and local agencies.

Although there are similarities between CEQA and NEPA, the two acts are not identical. For example, NEPA is a procedural law requiring agencies to evaluate a range of reasonable alternatives, disclose potential impacts, and identify feasible mitigation. CEQA, in contrast, is partly "substantive" in that it requires an agency to adopt "feasible" mitigation measures for any "significant effect on the environment." In an EIS (a NEPA document), as opposed to an EIR (a CEQA document), reasonable alternatives must be rigorously and objectively evaluated at a greater level of detail. The threshold for preparing an EIR is lower than the threshold for preparing an EIS under NEPA. It is therefore not uncommon to have a joint NEPA/CEQA document that is not an EIS/EIR but rather an

EA/EIR. This document is an example of an EA/EIR. It has been prepared because the Regional Water Board, as the CEQA lead agency, determined that the level of controversy surrounding the Proposed Action is sufficient to trigger the need to prepare an EIR under the low-threshold CEQA standard. The federal lead agency, however, does not believe that an EIS is required under the higher NEPA threshold. Even so, the EA shares many attributes of an EIS, particularly the detailed analysis of alternatives.

Required Permits and Approvals

The following section identifies the discretionary approvals, consistency determinations and federal executive orders that were considered in the preparation of this EA/DEIR.

DISCRETIONARY APPROVALS

Provided below is a list of the various discretionary approval processes that have been completed or are still being coordinated concurrent with the NEPA/CEQA environmental review process:

- Section 404 Clean Water Act Permit – U.S. Army Corps of Engineers (Corps), San Francisco District, Eureka Field Office
- Compliance with the Federal Endangered Species Act (ESA) – USFWS, Eureka, and NOAA Fisheries, Arcata, California
- Compliance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA) – NOAA Fisheries, Arcata, California
- Compliance with Section 7 of the federal Wild and Scenic Rivers Act (WSRA) – BLM, Redding, California
- USFS – as federal Cooperating Agency under NEPA and landowner within the project area
- Encroachment Permit – Required for placement of excavated materials within the Caltrans right-of-way along Highway 299 – Caltrans, Redding, California
- Compliance with the California Endangered Species Act (CESA) – CDFG, Region 1
- Section 401 Clean Water Act Water Quality Certification – Regional Water Board
- Trinity County Ordinances (Floodplain Management)

CONSISTENCY DETERMINATIONS

Provided below is a list of the governing laws for which a consistency determination will need to be made:

- Section 106 of the National Historic Preservation Act (NHPA)
- Federal Wild and Scenic River Act (WSRA)
- State Wild and Scenic River Act (WSRA)

FEDERAL EXECUTIVE ORDERS

Provided below is a list of the federal executive orders and implementing polices with which the project would need to comply:

- Executive Order 11988 for Floodplain Management
- Executive Order 12898 for Environmental Justice
- Executive Order 11990 for Wetlands
- Executive Order 13007 for Indian Sacred Sites on Federal Land
- Executive Order 12373 for State, Area-Wide, and Local Plan and Program Consistency
- Indian Trust Assets

Scoping and Public Involvement

The Regional Water Board initiated the public scoping process by forwarding a Notice of Preparation (NOP) of an EIR to the State Clearinghouse on October 7, 2005. The NOP and agency comments on the NOP are included in this document as Appendix B.

The NOP was circulated to the public; to local, state, and federal agencies; and to other interested parties in order to solicit comments on the Proposed Action. The public scoping period was October 7, 2005, through November 7, 2005, and scoping comments were received through November 7, 2005. Reclamation and the Regional Water Board held a joint NEPA/CEQA scoping meeting on October 20, 2005, in Junction City, California. During this meeting, members of the public were asked what issues they felt should be addressed in this EA/DEIR. As the public comment period continued, the lead agencies received letters that helped identify areas of concern. These areas of concern and other oral comments received at the scoping meeting were considered during the preparation of this EA/DEIR. The scoping and public involvement process is also described in Appendix B.

The scoping process determined that the Proposed Action could lead to potentially significant impacts on specific natural resources and on the human environment. Based on the comments received during the scoping process, the following resource elements are addressed in this EA/DEIR.

- land use;
- geology, fluvial geomorphology, and soils;
- water resources;
- water quality;
- fishery resources;
- vegetation, wildlife, and wetlands;
- recreation;
- socioeconomics, population, and housing;
- Tribal trust;
- cultural resources;

- air quality;
- environmental justice;
- aesthetics;
- hazardous materials;
- noise;
- public services and utilities/energy;
- transportation and traffic circulation;
- cumulative impacts; and
- growth-inducing impacts.

Existing Site Conditions

The Proposed Action is located on a reach of the Trinity River beginning approximately 1 mile (at RM 78) below Junction City, a small community in Trinity County, California, and continuing in a downstream direction to RM 73, about a mile upstream of the confluence of the North Fork and mainstem Trinity rivers. The project includes four discrete sites—Conner Creek, Valdor Gulch, Elkhorn, and Pear Tree Gulch—along approximately 3.4 miles of the Trinity River. To facilitate the engineering and environmental compliance efforts, the boundary for each site encompasses lands on either side of the Trinity River, although the width varies with location. The following section provides geographic information for each site.

CONNER CREEK

The Conner Creek site begins at River Mile 77.5 and extends 0.8 mile downstream along the Trinity River. It is found on the *Dedrick, California 7.5-minute* United States Geological Survey (USGS) quadrangle map, Township 34 North, Range 11 West, Sections 1, 35 and 36, MDBM, 040° 45' 15" North latitude by 123° 04' 00" West longitude.

VALDOR GULCH SITE

The Valdor Gulch site begins at River Mile 75.9 and extends 1.3 miles downstream along the Trinity River. It is found on the *Dedrick, California 7.5-minute* USGS quadrangle map, Township 34 North, Range 11 West, Sections 27 and 35, MDBM, 040° 45' 53" North latitude by 123° 05' 35" West longitude.

ELKHORN SITE

The Elkhorn site begins at River Mile 74.4 and extends 0.8 mile downstream along the Trinity River. It is found on the *Dedrick, California 7.5-minute* USGS quadrangle map, Township 34 North, Range 11 West, Sections 27 and 28, MDBM, 040° 45' 53" North latitude by 123° 06' 08" West longitude.

PEAR TREE GULCH SITE

The Pear Tree Gulch site begins at River Mile 73.4 and extends 0.5 mile downstream along the Trinity River. It is found on the *Dedrick, California 7.5-minute* USGS quadrangle map, Township 34 North, Range 11 West, Section 28, MDBM, 040° 45' 57" North latitude by 123° 06' 57" West longitude.

Description of the Proposed Action and Project Alternatives

Initially, 44 potential channel rehabilitation sites and three potential side channel sites between Lewiston Dam and the North Fork Trinity River were identified (FEIS/EIR, U.S. Fish and Wildlife Service et al. 2000). Subsequently, in a detailed review of potential river rehabilitation areas, a total of 104 potential rehabilitation sites were identified. Ultimately, the sites were selected using criteria that identified physical features and processes such as channel morphology, sediment supply, and high-flow hydraulics that would encourage a dynamic alluvial channel. Factors such as property ownership, access to the sites, and engineering and economic feasibility were also considered in the site selection process. Below Hocker Flat, 13 discrete sites were identified during the detailed review. Of these, 10 sites are incorporated into the segments included in the Proposed Action.

In general, the approach to the channel rehabilitation effort is to selectively remove fossilized riparian berms (berms that are anchored by extensive woody vegetation and consolidated sand deposits) that developed after the TRD was completed as a result of the loss of scour associated with peak flows. Along with berm removal, physical alteration of other alluvial features (i.e. floodplains) and removing riparian vegetation at strategic locations would promote the alluvial processes necessary for the restoration and maintenance of alternate bar riverine habitats.

As described in the FEIS, the rehabilitation sites exhibit a variety of conditions that require site-specific designs. The FEIS also recognized that, in many instances, the entire site would not require treatment to facilitate rehabilitation. This is because strategically treating certain areas is expected to result in a dynamic alluvial channel that will promote the formation and maintenance of an alternate bar channel in both treated and untreated areas.

The project identifies 38 discrete activity areas within the boundaries of the four sites (Conner Creek, 8 activity areas; Valdor Gulch, 12 activity areas; Elkhorn, 10 activity areas; and Pear Tree Gulch, 8 activity areas). The type, extent, and level of activity within each area may be different, depending on the alternative. These areas were defined by the interdisciplinary design team to include riverine areas, upland areas, and construction support areas. For each site, riverine areas are labeled with an R preceding the site number (e.g., R-1, R-2); upland areas are labeled with a U preceding the site number (e.g., U-1, U-2); and staging/use areas/roads are included in areas characterized with a C.

PROPOSED ACTION

The Proposed Action would include activities at all four sites. These activities are eventually expected to result in the development of point bars and floodplain habitat that do not presently exist. The response time will be dynamic and subject to external forces once the activities have been completed. Creation of these features would be accomplished through the rescaling of the river channel and floodplain within the riverine rehabilitation areas, although there is an expectation that natural alluvial processes may immediately affect a larger area. This rehabilitation of river function could result in the rapid development of a larger and more complex expanse of river and floodplain habitats. The result of habitat expansion would be increased habitat suitability and availability for salmonids and other native fish and wildlife species. The tires of machinery will not enter the river below the river's edge under the Proposed Action. Some vegetation removal or excavation below the water line (e.g., within 8 feet of the water's edge) will likely be required to ensure efficient removal of established riparian vegetation.

Under the Proposed Action, activities proposed for riverine areas would result in the excavation of approximately 91,500 cubic yards of material. The upland rehabilitation activity areas are large enough to accommodate this amount

of material; however, the contractor will have the option to remove materials from the river right sites at Conner Creek, Valdor Gulch, and Elkhorn. Removal of materials to an off-site location would be accomplished in compliance with federal, state, and local requirements.

The premise of the Proposed Action is that it would use the suite of rehabilitation activities to modify the type and/or character of aquatic, riparian, and upland habitat in a manner that incorporates an understanding of the functional relationships and natural processes of an alluvial river. The modifications proposed are designed to enable the river to reestablish the attributes of an alluvial river in a dynamic fashion over time.

ALTERNATIVE 1

Alternative 1 is identical to the Proposed Action at two of the sites, Valdor Gulch and Pear Tree Gulch. This alternative reflects stakeholder involvement and was developed to reduce significant impacts to private landowners at the Conner Creek and Elkhorn sites.

Activities included in Alternative 1 would provide substantial modification to the alluvial features at all four sites. The type and degree of modification would be reduced at the Conner Creek and Elkhorn sites. Alternative 1 would result in reductions in the area that would be affected and in material that would be excavated from riverine areas. Exclusion of activity in riverine areas at the Conner Creek site represents a reduction of the area and volume that would be excavated of 0.95 acre and 2,600 cubic yards (yards³), respectively. The exclusion of these areas would preserve the existing morphological features and riparian vegetation that enhance the aesthetic values for adjacent landowners. No material would be transported outside of the project area. Similarly, Alternative 1 represents a reduction in the area and volume that would be excavated of 2.61 acres and 8,470 cubic yards at the Elkhorn site.

These activities are expected to enhance site-specific riverine processes and to eventually result in development of point bars and floodplain habitat that do not presently exist. Similar to the Proposed Action, the temporal and spatial changes to the form and function of the Trinity River are subject to variability in the flow regime over several years.

Creation of these features would be accomplished through the rescaling of the river channel (e.g., feathered edges, floodplains, side channels) within the riverine activity areas, although there is an expectation that natural alluvial processes may ultimately affect a larger area over time. This rehabilitation of river function could result in the future development of a larger and more complex expanse of river and floodplain habitats. The result of habitat expansion would be increased habitat suitability and availability for salmonids and other native fish and wildlife species.

The modification of the activities at Conner Creek and Elkhorn would result in a reduction to the total area affected of 3.56 acres and 11,070 yards³. Similarly, the upland activity areas would not be used to place these materials (79,180 yards³ total). Overall, this alternative would result in less earthwork than the Proposed Action.

Affected Environment and Environmental Consequences

The affected environment and the environmental consequences of implementing each project alternative are described in Chapter 3. Each section addresses a specific environmental topic (e.g., Land Use, Fishery Resources), includes a discussion of the affected environment (CEQA existing conditions), environmental consequences (CEQA environmental impacts), methodology, significance criteria (if applicable), and mitigation measures (as required).

The affected environment discussion describing the existing regional and local conditions is used as the environmental baseline for analyzing the significance of potential effects of the Proposed Action and the significance of the effects of project alternatives with respect to each specific resource area. The following subsections summarize the environmental consequences of implementing each project alternative. In the instances where site-specific impacts are relevant, they are summarized. A complete summary of all project impacts and associated mitigation measures are presented at the end of this Executive Summary (Table ES-1) for both action alternatives.

LAND USE

Section 3.2 describes land use from a regional and local perspective. Land use within the Trinity River Basin is greatly influenced by the large amount of public, tribal, and private forestlands, much of which is used for timber production and other natural resource-related uses. The development potential of most of the land in the watershed is restricted by topography, public ownership, Timber Production Zone zoning (which applies to most private land), and by County and tribal planning policies that guide development towards already developed areas and discourage development on resource lands. In general, all parcels within the rehabilitation sites have been subdivided to their fullest extent possible under existing zoning designations; therefore, future rural residential development within the areas identified for rehabilitation is unlikely. Future development is further restricted by the proximity of parcels to the Trinity River; many of these parcels are currently zoned Flood Hazard and Open Space.

The following impacts to land use in the rehabilitation sites were assessed: construction-related disruption of adjacent land uses; disruption of adjacent land uses due to long-term operation of the proposed project; the conversion of vacant land to a new facility; and project consistency with the goals, policies, and objectives of the Trinity County General Plan (County 2001), as well as local community plans, policies, and ordinances.

The No-Action Alternative would not result in land use impacts. Construction of either action alternative (i.e., Proposed Action and Alternative 1) could result in potential nuisance effects to adjacent residences, including limiting access to the river for recreational activities, noise, disruption of access to residences, and short-term traffic disruptions. Access will be maintained throughout the construction period for all adjacent private residences, and Reclamation shall limit the amount of daily construction equipment traffic by staging on the project site at the end of each workday. No significant impacts were identified; therefore no mitigation measures are required.

GEOLOGY, FLUVIAL GEOMORPHOLOGY, AND SOILS

The proposed project was analyzed against known geologic, geomorphic, and soil conditions present within the rehabilitation sites in Section 3.3. Adverse impacts were considered significant if implementation of project alternatives could subject people, structures, or other resources to geologic or seismic hazards; disrupt, eliminate, or otherwise render unusable geologic or soil resources; interfere with mineral activities; or be inconsistent with the 10 Trinity River healthy river attributes identified in the Trinity River Flow Evaluation Final Report (U.S. Fish and Wildlife Service and Hoopa Valley Tribe 1999).

Although the Trinity County area historically has experienced low seismicity, moderate to strong ground shaking could occur following a large earthquake on one of the potentially active faults in the region. However, there would be no construction of permanent structures or facilities under the action alternatives. Therefore, in the event of a significant earthquake, there would be no new exposure of structures and/or people to geologic hazards.

Construction activities associated with either of the action alternatives would result in the disturbance and loosening of soils and would expose them to the elements, which would increase the potential for wind and water erosion, particularly if any soils were left exposed during the later winter and early spring periods of high precipitation. Erosion and sediment control measures will be implemented for both action alternatives. The No-Action Alternative would not adversely affect geology, fluvial geomorphology, or soils. The Proposed Action would not interfere with any ongoing mineral activities within the vicinity of the rehabilitation sites. The Proposed Action is consistent with the 10 Trinity River healthy river attributes.

WATER RESOURCES

Section 3.4 describes the surface water hydrology and groundwater from both regional and local perspectives, as well as site-specific location hydraulics associated with each rehabilitation site. The primary hydrologic concerns identified in the EA/DEIR are changes in base floodwater surface elevation, impacts to groundwater resources, and public safety associated with flooding.

The No-Action Alternative would not affect water resources in the Trinity River basin. However, under the No-Action Alternative, the beneficial effects of the Proposed Action (i.e., increase in suitable, available aquatic habitat) would not be realized.

Under both action alternatives, all excavated materials would be placed outside of the recognized 100-year floodplain. No significant impacts were identified; therefore no mitigation measures are required.

WATER QUALITY

Section 3.5 describes regional and local water quality. Specific water quality concerns in the Trinity River Basin include erosion and sedimentation and subsequent increases in turbidity and suspended solids levels; discharge of wastes, pollutants, and hazardous materials in and around the Trinity River; degradation of Trinity River beneficial uses identified in the *Water Quality Control Plan for the North Coast Region* (Basin Plan) (Regional Water Quality Control Board – North Coast Region 2001). The No-Action Alternative would have no impact on Trinity River water quality.

Construction of the Proposed Action or Alternative 1 could temporarily increase turbidity and total suspended solids in the water column, and could potentially result in a spill of hazardous materials (i.e., oil, grease, gasoline, solvent) into the Trinity River. Construction activities will be managed to minimize potential water quality effects, and appropriate mitigation measures will be implemented to minimize impacts to water quality.

FISHERY RESOURCES

Fishery resources include fish populations, their habitats, and the harvest of those populations. Section 3.6 discusses the existing environment within the Trinity River basin in both a regional and site-specific context, with regard to native anadromous fish and resident native and non-native fish.

The native anadromous salmonid species of interest in the mainstem Trinity River and its tributaries include Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), and steelhead (*Oncorhynchus mykiss irideus*). Of the three species, there are two spawning races of Chinook salmon (spring- and fall-run) and three

spawning races of steelhead (fall-, winter-, and summer-run). Native non-salmonid anadromous species of concern in the Trinity River basin include Pacific lamprey (*Lampetra tridentata*) and green sturgeon (*Acipenser medirostris*), although green sturgeon do not occur as far up river as the rehabilitation sites. Potential impacts to these resources resulting from either action alternative would be localized and temporary. These impacts include effects on potential spawning and rearing habitat for anadromous fishes, including listed coho salmon (federal and California), increased erosion and sedimentation, and permanent and temporary loss of shaded riverine aquatic (SRA) habitat. Finally, construction-related accidental spills of hazardous materials that could adversely affect fishes, including listed coho salmon, could occur under either action alternative.

Under the No-Action Alternative, there would be no effects on fishery resources other than those associated with current ongoing actions. However, under the No-Action Alternative, benefits to aquatic rearing habitat, including the wider flow area and associated reduced backwater elevations, water velocities, and scour depths, would not be realized.

Under the action alternatives, the temporary impacts on rearing habitat are expected to be offset by the permanent beneficial changes to physical rearing habitat associated with implementing the rehabilitation project. These benefits will result from the previously described engineered improvement in river connectivity to, and channel migration through, the flood plain, and from the revegetation of the floodplain with native plant species that will eventually contribute shade and large wood to the river channel. Improved river connectivity to the floodplain during elevated spring time flows is expected to increase the available slow, shallow-water habitat preferred by salmonid fry. This fluvial channel migration through the floodplain may create new shallow point bar habitat preferred by salmonid fry. The channel migration process and engineered side channel habitats will collectively increase the relative abundance of this preferred coho salmon rearing habitat, compared to the existing condition within the project reaches. Ultimately, the collective changes in channel morphology as a result of the Proposed Action and by planned future bank rehabilitation projects throughout the upper Trinity River will improve rearing habitat diversity for all anadromous salmonids (U.S. Fish and Wildlife Service and Hoopa Valley Tribe 1999). Measures to mitigate these potential impacts to a less-than-significant level have been identified and will be fully implemented.

VEGETATION, WILDLIFE, AND WETLANDS

Section 3.7 analyzes the potential vegetation, wildlife, and wetlands impacts resulting from construction and operation of the Proposed Action. The No-Action Alternative would not result in impacts to vegetation, wildlife, or wetlands. The action alternatives have the potential to result in both permanent and temporary impacts to jurisdictional wetland features within the rehabilitation sites. Construction of the Proposed Action would result in the permanent loss of 6.23 acres of riparian wetland and 7.97 acres of riverine habitat, whereas project construction associated with Alternative 1 would result in the permanent loss of 5.99 acres of riparian wetland and 6.96 acres of riverine habitat, slightly less than the permanent impacts for the Proposed Action. Construction access routes and channel improvements associated with the Proposed Action would temporarily disturb 0.01 acre of riparian wetland habitat. Construction access routes and staging areas would also temporarily disturb 0.01 acre of riparian wetland habitat. The present Trinity River channel has become encroached (up to 300 percent) with riparian vegetation that is homogenous in nature. The Proposed Action would ultimately create conditions for a diverse and dynamic riparian community.

Construction of the project could result in impacts on the following wildlife species with the potential to occur at the rehabilitation sites: Trinity bristle snail, little willow flycatcher, foothill yellow-legged frog, northwestern pond turtle,

nesting yellow warbler and yellow-breasted chat, and nesting raptors (i.e., northern goshawk, osprey, Cooper's hawk, and sharp-shinned hawk). In addition, seven BLM Sensitive wildlife species could potentially occur in or adjacent to the rehabilitation sites: foothill yellow-legged frog, Pacific fisher, small-footed myotis bat, long-eared myotis bat, pallid bat, Townsend's western big-eared bat, and Yuma myotis bat. Measures to mitigate impacts to each of these species to less-than-significant levels will be fully implemented.

RECREATION

Recreation-related impacts were assessed by identifying recreational resources (parks and recreation facilities) in or near the rehabilitation sites, and qualitatively determining whether the construction, operation, and/or maintenance of the Proposed Action would have any effect on these resources (Section 3.8). In addition to evaluating the effects on recreation opportunities, uses, and benefits, the project was evaluated for consistency with Trinity County recreation objectives and both federal and state Wild and Scenic River (WSRA) designations. The WSRA Section 7 Determination for this Project is included as Appendix D.

The No-Action Alternative would have no recreation impacts; however, the potential benefits to long-term recreational uses (fishing) would not be realized. Implementing the Proposed Action would increase turbidity and total suspended solids during construction activities. Although no in-river construction will occur, some bank sloughing may occur during these activities, resulting in some degree of turbidity within and downstream of the project boundary. Fine sediments may be suspended in the river for several hours following excavation activities.. Alternative 1 would result in less disturbed area and substantially less volume in terms of material excavated within the river channel. Therefore, potential increases in turbidity levels in the Trinity River associated with construction of Alternative 1 would be less than under the Proposed Action. These activities will be intermittent and are not expected to be significant. Mitigation measures during and after project activities will ensure that turbidity increases associated with the action alternatives shall not exceed the Regional Water Board's water quality objectives for turbidity in the Trinity River basin.

SOCIOECONOMICS, POPULATION, AND HOUSING

As discussed in Section 3.9, Trinity County was determined to be the area of potential effect due to the Proposed Action's overall size and its location. Potential effects associated with employment and income, population growth, displacement, and community disruption, as well as any potential plan conflicts, were qualitatively analyzed. For NEPA purposes, a threshold of 10 percent was used to evaluate employment and income changes, because changes exceeding 10 percent may have a regional effect.

The No-Action Alternative would not affect socioeconomics, population, or housing in Trinity County. Project implementation would generate temporary construction-related employment in Trinity County. The number of design, construction, and clerical positions required to complete the Proposed Action is undetermined, but it is expected to add a small percentage to existing local jobs. However, the duration of employment would be dependent on the length of the construction period (anticipated to be 6 to 9 months). In addition, the Proposed Action would provide direct local employment opportunities only if workers are hired from the local labor force.

TRIBAL TRUST

Section 3.10 discusses Tribal Trust Assets as they pertain to the Proposed Action. The need to restore and maintain the natural production of anadromous fish in the mainstem Trinity River originates partly from the federal government's trust responsibility to protect the fishery resources of the region's Indian tribes. The Proposed Action could potentially affect anadromous fish, non-anadromous fish, water, wildlife, vegetation, and overall riverine health. It is not anticipated that these impacts will affect the sociocultures and economies of the tribes. The No-Action Alternative would not impact Tribal Trust Assets. Construction-related impacts to Tribal Trust Assets are expected to be short-term and outweighed by the overall benefits to these Tribal Trust Assets through implementation of the Trinity River Restoration Program.

CULTURAL RESOURCES

Section 3.11 focuses on the evaluation of cultural resources on the Trinity River basin. Activities proposed to occur at the rehabilitation sites were evaluated to determine how cultural resources within the Trinity River basin might be affected. Impacts on archaeological resources are considered significant if implementation of the Proposed Action would potentially disturb unique archaeological resources.

Each rehabilitation site was surveyed for the presence of cultural resources that would be eligible for listing on the National Register of Historic Places. Based on the results of this survey, no sites eligible for listing were discovered. However, buried archaeological resources that have not been previously recorded may be uncovered during construction, particularly during ground-disturbing activities. Prior to initiation of construction or ground-disturbing activities, all construction workers shall be alerted to the possibility of buried cultural remains. Upon discovery of buried cultural materials or human remains, work within 50 feet of the find shall be halted and the proper agency contacted.

AIR QUALITY

Section 3.12 evaluates the air quality effects associated with construction and operation of the Proposed Action. The air quality analysis was conducted qualitatively by assessing anticipated construction-related impacts of the project and comparing them to existing and anticipated future air quality conditions. The results are compared to standards provided by the North Coast Unified Air Quality Management District (NCUAQMD).

Implementation of the No-Action Alternative would not adversely impact air quality. Construction associated with either of the action alternatives would require the use of construction equipment that would temporarily contribute to air pollution in the Trinity River basin area in the form of ozone precursors and particulate matter (PM₁₀). Exhaust emissions given off by heavy equipment during construction may contribute to ozone (O₃) non-attainment levels. Dust emissions would primarily be associated with removal of vegetation, excavation and disposal of earthen materials, and equipment travel on unpaved road surfaces. Reclamation will require the contractor to implement a dust control program to limit fugitive dust and PM₁₀ emissions. Project construction activities would also generate emissions from diesel- and gasoline-powered equipment and vehicles. Since the Proposed Action would take place over a 6- to 9-month period, emissions from the construction equipment are of concern to the NCUAQMD. Diesel particulate is an identified Hazardous Air Pollutant (HAP) and Toxic Air Contaminant (TAC), emissions of which should be minimized. In this regard, the length of the construction (approximately 6 to 9 months) will require the

contractor to comply with NCUAQMD *Rule 104 (3.0) Particulate Matter* or use portable internal combustion engines registered and certified under the state portable equipment regulation.

ENVIRONMENTAL JUSTICE

Section 3.13 discusses environmental justice as it pertains to the Proposed Action. Federal agencies are required to identify and address disproportionately high and adverse human health or environmental effects of their actions on minorities and low-income populations and communities, as well as the equity of the distribution of the benefits and risks of their decisions. No racial or ethnic group is disproportionately associated with the project rehabilitation sites. There is no evidence to suggest that the Proposed Action would cause a disproportionately high, adverse human health or environmental effect on minority and low-income populations, compared to other residents in the general vicinity of the Proposed Action or elsewhere in Trinity County.

AESTHETICS

Section 3.14 addresses aesthetic issues related to construction and operation of the Proposed Action, including conformance with the federal WSRA. The analysis in this section is based in part on Appendix G of the *CEQA Guidelines*, which is a sample Initial Study (IS) Checklist that includes a number of questions relating to potential aesthetic effects, and in part on professional judgment. This is a qualitative assessment that evaluates the rehabilitation project in relation to the local aesthetic context. BLM's WSRA Section 7 Determination for the Proposed Action is included as Appendix D.

Under the No-Action Alternative, no impacts to aesthetics or visual resources would occur. The No-Action Alternative would not be inconsistent with the federal and/or state WSRA requirements. Under either of the action alternatives, removal of upland and riparian vegetation could result in short-term decreased visual quality. However, revegetation of native species would result in more favorable vegetation recruitment and survival, which would increase the aesthetic quality of these areas in the long term. Excavation of material in upland areas would require a repository for excavated material (i.e., sand, gravel, and cobble). Excavated material would be placed in locations above the 100-year floodplain elevation and would be deposited in the line and form of existing tailing piles.

The Proposed Action and Alternative 1 have both been designed to be not only functional (e.g., enhance fisheries, restore river sinuosity), but to complement the visual resources associated with each site. Overall, these alternatives incorporate the diversity of landscapes and vegetation types into the character of the activity areas. For example, under either action alternative, the existing tailings pile in the Conner Creek site would be used to dispose of material excavated from riverine areas. Design criteria stipulated that this material be placed in a manner that blends the material into the contours of the existing pile while not changing the nominal heights of the pile. Retention of existing topographic features would significantly lessen the degree of visual impacts.

HAZARDOUS MATERIALS

Section 3.15 provides an evaluation of the types of hazardous materials that may currently be present within the study area established for the Proposed Action, as well as potential hazardous materials that may be introduced to the area as a result of implementing the Proposed Action. Reclamation staff, in consultation with the land owners and managers, determined that there were no known hazardous substances within or adjacent to each of the four rehabilitation sites.

The No-Action Alternative would not uncover or introduce hazardous materials, adversely affect public health or safety, or inhibit evacuations in the event of an emergency. No site-specific significant impacts were identified for either action alternative; therefore, no mitigation measures are required.

NOISE

The regional and local noise environment is described in Section 3.16. Noise is not considered to be a problem in Trinity County. Sources of noise in Trinity County include highway traffic, sawmills, airports (light planes), and other miscellaneous residential, commercial, and industrial sources. A community noise survey conducted in 2002 (Brown-Buntin 2002) indicates that existing noise levels in the general vicinity (Junction City Elementary School) are typical of small communities and rural areas. Since the Proposed Action would not result in a noticeable increase in traffic volume, the focus of this impact analysis was construction noise.

No adverse noise impacts would occur as a result of the No-Action Alternative. Construction activities associated with the action alternatives would generate noise levels ranging from 70 to 90 dBA at a distance of 50 feet. Construction activities would be temporary in nature, typically occurring during normal working hours for 3 to 6 weeks at each site. There would be no permanent noise impacts as a result of project implementation. Construction impacts would be similar for both action alternatives; the primary difference is that under Alternative 1, there would be less excavation activities at the Conner Creek and Elkhorn sites and less time would therefore be required to rehabilitate these sites. Measures to reduce the impacts associated with construction noise will be included in the contract requirements prepared by Reclamation.

PUBLIC SERVICES AND UTILITIES / ENERGY

Section 3.17 evaluates potential impacts from both the construction and long-term operation of the Proposed Action on the following public services and facilities: water supply and distribution; wastewater collection and treatment; law enforcement; solid waste collection and disposal; fire protection; telephone service, electric service, and schools. Additionally, the section addresses potential impacts to energy resources due to substantial or wasteful use of energy resources during project implementation.

The No-Action Alternative would not affect public services or utilities. Project implementation would result in the generation of solid waste associated with the removal of substantial amounts of vegetation and other construction-related waste (e.g., trash from workers, cans, buckets) which will be disposed of at approved sites. Although construction activities associated with the Proposed Action and Alternative 1 would be confined to the rehabilitation sites described in Chapter 2, access for mobilization and demobilization of heavy equipment may require traffic control on Dutch Creek and Red Hill Roads as well as Wintu Pass Road; the need for such traffic control would be minimal. Any potential road/bridge closures would be implemented during non-peak hours to avoid traffic circulation impacts.

TRANSPORTATION / TRAFFIC CIRCULATION

Section 3.18 addresses transportation and traffic issues related to construction and operation of the Proposed Action. Traffic impacts were qualitatively assessed based on several components including the construction procedures and equipment that will be utilized, local transportation policies, site review of existing conditions, and the level of traffic

on the key roadways. The No-Action Alternative would affect traffic flow in the general vicinity of the rehabilitation sites.

Project construction activities associated with the Proposed Action or Alternative 1 would be managed to ensure that SR 299, Dutch Creek Road, Red Hill Road, Chimariko Road, and Wintu Pass Way remain open to through traffic, although traffic control may be necessary during the mobilization and demobilization of heavy equipment. No road closures are anticipated; therefore, passage for emergency vehicles would not be restricted.

There are no residences within the site boundaries of any of the four rehabilitation sites. However, access to adjacent lands at the Valdor Gulch and Elkhorn sites may be restricted if traffic control measures are being used. This would constitute a significant impact. Reclamation will include contract requirements to ensure that traffic impacts will be minimal by staging the construction equipment on-site. A traffic control plan will be developed with the responsible agencies prior to implementation of the Proposed Action. Construction bid documents will require that access be maintained throughout the construction period for all private residences adjacent to the project site boundaries and access roads.

Under the action alternatives, construction-related traffic that would be added to area roads would consist of heavy trucks. The use of heavy construction equipment to move material to and from the Valdor Gulch and Elkhorn rehabilitation sites could affect local road conditions on the designated haul routes by increasing the rate of road wear. Chimariko Road, Wintu Pass Way, Dutch Creek Road, and Red Hill Road are the primary roadways that would be subjected to wear-and-tear by construction vehicles and equipment accessing the Valdor Gulch and Elkhorn rehabilitation sites. Mitigation measures will be implemented to reduce impacts to these rural roads.

Other Impacts and Commitments

CUMULATIVE IMPACTS

Cumulative impacts are the impacts on the environment that result from the incremental impacts of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or entity undertakes such other actions. State *CEQA Guidelines* and Council on Environmental Quality (CEQ) NEPA regulations require that the cumulative impacts of a proposed project be addressed in an environmental document such as this EA/DEIR when the cumulative impacts are expected to be significant (14 CCR 15130[a], 40CFR 1508.25[a][2]). When a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," the lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

The analysis of cumulative impacts in Chapter 4 addresses cumulative impacts of the Proposed Action, as well as the No-Action Alternative and Alternative 1. It is recognized that the Proposed Action may be implemented in an interactive manner with other projects. In addition, these other projects may affect the impacts of the Proposed Action.

The cumulative impacts section identifies related projects through the list approach, based on input from the lead and cooperating agencies. The geographic scope of the area examined for cumulative effects is the Trinity River corridor

between Lewiston Dam and the confluence of the North Fork Trinity River (Helena, CA). The following projects were considered in this section:

- Fish Habitat Management
- Trinity River Mainstem Fishery Restoration Project FEIS/EIR
- California Coastal Salmonid Restoration Program/Five-Counties Salmonid Conservation Program
- Clean Water Action Section 303(d) Total Maximum Daily Load Requirements

No adverse potential cumulative impacts are anticipated to result from the No-Action Alternative, Proposed Action, and Alternative 1. In short, the action alternatives as mitigated will benefit, rather than adversely affect, geology, fluvial geomorphology, and soils, water quality, fishery resources, vegetation, wildlife, and wetlands, recreation, tribal trust assets, and traffic/transportation. Thus, far from creating adverse impacts that will compound or exacerbate the adverse impacts of other projects, the action alternatives will contribute to long-term environmental benefits.

GROWTH-INDUCING IMPACTS

This section evaluates the potential for growth that could be induced by implementation of the Proposed Action and assesses the level of significance of any expected growth inducement. The potential for growth inducement is limited by the nature and location of the rehabilitation activities described in Chapter 2.

River rehabilitation projects are typically implemented in specific areas during a finite time period. Although the TRRP was established to implement the ROD, thereby increasing the fishery resources of the Trinity River, growth-inducing impacts within Trinity County were not anticipated. Section 15126 (g) of the state *CEQA Guidelines* provides definitions and guidance in determining the growth-inducing impacts of a Proposed Action.

Specifically, a project is defined to be growth-inducing if it would

- accelerate the rate of planned growth,
- remove obstacles to population growth,
- tax existing community service facilities, or
- foster, promote, or sustain economic or population growth

Growth itself is not assumed beneficial, detrimental, or insignificant to the environment. If a project is determined to be growth-inducing, an evaluation is made to determine if significant impacts on the environment would result from that growth.

Growth was evaluated in terms of Trinity County growth policies; general information on population demographics; vacant land and projected buildout; Trinity County's constraints to development; and proposed land uses.

There would be no significant growth-inducing impacts as a result of the action alternatives. In general, all parcels associated with the Proposed Action have been subdivided to the fullest extent possible under existing zoning designations.

Consultation and Coordination

Chapter 5 summarizes the scoping process, consultation, coordination, and applicable laws, policies, and regulations used to develop the EA/DEIR. The co-lead agencies for the EA/DEIR are Reclamation, as defined by NEPA, and the Regional Water Board, as defined by CEQA. The primary cooperating (NEPA) and responsible and trustee (CEQA) agencies include:

- U.S. Department of Agriculture, Forest Service
- U.S. Department of Interior, Bureau of Land Management
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- NOAA Fisheries
- California Department of Fish and Game
- Trinity County

A summary of the public scoping process that has been completed to date and a list of agencies, groups, and individuals providing comments and/or comment letters on the NOP that was circulated in October 1, 2005 are listed in Appendix B. In addition, a list of agencies and organizations consulted during the preparation of the environmental document; a list of the related laws, rules, regulations, and federal executive orders that were considered in the preparation of this EA/DEIR; and a discussion of how this EA/DEIR is consistent with the federal (NEPA) and state (CEQA) statutes are included in Chapter 5. Finally, Chapter 5 includes a summary of the various discretionary approval processes that have been completed or are still being coordinated concurrent with the NEPA/CEQA environmental review process and a summary of governing laws for which a consistency determination will need to be made.

Environmental Commitments and Mitigation Measures

Tables ES-1 summarizes potential project impacts and mitigation measures prescribed for potentially significant impacts for each environmental issue area (e.g., Land Use, Water Quality, Fishery Resources).

Table ES-1 Summary of Impacts and Mitigation Measures Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78		
	Proposed Action	Alternative 1
3.2 Land Use		
Impact 3.2-1	Implementation of the project could disrupt existing land uses adjacent to the proposed project site.	
Mitigation Measures	Since no significant impact was identified, no mitigation is required.	Since no significant impact was identified, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.2-2	Implementation of the project may be inconsistent with the goals, policies, and objectives of the Trinity County General Plan, as well as local community plans, policies, and ordinances.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.2-3	Implementation of the project may affect the availability of a locally important mineral resource recovery site.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
3.3 Geology, Fluvial Geomorphology, and Soils		
Impact 3.3-1	Implementation of the project could result in the exposure of structures and people to geologic hazards, including ground shaking and liquefaction.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.3-2	Construction activities associated with the project could potentially result in increased erosion and short-term sedimentation of the Trinity River.	
Mitigation Measures	2a: Reclamation or its contractors shall implement the following measures during construction activities: <ul style="list-style-type: none"> ▪ Areas where ground disturbance would occur shall be identified in 	2a: Reclamation or its contractors shall implement the following measures during construction activities: <ul style="list-style-type: none"> ▪ Areas where ground disturbance would occur shall be identified in advance of

**Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78**

	Proposed Action	Alternative 1
	<p>advance of construction and limited to only those areas that have been approved by Reclamation.</p> <ul style="list-style-type: none"> ▪ All construction vehicular traffic shall be confined to the designated access routes and staging areas. ▪ Disturbance shall be limited to the minimum necessary to complete all rehabilitation activities. ▪ All supervisory construction personnel shall be informed of environmental concerns, permit conditions, and final project specifications. <p>3b: Reclamation or its contractors shall prepare and implement an erosion and sedimentation control plan (Storm Water Pollution Prevention Plan [SWPPP]) prior to the start of construction. Measures for erosion control will be prioritized based on proximity to the river. The following measures shall be used as a guide to develop this plan:</p> <ul style="list-style-type: none"> ▪ Restore disturbed areas to pre-construction contours to the fullest extent feasible. ▪ Salvage, store, and use the highest quality soil for revegetation. ▪ Discourage noxious weed competition and control noxious weeds. ▪ Clear or remove roots from steep slopes immediately prior to scheduled construction. ▪ Leave drainage gaps in topsoil and spoil piles to accommodate surface water runoff. ▪ To the fullest extent possible, cease excavation activities during significantly wet or windy weather. ▪ Use bales and/or silt fencing to intercept sediment as appropriate. ▪ Before seeding disturbed soils, work the topsoil to reduce compaction caused by construction vehicle traffic. ▪ Rip feathered edges (and floodplain surfaces where appropriate) to approximately 18 inches depth. This furrowing of the river's edge will remove plant roots to allow mobilization of the bed, but will also intercept sediment before it reaches the waterway. 	<p>construction and limited to only those areas that have been approved by Reclamation.</p> <ul style="list-style-type: none"> ▪ All construction vehicular traffic shall be confined to the designated access routes and staging areas. ▪ Disturbance shall be limited to the minimum necessary to complete all rehabilitation activities. ▪ All supervisory construction personnel shall be informed of environmental concerns, permit conditions, and final project specifications. <p>3b: Reclamation or its contractors shall prepare and implement an erosion and sedimentation control plan (Storm Water Pollution Prevention Plan [SWPPP]) prior to the start of construction. Measures for erosion control will be prioritized based on proximity to the river. The following measures shall be used as a guide to develop this plan:</p> <ul style="list-style-type: none"> ▪ Restore disturbed areas to pre-construction contours to the fullest extent feasible. ▪ Salvage, store, and use the highest quality soil for revegetation. ▪ Discourage noxious weed competition and control noxious weeds. ▪ Clear or remove roots from steep slopes immediately prior to scheduled construction. ▪ Leave drainage gaps in topsoil and spoil piles to accommodate surface water runoff. ▪ To the fullest extent possible, cease excavation activities during significantly wet or windy weather. ▪ Use bales and/or silt fencing to intercept sediment as appropriate. ▪ Before seeding disturbed soils, work the topsoil to reduce compaction caused by construction vehicle traffic. ▪ Rip feathered edges (and floodplain surfaces where appropriate) to approximately 18 inches depth. This furrowing of the river's edge will remove plant roots to allow mobilization of the bed, but will also intercept sediment before it reaches the waterway.

Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
	<ul style="list-style-type: none"> ▪ Spoil sites shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion. <p>Sediment control measures shall be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until river levels rise and inundate the floodplain. If work activities take place during the rainy season, erosion control structures must be in place and operational at the end of each construction day.</p>	<ul style="list-style-type: none"> ▪ Spoil sites shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion. <p>Sediment control measures shall be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until river levels rise and inundate the floodplain. If work activities take place during the rainy season, erosion control structures must be in place and operational at the end of each construction day.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.3-3	Implementation of the project would interfere with existing, proposed, or potential development of mineral resources.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
3.4 Water Resources		
Impact 3.4-1	Implementation of the project could result in a permanent increase in base floodwater surface elevation.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	Less than significant	Less than significant
Impact 3.4-2	Implementation of the project could result in permanent decline in groundwater elevations, or permanent changes in groundwater quality.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.4-3	Implementation of the project may expose people or structures to a significant risk of injury, death or loss involving flooding.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.

**Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78**

	Proposed Action	Alternative 1
	required.	
Level of Significance after Mitigation	N/A	N/A
3.5 Water Quality		
Impact 3.5-1	Construction of the project could result in short-term temporary increases in turbidity and total suspended solids levels during construction.	
Mitigation Measures	<p>1a: Turbidity increases associated with activities shall not exceed the water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is summarized below.</p> <ul style="list-style-type: none"> ▪ Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. <p>1b: To ensure that turbidity levels do not exceed the threshold listed above during river's edge project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge construction activities. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed. Monitoring frequency shall be a minimum of every two hours during periods of increased turbidity.</p> <p>1c: Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project including silt fences, sediment filters, dewatering activities, and routine monitoring to verify effectiveness. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until vegetation re-growth occurs. All BMPs and sediment and erosion control devices will be inspected daily during the construction period to ensure that the devices are properly functioning. Excavated and stored</p>	<p>1a: Turbidity increases associated with activities shall not exceed the water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is summarized below.</p> <ul style="list-style-type: none"> ▪ Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. <p>1b: To ensure that turbidity levels do not exceed the threshold listed above during river's edge project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge construction activities. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed. Monitoring frequency shall be a minimum of every two hours during periods of increased turbidity.</p> <p>1c: Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project including silt fences, sediment filters, dewatering activities, and routine monitoring to verify effectiveness. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until vegetation re-growth occurs. All BMPs and sediment and erosion control devices will be inspected daily during the construction period to ensure that the devices are properly functioning. Excavated and stored materials will be kept in upland sites with erosion control properly</p>

Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
	materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.	installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.5-2	Construction of the project could result in short-term temporary increases in turbidity and total suspended solids levels following construction.	
Mitigation Measures	<p>2a: Turbidity increases following project construction activities shall not exceed the water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is summarized below.</p> <ul style="list-style-type: none"> ▪ Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. <p>2b: To ensure that turbidity levels do not exceed the threshold listed above during river's edge project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge construction activities. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed. Monitoring frequency shall be a minimum of every 2 hours during periods of increased turbidity.</p> <p>2c: Reclamation or its contractor shall prepare and implement a SWPPP that includes silt fences, sediment filters, dewatering activities, and routine monitoring to verify effectiveness. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until vegetation re-growth occurs. All sediment containment devices and erosion control devices will be</p>	<p>2a: Turbidity increases following project construction activities shall not exceed the water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is summarized below.</p> <ul style="list-style-type: none"> ▪ Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. <p>2b: To ensure that turbidity levels do not exceed the threshold listed above during river's edge project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge construction activities. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed. Monitoring frequency shall be a minimum of every 2 hours during periods of increased turbidity.</p> <p>2c: Reclamation or its contractor shall prepare and implement a SWPPP that includes silt fences, sediment filters, dewatering activities, and routine monitoring to verify effectiveness. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until vegetation re-growth occurs. All sediment containment devices and erosion control devices will be inspected daily during the construction period to ensure that the devices are</p>

**Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78**

	Proposed Action	Alternative 1
	<p>inspected daily during the construction period to ensure that the devices are functioning properly. Any erosion control devices found to be nonfunctional must be repaired or replaced following their discovery or by the end of the work day if rain is imminent or if the National Weather Service has forecast a greater than 50 percent possibility of rain within the following 24 hours. In those cases where, for safety reasons, repairs cannot be made immediately, they should be completed as soon as the work can safely be performed. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.</p>	<p>functioning properly. Any erosion control devices found to be nonfunctional must be repaired or replaced following their discovery or by the end of the work day if rain is imminent or if the National Weather Service has forecast a greater than 50 percent possibility of rain within the following 24 hours. In those cases where, for safety reasons, repairs cannot be made immediately, they should be completed as soon as the work can safely be performed. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.5-3	Construction of the project could cause contamination of the Trinity River from hazardous materials spills.	
Mitigation Measures	<p>3a: Reclamation shall require that the contractor prepare and implement a spill prevention and containment plan in accordance with applicable federal and state requirements.</p> <p>3b: Reclamation shall include in the construction contract documents a requirement that any construction equipment that would come in contact with the Trinity River will need to be inspected daily for leaks prior to entering the flowing channel. External oil, grease, and mud will be removed from equipment using steam cleaning. Untreated wash and rinse water must be adequately treated prior to discharge if that is the desired disposal option.</p> <p>3c: Reclamation shall include in the construction contract documents a requirement that hazardous materials, including fuels, oils, and solvents, not be stored or transferred within 150 feet of the active Trinity River channel. Areas for fuel storage, refueling, and servicing will be located at least 150 feet from the active river channel. In addition, the construction contractor shall be responsible for maintaining spill containment booms</p>	<p>3a: Reclamation shall require that the contractor prepare and implement a spill prevention and containment plan in accordance with applicable federal and state requirements.</p> <p>3b: Reclamation shall include in the construction contract documents a requirement that any construction equipment that would come in contact with the Trinity River will need to be inspected daily for leaks prior to entering the flowing channel. External oil, grease, and mud will be removed from equipment using steam cleaning. Untreated wash and rinse water must be adequately treated prior to discharge if that is the desired disposal option.</p> <p>3c: Reclamation shall include in the construction contract documents a requirement that hazardous materials, including fuels, oils, and solvents, not be stored or transferred within 150 feet of the active Trinity River channel. Areas for fuel storage, refueling, and servicing will be located at least 150 feet from the active river channel. In addition, the construction contractor shall be responsible for maintaining spill containment booms onsite</p>

Table ES-1		
Summary of Impacts and Mitigation Measures		
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78		
	Proposed Action	Alternative 1
	onsite at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks will maintain a spill containment boom at all times.	at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks will maintain a spill containment boom at all times.
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.5-4	Construction of the project could result in increased stormwater runoff and subsequent potential for erosion.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.5-5	Construction and maintenance of the project could result in the degradation of Trinity River beneficial uses identified in the Basin Plan.	
Mitigation Measures	The significance of sediment, settleable materials, suspended materials, and turbidity impacts, as well as recommended mitigation measures are addressed under Impacts 3.5.1 and 3.5.2. The significance of and mitigation for chemical constituents and toxicity impacts are addressed under Impact 3.5.3.	The significance of sediment, settleable materials, suspended materials, and turbidity impacts, as well as recommended mitigation measures are addressed under Impacts 3.5.1 and 3.5.2. The significance of and mitigation for chemical constituents and toxicity impacts are addressed under Impact 3.5.3.
Level of Significance after Mitigation	Less than Significant	Less than Significant
3.6 Fishery Resources		
Impact 3.6-1	Implementation of the project could result in effects on potential spawning and rearing habitat for anadromous fishes, including federally listed coho salmon.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.6-2	Implementation of the project could result in increased erosion and sedimentation levels that could adversely affect fishes, including federally listed coho salmon.	
Mitigation Measures	2a: Turbidity increases associated with project construction activities shall not exceed the Regional Water Board water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is	2a: Turbidity increases associated with project construction activities shall not exceed the Regional Water Board water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is

**Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78**

	Proposed Action	Alternative 1
	<p>summarized below.</p> <p>Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits.</p> <p>2b: To ensure that turbidity levels do not exceed the threshold listed above during project construction activities at the river's edge, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge construction activities. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed. Monitoring frequency shall be a minimum of every 2 hours during periods of increased turbidity.</p> <p>2c: Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project. Ripping of all riparian areas is expected to stop delivery of storm water to the river, however, BMPs including silt fences, sediment filters, dewatering activities, and routine monitoring to verify effectiveness, may be necessary. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until construction ends. All sediment containment devices and erosion control devices will be inspected daily during the construction period to ensure that the devices are functioning properly. Any erosion control devices found to be nonfunctional must be repaired or replaced following their discovery or by the end of the work day if rain is imminent or if a greater than 50 percent possibility of rain has been forecast within the following 24 hours by the National Weather Service. In those cases where, for safety reasons, repairs cannot be made immediately, they should be completed as soon as the work can safely be performed. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control</p>	<p>summarized below.</p> <p>Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits.</p> <p>2b: To ensure that turbidity levels do not exceed the threshold listed above during project construction activities at the river's edge, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge construction activities. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed. Monitoring frequency shall be a minimum of every 2 hours during periods of increased turbidity.</p> <p>2c: Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project. Ripping of all riparian areas is expected to stop delivery of storm water to the river, however, BMPs including silt fences, sediment filters, dewatering activities, and routine monitoring to verify effectiveness, may be necessary. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until construction ends. All sediment containment devices and erosion control devices will be inspected daily during the construction period to ensure that the devices are functioning properly. Any erosion control devices found to be nonfunctional must be repaired or replaced following their discovery or by the end of the work day if rain is imminent or if a greater than 50 percent possibility of rain has been forecast within the following 24 hours by the National Weather Service. In those cases where, for safety reasons, repairs cannot be made immediately, they should be completed as soon as the work can safely be performed. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling</p>

Table ES-1		
Summary of Impacts and Mitigation Measures		
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78		
	Proposed Action	Alternative 1
	standards will be required during stockpiling of materials.	of materials.
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.6-3	Construction activities associated with the project could potentially result in the accidental spill of hazardous materials that could adversely affect fishes, including federally listed coho salmon.	
Mitigation Measures	<p>Construction specifications shall include the following measures to reduce potential impacts associated with accidental spills of pollutants (fuel, oil, grease, etc.) to vegetation and aquatic habitat resources within the project boundaries:</p> <p>3a: Equipment and materials shall be stored away from wetland and surface water features.</p> <p>3b: Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 150 feet away from the Trinity River.</p> <p>3c: The contractor will develop and implement site-specific best management practices (BMPs), a water pollution control plan, and emergency spill control plan. The contractor will be responsible for immediate containment and removal of any toxins released.</p> <p>Section 3.5 and Section 3.15 provide additional details on mitigation measures developed for water quality standards, hazards, and hazardous materials. The responsible agencies (i.e., Regional Water Board) will be involved in the development and approval of these plans and practices.</p>	<p>Construction specifications shall include the following measures to reduce potential impacts associated with accidental spills of pollutants (fuel, oil, grease, etc.) to vegetation and aquatic habitat resources within the project boundaries:</p> <p>3a: Equipment and materials shall be stored away from wetland and surface water features.</p> <p>3b: Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 150 feet away from the Trinity River.</p> <p>3c: The contractor will develop and implement site-specific best management practices (BMPs), a water pollution control plan, and emergency spill control plan. The contractor will be responsible for immediate containment and removal of any toxins released.</p> <p>Section 3.5 and Section 3.15 provide additional details on mitigation measures developed for water quality standards, hazards, and hazardous materials. The responsible agencies (i.e., Regional Water Board) will be involved in the development and approval of these plans and practices.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.6-4	Construction activities associated with the project could result in the mortality of rearing fishes, including federally listed coho salmon..	
Mitigation Measures	<p>4a: To avoid or minimize potential injury and mortality of fish during excavation (berm removal) on the river banks, equipment shall be operated slowly and deliberately to alert and scare adult and juvenile salmonids away from the work area.</p> <p>4b: Monitoring of the rehabilitated</p>	<p>4a: To avoid or minimize potential injury and mortality of fish during excavation (berm removal) on the river banks, equipment shall be operated slowly and deliberately to alert and scare adult and juvenile salmonids away from the work area.</p> <p>4b: Monitoring of the rehabilitated</p>

**Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78**

	Proposed Action	Alternative 1
	floodplain sites for salmon fry stranding shall be performed by a qualified fishery biologist immediately after recession of floodflow events designated as a 1.5- year or less frequent event (i.e., $Q \geq 6,600$ cfs) for a period of 3 years following construction. Such fry stranding surveys shall be performed during the months of January through May. If stranding is observed, Reclamation will take appropriate measures to modify floodplain topography to reduce the likelihood of future occurrences of fry stranding.	floodplain sites for salmon fry stranding shall be performed by a qualified fishery biologist immediately after recession of floodflow events designated as a 1.5- year or less frequent event (i.e., $Q \geq 6,600$ cfs) for a period of 3 years following construction. Such fry stranding surveys shall be performed during the months of January through May. If stranding is observed, Reclamation will take appropriate measures to modify floodplain topography to reduce the likelihood of future occurrences of fry stranding.
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.6-5	Implementation of the project would result in the permanent and temporary loss of shaded riverine aquatic habitat for anadromous salmonids.	
Mitigation Measures	<p>To maintain overall SRA habitat values within the project reach, the Proposed Action would be designed to minimize losses of riparian vegetation adjacent to the Trinity River channel, except where necessary to re-activate river access to the floodplain. Boundary markers shall be installed along all riparian areas outside of delineated rehabilitation areas. These markers will stop construction access so that impacts to riparian vegetation are minimized. To compensate for loss of riparian vegetation within project boundaries, Reclamation shall implement the following measures:</p> <p>5a: Mitigation for riparian plant removal will be based on the actual acreage of riparian vegetation coverage affected by the Proposed Action/Alternative 1 rather than the specific numbers of plants. This measure will support the TRRP objective of removing the homogeneous plant community and replacing it with a diverse assemblage of riparian vegetation.</p> <p>5b: Reclamation shall develop and implement a revegetation plan for impacts to riparian habitat that occur during project construction. This plan will identify planting mixes, planting procedures, and monitoring requirements. Planted species will include riparian species native to the area that would resist invasion by noxious plant species. The revegetation plan will identify appropriate mitigation for impacts to SRA habitat, describe planting</p>	<p>To maintain overall SRA habitat values within the project reach, the Proposed Action would be designed to minimize losses of riparian vegetation adjacent to the Trinity River channel, except where necessary to re-activate river access to the floodplain. Boundary markers shall be installed along all riparian areas outside of delineated rehabilitation areas. These markers will stop construction access so that impacts to riparian vegetation are minimized. To compensate for loss of riparian vegetation within project boundaries, Reclamation shall implement the following measures:</p> <p>5a: Mitigation for riparian plant removal will be based on the actual acreage of riparian vegetation coverage affected by the Proposed Action/Alternative 1 rather than the specific numbers of plants. This measure will support the TRRP objective of removing the homogeneous plant community and replacing it with a diverse assemblage of riparian vegetation.</p> <p>5b: Reclamation shall develop and implement a revegetation plan for impacts to riparian habitat that occur during project construction. This plan will identify planting mixes, planting procedures, and monitoring requirements. Planted species will include riparian species native to the area that would resist invasion by noxious plant species. The revegetation plan will identify appropriate mitigation for impacts to SRA habitat, describe planting techniques and locations, and incorporate plantings of</p>

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Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
	<p>techniques and locations, and incorporate plantings of native species that would resist invasion by noxious plant species.</p> <p>5c: Reclamation or its contractor shall monitor the plantings annually for up to 3 years to ensure that trees and shrubs have become established. Supplemental planting will be conducted, as necessary, to ensure that this performance standard is met. To meet the revegetation success criteria, the rehabilitation areas should demonstrate a 60 percent survival rate for planted species at the end of the third growing season. Natural recruitment of native riparian species can be included in this criterion. If recovery success cannot be determined after 3 years, an additional 2 years of monitoring shall be conducted. If at any time during the monitoring period it is determined that the success criteria will not be met in the planted and naturally restored areas, additional remediation measures shall be developed and implemented. Once riparian mitigation has been successfully completed, Reclamation shall submit a memorandum to the Corps and NOAA Fisheries documenting the results.</p>	<p>native species that would resist invasion by noxious plant species.</p> <p>5c: Reclamation or its contractor shall monitor the plantings annually for up to 3 years to ensure that trees and shrubs have become established. Supplemental planting will be conducted, as necessary, to ensure that this performance standard is met. To meet the revegetation success criteria, the rehabilitation areas should demonstrate a 60 percent survival rate for planted species at the end of the third growing season. Natural recruitment of native riparian species can be included in this criterion. If recovery success cannot be determined after 3 years, an additional 2 years of monitoring shall be conducted. If at any time during the monitoring period it is determined that the success criteria will not be met in the planted and naturally restored areas, additional remediation measures shall be developed and implemented. Once riparian mitigation has been successfully completed, Reclamation shall submit a memorandum to the Corps and NOAA Fisheries documenting the results.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
3.7 Vegetation, Wildlife, and Wetlands		
Impact 3.7-1	Construction activities associated with the project could result in the loss of jurisdictional wetlands and riparian habitat.	
Mitigation Measures	<p>In order to avoid and minimize impacts to jurisdictional wetlands, the following measures should be implemented:</p> <p>1a: Prior to the start of construction activities, Reclamation shall retain a qualified biologist to identify potential construction access routes necessary for the project to ensure that these features avoid and/or minimize to the fullest extent impacts to jurisdictional waters. In addition, jurisdictional waters shall be clearly identified in the construction drawings along with specific instructions to avoid any construction activity within these features. Each jurisdictional feature proposed to be avoided will be flagged, staked, or otherwise marked to ensure that construction activities do not encroach upon them. Marked areas shall be</p>	<p>In order to avoid and minimize impacts to jurisdictional wetlands, the following measures should be implemented:</p> <p>1a: Prior to the start of construction activities, Reclamation shall retain a qualified biologist to identify potential construction access routes necessary for the project to ensure that these features avoid and/or minimize to the fullest extent impacts to jurisdictional waters. In addition, jurisdictional waters shall be clearly identified in the construction drawings along with specific instructions to avoid any construction activity within these features. Each jurisdictional feature proposed to be avoided will be flagged, staked, or otherwise marked to ensure that construction activities do not encroach upon them. Marked areas shall be inspected and</p>

**Table ES-1
Summary of Impacts and Mitigation Measures
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	Proposed Action	Alternative 1
	<p>inspected and maintained on a regular basis throughout the construction phase.</p> <p>1b: Reclamation or its contractor will revegetate riparian areas with a substantial diversity of native plant revegetation areas. Planted areas will grow in over time and will provide increased diversity in riparian structure and species over that which presently exists. Because the present Trinity River channel is encroached (up to 300%) with riparian vegetation that is homogenous in nature, strict replacement requirements based on original stem counts and species are not desirable;</p> <p>1c: Floodplain values and functions will be enhanced by the Canyon Creek Rehabilitation Sites project. Consequently, substantial new areas beyond those identified in pre-project plant community delineations are expected to recruit to riparian (wetland) habitats, of both seasonal and perennial nature, within a 3-5 year post-project window.</p>	<p>maintained on a regular basis throughout the construction phase.</p> <p>1b: Reclamation or its contractor will revegetate riparian areas with a substantial diversity of native plant revegetation areas. Planted areas will grow in over time and will provide increased diversity in riparian structure and species over that which presently exists. Because the present Trinity River channel is encroached (up to 300%) with riparian vegetation that is homogenous in nature, strict replacement requirements based on original stem counts and species are not desirable;</p> <p>1c: Floodplain values and functions will be enhanced by the Canyon Creek Rehabilitation Sites project. Consequently, substantial new areas beyond those identified in pre-project plant community delineations are expected to recruit to riparian (wetland) habitats, of both seasonal and perennial nature, within a 3-5 year post-project window.</p>
Level of Significance after Mitigation	N/A	N/A
Impact 3.7-2	Implementation of the project would result in the loss of upland plant communities.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.7-3	Construction of the project could result in the loss of individuals of a special-status plant species.	
Mitigation Measures	<p>The following measures shall be implemented at the Conner Creek and Valdor Gulch sites to avoid or minimize project-related impacts to Canyon Creek stonecrop and Hecner's lewisia:</p> <p>3a: A qualified botanist will visit the unsurveyed portions of the Conner Creek and Valdor Gulch sites to determine habitat suitability at those locations for Canyon Creek stonecrop and/or Heckner's lewisia. If suitable habitat is determined to be available, surveys shall be conducted during the blooming periods for these species (i.e., May–July) to determine (1) if the species occur and (2) the quality, location, and extent of any populations. If either of these species is found within 250</p>	<p>The following measures shall be implemented at the Conner Creek and Valdor Gulch sites to avoid or minimize project-related impacts to Canyon Creek stonecrop and Hecner's lewisia:</p> <p>3a: A qualified botanist will visit the unsurveyed portions of the Conner Creek and Valdor Gulch sites to determine habitat suitability at those locations for Canyon Creek stonecrop and/or Heckner's lewisia. If suitable habitat is determined to be available, surveys shall be conducted during the blooming periods for these species (i.e., May–July) to determine (1) if the species occur and (2) the quality, location, and extent of any populations. If either of these species is found within 250</p>

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Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
	<p>feet of any proposed disturbance, the following measures shall be implemented.</p> <p>3b: Prior to the start of disturbance, exclusionary fencing shall be erected around the known occurrences. If necessary, a qualified botanist should be present to assist with locating these special-status plant populations. The exclusionary fencing shall be periodically inspected throughout each period of construction and be repaired as necessary.</p> <p>3c: If a population cannot be fully avoided, the applicant shall retain a qualified botanist to contact CDFG to determine the appropriate salvage and relocation measures.</p>	<p>feet of any proposed disturbance, the following measures shall be implemented.</p> <p>3b: Prior to the start of disturbance, exclusionary fencing shall be erected around the known occurrences. If necessary, a qualified botanist should be present to assist with locating these special-status plant populations. The exclusionary fencing shall be periodically inspected throughout each period of construction and be repaired as necessary.</p> <p>3c: If a population cannot be fully avoided, the applicant shall retain a qualified botanist to contact CDFG to determine the appropriate salvage and relocation measures.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.7-4	Construction activities associated with the project could result in impacts to the federally listed Trinity bristle snail.	
Mitigation Measures	<p>In order to avoid and/or minimize impacts to the Trinity bristle snail, the following measures shall be implemented:</p> <p>4a: If identified potential bristle snail habitat is to be disturbed during construction, a minimum of one survey for Trinity bristle snails in this area(s) shall be conducted a maximum of one week prior to construction. A qualified biologist shall be retained by Reclamation to conduct the survey. If a Trinity bristle snail is detected, the biologist shall relocate it to a suitable location outside of the construction limits.</p> <p>4b: Mitigation measures presented in Section 3.5 for addressing erosion and sedimentation and accidental spills shall be fully implemented to mitigate for the potential indirect impacts to riparian habitat due to sedimentation and accidental spills.</p> <p>4c: Mitigation Measure 3.7-1 (discussed previously) concerning disturbance to riparian habitat will be fully implemented.</p>	<p>In order to avoid and/or minimize impacts to the Trinity bristle snail, the following measures shall be implemented:</p> <p>4a: If identified potential bristle snail habitat is to be disturbed during construction, a minimum of one survey for Trinity bristle snails in this area(s) shall be conducted a maximum of one week prior to construction. A qualified biologist shall be retained by Reclamation to conduct the survey. If a Trinity bristle snail is detected, the biologist shall relocate it to a suitable location outside of the construction limits.</p> <p>4b: Mitigation measures presented in Section 3.5 for addressing erosion and sedimentation and accidental spills shall be fully implemented to mitigate for the potential indirect impacts to riparian habitat due to sedimentation and accidental spills.</p> <p>4c: Mitigation Measure 3.7-1 (discussed previously) concerning disturbance to riparian habitat will be fully implemented.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.7-5	Construction activities associated with the project could result in impacts to the federally listed northern spotted owl.	
Mitigation Measures	Since no significant impact was identified	Since no significant impact was identified

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Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
	for this alternative, no mitigation is required.	for this alternative, no mitigation is required.
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.7-6	Construction activities associated with the project could result in impacts to the state-listed little willow flycatcher.	
Mitigation Measures	<p>The following mitigation measures shall be implemented to avoid or minimize potential impacts to the little willow flycatcher:</p> <p>6a: Grading and other construction activities should be scheduled to avoid the nesting season to the extent possible. The nesting season for this species in Trinity County extends from June 15 through July 31 (P. Herrera, RSL pers. communication). If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, mitigations b and c should be implemented.</p> <p>6b: A qualified biologist should conduct a minimum of one pre-construction survey for the little willow flycatcher within the project sites and a 250-foot buffer around the sites. The survey should be conducted no more than 15 days prior to the initiation of construction in any given area. The pre-construction survey should be used to ensure that no nests of this species within or immediately adjacent to the project sites would be disturbed during project implementation. If an active nest is found, CDFG will be contacted prior to the start of construction to determine the appropriate mitigation measures.</p> <p>6c: If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.</p>	<p>The following mitigation measures shall be implemented to avoid or minimize potential impacts to the little willow flycatcher:</p> <p>6a: Grading and other construction activities should be scheduled to avoid the nesting season to the extent possible. The nesting season for this species in Trinity County extends from June 15 through July 31 (P. Herrera, RSL pers. communication). If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, mitigations b and c should be implemented.</p> <p>6b: A qualified biologist should conduct a minimum of one pre-construction survey for the little willow flycatcher within the project sites and a 250-foot buffer around the sites. The survey should be conducted no more than 15 days prior to the initiation of construction in any given area. The pre-construction survey should be used to ensure that no nests of this species within or immediately adjacent to the project sites would be disturbed during project implementation. If an active nest is found, CDFG will be contacted prior to the start of construction to determine the appropriate mitigation measures.</p> <p>6c: If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.</p>
Level of Significance after Mitigation	N/A	N/A
Impact 3.7-7	Construction activities associated with the project could result in impacts to the foothill yellow-legged frog.	

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Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
Mitigation Measures	<p>In order to avoid and/or minimize impacts to the foothill yellow-legged frog, the following measures shall be implemented:</p> <p>7a: If any construction in the Trinity River channel will occur prior to August 1 of any construction season, a pre-construction survey for yellow-legged frog larvae and/or eggs shall be conducted by a qualified biologist. This survey would need to be conducted within the construction boundaries no more than 2 weeks prior to the start of in-stream construction activities. If larvae or eggs are detected, the biologist shall relocate them to a suitable location outside of the construction boundaries.</p> <p>7b: In the event that a yellow-legged frog is observed within the construction boundaries, the contractor shall temporarily halt in-stream construction activities until the frog has been moved to a safe location with suitable habitat outside of the construction limits.</p> <p>7c: Mitigation measures presented in Section 3.5 for addressing erosion and sedimentation and accidental spills shall be fully implemented to mitigate for potential indirect impacts to dispersal habitat for the yellow-legged frog due to sedimentation and accidental spills.</p> <p>7d: Mitigation measures associated with the disturbance to riparian habitat were previously discussed (Mitigation Measure 3.7-1) and will be fully implemented.</p>	<p>In order to avoid and/or minimize impacts to the foothill yellow-legged frog, the following measures shall be implemented:</p> <p>7a: If any construction in the Trinity River channel will occur prior to August 1 of any construction season, a pre-construction survey for yellow-legged frog larvae and/or eggs shall be conducted by a qualified biologist. This survey would need to be conducted within the construction boundaries no more than 2 weeks prior to the start of in-stream construction activities. If larvae or eggs are detected, the biologist shall relocate them to a suitable location outside of the construction boundaries.</p> <p>7b: In the event that a yellow-legged frog is observed within the construction boundaries, the contractor shall temporarily halt in-stream construction activities until the frog has been moved to a safe location with suitable habitat outside of the construction limits.</p> <p>7c: Mitigation measures presented in Section 3.5 for addressing erosion and sedimentation and accidental spills shall be fully implemented to mitigate for potential indirect impacts to dispersal habitat for the yellow-legged frog due to sedimentation and accidental spills.</p> <p>7d: Mitigation measures associated with the disturbance to riparian habitat were previously discussed (Mitigation Measure 3.7-1) and will be fully implemented.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.7-8	Construction activities associated with the project could result in impacts to the northwestern pond turtle.	
Mitigation Measures	<p>In order to avoid and/or minimize impacts to the northwestern pond turtle, the following measures shall be implemented:</p> <p>8a: A minimum of one survey for pond turtle nests shall be conducted a maximum of one week prior to construction. A qualified biologist shall be retained by Reclamation to conduct the survey. If a pond turtle nest is found, the biologist shall flag the site and determine whether construction activities can avoid affecting the nest. If the nest cannot be avoided, the nest should be excavated by</p>	<p>In order to avoid and/or minimize impacts to the northwestern pond turtle, the following measures shall be implemented:</p> <p>8a: A minimum of one survey for pond turtle nests shall be conducted a maximum of one week prior to construction. A qualified biologist shall be retained by Reclamation to conduct the survey. If a pond turtle nest is found, the biologist shall flag the site and determine whether construction activities can avoid affecting the nest. If the nest cannot be avoided, the nest should be excavated by the biologist</p>

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	Proposed Action	Alternative 1
	<p>the biologist and reburied at a suitable location outside of the construction limits.</p> <p>8b: In the event that a pond turtle is observed within the construction limits, the contractor shall temporarily halt construction activities until the turtle has been moved by a qualified biologist to a safe location within suitable habitat outside of the construction limits.</p> <p>8c: Mitigation measures presented in Section 3.5 (Water Quality) for addressing erosion and sedimentation and accidental spills shall be fully implemented to mitigate for the potential indirect impacts to potential dispersal habitat due to sedimentation and accidental spills.</p> <p>8d: Mitigation measures associated with the disturbance to riparian habitat were discussed previously in this section (Mitigation Measure 3.7-1) and will be fully implemented.</p>	<p>and reburied at a suitable location outside of the construction limits.</p> <p>8b: In the event that a pond turtle is observed within the construction limits, the contractor shall temporarily halt construction activities until the turtle has been moved by a qualified biologist to a safe location within suitable habitat outside of the construction limits.</p> <p>8c: Mitigation measures presented in Section 3.5 (Water Quality) for addressing erosion and sedimentation and accidental spills shall be fully implemented to mitigate for the potential indirect impacts to potential dispersal habitat due to sedimentation and accidental spills.</p> <p>8d: Mitigation measures associated with the disturbance to riparian habitat were discussed previously in this section (Mitigation Measure 3.7-1) and will be fully implemented.</p>
Level of Significance after Mitigation	N/A	N/A
Impact 3.7-9	Construction activities associated with the project could result in impacts to nesting California yellow warblers and yellow-breasted chats.	
Mitigation Measures	<p>In order to avoid and/or minimize impacts to nesting California yellow warblers and yellow-breasted chats, the following measures shall be implemented:</p> <p>9a: Grading and other construction activities should be scheduled to avoid the nesting season to the extent possible. The nesting season for these species in Trinity County extends from March through August. If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, measures b and c should be implemented.</p> <p>9b: A qualified biologist should conduct a minimum of one pre-construction survey for yellow warblers and yellow-breasted chats within the project sites and a 250-foot buffer around the sites. The survey should be conducted no more than 15 days prior to the initiation of construction in any given area. The pre-construction survey should be used to ensure that no nests of these species within or immediately adjacent to the project sites would be disturbed during project implementation. If an active nest is</p>	<p>In order to avoid and/or minimize impacts to nesting California yellow warblers and yellow-breasted chats, the following measures shall be implemented:</p> <p>9a: Grading and other construction activities should be scheduled to avoid the nesting season to the extent possible. The nesting season for these species in Trinity County extends from March through August. If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, measures b and c should be implemented.</p> <p>9b: A qualified biologist should conduct a minimum of one pre-construction survey for yellow warblers and yellow-breasted chats within the project sites and a 250-foot buffer around the sites. The survey should be conducted no more than 15 days prior to the initiation of construction in any given area. The pre-construction survey should be used to ensure that no nests of these species within or immediately adjacent to the project sites would be disturbed during project implementation. If an active nest is found, a qualified biologist</p>

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	Proposed Action	Alternative 1
	<p>found, a qualified biologist should determine the extent of a construction-free buffer zone to be established around the nest.</p> <p>9c: If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.</p>	<p>should determine the extent of a construction-free buffer zone to be established around the nest.</p> <p>9c: If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.</p>
Level of Significance after Mitigation	N/A	N/A
Impact 3.7-10	Construction activities associated with the project could disrupt nesting by special-status raptors.	
Mitigation Measures	<p>In order to avoid and/or minimize impacts to nesting special-status raptors, the following measures shall be implemented:</p> <p>10a: Construction should be scheduled to avoid the nesting season to the extent feasible. The nesting season for most raptors in Trinity County extends from 1 February 15 through July 31. Thus, if construction can be scheduled to occur between August 1 and February 14, the nesting season would be avoided and no impacts to nesting raptors would be expected. If it is not possible to schedule construction during this time, the following mitigation measures should be implemented.</p> <p>10b: Pre-construction surveys for nesting raptors should be conducted by a qualified biologist to ensure that no nests will be disturbed during project implementation. These surveys should be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the biologist should inspect all trees immediately adjacent to the impact areas for raptor nests. If an active raptor nest is found close enough (i.e., within 500 feet) to the construction area to be disturbed by these activities, the biologist, in consultation with the CDFG, shall determine the extent of a construction-free buffer zone to be established around the nest.</p> <p>10c: If vegetation is to be removed by the project and all necessary approvals</p>	<p>In order to avoid and/or minimize impacts to nesting special-status raptors, the following measures shall be implemented:</p> <p>10a: Construction should be scheduled to avoid the nesting season to the extent feasible. The nesting season for most raptors in Trinity County extends from 1 February 15 through July 31. Thus, if construction can be scheduled to occur between August 1 and February 14, the nesting season would be avoided and no impacts to nesting raptors would be expected. If it is not possible to schedule construction during this time, the following mitigation measures should be implemented.</p> <p>10b: Pre-construction surveys for nesting raptors should be conducted by a qualified biologist to ensure that no nests will be disturbed during project implementation. These surveys should be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the biologist should inspect all trees immediately adjacent to the impact areas for raptor nests. If an active raptor nest is found close enough (i.e., within 500 feet) to the construction area to be disturbed by these activities, the biologist, in consultation with the CDFG, shall determine the extent of a construction-free buffer zone to be established around the nest.</p> <p>10c: If vegetation is to be removed by the project and all necessary approvals</p>

**Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78**

	Proposed Action	Alternative 1
	have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.	have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.7-11	Construction activities associated with the project could result in impacts to special-status bats and the ring-tailed cat.	
Mitigation Measures	<p>In order to avoid and/or minimize impacts to roosting special-status bats, the following measures shall be implemented:</p> <p>11a: A pre-construction survey for roosting bats and ring-tail cats shall be conducted prior to any removal of trees ≥ 12 inches in diameter at 4.5 feet above grade. The survey will be conducted by a qualified biologist. No activities that would result in disturbance to active roosts of special-status bats or dens of ring-tail cats shall proceed prior to completion of the surveys. If no active roosts or dens are found, no further action would be warranted. Because bats are known to abandon young when disturbed, if a maternity roost is located, a qualified bat biologist will determine the extent of a construction-free zone to be implemented around the roost. If a bat maternity roost or hibernacula or a ring-tail den is present, Measures b or c shall be implemented. CDFG shall also be notified of any active bat nurseries within the disturbance zones.</p> <p>11b: If an active maternity roost or hibernacula is found, the project will be redesigned to avoid the loss of the tree occupied by the roost, if feasible. If the project cannot be redesigned to avoid removal of the occupied tree, demolition of that tree should commence before bat maternity colonies form (i.e., prior to March 1) or after young are volant (flying) (i.e., after July 31). The disturbance-free buffer zones described above should be observed during the bat maternity roost season (March 1–July 31). If a non-breeding bat hibernacula is found in a tree scheduled to be razed, the individuals shall be safely evicted, under the direction of a qualified bat biologist (as determined by a Memorandum of Understanding with</p>	<p>In order to avoid and/or minimize impacts to roosting special-status bats, the following measures shall be implemented:</p> <p>11a: A pre-construction survey for roosting bats and ring-tail cats shall be conducted prior to any removal of trees ≥ 12 inches in diameter at 4.5 feet above grade. The survey will be conducted by a qualified biologist. No activities that would result in disturbance to active roosts of special-status bats or dens of ring-tail cats shall proceed prior to completion of the surveys. If no active roosts or dens are found, no further action would be warranted. Because bats are known to abandon young when disturbed, if a maternity roost is located, a qualified bat biologist will determine the extent of a construction-free zone to be implemented around the roost. If a bat maternity roost or hibernacula or a ring-tail den is present, Measures b or c shall be implemented. CDFG shall also be notified of any active bat nurseries within the disturbance zones.</p> <p>11b: If an active maternity roost or hibernacula is found, the project will be redesigned to avoid the loss of the tree occupied by the roost, if feasible. If the project cannot be redesigned to avoid removal of the occupied tree, demolition of that tree should commence before bat maternity colonies form (i.e., prior to March 1) or after young are volant (flying) (i.e., after July 31). The disturbance-free buffer zones described above should be observed during the bat maternity roost season (March 1–July 31). If a non-breeding bat hibernacula is found in a tree scheduled to be razed, the individuals shall be safely evicted, under the direction of a qualified bat biologist (as determined by a Memorandum of Understanding with</p>

Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
	<p>CDFG), by opening the roosting area to allow air flow through the cavity. Demolition shall then follow no less than the following day (i.e., there will be no less than one night between initial disturbance for air flow and the demolition). This action should allow bats to leave during dark hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. Trees with roosts that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow bats to escape during the darker hours.</p> <p>11c: If an active ring-tail nest is found, the project will be redesigned to avoid the loss of the tree occupied by the nest if feasible. If the project cannot be redesigned to avoid removal of the occupied tree, demolition of that tree should commence outside of the breeding season (February 1 to August 30). If a non-breeding den is found in a tree scheduled to be razed, the individuals shall be safely evicted under the direction of a qualified biologist. Trees with dens that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow ring-tail cats to escape during the darker hours.</p>	<p>CDFG), by opening the roosting area to allow air flow through the cavity. Demolition shall then follow no less than the following day (i.e., there will be no less than one night between initial disturbance for air flow and the demolition). This action should allow bats to leave during dark hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. Trees with roosts that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow bats to escape during the darker hours.</p> <p>11c: If an active ring-tail nest is found, the project will be redesigned to avoid the loss of the tree occupied by the nest if feasible. If the project cannot be redesigned to avoid removal of the occupied tree, demolition of that tree should commence outside of the breeding season (February 1 to August 30). If a non-breeding den is found in a tree scheduled to be razed, the individuals shall be safely evicted under the direction of a qualified biologist. Trees with dens that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow ring-tail cats to escape during the darker hours.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.7-12	Construction activities associated with the project could result in the loss of non-breeding habitat for special-status birds.	
Mitigation Measures	Since no significant impact was identified for these alternatives, no mitigation is required.	Since no significant impact was identified for these alternatives, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.7-13	Construction activities associated with the project could result in impacts to BLM sensitive species.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.7-14	Construction activities associated with the project could restrict terrestrial wildlife movement through the sites.	
Mitigation Measures	Since no significant impact was identified	Since no significant impact was identified

Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
	for this alternative, no mitigation is required.	for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.7-15	Implementation of the project could result in the spread of non-native and invasive plant species.	
Mitigation Measures	<p>In order to avoid and/or minimize the potential introduction and/or spread of noxious weeds, the following measures shall be implemented:</p> <p>15a: Use only certified weed-free erosion control materials, mulch, and seed.</p> <p>15b: Preclude the use of rice straw in riparian areas.</p> <p>15c: Limit any import or export of fill to material not known to be weed free.</p> <p>15d: Require the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering the County.</p> <p>15e: Within the first 3-5 years, post-project if it is determined that non-native invasive vegetation is out-competing desired planted or native colonizing riparian vegetation, opportunities to control these non-native species may be considered. When implementing weed control techniques, the approach will consider using all available control methods known for a weed species. Control methods will be consistent with those adopted by the Trinity County Weed Management Cooperative.</p>	<p>In order to avoid and/or minimize the potential introduction and/or spread of noxious weeds, the following measures shall be implemented:</p> <p>15a: Use only certified weed-free erosion control materials, mulch, and seed.</p> <p>15b: Preclude the use of rice straw in riparian areas.</p> <p>15c: Limit any import or export of fill to material not known to be weed free.</p> <p>15d: Require the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering the County.</p> <p>15e: Within the first 3-5 years, post-project if it is determined that non-native invasive vegetation is out-competing desired planted or native colonizing riparian vegetation, opportunities to control these non-native species may be considered. When implementing weed control techniques, the approach will consider using all available control methods known for a weed species. Control methods will be consistent with those adopted by the Trinity County Weed Management Cooperative.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
3.8 Recreation		
Impact 3.8-1	Construction associated with the project could disrupt recreation activities (i.e., boating, fishing, and swimming) in the Trinity River.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.8-2	Construction of the project could result in an increased safety risk to recreational users.	
Mitigation Measures	Since no significant impact was identified	Since no significant impact was identified

Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
	for this alternative, no mitigation is required.	for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.8-3	Construction activities associated with the project could lower the river's aesthetic values for recreationists by increasing turbidity levels in the Trinity River.	
Mitigation Measures	<p>3a: Turbidity increases associated with project construction activities shall not exceed the Regional Water Board water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is summarized below.</p> <ul style="list-style-type: none"> ▪ Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. <p>3b: To ensure that turbidity levels do not exceed the threshold listed above during river's edge project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge construction activities. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed. Monitoring frequency shall be a minimum of every 2 hours during periods of increased turbidity.</p> <p>3c: Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project. Ripping of all riparian areas is expected to stop delivery of storm water to the river, however, BMPs including silt fences, sediment filters, dewatering activities, and routine monitoring to verify effectiveness, may be necessary. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until river levels rise and inundate the floodplain. All sediment containment devices and erosion control</p>	<p>3a: Turbidity increases associated with project construction activities shall not exceed the Regional Water Board water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is summarized below.</p> <ul style="list-style-type: none"> ▪ Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. <p>3b: To ensure that turbidity levels do not exceed the threshold listed above during river's edge project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge construction activities. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed. Monitoring frequency shall be a minimum of every 2 hours during periods of increased turbidity.</p> <p>3c: Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project. Ripping of all riparian areas is expected to stop delivery of storm water to the river, however, BMPs including silt fences, sediment filters, dewatering activities, and routine monitoring to verify effectiveness, may be necessary. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until river levels rise and inundate the floodplain. All sediment containment devices and erosion control devices will be inspected daily during the construction</p>

Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
	devices will be inspected daily during the construction period to ensure that the devices are functioning properly. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.	period to ensure that the devices are functioning properly. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.8-4	Implementation of the project could affect Wild and Scenic River values.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
3.9 Socioeconomics, Population, and Housing		
Impact 3.9-1	Construction of the project would provide temporary employment opportunities for construction workers in Trinity County.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.9-2	Implementation of the project could result in the disruption or displacement of local businesses.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.9-3	Implementation of the project would result in an increased demand for housing during construction.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.9-4	Implementation of the project would result in concentrated population growth.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.

Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
Level of Significance after Mitigation	N/A	N/A
3.10 Tribal Trust		
Impact 3.10-1	Implementation of the project may reduce the quantity or quality of Indian trust assets.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
3.11 Cultural Resources		
Impact 3.11-1	Implementation of the project could potentially result in disturbance of undiscovered prehistoric or historic resources.	
Mitigation Measures	<p>1a: Prior to initiation of construction or ground-disturbing activities, all construction workers shall be alerted to the possibility of buried cultural remains. This would include prehistoric and/or historic resources. Personnel shall be instructed that upon discovery of buried cultural materials, work within 50 feet of the find shall be halted and Reclamation's designated archaeologist consulted. Once the find has been identified, then Reclamation will make the necessary plans for treatment of the finds(s) and for the evaluation and mitigation of impacts if the find(s) are found to be significant as defined in the PA.</p> <p>1b: If buried human remains are encountered on non-federal lands during construction, work in that area must be halted, and the Trinity County Coroner's Office shall be immediately contacted. If the remains are determined to be of Native American origin, then the Native American Heritage Commission (NAHC) will be notified within 24 hours of determination, as required by <i>Public Resources Code</i> 5097. The NAHC will notify designated Most Likely Descendants, who will provide recommendations for the treatment of the remains within 24 hours. The NAHC will mediate any disputes regarding treatment of remains. For the discovery of Native American human remains and associated items on Federal lands, the Native American Graves Protection Act (25 U.S.C. 3001) and its implementing regulations (43 CFR Part 10) will be</p>	<p>1a: Prior to initiation of construction or ground-disturbing activities, all construction workers shall be alerted to the possibility of buried cultural remains. This would include prehistoric and/or historic resources. Personnel shall be instructed that upon discovery of buried cultural materials, work within 50 feet of the find shall be halted and Reclamation's designated archaeologist consulted. Once the find has been identified, then Reclamation will make the necessary plans for treatment of the finds(s) and for the evaluation and mitigation of impacts if the find(s) are found to be significant as defined in the PA.</p> <p>1b: If buried human remains are encountered on non-federal lands during construction, work in that area must be halted, and the Trinity County Coroner's Office shall be immediately contacted. If the remains are determined to be of Native American origin, then the Native American Heritage Commission (NAHC) will be notified within 24 hours of determination, as required by <i>Public Resources Code</i> 5097. The NAHC will notify designated Most Likely Descendants, who will provide recommendations for the treatment of the remains within 24 hours. The NAHC will mediate any disputes regarding treatment of remains. For the discovery of Native American human remains and associated items on Federal lands, the Native American Graves Protection Act (25 U.S.C. 3001) and its implementing regulations (43 CFR Part 10) will be followed.</p> <p>If the find is determined to be a historical</p>

**Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78**

	Proposed Action	Alternative 1
	<p>followed.</p> <p>If the find is determined to be a historical resource or a unique archaeological resource, as defined by CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or other appropriate mitigation shall be made available. Work may continue on other parts of the proposed project while historical or unique archaeological resource mitigation takes place.</p>	<p>resource or a unique archaeological resource, as defined by CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or other appropriate mitigation shall be made available. Work may continue on other parts of the proposed project while historical or unique archaeological resource mitigation takes place.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant

3.12 Air Quality

Impact 3.12-1 Construction activities associated with the project could result in an increase in fugitive dust and associated particulate matter (PM₁₀ and PM_{2.5}) levels.

Mitigation Measures	<p>1a: Reclamation shall include provisions in the construction bid documents specifying that the contractor shall implement a dust control program to limit fugitive dust and particulate matter emissions. The dust control program may include, but will not be limited, to the following elements, as appropriate:</p> <ul style="list-style-type: none"> ▪ Inactive construction areas will be watered as needed to ensure dust control. ▪ Pursuant to the <i>California Vehicle Code</i> (Section 23114), all trucks hauling soil or other loose material to and from the construction site shall be covered or should maintain adequate freeboard to ensure retention of materials within the truck's bed (e.g.,(ensure 1-2 feet vertical distance between top of load and the trailer). ▪ Excavation activities and other soil-disturbing activities shall be conducted in phases to reduce the amount of bare soil exposed at any one time. Mulching with weed free materials may be used to minimize soil erosion, as described in Sections 3.3 and 3.5 of the EA/DEIR. ▪ Watering with either equipment and/or manually would be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust. ▪ All paved access roads, parking areas, and staging areas shall be 	<p>1a: Reclamation shall include provisions in the construction bid documents specifying that the contractor shall implement a dust control program to limit fugitive dust and particulate matter emissions. The dust control program may include, but will not be limited, to the following elements, as appropriate:</p> <ul style="list-style-type: none"> ▪ Inactive construction areas will be watered as needed to ensure dust control. ▪ Pursuant to the <i>California Vehicle Code</i> (Section 23114), all trucks hauling soil or other loose material to and from the construction site shall be covered or should maintain adequate freeboard to ensure retention of materials within the truck's bed (e.g.,(ensure 1-2 feet vertical distance between top of load and the trailer). ▪ Excavation activities and other soil-disturbing activities shall be conducted in phases to reduce the amount of bare soil exposed at any one time. Mulching with weed free materials may be used to minimize soil erosion, as described in Sections 3.3 and 3.5 of the EA/DEIR. ▪ Watering with either equipment and/or manually would be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust. ▪ All paved access roads, parking areas, and staging areas shall be swept (with
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Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
	<p>swept (with water sweepers) at each construction site, as required by Reclamation.</p> <ul style="list-style-type: none"> ▪ Roads will be swept (with water sweepers) if visible soil material is carried onto adjacent public roads, as required by Reclamation. ▪ All ground-disturbing activities with the potential to generate dust shall be suspended when winds exceed 20 miles per hour, as directed by the NCUAQMD. ▪ Reclamation or its contractor shall designate a person to monitor dust control and to order increased watering as necessary to prevent transport of dust offsite. This person will also respond to citizen complaints. 	<p>water sweepers) at each construction site, as required by Reclamation.</p> <ul style="list-style-type: none"> ▪ Roads will be swept (with water sweepers) if visible soil material is carried onto adjacent public roads, as required by Reclamation. ▪ All ground-disturbing activities with the potential to generate dust shall be suspended when winds exceed 20 miles per hour, as directed by the NCUAQMD. ▪ Reclamation or its contractor shall designate a person to monitor dust control and to order increased watering as necessary to prevent transport of dust offsite. This person will also respond to citizen complaints.
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.12-2	Construction activities associated with the project could result in an increase in construction vehicle exhaust emissions.	
Mitigation Measures	<p>2a: Reclamation shall include provisions in the construction bid documents specifying that the contractors shall comply with NCUAQMD <i>Rule 104 (3.0) Particulate Matter</i>. This compliance could occur through the use of portable internal combustion engines registered and certified under the state portable equipment regulation (Health & Safety Code 41750 through 41755).</p>	<p>2a: Reclamation shall include provisions in the construction bid documents specifying that the contractors shall comply with NCUAQMD <i>Rule 104 (3.0) Particulate Matter</i>. This compliance could occur through the use of portable internal combustion engines registered and certified under the state portable equipment regulation (Health & Safety Code 41750 through 41755).</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.12-3	Construction activities associated with the project and removal of vegetation could result in vegetative materials that managers will decide to burn.	
Mitigation Measures	<p>3a: Piles will consist only of dried vegetative materials. Burn piles will be no larger than 10 feet in diameter. Field personnel will be on site during all hours of burning and materials necessary to extinguish fires will be available at all times.</p> <p>3b: In general, all requirements of a NCUAQMD "NON-Standard" burn permit will be met for burning. Burn management planning would may include but not be limited to:</p> <ul style="list-style-type: none"> ▪ Ensure that burning occurs only on approved burn days as defined by the 	<p>3a: Piles will consist only of dried vegetative materials. Burn piles will be no larger than 10 feet in diameter. Field personnel will be on site during all hours of burning and materials necessary to extinguish fires will be available at all times.</p> <p>3b: In general, all requirements of a NCUAQMD "NON-Standard" burn permit will be met for burning. Burn management planning would may include but not be limited to:</p> <ul style="list-style-type: none"> ▪ Ensure that burning occurs only on approved burn days as defined by the NCUAQMD (determined via calling 1-

**Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78**

	Proposed Action	Alternative 1
	<p>NCUAQMD (determined via calling 1-866-BURN-DAY).</p> <ul style="list-style-type: none"> ▪ Burning will only occur during suitable conditions to ensure control of ignited fires. For instance: Water to wet the litter and duff layer and penetrate the mineral soil layer to 1/4 inch or more will be present, wind speeds will be low (< 10 mph), and temperature will be low (< 80° F) ▪ Piles may be covered with a 5-foot x 5-foot sheet of 4-mil polyethylene plastic to promote drying of the slash. At least 3/4 of each pile surface would be covered and the plastic anchored to preserve a dry ignition point. Dry fuel conditions will minimize smoke emissions. ▪ Slash piles would not be constructed on logs, stumps, on talus slopes, within 25 feet of wildlife trees with nest structures, in roadways or in drainage ditches. Piles would not be placed within 10 feet of trees intended to be saved (reserved trees), or within 25 feet of a unit boundary. <p>3c: Notification of the public and the NCUAQMD will occur each day. Depending on wind direction and proximity to roads, signs or personnel will notify residents and traffic on nearby access routes.</p>	<p>866-BURN-DAY).</p> <ul style="list-style-type: none"> ▪ Burning will only occur during suitable conditions to ensure control of ignited fires. For instance: Water to wet the litter and duff layer and penetrate the mineral soil layer to 1/4 inch or more will be present, wind speeds will be low (< 10 mph), and temperature will be low (< 80° F) ▪ Piles may be covered with a 5-foot x 5-foot sheet of 4-mil polyethylene plastic to promote drying of the slash. At least 3/4 of each pile surface would be covered and the plastic anchored to preserve a dry ignition point. Dry fuel conditions will minimize smoke emissions. ▪ Slash piles would not be constructed on logs, stumps, on talus slopes, within 25 feet of wildlife trees with nest structures, in roadways or in drainage ditches. Piles would not be placed within 10 feet of trees intended to be saved (reserved trees), or within 25 feet of a unit boundary. <p>3c: Notification of the public and the NCUAQMD will occur each day. Depending on wind direction and proximity to roads, signs or personnel will notify residents and traffic on nearby access routes.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
3.13 Environmental Justice		
Impact 3.13-1	Implementation of the proposed project could adversely affect a minority or low-income population and/or community.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
3.14 Aesthetics		
Impact 3.14-1	Implementation of the project could result in the degradation and/or obstruction of a scenic view from key observation areas.	
Mitigation Measures	One significant impact was identified in VAU 2 at KOP #26 of the Conner Creek Rehabilitation Site. No mitigation is available to reduce the significance of this	One significant impact was identified in VAU 2 at KOP #26 of the Conner Creek Rehabilitation Site. No mitigation is available to reduce the significance of this

Table ES-1 Summary of Impacts and Mitigation Measures Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78		
	Proposed Action	Alternative 1
	impact. There are no significant impacts associated with the other three rehabilitation sites.	impact. There are no significant impacts associated with the other three rehabilitation sites.
Level of Significance after Mitigation	Significant & N/A	Significant & N/A
Impact 3.14-2	Implementation of the project could substantially change the character of, or be disharmonious with, existing land uses and aesthetic features.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.14-3	The project may be inconsistent with the federal or state Wild and Scenic River Acts or Scenic Byway requirements.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.14-4	The project may potentially generate increased daytime glare and/or nighttime lighting.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
3.15 Hazardous Materials		
Impact 3.15-1	Implementation of the project may increase the potential for release of, or exposure to, potentially hazardous materials that could pose a public health or safety hazard.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.15-2	Construction activities associated with the project may interfere with emergency response/evacuation plans by temporarily slowing traffic flow.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.15.3	Implementation of the project may contribute to area wildland fire potential and	

**Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78**

	Proposed Action	Alternative 1
	catastrophic fire behavior.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.15.4	Implementation of the project may contribute to an increased risk of landslide or flooding.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
3.16 Noise		
Impact 3.16-1	Construction activities associated with the project would result in noise impacts to nearby sensitive receptors.	
Mitigation Measures	<p>1a: Construction activities near residential areas would be scheduled between 7:00 AM and 7:00 PM, Monday through Saturday. No construction activities shall be scheduled for Sundays or other hours and days established by the local jurisdiction (i.e., Trinity County). The contractor may submit for variances in construction activity hours, as needed.</p> <p>1b: Reclamation shall require in construction specifications that the contractor maintain all construction equipment with manufacturer's specified noise muffling devices.</p> <p>1c: Reclamation shall require in construction specifications that the contractor place all stationary noise-generating equipment as far away as feasibly possible from sensitive noise receptors or in an orientation minimizing noise impacts (i.e., behind existing barriers, storage piles, unused equipment).</p>	<p>1a: Construction activities near residential areas would be scheduled between 7:00 AM and 7:00 PM, Monday through Saturday. No construction activities shall be scheduled for Sundays or other hours and days established by the local jurisdiction (i.e., Trinity County). The contractor may submit for variances in construction activity hours, as needed.</p> <p>1b: Reclamation shall require in construction specifications that the contractor maintain all construction equipment with manufacturer's specified noise muffling devices.</p> <p>1c: Reclamation shall require in construction specifications that the contractor place all stationary noise-generating equipment as far away as feasibly possible from sensitive noise receptors or in an orientation minimizing noise impacts (i.e., behind existing barriers, storage piles, unused equipment).</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
3.17 Public Services and Utilities/Energy		
Impact 3.17-1	Implementation of the project could disrupt existing electrical and phone service during the construction phase.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.

Table ES-1 Summary of Impacts and Mitigation Measures Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78		
	Proposed Action	Alternative 1
	required.	
Level of Significance after Mitigation	N/A	N/A
Impact 3.17-2	Construction of the project could result in the generation of increased solid waste.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.17-3	Implementation of the project may result in disruption to emergency services or disruption to school bus routes or student travel routes during the construction phase.	
Mitigation Measures	<p>3a: Reclamation shall stipulate in the contract specifications for construction that the contractor must stage construction work and temporary closures in a manner that will allow for access by emergency service providers.</p> <p>3b: Reclamation shall stipulate in the contract specifications that the contractor must provide 72-hour notice to the local emergency providers (i.e., TCSD, CDF, LCSD, Trinity Life Support Ambulance, and STAR) prior to the start of temporary closures.</p>	<p>3a: Reclamation shall stipulate in the contract specifications for construction that the contractor must stage construction work and temporary closures in a manner that will allow for access by emergency service providers.</p> <p>3b: Reclamation shall stipulate in the contract specifications that the contractor must provide 72-hour notice to the local emergency providers (i.e., TCSD, CDF, LCSD, Trinity Life Support Ambulance, and STAR) prior to the start of temporary closures.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.17-4	Construction of the proposed project could result in a substantial use of nonrenewable energy resources.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
3.18 Transportation / Traffic Circulation		
Impact 3.18-1	Construction activities would reduce/close existing traffic lanes.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A
Impact 3.18-2	Construction activities would generate short-term increases in vehicle trips.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.

Table ES-1
Summary of Impacts and Mitigation Measures
Canyon Creek Suite of Rehabilitation Sites: Trinity River Mile 73 to 78

	Proposed Action	Alternative 1
	required.	
Level of Significance after Mitigation	N/A	N/A
Impact 3.18-3	Implementation of the project would affect access to adjacent land uses.	
Mitigation Measures	<p>3a Construction bid documents will require that access be maintained throughout the construction period for all private residences adjacent to the project site boundaries and access roads on the left side of Trinity River.</p> <p>3b During the construction phase of the project, Reclamation shall limit the amount of daily construction equipment traffic by staging most construction equipment and vehicles on the project site throughout work at each site.</p>	<p>3a Construction bid documents will require that access be maintained throughout the construction period for all private residences adjacent to the project site boundaries and access roads on the left side of Trinity River.</p> <p>3b During the construction phase of the project, Reclamation shall limit the amount of daily construction equipment traffic by staging most construction equipment and vehicles on the project site throughout work at each site.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.18-4	Construction activities would increase wear and tear on local roadways.	
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	Less than Significant	Less than Significant
Impact 3.18-5	Construction activities could pose a safety hazard to motorists, bicyclists, and pedestrians.	
Mitigation Measures	<p>5a Reclamation shall include provisions in the contract specifications that require the construction contractor to prepare and implement a traffic control plan that would include provision and maintenance of temporary access through the construction zone, reduction in speed limits through the construction zone, signage and appropriate traffic control devices, illumination during hours of darkness or limited visibility, use of safety clothing/vests to ensure visibility of construction workers by motorists, and fencing as appropriate to separate pedestrians and bicyclists from construction activities.</p>	<p>5a Reclamation shall include provisions in the contract specifications that require the construction contractor to prepare and implement a traffic control plan that would include provision and maintenance of temporary access through the construction zone, reduction in speed limits through the construction zone, signage and appropriate traffic control devices, illumination during hours of darkness or limited visibility, use of safety clothing/vests to ensure visibility of construction workers by motorists, and fencing as appropriate to separate pedestrians and bicyclists from construction activities.</p>
Level of Significance after Mitigation	Less than Significant	Less than Significant

References

U.S. Department of Interior. 2000. Record of decision. Trinity River mainstem fishery restoration final environmental impact statement/environmental impact report.

U.S. Bureau of Reclamation. 2004. *Trinity River Restoration Program: Hocker Flat Rehabilitation Site: Trinity River Mile 78 to 79.1*. Vol. November: Trinity River Restoration Program.

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