

# Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4–111.7

## *Environmental Assessment/Draft Environmental Impact Report Volume I: Draft FONSI and Executive Summary*

November 2007



*Project Applicant and Federal  
Co-Lead Agency for NEPA*

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



*Federal Co-Lead Agency for NEPA*

U.S. Department of Agriculture  
Forest Service



*Federal Cooperating Agency for NEPA*

U.S. Department of Interior  
Bureau of Land Management



*California Lead Agency for CEQA*

Trinity County  
Resource Conservation District

*Applicant's Consultant*

 North State Resources, Inc.

*Cover photos: The top photo is of the historic Lewiston Bridge on the Trinity River. The middle photo is of the Cableway Fishing Access on the Trinity River. The bottom photo is of the Indian Creek Rehabilitation site, an earlier Trinity River Restoration Program project; this photo, taken in late October 2007, shows a created floodplain and side channel on the Trinity River upstream of Weaver Creek.*

**LEWISTON–DARK GULCH REHABILITATION PROJECT:  
TRINITY RIVER MILE 105.4 TO 111.7**

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Volume I: Draft FONSI and Executive Summary***

**November 2007**

**State Clearinghouse  
SCH # 2007042161**

***Project Applicant and Federal Co-Lead Agency for NEPA***

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November 7, 2007

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ENV 7.00

Subject: Environmental Assessment/Draft Environmental Impact Report for the Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7

### 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, Trinity County Resource Conservation District (TCRCD), we 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 Lewiston-Dark Gulch Rehabilitation 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), 13112 (invasive species), and 12898 (environmental justice).

This Project would implement important provisions of the Interior Secretary's December 19, 2000 Record of Decision (ROD) for Trinity River Restoration. Physical channel rehabilitation is identified in the ROD as a necessary step towards recovery of the Trinity River's anadromous fishery and fulfillment of the federal government's tribal trust responsibility. The purpose of the proposed Lewiston-Dark Gulch Rehabilitation Project is to provide increased juvenile salmonid rearing habitat on the mainstem Trinity River. Construction will create additional fish and wildlife habitat that is expected to increase over time as river processes are restored. Work to be performed includes re-contouring bank and floodplain features, as well as conducting in-river work such as gravel placement and grade control removal. Project work would start in summer 2008 with gravel additions to the river expected to be performed annually thereafter. The TCRCD is working as a partner agency under a grant from the California Department of Fish and Game's Fisheries Restoration Grant Program that provides financial support for Project implementation.

A 45-day public review period has been established for review of the Draft EA/EIR. The review period begins on November 13, 2007 and ends January 8, 2008. A public hearing will be held at 6:30 pm on December 19, 2007 at the Trinity Public Utilities District conference room (26 Ponderosa Lane – off of Highway 299 just east of Weaverville) to discuss the Project and receive public comment. Electronic copies of the EA/DEIR will be available for public review on the TRRP's website at: [http://www.trrp.net/RestorationProgram/Lewiston-Dark Gulch.htm](http://www.trrp.net/RestorationProgram/Lewiston-Dark%20Gulch.htm), the

TCRCD's website at: [www.tcrd.net](http://www.tcrd.net), or on Reclamation's Mid-Pacific Region website at [http://www.usbr.gov/mp/nepa/nepa\\_projdetails.cfm?Project\\_ID=2697](http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=2697). Hard copies of the document are available in Weaverville, California at the following locations: the Trinity County Resource Conservation District, 1 Horseshoe Lane; the Trinity River Restoration Program Office at 1313 South Main Street; the US Forest Service Office at 360 N. Main St; and the Trinity County Library at 211 N. Main Street. 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 Environmental Assessment/Finding of No Significant Impact (EA/FONSI) and Final EIR (FEIR) will be used by federal and state agencies to decide which Project actions from a number of alternatives will be implemented. The final document is anticipated to be distributed in February 2008. Though a Draft FONSI is included within the EA/DEIR, if new information becomes available during this public circulation period, the FONSI and any associated decisions will change accordingly. Written comments must be received by the Trinity River Restoration Program, P.O. Box 1300, Weaverville, California 96093, no later than 5:00 p.m. on January 8, 2008. E-mailed comments may be sent to Brandt Gutermuth, TRRP Environmental Specialist, at [bgutermuth@mp.usbr.gov](mailto:bgutermuth@mp.usbr.gov).

Sincerely,



Patrick Frost  
District Manager  
Trinity County Resource Conservation District  
CEQA - Lead Agency



Douglas P. Schleusner  
Executive Director  
Trinity River Restoration Program  
NEPA - Lead Agency

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**If you would like a copy of the Draft EA/EIR, please detach and mail the following piece to the Trinity River Restoration Program, P.O. Box 1300, Weaverville, California 96093**

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

- Lewiston-Dark Gulch Project: Draft EA/EIR Executive Summary (50 pages and Document CD)
- Lewiston-Dark Gulch Project: Draft EA/EIR (approximately 500 pages)
- Lewiston-Dark Gulch Project: Draft EA/EIR (CD of entire document).

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City, State, Zip Code \_\_\_\_\_

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**Draft FONSI**



**U.S. BUREAU OF RECLAMATION**  
**MID-PACIFIC REGION**  
**NORTHERN CALIFORNIA AREA OFFICE**  
**TRINITY RIVER RESTORATION PROGRAM**  
**WEAVERVILLE, CALIFORNIA**  
**FINDING OF NO SIGNIFICANT IMPACT**

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), in conjunction with the Shasta Trinity National Forest (STNF) have found that the Proposed Action, supported by the Lewiston-Dark Gulch Rehabilitation Project Environmental Assessment/Final Environmental Impact Report (EA/Final EIR), will result in no significant impacts on the human environment considering the context and intensity of impacts. 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 and 40 CFR 1508.27.

**Reference: Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4 to 111.7 EA**

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Date

\_\_\_\_\_  
Date

FONSI No. TR-EA0107

\_\_\_\_\_  
Date



## **FINDING OF NO SIGNIFICANT IMPACT**

### **Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4 to 111.7**

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#### **BACKGROUND AND NEED**

Completion of the Trinity and Lewiston Dams in 1964 blocked migratory fish access to habitat upstream of Lewiston Dam, eliminated coarse 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 downstream to the North Fork Trinity River. Encroachment of riparian vegetation on the 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 1994, the U.S. Fish and Wildlife Service (USFWS) as the NEPA lead agency began the NEPA process for the Trinity River Mainstem Fishery Restoration Program. The Final Environmental Impact Statement for the Trinity River Mainstem Fishery Restoration Program (FEIS), published in 2000, functions as project-level guidance for policy decisions associated with managing Trinity River flows and as a programmatic NEPA document providing first-tier support of other related actions.

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 Flow Evaluation Alternative as 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 TRRP provides expert support to the Trinity Management Council (TMC) related to both scientific evaluation of restoration progress and management implementation. The Shasta Trinity National Forest (STNF) is an active participant in the TMC, due in part, to their role as the manager of national forest system lands, including the Trinity Unit of the Whiskeytown-Shasta-Trinity National Recreation Area (NRA).

The Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4 to 111.7 (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 vegetation and recontour the slopes adjacent to the waters edge; re-establish functional floodplains provide revegetation and conditions for the 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 fourth in a sequence of channel rehabilitation projects (Hocker Flat constructed in 2005, Canyon Creek constructed in 2006 and Indian Creek under construction - 2007) 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 and enhance the STNF gravel supplementation efforts implemented previously to include activities in the Trinity River downstream of Lewiston Dam. Collectively, these projects are intended to enhance river processes in order to increase channel complexity and fisheries habitat throughout the mainstem Trinity River downstream of Lewiston Dam. The project would contribute to the restoration of aquatic habitat in the mainstem Trinity River through the development of properly functioning channel conditions. Rehabilitation treatments of the type described in the EA, combined with ROD flow releases, are expected to contribute to the restoration of the Trinity River mainstem fishery. The EA documents the analysis of three alternatives to meet this need.

The EA/Final EIR for the Project considered three alternatives: the No-Action Alternative, Proposed Action and Alternative 1. After inclusion of all mitigation measures, no significant impacts were determined under any of these alternatives pursuant to NEPA or the California Environmental Quality Act (CEQA).

Details concerning these alternatives and other alternatives considered but not carried forward for evaluation are included in the EA/Draft EIR (Volume II, Chapter 2) The Proposed Action maximizes environmental benefits with less-than-significant environmental impacts and is preferred for implementation.

The Proposed Action is described below.

Programmatically, the TRRP's approach to channel rehabilitation efforts is to selectively remove fossilized riparian berms that developed after the Trinity River Division of the Central Valley Project was completed as a result of the loss of scouring associated with peak flows. At the Lewiston–Dark Gulch sites, berm removal is not among the project activities because the sites are upstream of Grass Valley Creek, the main source of the sediment that creates the berms. In addition to berm removal, most of the Lewiston–Dark Gulch project activities are focused on physical alteration of other alluvial features (e.g., floodplains, mid-channel bars and side channels) and removal of riparian vegetation at strategic locations to create fish habitat and 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 TRRP identified 21 discrete activity areas within the boundary of the Lewiston site and 19 activity areas within the Dark Gulch site. Access to these areas requires existing and new roads and, in addition, low-flow crossings of the Trinity River at the Dark Gulch site. The type, extent, and level of activity in 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); in-channel work areas (e.g., gravel placement or grade control removal) are identified with an IC; and staging/use areas are characterized with a C. Low-flow channel crossings are labeled with an X, and roads are identified as existing or new. The locations of, and additional information on, these activity areas are provided in Chapter 2 of the EA/Draft EIR.

As the co-lead agency for the EA, the STNF has the legal responsibility to ensure that activities authorized within the NRA are consistent with the Land and Resource Management Plan and other regulatory requirements. For purposes of this FONSI, the STNF decision is focused on 12 discrete activity areas within the boundary of the NRA. These activity areas are: R-1 SO, R-2 DC, IC-1 SO, IC-2 SO, IC-3 SO, IC-4 DC, U-1 SO, U-2 DC, C-1 SO, C-2 SO, C-3 SO and C-4 DC. Additionally, several road segments (non-system roads) will be required to access the various activity areas.

The activities included in the Proposed Action emphasize modifying existing grade control features; reconnecting the river's floodplain with the river at intermediate flows (between 450 and 6,000 cfs); and enhancing the bed and banks of the Trinity River to promote well-distributed aquatic habitat over a range of intermediate flows. Removal of material at the IC areas will provide opportunities to enhance the development of alternate point bars and supplement coarse sediment at a number of locations. Collectively, these activities are intended to provide functional aquatic habitat under a range of flow conditions.

The TRRP has developed a number of programmatic objectives for channel rehabilitation projects. These objectives are described in Chapter 2. The programmatic objectives were used to identify a number of specific activities that could be applied at either site. Each activity area was established to meet a suite of specific objectives in conformance with the overall goals and objectives outlined for the TRRP. Ultimately, the goal of these channel rehabilitation efforts is to provide suitable rearing habitat for anadromous salmonids and to reestablish geomorphic processes associated with an alluvial river (alternate point bars).

The Proposed Action includes 15 rehabilitation activities. Each rehabilitation activity is identified with an alpha code for reference throughout the EA/Draft EIR. The rehabilitation activities are shown in Table 1-1.

**Table 1-1. Lewiston–Dark Gulch Rehabilitation Activities**

<b>Label</b>	<b>Activity Type</b>
A	Recontouring and vegetation removal
B	Constructed floodplain (450 cfs)
C	Constructed floodplain (1,000 – 4,500 cfs)
D	Constructed floodplain (6,000 cfs)
E	Low-flow side channel (300 cfs)
F	Medium-flow side channel (1000 cfs)
G	Alcove (450 cfs, 6,000 cfs)
H	Grade control removal
I	Coarse sediment addition
J	Placement of excavated materials
K	Staging/use areas (includes gravel processing)
L	Roads, existing
M	Roads, new
N	Crossings (Trinity River)
O	Revegetation

Activities A–I would all occur within riverine areas included for rehabilitation activities as part of The Proposed Action. However, the type and degree of activity would differ slightly for each area along the project reaches; Lewiston and Dark Gulch. Activities J and 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. Activities, including road creation, water crossings, and processing/transportation of alluvial materials, are designed to minimize impacts to the resources described in Chapter 3 of the EA/Draft EIR, as revised in the EA/Final EIR. The

inclusion of in-channel activities are intended to enhance the ability of the river to readjust to changes in the flow and sediment regime provided by the ROD. The Riparian Revegetation Management Plan prepared in cooperation with the California Department of Fish and Game (CDFG) will be implemented to ensure that riparian habitat (e.g., riparian vegetation) meets the TRRP objective of restoring the form and function of an alluvial river over time, while also meeting the STNF Standards and Guidelines for Riparian Reserve and the State of California's requirement of "no net-loss of riparian habitat" as interpreted by CDFG and the Regional Water Quality Control Board—North Coast Region (Regional Water Board). The Project includes provisions to ensure a 1:1 replacement of affected riparian habitat over time. Project monitoring requirements will allow critical evaluation in order to adjust future rehabilitation plans to incorporate those practices that perform best in the field. A comprehensive discussion of these rehabilitation site activities is provided in Chapter 2 of the EA/Draft EIR.

The Proposed Action meets the requirements of the Trinity River ROD, the Endangered Species Act (ESA), the Clean Water Act, , NEPA, the Clean Air Act, the Wild and Scenic Rivers Act (WSRA), the National Historic Preservation Act, the Land and Resource Management Plan for the Shasta-Trinity National Forest and the Resource Management Plan for the Redding Field Office of the Bureau of Land Management and the Northwest Forest Plan and Aquatic Conservation Strategy.

## **FINDINGS**

The No-Action Alternative, Proposed Action and Alternative 1 were evaluated in the EA 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; tribal trust; cultural resources; air quality; environmental justice; aesthetics; hazardous waste and materials; noise; public services and utilities/energy; and transportation/traffic circulation. Based on the following summary of the implementation effects of the Proposed Action (as discussed fully in the EA), implementation of the Proposed Action would result in no significant impacts to the quality of the human environment.

### **Land Use**

The Project is located within the Lewiston Community Planning Area. Land use impacts resulting from Alternative 3 would be consistent with Trinity County's development standards for lands within the Lewiston community and lands lying within the Flood Hazard Overlay zoning district. Project construction impacts from access, excavation/earthwork along the river's edge, placement of materials at higher elevations, and processing and transport of alluvial materials will have less-than-significant short-term impacts.

### **Geology, Fluvial Geomorphology, and Soils**

Implementation of the Proposed Action is consistent with the 10 Trinity River Flow Evaluation Study healthy river attributes that provide a basis for the TRRP channel rehabilitation program in support of fish and wildlife populations. Construction activities and disturbance would increase the potential for short-

term wind and water erosion; however, the exclusion of in-channel excavation activities, combined with the implementation of sediment control measures, will ensure that construction impacts to the river are less than significant.

## **Water Resources**

Implementation of the Proposed Action 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 one foot are possible. The Project is expected to have minimal, if any, effects on groundwater elevations or groundwater quality. These relatively small scale impacts to water resources within the project area would be less than significant.

## **Water Quality**

Implementation of the Proposed Action, including construction activities in or adjacent to the low-flow 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 mitigation measures will be implemented to reduce water quality impacts to less-than-significant levels.

## **Fisheries Resources**

To comply with Section 7 of the ESA, Reclamation initiated informal consultation with the National Marine Fisheries Service (NMFS) concerning project effects on the federally and state-listed (threatened) Southern Oregon/Northern California Coast (SONCC) evolutionarily significant unit (ESU) of coho salmon. NMFS affirmed that certain non-flow measures, including the mechanical rehabilitation projects identified in the ROD, were considered in its 2000 Biological Opinion issued in response to the FEIS/EIR. In that Biological Opinion, NMFS identified implementation of mechanical rehabilitation projects as reasonable and prudent measures to minimize Trinity River Division effects on SONCC ESU coho salmon. During the NEPA process, the TRRP requested clarification from NMFS with regards to in-channel activities described in the Proposed Action. Subsequently, NMFS provided the TRRP with documentation necessary to ensure that the 2000 Biological Opinion did in fact consider these types of activities. Reclamation will continue to coordinate with NMFS 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 of the project. Improved river access to the floodplain during elevated springtime flows is expected to increase the availability of the slow, shallow edge habitat preferred by juvenile salmonids. Collective improvements in fluvial channel dynamics contributed by the Proposed Action in conjunction with future channel rehabilitation projects throughout the upper Trinity River below Lewiston Dam are ultimately expected to improve rearing habitat diversity for all anadromous salmonids. Because of the Project's limited construction near

the water, inclusion of mitigation measures to protect fishes, and generally localized effects, no significant effects would occur to fisheries resources.

## **Vegetation, Wildlife, and Wetlands**

Construction activities associated with the Proposed Action 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 native riparian vegetation, and long-term changes in river inundation periods are expected to increase both seasonal and perennial riparian habitats.

Reclamation conducted informal consultation with the USFWS concerning effects to the ESA-listed northern spotted owl. Based on the consultation, the known lack of suitable habitat and spotted owl nests in the area (nest data provided by the Shasta-Trinity National Forest), and Trinity River bird distribution data provided by Redwood Sciences Laboratory, Reclamation determined that a biological assessment was not required because the proposed Project would have no effect on the northern spotted owl or its critical habitat. .

The Proposed Action is limited to activity areas within the site boundaries. Specific design and contract criteria are included in the project description to ensure that project activities occur in a manner that addresses potential impacts to special-status species, including avian and amphibian species. These activities and prescriptive measures, combined with rapid riparian revegetation rates, ensure that there will be no significant project impacts to vegetation, wildlife, and wetlands.

## **Recreation**

The Trinity River was federally designated as a National Wild and Scenic River in 1981. Construction and implementation of the Proposed Action would not permanently affect the scenic or recreational values of the Trinity River for which it was designated. Implementation of the Proposed Action would result in a long-term benefit to the form and function of the Trinity River, thereby enhancing its Outstandingly Remarkable Values for which it was designated as a Wild and Scenic River, including its anadromous fishery. Because fishing impacts would be limited and project benefits localized, the project would result in no significant impacts to recreation.

## **Socioeconomics, Population, and Housing**

The Proposed Action 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 seek lodging during the construction period; however, because of the limited project size and duration, no significant socioeconomic effects would result from implementation.

## **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 Assets resulting from the Proposed Action are expected to be short-term and to be outweighed by long-term increases in 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. However, project improvements to riverine health and trust assets would not be significant because of the localized nature of the project.

## **Cultural Resources**

Cultural resources were identified within the Area of Potential Effect (APE), specifically features associated with the dredge tailings at the Dark Gulch site. The Proposed Action was revised during the planning stages to avoid potentially significant features so that these might remain eligible for listing on the National Register of Historic Places by the BLM. 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. Because of these pre-project cultural resource surveys, subsequent design changes to avoid potentially significant resources, and mitigation measures to cover potential finds during construction, project impacts to cultural resources during implementation of the Proposed Action would not be significant.

## **Air Quality**

Construction associated with the Proposed Action 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 to ensure that there are no significant construction-related impacts to air quality from the project.

## **Environmental Justice**

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. No significant project effects on environmental justice would occur as a result of project implementation.

## **Aesthetics**

Implementation of the Proposed Action would complement the visual resources of the project area by restoring the function and form typical of an alluvial river. Design of the Proposed Action incorporates the diversity of the landscape and vegetation types in the project vicinity into the character of the rehabilitated riverine and upland areas. Excavated material and disturbed dredger tailings piles would be processed or placed in a manner that blends into the contours of the remaining tailings piles. Retention of existing topographic features would lessen the degree of visual impacts and improve the aesthetic quality

of the affected reach of the Trinity River. Because changes to the landscape will not be noticeable in the long term, the project will not result in significant effects to aesthetics.

### **Hazardous Materials**

Implementation of the Proposed Action would potentially release hazardous materials that could pose a public hazard. However, construction specifications will ensure that the contractor follows Best Management Practices to prevent the release of hazardous materials into the environment (e.g., oils, gasoline). These practices will ensure that no significant effects from hazardous material would occur during project implementation.

### **Noise**

Construction activities would be scheduled between 7:00 a.m. and 7:00 p.m. Monday through Saturday and processing of gravel would utilize local topography to dampen/deflect/decrease the noise leaving the site. During working hours, the contractor would operate all equipment to minimize noise impacts to nearby sensitive receptors (residences, etc.) so that no significant project impacts from noise would occur.

### **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. Because construction work and temporary road closures would be staged in a manner to allow for access by emergency service providers, no significant effects to public services would result from project implementation.

### **Transportation/Traffic Circulation**

Implementation of the Proposed Action would minimize the use of heavy construction equipment to transport material to and from the project work site. 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. Implementation of these planning measures will ensure that no significant effects to traffic circulation would result from project implementation.

### **SUMMARY**

Implementation of the Proposed Action, including mitigation measures, would contribute to the long-term environmental quality and sustainability of the Trinity River ecosystem with no significant impacts to the environment.

### **FINDING OF NO SIGNIFICANT IMPACT IN ACCORDANCE WITH 40 CFR 1508.27**

After considering the environmental effects described in the EA, It has been determined that the Proposed Action will not have a significant effect on the quality of the human environment considering the context and intensity of impacts. Furthermore, it is determined that the Proposed Action is not a major federal

action, individually or cumulatively, and will not significantly affect the quality of the environment. Therefore, an environmental impact statement is not needed. This determination is based on the EA/Draft EIR and the context and intensity of the following factors (40 CFR 1508.27):

- 1) **There will be no significant effects, beneficial or adverse, resulting from implementation of this project.** The finding is not biased by the beneficial effects of the action. The construction of the rehabilitation site along a 6.3-mile reach of the Trinity River is expected to provide localized improvements in aquatic and riparian habitats that currently exist at this site. This site will incrementally assist in meeting long-term needs to enhance fish habitat and provide properly functioning river conditions. Viewed within the context of a *healthy* Trinity River, and against implementing the larger river restoration program required under the ROD, this channel rehabilitation project will not result in any significant impacts.
- 2) **Public health and safety are not significantly affected by the Proposed Action.** Due to the limited duration of the project and implementation of public safeguards, public safety will not be at risk. Standard STNF and Reclamation practices for notifying the public of heavy equipment activities during project implementation will be made.
- 3) **There will be no significant adverse effects on prime farmlands, park lands, floodplains, wetlands, historic or cultural resources, scenic rivers, ecologically critical areas, civil rights, women or minority groups.** The entire mainstem Trinity River, from the Lewiston dam to Wetchipee, was designated as a National Wild and Scenic River by the Secretary of the Interior in 1981, primarily because of the river's anadromous fishery. Under the Wild and Scenic Rivers Act, a federal agency may not assist in construction of a water resources project that would have a direct and adverse impact on the free-flowing, scenic, and natural values of a wild or scenic river. The Proposed Action will result in a minor amount of disturbance to river attributes while enhancing the outstandingly remarkable value (anadromous fishery) for which the river was designated in the Wild and Scenic System. Furthermore, this project is programmatically tiered to the Trinity River Mainstem Fishery Restoration Program EIS, which recommended implementation of the six components of the ROD. The Proposed Action, one project within the channel rehabilitation component of the ROD, has no significant impacts within the context of the entire array of ROD restoration components.
- 4) **Based on public participation and the involvement of resource specialists, project effects on the quality of the human environment are not expected to be highly controversial.** These rehabilitation projects have received general support by Trinity County and its citizenry. While controversy regarding certain activities at certain locations was identified during the course of the NEPA process, overall the anticipated effects are reasonably predictable; therefore, these effects are not determined to be highly controversial. Biological, social, and economic issues have been addressed in the EA so that this project should avoid major scientific controversy over environmental effects.

- 5) **There are no known effects on the human environment that are highly uncertain or involve unique or unknown risks.** The effects of this project have been clearly evaluated within the EA. Furthermore, similar actions have been completed in the past with no unpredicted developments.
- 6) **These actions do not set a precedent for other projects that may be implemented to meet the goals and objectives of the Trinity River Restoration Program.** The Trinity River Mainstem Fishery Restoration EIS, the ROD, and the Trinity River Flow Evaluation Report all evaluated and recommended channel rehabilitation projects on the Trinity River below Lewiston Dam. The EIS constitutes the basis for tiering in this instance. The environmental effects of future projects will be analyzed based on need dictated by the ROD, but these needs will be balanced by any new information collected during implementation of this proposed project and other recently implemented projects.
- 7) **There are no known significant cumulative effects from this project and other projects implemented or planned on areas separated from the affected area of this project beyond those assessed.** While some short-term adverse direct and indirect effects may result from the project, these effects have been analyzed in the EA, and will not lead to significant cumulative effects. Potentially significant long-term project effects from implementation of the ROD were evaluated in the Trinity River Mainstem Fishery Restoration EIS. When considered in the context of cumulative watershed effects, the Proposed Action is intended to improve the alluvial processes and function of the mainstem Trinity River, at the same time improving the ability of the Trinity River to mobilize and transport sediment. Cumulative short-term impacts such as soil disturbance and turbidity would occur in response to the Proposed Action, but not to an extent that would cause significant impacts to downstream water quality.
- 8) **Based on surveys accomplished prior to this decision, this action will not adversely affect sites or structures eligible for the National Register of Historic Places, or cause loss or destruction of significant scientific, cultural, or historic resources.** Interdisciplinary teams and individual resource experts have visited the site and provided recommendations to modify the location of one of the upland disposal areas to avoid a potentially significant cultural resource feature associated with the dredge tailings within the Dark Gulch site. Based on these modifications, in conjunction with measures described in the EA, the decision maker has determined that there will be no destruction of scientific, cultural, or historic resources.
- 9) **The Proposed Action would not adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973 (ESA).** A biological opinion addressing foreseeable Trinity River Restoration Program activities (National Marine Fisheries Service 2000) was written in response to a biological assessment that reflected the findings in the Trinity River Mainstem Fishery Restoration EIS. The opinion was written because Trinity River coho salmon are federally listed as threatened. The opinion describes adverse effects that could result from the channel rehabilitation measures that are included in the preferred alternative described in the EIS. Such adverse effects were determined to be minor and short-lived, dwarfed by the long-term beneficial outcome from implementing the Proposed Action.

The displacement of juvenile coho salmon "...is not expected to result in lethal take of these fish." (NMFS 2000).

While the bald eagle has been removed from the Endangered Species list and consultation is no longer required. In any event the Proposed Action may affect but would not likely adversely affect the bald eagle based on the following rationale: Eagles are not known nor expected to nest within or near the project area. There is a potential to temporarily displace foraging eagles for short periods of time (at discrete activity areas) during a time of relatively low eagle foraging activity in the area. Other reaches of the Trinity River would remain undisturbed and available for foraging eagles. Fish, and thus foraging eagles, are expected to start reusing the area immediately following project implementation.

Informal consultation with the USFWS concerning effects to the ESA-listed northern spotted owl was conducted by Reclamation. Based on this informal consultation, known lack of suitable habitat and spotted owl nests in the area (nest data provided by the USFS), and Trinity River bird distribution data provided by the Redwood Sciences Laboratory, Reclamation determined that a biological assessment was not required since the proposed project would have no effect on the northern spotted owl or its critical habitat.

No federally or state listed threatened or endangered plant species occur within, or adjacent to the site boundaries of defined for the Proposed Action.

- 10) **Implementation of the Proposed Action does not threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment.** Implementation of the Proposed Action does not threaten violation of any laws. Its implementation meets requirements under the ROD, the Endangered Species Act, the Clean Water Act, the National Forest Management Act (NFMA), the Northwest Forest Plan and Aquatic Conservation Strategy, NEPA, the Clean Air Act, the Wild and Scenic Rivers Act, the National Historic Preservation Act, the STNF LRMP and BLM's the Resource Management Plan for the Redding Field Office.

The Proposed Action described in this finding is fully consistent with the STNF LRMP, NFMA and the California Environmental Quality Act. The following permits are required to authorize the Proposed Action:

- Section 404, Clean Water Act, Nationwide Permit 27 (San Francisco District, U.S. Army Corp of Engineers),
- Section 401, Clean Water Act Water Quality Certification (North Coast Regional Water Quality Control Board),
- 1600 Streambed Alteration Agreement, (California Department of Fish And Game).

## **Findings Required by Other Laws and Regulations**

This decision to implement the rehabilitation activities, including those specifically under the jurisdiction of the STNF is consistent with the intent of the LRMP with respect to fishery resources (LRMP page 4-18, page 4-114). The Proposed Action is also consistent with the direction provided in the STNF's NRA Management Guide, page IV-3.

## **Implementation Date**

The Proposed Action will be implemented on or after March 1, 2008.

## **Administrative Review or Appeal Opportunities**

For activities specific to lands managed by the STNF, this decision is not subject to appeal pursuant to 36 CFR 215.12 "the following decisions and actions are not subject to appeal under this part: (e) Projects or activities for which notice of the proposed action and opportunity to comment is published and (1) No substantive comments expressing concerns or only supportive comments are received during the comment period for a proposed action analyzed and documented in an EA.

## **Contact**

For additional information concerning the overall decision to implement the Proposed Action, contact Brandt Gutermuth, Project Manager, Trinity River Restoration Program, P.O. Box 1300, 1313 Main Street, Weaverville California, 96093. For information specific to the decision to implement activities on lands administered by the STNF, contact Todd Johnson, Shasta-Trinity National Forest, Shasta Lake Administrative Unit, 14225 Holiday Road, Redding, California 96003

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## **Executive Summary**



# Executive Summary

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## 1 Introduction

This Environmental Assessment/Draft Environmental Impact Report (EA/Draft EIR) for the Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4 – 111.7 addresses the environmental issues, alternatives, and impacts associated with the modification of the bed and banks of the Trinity River at two sites near the community of Lewiston (Proposed Action). The rehabilitation measures are required for the restoration of the Trinity River mainstem fishery. The Proposed Action is designed to benefit anadromous salmonids and their habitat by developing a properly functioning, diverse floodplain and riverine habitat. The rehabilitation sites encompass alluvial and upland features along a 6.3-mile reach of the mainstem Trinity River beginning immediately downstream of the Trinity River Salmon and Steelhead Hatchery (TRSSH) and extending downstream to the area known as Bucktail, upstream of the confluence with Grass Valley Creek in the general vicinity of Lewiston, Trinity County, California.

The U.S. Bureau of Reclamation (Reclamation), the Shasta-Trinity National Forest (STNF), and the Trinity County Resource Conservation District (TCRCD) prepared this EA/Draft EIR in cooperation with the U.S. Bureau of Land Management (BLM). 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, in conjunction with the STNF, will be responsible for project implementation and will function as the federal lead agency for NEPA compliance and federal Endangered Species Act requirements. The STNF will serve as co-lead for those decisions affecting lands managed by the STNF within the Lewiston site boundary. The TCRCD will function as the state lead agency for CEQA compliance. Due to its extensive experience and land holdings along the mainstem Trinity River below Lewiston, BLM is functioning as a NEPA Cooperating Agency and has assisted in the preparation of this EA/Draft EIR. As co-managers of the Wild and Scenic Corridor established for the designated reach of the Trinity River, the STNF and BLM are responsible for complying with Section 7 of the Wild and Scenic Rivers Act to ensure that the Outstandingly Remarkable Values (ORVs) for which the Trinity River was designated under the federal Wild and Scenic River Act are protected or enhanced.

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

- National Marine Fisheries Service (NMFS)
- U.S. Army Corps of Engineers (USACE)
- California Regional Water Quality Control Board, North Coast Region (Regional Water Board)

- U.S. Fish and Wildlife Service (USFWS)
- California Department of Fish and Game (CDFG)
- Trinity County

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 Flow Evaluation Alternative, which was identified as the Preferred Alternative in the FEIS/EIR. In addition, 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 was made 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. The county’s determination was based on its decision to defer pursuing a 1990 petition to the State Water Resources Control Board (State Water Board) related to Water Right Orders 90-05 and 91-01. 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 and the documents that 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

## 2 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 Trinity River 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 mainstem 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.

Simultaneous with the implementation of an earlier rehabilitation project on the Trinity River, the Indian Creek Rehabilitation Project, the Trinity River Restoration Program (TRRP) and the TCRCD issued a Notice of Preparation for the Lewiston–Dark Gulch project. This project is intended to provide habitat for anadromous salmonids in the general vicinity of Lewiston, while providing opportunities for the riverine processes to respond to changes in flow and sediment regimes. Meanwhile, design options and implementation of other proposed Trinity River restoration components, including coarse sediment/spawning gravel supplementation 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 TCRCDD, the BLM, and the STNF, with funding provided by the California Department of Fish and Game's (CDFG's) Coastal Salmon Recovery Program, the 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 be implemented based on these inventories. The STNF is conducting plan development and environmental review for timber management, 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.

### 3 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 along a 6.3-mile reach of the Trinity River beginning immediately below Lewiston Dam and extending downstream to the area known as Bucktail, west of Lewiston. 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 whereby 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 from constructing the Hocker Flat, Canyon Creek and Indian Creek rehabilitation projects. On-going monitoring at these project sites will continue to be incorporated into the AEAM Program for future restoration and rehabilitation efforts.

## 4 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 ORVs 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;
- provide safe and reasonable access to the sites 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 sites;
- integrate known fluvial and ecological theories and relationships with the sites' measured physical and biological attributes and evaluate the response over a definitive time frame;
- conduct in-channel activities in a manner that reduces construction-related impacts, maximizes the river's ability to rehabilitate itself during high flows, and reduces the cost and complexity of implementation;

- 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); and
- facilitate recovery of native fish and wildlife resources that are in decline or listed as threatened and endangered.

The following objectives apply to the responsible and trustee agencies for the Proposed Action:

- 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, native plant, and jurisdictional wetland 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.

## 5 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. 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 TCRCDC, 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. However, Reclamation and the STNF, as co-leads from the federal perspective, do 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.

## 6 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/Draft EIR.

### 6.1 Discretionary Approvals

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

- Section 404 Clean Water Act Permit – U.S. Army Corps of Engineers (USACE), San Francisco District, Eureka Field Office, Eureka, California
- Compliance with the Federal Endangered Species Act (ESA) – USFWS, Eureka, and NMFS, Arcata, California
- Compliance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA) – NMFS, Arcata, California
- Compliance with Section 7 of the federal Wild and Scenic Rivers Act – BLM, Redding, California
- Section 1602 Streambed Alteration Agreement—CDFG, Region 1
- Compliance with the California Endangered Species Act (CESA) – CDFG, Region 1
- Section 401 Clean Water Act Water Quality Certification – Regional Water Quality Control Board – North Coast Region
- Trinity County Ordinances (Floodplain Management) — Trinity County

### 6.2 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
- Federal Wild and Scenic Rivers Act
- National Forest Management Act
- State Wild and Scenic River Act

### 6.3 Federal Executive Orders

Provided below is a list of the federal executive orders and implementing polices with which the project will 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
- Executive Order 13112 for Invasive Species
- Executive Order 13443 for Facilitation of Hunting Heritage and Wildlife Conservation
- Indian Trust Assets

## 7 Scoping and Public Involvement

The TCRCD initiated the public scoping process by forwarding a Notice of Preparation (NOP) of an EIR to the State Clearinghouse on May 1, 2007. The NOP and agency comments on the NOP are summarized in Chapter 1 of the EA/Draft EIR.

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 May 1, 2007 through May 31, 2007, and scoping comments were received through August 14, 2007. Reclamation and the TCRCD held a joint NEPA/CEQA scoping meeting on May 15, 2007, at the Lewiston Community Center in Lewiston, California. During this meeting, members of the public were asked what issues they felt should be addressed in this EA/Draft EIR. 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/Draft EIR. The scoping and public involvement process is also described in Chapter 1.

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/Draft EIR.

- |  |   |
|--|---|
| ▪ land use;                                  | ▪ cultural resources;                     |
| ▪ geology, fluvial geomorphology, and soils; | ▪ air quality;                            |
| ▪ water resources;                           | ▪ environmental justice;                  |
| ▪ water quality;                             | ▪ aesthetics;                             |
| ▪ fishery resources;                         | ▪ hazardous materials;                    |
| ▪ vegetation, wildlife, and wetlands;        | ▪ noise;                                  |
| ▪ recreation;                                | ▪ public services and utilities/energy;   |
| ▪ socioeconomics, population, and housing;   | ▪ transportation and traffic circulation; |
| ▪ Tribal trust;                              | ▪ cumulative impacts; and                 |
|  | ▪ growth-inducing impacts.                |

## 8 Existing Site Conditions

The Trinity River originates in the rugged Salmon-Trinity Mountains of northern California in the northeast corner of Trinity County, California. The river flows generally southward until Trinity and

Lewiston dams impound it. From Lewiston Dam, the river flows westward for 112 miles until it enters the Klamath River near the town of Weitchpec on the Yurok Reservation. The Trinity River passes through Trinity and Humboldt counties and the Hoopa Valley and Yurok Indian Reservations, draining approximately 2,965 square miles. The Klamath River flows northwesterly for approximately 40 miles from its confluence with the Trinity River before entering the Pacific Ocean.

The Lewiston–Dark Gulch sites are located along a 6.3-mile reach of the mainstem Trinity River in the general vicinity of Lewiston, Trinity County, California. To facilitate the engineering and environmental compliance efforts, the site boundaries encompass lands on both sides of the Trinity River. At the Lewiston site, the site boundary includes several distinguishing geographical features, namely a weir below the TRSSH, and two public bridges that cross the Trinity River. The Dark Gulch site includes portions of the rural communities of Salt Flat and Bucktail. Immediately downstream of the Dark Gulch site is a popular fishing area, locally known as Bucktail Hole.

## **9 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.

In general, the approach to channel rehabilitation 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 scouring associated with peak flows. Along with berm removal, the approach involves physical alteration of other alluvial features (e.g., floodplains) and removal of riparian vegetation at strategic locations to 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, entire sites 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 includes more than 50 discrete activity areas within the project boundaries established for the two sites. Chapter 2 of the EA/Draft EIR (Volume II) contains figures that illustrate the location of these areas, as well as roads and access routes that would be used to implement the project. The type, extent, and level of activity within each area may be different, depending on the alternative. The activity areas

were defined by the interdisciplinary design team to include riverine areas, upland areas, and construction support areas. 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); staging areas and roads are included in areas labeled with a C; and low-flow crossings are labeled with an X.

## 9.1 Proposed Action

The Proposed Action would include activities throughout the project boundaries on both sides of the Trinity River. These activities are expected to eventually 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. Modification to the weir below the TRSSH, combined with in-channel treatments (grade control removal and sediment supplementation) will assist in reestablishing the alluvial processes and interactions at these sites. 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. Figures 2.2a, 2.2b and 2.2c in the EA/Draft EIR illustrate the activities that would be implemented under the Proposed Action.

The Proposed Action includes a number of in-channel activities at both the Lewiston and Dark Gulch sites as well as several river crossings within the boundary of the Dark Gulch site. The in-channel activities would include the placement of approximately 51,630 cubic yards of coarse sediment into the Trinity River: 36,330 cubic yards at the Lewiston site and 15,300 cubic yards at the Dark Gulch site. The riverine activities would result in the excavation of approximately 87,000 cubic yards of alluvial material: 38,100 cubic yards at the Lewiston site and 48,900 cubic yards at the Dark Gulch site. About 84,600 cubic yards would be placed at various upland locations within the project sites. Riverine activities on both sides of the Trinity River would use adjacent upland and staging areas to dispose of and/or stockpile excavated or processed materials within the boundaries of the two sites. These sites include public and private lands within a narrow corridor parallel to the river.

In-channel and riverine activities incorporated into the Proposed Action are intended to increase the potential for the river to meander (migrate) out of the channel in which it has been confined by historic dredging activities and, more recently, by riparian berms. In addition to the immediate changes to the channel (e.g., grade control removal, berm removal, floodplain excavation), the Proposed Action would increase the likelihood that the Trinity River would reflect more of the “healthy river” attributes of an alluvial river. A full discussion of the healthy river attributes is provided in Section 3.3 of the EA/Draft EIR.

## 9.2 Alternative 1

Alternative 1 is similar in many respects to the Proposed Action, although the type and degree of activities are different for the two sites. Figures 2-3a-c in Volume II of this document illustrate the

activity areas included in Alternative 1. In essence, Alternative 1 is intended to increase the level of mechanical channel rehabilitation at select locations. The modification of a larger part of the weir at the Lewiston site and the large-scale floodplain/side channel excavation at the Bucktail site, with its associated gravel processing, are examples where impacts would be substantially different from those of the Proposed Action.

Under Alternative 1, in-channel activities would include the placement of approximately 53,200 cubic yards of coarse sediment into the Trinity River: 37,900 cubic yards at the Lewiston site and 15,300 cubic yards at the Dark Gulch site. The riverine activities would result in the excavation of approximately 190,600 cubic yards of alluvial material: 45,000 cubic yards at the Lewiston site and 145,600 cubic yards at the Dark Gulch site. About 110,600 cubic yards would be placed at various upland locations within the project sites. Riverine activities on both sides of the Trinity River would use adjacent upland and staging areas to dispose of and/or stockpile excavated or processed materials within the boundaries of the two sites. These sites include public and private lands within a narrow corridor parallel to the river.

Overall, Alternative 1 would result in activities over a larger area, and there would be a proportional increase in the volume of excavated material. This increase is expected to enhance site-specific riverine processes and eventually result in the development of point bars and floodplain habitat that do not presently exist. The increase in volume of excavated material would also preclude the need to develop off-site sources of coarse sediment but could result in additional disturbance to areas adjacent to the Trinity River. 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.

## **10 Affected Environment and Environmental Consequences**

The affected environment and the environmental consequences of implementing each project alternative are described in Chapter 3. Each section of Chapter 3 addresses a specific environmental topic (e.g., Land Use, Fishery Resources) and 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 descriptions of the existing regional and local conditions in the Affected Environment sections are used as the environmental baseline for analyzing the significance of the 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 for all of the action alternatives are presented at the end of this Executive Summary (Table ES-1).

### **10.1 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 County and tribal planning policies that guide development toward already developed areas and discourage development on resource lands. In general, all parcels within the project boundaries have been subdivided to the 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 the 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 project boundary are 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 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 will limit the amount of daily construction equipment traffic by staging the equipment on the project site at the end of each workday. No significant impacts were identified; therefore, no mitigation measures are required.

## 10.2 Geology, Fluvial Geomorphology, and Soils

Known geologic, geomorphic, and soil conditions within the project boundaries are described in Section 3.3. Impacts were considered significant if implementation of the 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.

The No-Action Alternative would not adversely affect geology, fluvial geomorphology, or soils. Construction activities associated with either action alternative 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. These impacts are considered significant, and erosion and sediment control mitigation measures will be implemented for either action alternative. The Proposed Action and

Alternative 1 would not interfere with any ongoing mineral activities within the vicinity of the project boundary.

### 10.3 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 the rehabilitation site. The primary hydrologic concerns identified in the EA/Draft EIR 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 either action alternative, all excavated materials would be placed outside of the recognized 100-year floodplain. No significant impacts were identified; therefore, no mitigation measures are required.

### 10.4 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; and degradation of Trinity River beneficial uses identified in the Basin Plan (Regional Water Quality Control Board – North Coast Region, 2001). The No-Action Alternative would have no effect on Trinity River water quality.

Construction of either action alternative 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, solvents) into the Trinity River. Several significant impacts were identified. Construction activities will be managed to minimize potential water quality effects and mitigation measures will be implemented to minimize impacts to water quality.

### 10.5 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 with regard to native anadromous fish and resident native and non-native fish from both a regional and site-specific context.

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 upriver as the project site. The Southern Oregon/Northern California Evolutionarily Significant Unit of coho salmon is federally and state-listed as threatened. 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 the federally and state-listed coho salmon, increased erosion and sedimentation, 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 any of the action alternatives.

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 either action alternative, 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 would result from the previously described engineered improvement in river connectivity to, and channel migration through, the floodplain, 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 springtime 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 would 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 planned future bank rehabilitation projects throughout the upper Trinity River would 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 are identified and will be fully implemented.

## 10.6 Vegetation, Wildlife, and Wetlands

Section 3.7 analyzes the potential vegetation, wildlife, and wetlands impacts that would result from construction and operation of the Proposed Action. The No-Action Alternative would not result in impacts to vegetation, wildlife, or wetlands. Either action alternative has the potential to result in temporary impacts to jurisdictional wetland features within the project boundary. Construction of the Proposed Action would result in temporary impacts to 22.50 acres of other waters (riverine). Project construction associated with Alternative 1 would result in temporary impacts to 1.33 acres of jurisdictional wetlands and 34.43 acres of other waters (riverine). 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 within the project boundaries: little willow flycatcher, foothill yellow-legged frog, northwestern

pond turtle, nesting California yellow warbler and yellow-breasted chat, Vaux's swifts, ruffed grouse, nesting raptors (i.e., northern goshawk, osprey, Cooper's hawk, and sharp-shinned hawk), special-status bats, and ring-tailed cats. In addition, seven BLM Sensitive wildlife species could potentially occur in or adjacent to the project boundary: 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. Mitigation measures have been developed to reduce these impacts to less-than-significant levels.

## 10.7 Recreation

Recreation-related impacts were assessed by identifying recreational resources (parks and recreation facilities) in or near the project boundaries, and qualitatively determining whether the construction, operation, and/or maintenance of the Proposed Action would affect 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 No-Action Alternative would have no recreation impacts; however, the potential benefits to long-term recreational uses (fishing) would not be realized under this alternative. Implementing either action alternative would increase turbidity and total suspended solids during construction activities. In-river construction, in conjunction with other activities, could result in some bank sloughing during project implementation, resulting in some degree of turbidity within and downstream of the project boundaries. Fine sediments may be suspended in the river for several hours following excavation activities. Activities will also result in impacts related to public safety and resources associated with river recreation access. These activities will be intermittent, but significant in the short term. Mitigation measures during and after project activities will ensure that turbidity increases associated with the action alternatives will not exceed the Regional Water Board's water quality objectives for turbidity in the Trinity River basin.

## 10.8 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 could 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. The duration of employment would be dependent on the length of the construction period (expected to occur over a 20-week period). In addition, the Proposed Action would provide direct local employment opportunities

only if workers are hired from the local labor force. No significant impacts were identified; therefore, no mitigation measures are required.

## **10.9 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. No significant impacts were identified; therefore, no mitigation measures are required.

## **10.10 Cultural Resources**

Section 3.11 evaluates the effects of the Proposed Action and alternatives on cultural resources in the Trinity River basin. Impacts on archaeological resources would be considered significant if implementation of the Proposed Action would potentially disturb unique archaeological resources.

The area of potential effect (APE) was surveyed for the presence of cultural resources that would be eligible for listing on the National Register of Historic Places (NRHP). Determinations of eligibility for listing on the NRHP of each of the identified historic resources within the APE were completed for two identified sites, and the eligibility of a third site is currently being considered in consultation with BLM. The Programmatic Agreement developed in consultation with the State Historic Preservation Officer and the Council on Historic Preservation requires such consultation. It is anticipated that one site within the APE could be eligible for inclusion on the NRHP because it relates to historic dredge operations. However, the project has been designed to maintain the integrity of these sites. The remaining features, including dredger tailings and ditches, appear to be ineligible for inclusion on the NRHP, but a final determination will be made pending input from BLM. The discovery of new features during project implementation would be a potentially significant impact. Mitigation measures have been developed to reduce these impacts to less-than-significant levels.

## **10.11 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 (NCAQMD).

Implementation of the No-Action Alternative would not affect air quality. Construction associated with any 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 (O<sub>3</sub>) 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 20-week period, emissions from 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 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. These impacts are considered significant. Mitigation measures have been developed to reduce these impacts to less-than significant levels.

## 10.12 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 area. 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. No significant impacts were identified; therefore, no mitigation measures are required.

## 10.13 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, and in part on professional judgment. The assessment is qualitative and evaluates the rehabilitation project in relation to the local aesthetic context.

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 action alternative, removal of upland and riparian vegetation could result in short-term decreased visual quality. While temporary, the impact of modifying the vegetation in select locations would be significant. 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 action alternatives have all 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 any of the action alternatives, existing tailings piles would be used to dispose of material excavated from riverine areas. Design criteria stipulate that this material be placed in a manner that blends the material into the contours of the existing piles while not changing the nominal heights of the piles. Retention of existing topographic features would significantly lessen the degree of visual impacts. In addition to the design measures included in the project description, mitigation measures have been developed to reduce impacts to less-than-significant levels.

## **10.14 Hazardous Materials**

Section 3.15 provides an evaluation of the types of hazardous materials that may currently be present within the project 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 landowners and managers, determined that there were no known hazardous substances within or adjacent to the project boundaries.

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 any of the action alternatives; therefore, no mitigation measures are required.

## **10.15 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 for Trinity County in 2002 indicated that existing noise levels in the general vicinity of the project sites 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, typically occurring during normal working hours intermittently for up to 20 weeks. There would be no permanent noise impacts as a result of project implementation. Construction-related noise impacts would be significant for either action alternative. Mitigation measures will reduce these impacts to less-than-significant levels.

## 10.16 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 the potential for impacts to energy resources from substantial or wasteful use of these resources during project implementation.

The No-Action Alternative would not affect public services or utilities. Implementation of either action alternative 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 action alternatives would be confined to the project boundaries described in Chapter 2, access for mobilization and demobilization of heavy equipment could require traffic control. This would be a significant impact, particularly as it relates to impacts on school bus routes and emergency service providers. Mitigation measures have been developed to reduce these impacts to less-than significant levels.

## 10.17 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 used, local transportation policies, a review of existing conditions at the sites, and the level of traffic on the key roadways. The No-Action Alternative would not affect traffic flow in the general vicinity of the project boundaries.

Project construction activities associated with either of the action alternatives would be managed to ensure that public roads 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 a number of residential and commercial buildings within the project boundary, although the design criteria ensured that all activity areas excluded public and private improvements. However, access to adjacent lands could 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 and commercial establishments within and/or adjacent to the project 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 project site could affect local road conditions on the designated haul routes by increasing the rate of wear to roads

maintained by Trinity County or private entities. Mitigation measures will be implemented to reduce impacts to these rural roads to less-than-significant levels.

## **10.18 Other Impacts and Commitments**

### **10.18.1 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/Draft EIR 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 the 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
- California Coastal Salmonid Restoration Program/Five-Counties Salmonid Conservation Program
- Clean Water Action Section 303(d) Total Maximum Daily Load Requirements Program

No potentially adverse cumulative impacts are anticipated to result from the No-Action Alternative, Proposed Action, or 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; and Tribal Trust Assets. 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.

### **10.18.2 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 to be 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 build out; 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.

## 10.19 Consultation and Coordination

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

- U.S. Department of Interior, Bureau of Land Management
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service
- California Department of Fish and Game
- California Regional Water Quality Control Board, North Coast Region

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 by the TCRCDC are included in Chapter 1 of the EA/Draft EIR. 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/Draft EIR is consistent with 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.

## **10.20 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.

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
3.2 Land Use		
<b>Impact 3.2-1: Implementation of the project could disrupt existing land uses adjacent to the proposed project site.</b>		
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
<b>Impact 3.2-2: Implementation of the project may be inconsistent with the goals, policies, and objectives of the STNF LRMP, BLM’s RMP, and the Trinity County General Plan, as well as local community plans, policies, and ordinances</b>		
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
<b>Impact 3.2-3: Implementation of the project may affect the availability of a locally important mineral resource recovery site.</b>		
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

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
3.3 Geology, Fluvial Geomorphology, and Soils		
<b>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.</b>		
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
<b>Impact 3.3-2: Construction activities associated with the project could potentially result in increased erosion and short-term sedimentation of the Trinity River.</b>		
Mitigation Measures	<p><b>2a</b> Reclamation or its contractors shall implement the following measures during construction activities:</p> <ul style="list-style-type: none"> <li>▪ Areas where ground disturbance would occur shall be identified in advance of construction and limited to only those areas that have been approved by Reclamation.</li> <li>▪ All vehicular construction traffic shall be confined to the designated access routes and staging areas.</li> <li>▪ Disturbance shall be limited to the minimum necessary to complete all rehabilitation activities.</li> <li>▪ All supervisory construction personnel shall be informed of environmental concerns, permit conditions, and final project specifications.</li> </ul> <p><b>2b</b> Reclamation or its contractors shall prepare an erosion and sedimentation control plan (Storm Water Pollution Prevention Plan [SWPPP]). Measures for</p>	<p><b>2a</b> Reclamation or its contractors shall implement the following measures during construction activities:</p> <ul style="list-style-type: none"> <li>▪ Areas where ground disturbance would occur shall be identified in advance of construction and limited to only those areas that have been approved by Reclamation.</li> <li>▪ All vehicular construction traffic shall be confined to the designated access routes and staging areas.</li> <li>▪ Disturbance shall be limited to the minimum necessary to complete all rehabilitation activities.</li> <li>▪ All supervisory construction personnel shall be informed of environmental concerns, permit conditions, and final project specifications.</li> </ul> <p><b>2b</b> Reclamation or its contractors shall prepare an erosion and sedimentation control plan (Storm Water Pollution Prevention Plan [SWPPP]). Measures for</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	<p>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"> <li>▪ Restore disturbed areas to pre-construction contours to the fullest extent feasible.</li> <li>▪ Salvage, store, and use the highest quality soil for revegetation.</li> <li>▪ Discourage noxious weed competition and control noxious weeds.</li> <li>▪ Clear or remove roots from steep slopes immediately prior to scheduled construction.</li> <li>▪ Leave drainage gaps in topsoil and spoil piles to accommodate surface water runoff.</li> <li>▪ To the fullest extent possible, cease excavation activities during significantly wet or windy weather.</li> <li>▪ Use bales and/or silt fencing as appropriate.</li> <li>▪ Before seeding disturbed soils, work the topsoil to reduce compaction caused by construction vehicle traffic.</li> <li>▪ Rip feathered edges (and floodplain surfaces where appropriate) to approximately 18 inches depth. The 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.</li> <li>▪ 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.</li> <li>▪ Sediment control measures shall be in place prior to</li> </ul>	<p>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"> <li>▪ Restore disturbed areas to pre-construction contours to the fullest extent feasible.</li> <li>▪ Salvage, store, and use the highest quality soil for revegetation.</li> <li>▪ Discourage noxious weed competition and control noxious weeds.</li> <li>▪ Clear or remove roots from steep slopes immediately prior to scheduled construction.</li> <li>▪ Leave drainage gaps in topsoil and spoil piles to accommodate surface water runoff.</li> <li>▪ To the fullest extent possible, cease excavation activities during significantly wet or windy weather.</li> <li>▪ Use bales and/or silt fencing as appropriate.</li> <li>▪ Before seeding disturbed soils, work the topsoil to reduce compaction caused by construction vehicle traffic.</li> <li>▪ Rip feathered edges (and floodplain surfaces where appropriate) to approximately 18 inches depth. The 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.</li> <li>▪ 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.</li> <li>▪ Sediment control measures shall be in place prior to</li> </ul>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	<p>the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated. 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> <p>Reclamation will develop the erosion and sedimentation control plan in conjunction with the STNF, BLM, and the Regional Water Board and in cooperation with NMFS and CDFG. Reclamation’s project manager will ensure the preparation and implementation of an erosion and sediment control plan prior to the start of construction.</p>	<p>the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated. 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> <p>Reclamation will develop the erosion and sedimentation control plan in conjunction with the STNF, BLM, and the Regional Water Board and in cooperation with NMFS and CDFG. Reclamation’s project manager will ensure the preparation and implementation of an erosion and sediment control plan prior to the start of construction.</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 proposed project could result in a temporary or permanent increase in the base floodwater elevation.**

Level of Significance after Mitigation	Less than significant	Less than significant
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**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
<b>Impact 3.4-2: Implementation of the project could result in a permanent decline in groundwater elevations or permanent changes in groundwater quality.</b>		
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
<b>Impact 3.4-3: Implementation of the project may expose people or structures to a significant risk of injury, death or loss involving flooding.</b>		
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

3.5 Water Quality

<b>Impact 3.5-1: Construction of the project could result in short-term, temporary increases in turbidity and total suspended solids levels during construction.</b>		
Mitigation Measures	<p><b>1a</b> Turbidity increases associated with project 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"> <li>▪ Turbidity shall not be increased by more than 20</li> </ul>	<p><b>1a</b> Turbidity increases associated with project 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"> <li>▪ Turbidity shall not be increased by more than 20</li> </ul>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
	<p>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> <p><b>1b</b> 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 on a daily basis during river's edge construction (within 10 feet of the water line). Whenever a visible increase in turbidity is observed, monitoring frequency shall be a minimum of every 2 hours during this period.</p> <ul style="list-style-type: none"> <li>▪ If the grab sample results indicate that turbidity levels exceed the thresholds established in the Basin Plan, actions shall be implemented immediately to reduce and maintain turbidity at or below the thresholds. Potential remedial actions include temporarily halting construction activities and implementation of additional Best Management Practices (BMPs) until turbidity is at or below the thresholds.</li> </ul> <p><b>1c</b> Fill gravels used on the streambeds, stream banks, and river crossing will be composed of washed, spawning-sized gravels from a local Trinity Basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants such as petroleum products. Washed gravel will pass Caltrans cleanliness test #227 with a value of 85 or greater.</p> <p><b>1d</b> Reclamation or its contractor shall prepare and</p>	<p>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> <p><b>1b</b> 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 on a daily basis during river's edge construction (within 10 feet of the water line). Whenever a visible increase in turbidity is observed, monitoring frequency shall be a minimum of every 2 hours during this period.</p> <ul style="list-style-type: none"> <li>▪ If the grab sample results indicate that turbidity levels exceed the thresholds established in the Basin Plan, actions shall be implemented immediately to reduce and maintain turbidity at or below the thresholds. Potential remedial actions include temporarily halting construction activities and implementation of additional Best Management Practices (BMPs) until turbidity is at or below the thresholds.</li> </ul> <p><b>1c</b> Fill gravels used on the streambeds, stream banks, and river crossing will be composed of washed, spawning-sized gravels from a local Trinity Basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants such as petroleum products. Washed gravel will pass Caltrans cleanliness test #227 with a value of 85 or greater.</p> <p><b>1d</b> Reclamation or its contractor shall prepare and</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
	<p>implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project, including silt fences, sediment filters, and routine monitoring to verify effectiveness. Proper implementation of erosion and sediment controls 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 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><b>1e</b> To minimize the potential for increases in turbidity and suspended sediments entering the Trinity River as a result of the new access roads, Reclamation or its contractor shall implement the following protocols. (To ensure that turbidity levels do not exceed the thresholds listed in 1a, see measure 1b listed above).</p> <ul style="list-style-type: none"> <li>▪ Keep bare soil to the minimum required by designs. Erosion control devices/measures shall be applied to areas where vegetation has been removed to reduce short-term erosion prior to the start of the rainy season.</li> <li>▪ Keep runoff from bare soil areas well dispersed. Dispersing runoff keeps sediment on-site and prevents sediment delivery to streams. Direct any concentrated runoff from bare soil areas into natural buffers of vegetation or to gentler sloping areas where sediment can settle out.</li> <li>▪ Disconnect and disperse flow paths, including</li> </ul>	<p>implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project, including silt fences, sediment filters, and routine monitoring to verify effectiveness. Proper implementation of erosion and sediment controls 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 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><b>1e</b> To minimize the potential for increases in turbidity and suspended sediments entering the Trinity River as a result of the new access roads, Reclamation or its contractor shall implement the following protocols. (To ensure that turbidity levels do not exceed the thresholds listed in 1a, see measure 1b listed above).</p> <ul style="list-style-type: none"> <li>▪ Keep bare soil to the minimum required by designs. Erosion control devices/measures shall be applied to areas where vegetation has been removed to reduce short-term erosion prior to the start of the rainy season.</li> <li>▪ Keep runoff from bare soil areas well dispersed. Dispersing runoff keeps sediment on-site and prevents sediment delivery to streams. Direct any concentrated runoff from bare soil areas into natural buffers of vegetation or to gentler sloping areas where sediment can settle out.</li> <li>▪ Disconnect and disperse flow paths, including</li> </ul>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	roadside ditches, that might otherwise deliver fine sediment to stream channels. <ul style="list-style-type: none"> <li>Decompact or rip floodplain areas so that surfaces are permeable and no surface water runoff occurs.</li> </ul>	roadside ditches, that might otherwise deliver fine sediment to stream channels. <ul style="list-style-type: none"> <li>Decompact or rip floodplain areas so that surfaces are permeable and no surface water runoff occurs.</li> </ul>
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><b>2a</b> Turbidity increases associated with project 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"> <li>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.</li> </ul> <p><b>2b</b> To ensure that turbidity levels do not exceed the threshold listed above following construction, Reclamation or its contractor shall monitor turbidity and total suspended solids during and after representative rainfall events to determine the effect of the project on Trinity River water quality. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed.</p> <ul style="list-style-type: none"> <li>If increases in turbidity and total suspended solids</li> </ul>	<p><b>2a</b> Turbidity increases associated with project 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"> <li>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.</li> </ul> <p><b>2b</b> To ensure that turbidity levels do not exceed the threshold listed above following construction, Reclamation or its contractor shall monitor turbidity and total suspended solids during and after representative rainfall events to determine the effect of the project on Trinity River water quality. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed.</p> <ul style="list-style-type: none"> <li>If increases in turbidity and total suspended solids</li> </ul>
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**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	<p>are observed as a result erosion from access roads, then field turbidity measurements shall be collected 50 feet upstream of a point adjacent to the end of the access road and 500 feet downstream.</p> <ul style="list-style-type: none"> <li>▪ If the grab sample results indicate that turbidity levels exceed the established thresholds identified in the Basin Plan, the Regional Water Quality Control Board will be notified. The need to implement erosion control measures for turbidity that is expected to result from overland river flows (versus surface run-off) will be evaluated with Regional Water Quality Control Board staff to determine if remediation measures are needed.</li> </ul> <p><b>2c</b> To reduce the potential for the new access roads to continually contribute soil materials to the Trinity River following project construction, thereby increasing turbidity and total suspended solids in the river, the new access roads shall be stabilized or decommissioned upon completion of work in those areas. Decommissioning is defined as removing those elements of a road that reroute hillslope drainage and present slope stability hazards.</p>	<p>are observed as a result erosion from access roads, then field turbidity measurements shall be collected 50 feet upstream of a point adjacent to the end of the access road and 500 feet downstream.</p> <ul style="list-style-type: none"> <li>▪ If the grab sample results indicate that turbidity levels exceed the established thresholds identified in the Basin Plan, the Regional Water Quality Control Board will be notified. The need to implement erosion control measures for turbidity that is expected to result from overland river flows (versus surface run-off) will be evaluated with Regional Water Quality Control Board staff to determine if remediation measures are needed.</li> </ul> <p><b>2c</b> To reduce the potential for the new access roads to continually contribute soil materials to the Trinity River following project construction, thereby increasing turbidity and total suspended solids in the river, the new access roads shall be stabilized or decommissioned upon completion of work in those areas. Decommissioning is defined as removing those elements of a road that reroute hillslope drainage and present slope stability hazards.</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><b>3a</b> 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><b>3b</b> Reclamation shall include in the construction</p>	<p><b>3a</b> 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><b>3b</b> Reclamation shall include in the construction</p>
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**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	<p>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><b>3c</b> 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 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.</p>	<p>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><b>3c</b> 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 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.</p>
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

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
<b>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.</b>		
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 and state-listed coho salmon.**

Mitigation Measures	<p><b>1a</b> Because the proposed construction schedule includes in-river work that could affect spawning spring- and fall-run Chinook salmon, coho salmon, and steelhead or their eggs once in the gravel, prior to the start of project construction, Reclamation or its contractor shall retain a qualified fisheries biologist to conduct a survey for active redds and potential spawning habitat 200 feet upstream and downstream of the proposed in-river construction activities if in-river work activities will be conducted outside of the late-summer, low-flow conditions (e.g., July 15–September 15).</p> <p><b>1b</b> Alluvial material used for coarse sediment additions will be composed of washed, spawning-sized gravels</p>	<p><b>1a</b> Because the proposed construction schedule includes in-river work that could affect spawning spring- and fall-run Chinook salmon, coho salmon, and steelhead or their eggs once in the gravel, prior to the start of project construction, Reclamation or its contractor shall retain a qualified fisheries biologist to conduct a survey for active redds and potential spawning habitat 200 feet upstream and downstream of the proposed in-river construction activities if in-river work activities will be conducted outside of the late-summer, low-flow conditions (e.g., July 15–September 15).</p> <p><b>1b</b> Alluvial material used for coarse sediment additions will be composed of washed, spawning-sized gravels</p>
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**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	(3/8 to 5 inches diameter) from a local Trinity River basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants, such as petroleum products. Washed gravel will pass Caltrans cleanliness test #227 with a value of 85 or greater.	(3/8 to 5 inches diameter) from a local Trinity River basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants, such as petroleum products. Washed gravel will pass Caltrans cleanliness test #227 with a value of 85 or greater.
Level of Significance after Mitigation	Less than significant/Beneficial	Less than significant/Beneficial

**Impact 3.6-2: Implementation of the project could result in increased erosion and sedimentation levels that could adversely affect fishes, including federally and state-listed coho salmon.**

Mitigation Measures	<p><b>2a</b> 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"> <li>▪ 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.</li> </ul> <p><b>2b</b> To ensure that turbidity levels do not exceed the threshold listed above during project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of construction activities. At a minimum, field turbidity measurements shall be collected on a daily</p>	<p><b>2a</b> 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"> <li>▪ 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.</li> </ul> <p><b>2b</b> To ensure that turbidity levels do not exceed the threshold listed above during project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of construction activities. At a minimum, field turbidity measurements shall be collected on a daily</p>
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**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
	<p>basis during in-water and river’s edge construction (within 10 feet of the water line). Whenever a visible increase in turbidity is observed, monitoring frequency shall be a minimum of every 2 hours.</p> <ul style="list-style-type: none"> <li>▪ If the grab sample results indicate that turbidity levels exceed the established thresholds identified in the Basin Plan, actions shall be implemented immediately to reduce and maintain turbidity at or below the thresholds. Potential remedial actions include temporarily halting in-channel construction activities and implementation of additional Best Management Practices (BMPs) until turbidity is at or below the thresholds.</li> </ul> <p><b>2c</b> Proper implementation of erosion and sediment containment devices during and after construction shall be adequate to minimize sediment inputs into the Trinity River. Decompaction and ripping of floodplain areas is expected to eliminate surface runoff during the first year post-construction.</p> <p>Because shoreline construction activities must be able to take place during the fall and potentially during the winter (after October 15 and before April 15), temporary erosion and sediment control structures must be in place and operational at the end of each construction day. Measures for erosion control will be prioritized based on proximity to the river.</p> <p>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> <p><b>2d</b> Reclamation or its contractor shall prepare and</p>	<p>basis during in-water and river’s edge construction (within 10 feet of the water line). Whenever a visible increase in turbidity is observed, monitoring frequency shall be a minimum of every 2 hours.</p> <ul style="list-style-type: none"> <li>▪ If the grab sample results indicate that turbidity levels exceed the established thresholds identified in the Basin Plan, actions shall be implemented immediately to reduce and maintain turbidity at or below the thresholds. Potential remedial actions include temporarily halting in-channel construction activities and implementation of additional Best Management Practices (BMPs) until turbidity is at or below the thresholds.</li> </ul> <p><b>2c</b> Proper implementation of erosion and sediment containment devices during and after construction shall be adequate to minimize sediment inputs into the Trinity River. Decompaction and ripping of floodplain areas is expected to eliminate surface runoff during the first year post-construction.</p> <p>Because shoreline construction activities must be able to take place during the fall and potentially during the winter (after October 15 and before April 15), temporary erosion and sediment control structures must be in place and operational at the end of each construction day. Measures for erosion control will be prioritized based on proximity to the river.</p> <p>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> <p><b>2d</b> Reclamation or its contractor shall prepare and</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	<p>implement a Storm Water Pollution Prevention Plan (SWPPP) that describes Best Management Practices (BMPs) for the project. Ripping of all riparian areas to create furrows parallel to the river is expected to stop delivery of storm water to the river; however, BMPs, including silt fences, sediment filters, 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.</p> <p>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 of materials.</p>	<p>implement a Storm Water Pollution Prevention Plan (SWPPP) that describes Best Management Practices (BMPs) for the project. Ripping of all riparian areas to create furrows parallel to the river is expected to stop delivery of storm water to the river; however, BMPs, including silt fences, sediment filters, 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.</p> <p>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 of materials.</p>
Level of Significance after Mitigation	Less than significant	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
<p><b>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 and state-listed coho salmon.</b></p>		
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 boundary:</p> <p><b>3a</b> Equipment and materials shall be stored away from wetland and surface water features.</p> <p><b>3b</b> 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><b>3c</b> 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 boundary:</p> <p><b>3a</b> Equipment and materials shall be stored away from wetland and surface water features.</p> <p><b>3b</b> 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><b>3c</b> 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

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
<p><b>Impact 3.6-4: Construction activities associated with the project could result in the mortality of rearing fishes, including federally and state-listed coho salmon.</b></p>		
<p>Mitigation Measures</p>	<p><b>4a</b> To avoid or minimize potential injury and mortality of fish during riverine activities (removal of grade control structures, channel crossings, addition and grading of coarse sediment), equipment shall be operated slowly and deliberately to alert and scare adult and juvenile salmonids away from the work area.</p> <p><b>4b</b> Reclamation or its contractor shall minimize potential injury and mortality of fish during the use of low-flow channel crossings. This will be accomplished by minimizing vehicle traffic and by operating equipment and vehicles slowly and deliberately to alert and scare adult and juvenile salmonids away from the crossing area, or by having a person wade ahead of equipment to scare fish away from the crossing area.</p> <p><b>4c</b> To avoid or minimize potential injury and mortality of fish during excavation and placement of fill materials within the active low-flow channel, equipment shall be operated slowly and deliberately to alert and scare adult and juvenile salmonids away from the work area. The contractor shall be instructed that before submerging an excavator bucket or laying gravel below the water surface, the excavator bucket will be operated to "tap" the surface of the water, or a person will wade ahead of fill placement equipment to scare fish away from the work area. To avoid impacts to mobile life stages of salmonids that may be present in the water column, the first layers of clean gravel that are being placed into the wetted channel shall be added slowly and deliberately to allow fish to move from the work area.</p> <p><b>4d</b> Monitoring of the rehabilitated floodplain sites for</p>	<p><b>4a</b> To avoid or minimize potential injury and mortality of fish during riverine activities (removal of grade control structures, channel crossings, addition and grading of coarse sediment), equipment shall be operated slowly and deliberately to alert and scare adult and juvenile salmonids away from the work area.</p> <p><b>4b</b> Reclamation or its contractor shall minimize potential injury and mortality of fish during the use of low-flow channel crossings. This will be accomplished by minimizing vehicle traffic and by operating equipment and vehicles slowly and deliberately to alert and scare adult and juvenile salmonids away from the crossing area, or by having a person wade ahead of equipment to scare fish away from the crossing area.</p> <p><b>4c</b> To avoid or minimize potential injury and mortality of fish during excavation and placement of fill materials within the active low-flow channel, equipment shall be operated slowly and deliberately to alert and scare adult and juvenile salmonids away from the work area. The contractor shall be instructed that before submerging an excavator bucket or laying gravel below the water surface, the excavator bucket will be operated to "tap" the surface of the water, or a person will wade ahead of fill placement equipment to scare fish away from the work area. To avoid impacts to mobile life stages of salmonids that may be present in the water column, the first layers of clean gravel that are being placed into the wetted channel shall be added slowly and deliberately to allow fish to move from the work area.</p> <p><b>4d</b> Monitoring of the rehabilitated floodplain sites for</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	salmon fry stranding shall be performed by a qualified fishery biologist immediately after recession of flood flow events designated as a 1.5- year or less frequent event (i.e., $Q \geq 6,000$ cfs) for a period of 3 years following construction. These flows, and associated fry stranding surveys, would occur most frequently between January and May. If substantial stranding is observed, Reclamation will take appropriate measures to return stranded fishes to river habitats and to modify floodplain topography to reduce the likelihood of future occurrences of fry stranding.	salmon fry stranding shall be performed by a qualified fishery biologist immediately after recession of flood flow events designated as a 1.5- year or less frequent event (i.e., $Q \geq 6,000$ cfs) for a period of 3 years following construction. These flows, and associated fry stranding surveys, would occur most frequently between January and May. If substantial stranding is observed, Reclamation will take appropriate measures to return stranded fishes to river habitats and 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 prevent construction access so that impacts to riparian vegetation are minimized. To compensate for the loss of riparian vegetation within the project boundaries, Reclamation shall implement the following measures:</p> <p><b>5a</b> To mitigate for the loss of riparian habitat, the project will be designed to preserve riparian vegetation within the site boundaries (1) to increase the diversity of native vegetation types and age classes available post-</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 prevent construction access so that impacts to riparian vegetation are minimized. To compensate for the loss of riparian vegetation within the project boundaries, Reclamation shall implement the following measures:</p> <p><b>5a</b> To mitigate for the loss of riparian habitat, the project will be designed to preserve riparian vegetation within the site boundaries (1) to increase the diversity of native vegetation types and age classes available post-</p>
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**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
	<p>project and (2) to facilitate natural recolonization of constructed surfaces by native vegetation. Prior to the start of construction activities, Reclamation shall identify potential construction access routes that avoid and/or minimize, to the fullest extent, impacts to riparian habitat. In addition, Reclamation shall clearly identify and flag biologically sensitive areas (e.g., jurisdictional waters and riparian habitat) to be protected during construction activities. Each biologically sensitive area to be avoided will be flagged, staked, or otherwise marked to ensure that construction activities do not encroach upon them. Reclamation shall inspect and maintain marked areas regularly throughout the construction phase.</p> <p><b>5b</b> Reclamation shall develop a Riparian Revegetation and Monitoring Plan, subject to approval by USACE, the Regional Water Board, and CDFG, prior to implementing the proposed project. The Plan shall include measures that ensure that all riparian vegetation removed by the TRRP projects within the 40-mile corridor of the Trinity River downstream of Lewiston Dam will be replaced by natural recruitment, replanting, or any combination thereof, at an areal ratio of 1:1, within a 5- year time-frame. These measures shall support the TRRP objective to restore the existing homogeneous vegetation pattern with a more diverse assemblage of riparian vegetation, including provisions for incorporation of native species that can resist invasion by noxious plant species. Because the existing Trinity River channel is encroached upon (up to 300 percent) by a homogeneous riparian vegetation community thought to be less suitable for fish and wildlife habitat, the plan need not require strict replacement based on original stem counts and species.</p> <p><b>5c</b> Reclamation shall initiate a 5-year mitigation</p>	<p>project and (2) to facilitate natural recolonization of constructed surfaces by native vegetation. Prior to the start of construction activities, Reclamation shall identify potential construction access routes that avoid and/or minimize, to the fullest extent, impacts to riparian habitat. In addition, Reclamation shall clearly identify and flag biologically sensitive areas (e.g., jurisdictional waters and riparian habitat) to be protected during construction activities. Each biologically sensitive area to be avoided will be flagged, staked, or otherwise marked to ensure that construction activities do not encroach upon them. Reclamation shall inspect and maintain marked areas regularly throughout the construction phase.</p> <p><b>5b</b> Reclamation shall develop a Riparian Revegetation and Monitoring Plan, subject to approval by USACE, the Regional Water Board, and CDFG, prior to implementing the proposed project. The Plan shall include measures that ensure that all riparian vegetation removed by the TRRP projects within the 40-mile corridor of the Trinity River downstream of Lewiston Dam will be replaced by natural recruitment, replanting, or any combination thereof, at an areal ratio of 1:1, within a 5- year time-frame. These measures shall support the TRRP objective to restore the existing homogeneous vegetation pattern with a more diverse assemblage of riparian vegetation, including provisions for incorporation of native species that can resist invasion by noxious plant species. Because the existing Trinity River channel is encroached upon (up to 300 percent) by a homogeneous riparian vegetation community thought to be less suitable for fish and wildlife habitat, the plan need not require strict replacement based on original stem counts and species.</p> <p><b>5c</b> Reclamation shall initiate a 5-year mitigation</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
	<p>monitoring program following the first growing season after project implementation. After a period of 3 years, Reclamation, in consultation with USACE, the Regional Water Board and CDFG, will determine the need, if any, for additional plantings and will assess and/or remedy any loss of riparian habitat, including jurisdictional wetlands within the site boundaries, defined in the EA/EIR, to ensure that no-net loss of wetlands and riparian habitat occurs within the 5-year monitoring period. Monitoring the response of riparian habitat to the channel rehabilitation project after 3 years into the 5-year vegetation recovery period will allow Reclamation to take any additional necessary actions to meet the goal of no net-loss of riparian habitat within the boundaries of the Lewiston and Dark Gulch sites.</p> <p><b>5d</b> Reclamation shall complete a post-project wetland delineation and vegetation habitat evaluation as a basis for comparing pre- and post-project conditions and submit the results to USACE, the Regional Water Board, and CDFG. This post-project vegetation survey will occur approximately 5 years after revegetation is completed. In the event that this delineation identifies a net loss in riparian habitat, Reclamation shall enhance or reestablish riparian vegetation that will function as SRA habitat within the boundaries of the rehabilitation sites. Potential options to accomplish this objective include increasing the density and diversity of riparian vegetation to supplement natural recruitment and introducing riparian plants in locations to expand riparian habitat. In the event that conditions within the boundaries of the Lewiston and Dark Gulch sites preclude adequate onsite mitigation, Reclamation may consider alternate locations for riparian vegetation mitigation within the Trinity River corridor, subject to approval by USACE, the Regional</p>	<p>monitoring program following the first growing season after project implementation. After a period of 3 years, Reclamation, in consultation with USACE, the Regional Water Board and CDFG, will determine the need, if any, for additional plantings and will assess and/or remedy any loss of riparian habitat, including jurisdictional wetlands within the site boundaries, defined in the EA/EIR, to ensure that no-net loss of wetlands and riparian habitat occurs within the 5-year monitoring period. Monitoring the response of riparian habitat to the channel rehabilitation project after 3 years into the 5-year vegetation recovery period will allow Reclamation to take any additional necessary actions to meet the goal of no net-loss of riparian habitat within the boundaries of the Lewiston and Dark Gulch sites.</p> <p><b>5d</b> Reclamation shall complete a post-project wetland delineation and vegetation habitat evaluation as a basis for comparing pre- and post-project conditions and submit the results to USACE, the Regional Water Board, and CDFG. This post-project vegetation survey will occur approximately 5 years after revegetation is completed. In the event that this delineation identifies a net loss in riparian habitat, Reclamation shall enhance or reestablish riparian vegetation that will function as SRA habitat within the boundaries of the rehabilitation sites. Potential options to accomplish this objective include increasing the density and diversity of riparian vegetation to supplement natural recruitment and introducing riparian plants in locations to expand riparian habitat. In the event that conditions within the boundaries of the Lewiston and Dark Gulch sites preclude adequate onsite mitigation, Reclamation may consider alternate locations for riparian vegetation mitigation within the Trinity River corridor, subject to approval by USACE, the Regional</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	Water Board, and CDFG.	Water Board, and CDFG.
Level of Significance after Mitigation	Less than significant	Less than significant

**Impact 3.6-6: Implementation of the project would result in fish passage being temporarily impaired during the in-stream construction phase.**

Mitigation Measures	Proposed Action	Alternative 1
	<p><b>6a</b> Fill gravels used on the low water crossings, streambeds, and stream banks will be composed of washed, spawning-sized gravels from a local Trinity Basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants such as petroleum products. Washed gravel will pass Caltrans cleanliness test #227 with a value of 85 or greater.</p> <p><b>6b</b> Reclamation or its contractor shall construct the low-flow channel crossings to allow adequate depth and velocity for adult and juvenile salmonids to safely pass. Flows associated with storm events are not considered critical as the width and hydrologic conditions associated with low-flow channel crossings in the Trinity River are not considered to limit fish passage at elevated flows and would be comparable to hydrologic conditions in local riffle-and-run features. For low-flow channel crossings at base flows, velocities shall not exceed 2 fps to allow for juvenile fish passage. Minimum water depth at low flow shall not be less than 12 inches in two-thirds of the river channel to provide adequate depth for adult salmon and steelhead passage.</p> <p><b>6c</b> The number of vehicle and equipment crossings of the Trinity River will be minimized.</p>	<p><b>6a</b> Fill gravels used on the low water crossings, streambeds, and stream banks will be composed of washed, spawning-sized gravels from a local Trinity Basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants such as petroleum products. Washed gravel will pass Caltrans cleanliness test #227 with a value of 85 or greater.</p> <p><b>6b</b> Reclamation or its contractor shall construct the low-flow channel crossings to allow adequate depth and velocity for adult and juvenile salmonids to safely pass. Flows associated with storm events are not considered critical as the width and hydrologic conditions associated with low-flow channel crossings in the Trinity River are not considered to limit fish passage at elevated flows and would be comparable to hydrologic conditions in local riffle-and-run features. For low-flow channel crossings at base flows, velocities shall not exceed 2 fps to allow for juvenile fish passage. Minimum water depth at low flow shall not be less than 12 inches in two-thirds of the river channel to provide adequate depth for adult salmon and steelhead passage.</p> <p><b>6c</b> The number of vehicle and equipment crossings of the Trinity River will be minimized.</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
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 (e.g., wetlands).**

Mitigation Measures	<p><b>1a</b> 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, Reclamation shall clearly identify, and flag in the field, biologically sensitive areas (e.g., jurisdictional waters and riparian habitat) to be protected, and will provide the contractor specific instructions to avoid any construction activity within these features. Reclamation shall inspect and maintain marked areas on a regular basis throughout the construction phase.</p> <p><b>1b</b> Reclamation shall develop a Riparian Revegetation and Monitoring Plan, subject to approval by the USACE, Regional Water Board, and CDFG, prior to implementing the proposed project. The plan shall include measures that ensure that all riparian vegetation (a key parameter of jurisdictional wetlands) removed by TRRP projects within the 40-mile corridor of the Trinity River downstream of Lewiston Dam is replaced by natural recruitment, replanting, or any combination thereof at an areal ratio of 1:1 within a 5-year time frame. Because the present Trinity River channel is encroached (up to 300 percent) with riparian vegetation that is homogenous</p>	<p><b>1a</b> 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, Reclamation shall clearly identify, and flag in the field, biologically sensitive areas (e.g., jurisdictional waters and riparian habitat) to be protected, and will provide the contractor specific instructions to avoid any construction activity within these features. Reclamation shall inspect and maintain marked areas on a regular basis throughout the construction phase.</p> <p><b>1b</b> Reclamation shall develop a Riparian Revegetation and Monitoring Plan, subject to approval by the USACE, Regional Water Board, and CDFG, prior to implementing the proposed project. The plan shall include measures that ensure that all riparian vegetation (a key parameter of jurisdictional wetlands) removed by TRRP projects within the 40-mile corridor of the Trinity River downstream of Lewiston Dam is replaced by natural recruitment, replanting, or any combination thereof at an areal ratio of 1:1 within a 5-year time frame. Because the present Trinity River channel is encroached (up to 300 percent) with riparian vegetation that is homogenous</p>
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**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
	<p>in nature, this plan need not require strict replacement based on original stem counts and species. The plan shall acknowledge that the ultimate goals of the TRRP include functional riparian habitat and no net-loss of jurisdictional wetlands throughout the 40-mile reach of the Trinity River below the TRD. Because riparian habitat and jurisdictional wetlands will respond to river restoration with some degree of spatial and temporal variability, areal habitat coverages within a river reach will remain relatively consistent while habitat changes at specific locations may be measurable.</p> <p><b>1c</b> Floodplain values and functions will be enhanced by the project as well as by ROD flows. Consequently, substantial new areas beyond those identified in pre-project plant community delineations are expected to convert to riparian habitats (in some cases, jurisdictional wetlands), both seasonal and perennial, within a 3–5 year post-project window. Reclamation will take advantage of opportunities during or after project construction to enhance wetland functions within project boundaries or to create conditions required for functional jurisdictional wetlands (i.e., hydrology, vegetation, and hydric soils) to persist over time. For example, excavation of areas upslope (beyond the 6,000 cfs OHWM line) to a depth coincident with medium- or low-flow (2000-450 cfs) conditions may provide opportunities to establish the hydrologic conditions necessary for establishing functional jurisdictional wetlands.</p> <p>Reclamation shall initiate a 5-year mitigation-monitoring program after the first growing season following project implementation. After a period of 2 years, the need for additional wetland enhancement will be evaluated. At that time, Reclamation, in consultation with the USACE, Regional Water Board, and CDFG, will determine</p>	<p>in nature, this plan need not require strict replacement based on original stem counts and species. The plan shall acknowledge that the ultimate goals of the TRRP include functional riparian habitat and no net-loss of jurisdictional wetlands throughout the 40-mile reach of the Trinity River below the TRD. Because riparian habitat and jurisdictional wetlands will respond to river restoration with some degree of spatial and temporal variability, areal habitat coverages within a river reach will remain relatively consistent while habitat changes at specific locations may be measurable.</p> <p><b>1c</b> Floodplain values and functions will be enhanced by the project as well as by ROD flows. Consequently, substantial new areas beyond those identified in pre-project plant community delineations are expected to convert to riparian habitats (in some cases, jurisdictional wetlands), both seasonal and perennial, within a 3–5 year post-project window. Reclamation will take advantage of opportunities during or after project construction to enhance wetland functions within project boundaries or to create conditions required for functional jurisdictional wetlands (i.e., hydrology, vegetation, and hydric soils) to persist over time. For example, excavation of areas upslope (beyond the 6,000 cfs OHWM line) to a depth coincident with medium- or low-flow (2000-450 cfs) conditions may provide opportunities to establish the hydrologic conditions necessary for establishing functional jurisdictional wetlands.</p> <p>Reclamation shall initiate a 5-year mitigation-monitoring program after the first growing season following project implementation. After a period of 2 years, the need for additional wetland enhancement will be evaluated. At that time, Reclamation, in consultation with the USACE, Regional Water Board, and CDFG, will determine</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	<p>whether there is a need to further enhance or create additional areas of jurisdictional wetlands within the project boundary defined in the EIR so that there will be no net loss of wetlands at the end of the 5-year monitoring period. Determining the need to further enhance or create additional wetland areas after 2 years of monitoring will provide a 3-year period for Reclamation to take additional pro-active measures towards meeting the goal of no net loss of jurisdictional wetland habitat within the boundaries of the sites.</p> <p>Reclamation shall conduct a post-project wetland delineation 5 years after project construction for comparison to the pre-construction wetland delineation. In the event that a post-project wetland delineation identifies a net loss of jurisdictional wetlands within the sites, the TRRP, in consultation with the USACE, the Regional Water Board, and CDFG, will implement additional mitigation measures to further enhance or create additional jurisdictional wetlands within the boundaries of the Lewiston–Dark Gulch Rehabilitation Sites. In the event the conditions within the boundary of these sites preclude the ability to adequately mitigate onsite, Reclamation may consider alternate locations for jurisdictional wetland mitigation within the local Trinity River corridor, subject to approval by the USACE, the Regional Water Board, and CDFG.</p>	<p>whether there is a need to further enhance or create additional areas of jurisdictional wetlands within the project boundary defined in the EIR so that there will be no net loss of wetlands at the end of the 5-year monitoring period. Determining the need to further enhance or create additional wetland areas after 2 years of monitoring will provide a 3-year period for Reclamation to take additional pro-active measures towards meeting the goal of no net loss of jurisdictional wetland habitat within the boundaries of the sites.</p> <p>Reclamation shall conduct a post-project wetland delineation 5 years after project construction for comparison to the pre-construction wetland delineation. In the event that a post-project wetland delineation identifies a net loss of jurisdictional wetlands within the sites, the TRRP, in consultation with the USACE, the Regional Water Board, and CDFG, will implement additional mitigation measures to further enhance or create additional jurisdictional wetlands within the boundaries of the Lewiston–Dark Gulch Rehabilitation Sites. In the event the conditions within the boundary of these sites preclude the ability to adequately mitigate onsite, Reclamation may consider alternate locations for jurisdictional wetland mitigation within the local Trinity River corridor, subject to approval by the USACE, the Regional Water Board, and CDFG.</p>
Level of Significance after Mitigation	Less than significant	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
<b>Impact 3.7-2: Implementation of the project would result in the loss of upland plant communities.</b>		
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
<b>Impact 3.7-3: Construction of the project could result in the loss of individuals of a special-status plant species.</b>		
Mitigation Measures	<p><b>3a</b> A qualified botanist will visit the unsurveyed portion of the Dark Gulch site to determine habitat suitability at those locations for California globe mallow, Dudley’s rush, English Peak greenbriar, fox sedge, northern clarkia, and veiny arnica. 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 feet of any proposed disturbance, the following measures shall be implemented.</p> <p><b>3b</b> 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><b>3c</b> If a population cannot be fully avoided, the applicant shall retain a qualified botanist to contact CDFG to determine the appropriate salvage and</p>	<p><b>3a</b> A qualified botanist will visit the unsurveyed portion of the Dark Gulch site to determine habitat suitability at those locations for California globe mallow, Dudley’s rush, English Peak greenbriar, fox sedge, northern clarkia, and veiny arnica. 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 feet of any proposed disturbance, the following measures shall be implemented.</p> <p><b>3b</b> 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><b>3c</b> If a population cannot be fully avoided, the applicant shall retain a qualified botanist to contact CDFG to determine the appropriate salvage and</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	relocation measures.	relocation measures.
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 state-listed little willow flycatcher.**

Mitigation Measures	Proposed Action	Alternative 1
	<p><b>4a</b> Grading and other construction activities shall 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. If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, Mitigation measures 4b and 4c shall be implemented.</p> <p><b>4b</b> A qualified biologist shall 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 shall be conducted no more than 15 days prior to the initiation of construction in any given area. The pre-construction survey shall 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 shall be contacted prior to the start of construction to determine the appropriate mitigation measures.</p> <p><b>4c</b> 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 shall 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><b>4a</b> Grading and other construction activities shall 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. If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, Mitigation measures 4b and 4c shall be implemented.</p> <p><b>4b</b> A qualified biologist shall 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 shall be conducted no more than 15 days prior to the initiation of construction in any given area. The pre-construction survey shall 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 shall be contacted prior to the start of construction to determine the appropriate mitigation measures.</p> <p><b>4c</b> 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 shall 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>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
Level of Significance after Mitigation	Less than significant	Less than significant
<b>Impact 3.7-5: Construction activities associated with the project could result in impacts to the foothill yellow-legged frog.</b>		
Mitigation Measures	<p><b>5a</b> 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 boundary 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 boundary.</p> <p><b>5b</b> In the event that a yellow-legged frog is observed within the construction boundary, 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><b>5c</b> Mitigation measures presented in Section 3.5 (Water Quality) 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><b>5d</b> The mitigation measure associated with the disturbance to riparian habitat (Mitigation Measure 3.7-1) will be fully implemented.</p>	<p><b>5a</b> 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 boundary 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 boundary.</p> <p><b>5b</b> In the event that a yellow-legged frog is observed within the construction boundary, 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><b>5c</b> Mitigation measures presented in Section 3.5 (Water Quality) 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><b>5d</b> The mitigation measure associated with the disturbance to riparian habitat (Mitigation Measure 3.7-1) will be fully implemented.</p>
Level of Significance after Mitigation	Less than significant	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
<b>Impact 3.7-6: Construction activities associated with the project could result in impacts to the northwestern pond turtle.</b>		
Mitigation Measures	<p><b>6a:</b> 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 shall be excavated by the biologist and reburied at a suitable location outside of the construction limits.</p> <p><b>6b:</b> 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><b>6c:</b> 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><b>6d:</b> Mitigation measures associated with the disturbance to riparian habitat were discussed previously in this section (Mitigation Measure 3.7-1) and shall be fully implemented.</p>	<p><b>6a:</b> 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 shall be excavated by the biologist and reburied at a suitable location outside of the construction limits.</p> <p><b>6b:</b> 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><b>6c:</b> 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><b>6d:</b> Mitigation measures associated with the disturbance to riparian habitat were discussed previously in this section (Mitigation Measure 3.7-1) and shall be fully implemented.</p>
Level of Significance after Mitigation	Less than significant	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
<p><b>Impact 3.7-7: Construction activities associated with the project could result in impacts to nesting yellow warblers, yellow-breasted chats, Vaux’s swifts, and ruffed grouse.</b></p>		
<p>Mitigation Measures</p>	<p>In order to avoid and/or minimize impacts to nesting Vaux’s swifts, ruffed grouse, California yellow warblers, and yellow-breasted chats, the following measures shall be implemented:</p> <p><b>7a:</b> Grading and other construction activities shall be scheduled to avoid the nesting season for these species to the extent possible. The nesting season for these species in Trinity County extends from March 15 through August. If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, measures 7b and 7c shall be implemented.</p> <p><b>7b:</b> A qualified biologist shall conduct a minimum of one pre-construction survey for these species within the project site and a 250-foot buffer around the site. The survey shall be conducted no more than 15 days prior to the initiation of construction in any given area. The pre-construction survey shall 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 shall determine the extent of a construction-free buffer zone to be established around the nest.</p> <p><b>7c:</b> If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting habitat (e.g., shrubs and trees) that will be removed by the project shall be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the</p>	<p>In order to avoid and/or minimize impacts to nesting Vaux’s swifts, ruffed grouse, California yellow warblers, and yellow-breasted chats, the following measures shall be implemented:</p> <p><b>7a:</b> Grading and other construction activities shall be scheduled to avoid the nesting season for these species to the extent possible. The nesting season for these species in Trinity County extends from March 15 through August. If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, measures 7b and 7c shall be implemented.</p> <p><b>7b:</b> A qualified biologist shall conduct a minimum of one pre-construction survey for these species within the project site and a 250-foot buffer around the site. The survey shall be conducted no more than 15 days prior to the initiation of construction in any given area. The pre-construction survey shall 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 shall determine the extent of a construction-free buffer zone to be established around the nest.</p> <p><b>7c:</b> If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting habitat (e.g., shrubs and trees) that will be removed by the project shall be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	likelihood of direct impacts.	likelihood of direct impacts.
Level of Significance after Mitigation	Less than significant	Less than significant

**Impact 3.7-8: Construction activities associated with the project could disrupt nesting by special-status raptors.**

Mitigation Measures	Proposed Action	Alternative 1
	<p>In order to avoid and/or minimize impacts to nesting special-status raptors, the following measures shall be implemented:</p> <p><b>8a:</b> Construction shall be scheduled to avoid the nesting season for raptors to the extent feasible. The nesting season for most raptors in Trinity County extends from February 15 through July 31. Thus, if construction can be scheduled to occur between August 1 and February 14, the nesting season will 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 shall be implemented.</p> <p><b>8b:</b> Pre-construction surveys for nesting raptors shall be conducted by a qualified biologist to ensure that no nests will be disturbed during project implementation. These surveys shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the biologist shall 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><b>8c:</b> If vegetation is to be removed by the project and all necessary approvals have been obtained, potential</p>	<p>In order to avoid and/or minimize impacts to nesting special-status raptors, the following measures shall be implemented:</p> <p><b>8a:</b> Construction shall be scheduled to avoid the nesting season for raptors to the extent feasible. The nesting season for most raptors in Trinity County extends from February 15 through July 31. Thus, if construction can be scheduled to occur between August 1 and February 14, the nesting season will 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 shall be implemented.</p> <p><b>8b:</b> Pre-construction surveys for nesting raptors shall be conducted by a qualified biologist to ensure that no nests will be disturbed during project implementation. These surveys shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the biologist shall 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><b>8c:</b> If vegetation is to be removed by the project and all necessary approvals have been obtained, potential</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	nesting habitat (i.e., trees) that will be removed by the project shall be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.	nesting habitat (i.e., trees) that will be removed by the project shall 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 3.7-9: 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 and the ring-tailed cat, the following measures shall be implemented:</p> <p><b>9a:</b> A pre-construction survey for roosting bats and ring-tailed cats shall be conducted prior to any removal of trees <math>\geq 12</math> inches in diameter at 4.5 feet above grade. The survey shall be conducted by a qualified biologist. No activities that would result in disturbance to active roosts of special-status bats or dens of ring-tailed 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 shall determine the extent of a construction-free zone to be implemented around the roost. If a bat maternity roost or hibernacula or a ring-tailed cat den is present, Measures 9b and/or 9c shall be implemented. CDFG shall also be notified of any active bat nurseries within the disturbance zones.</p> <p><b>9b:</b> If an active maternity roost or hibernacula is found, the project shall be redesigned to avoid the loss of the tree occupied by the roost, if feasible. If the project</p>	<p>In order to avoid and/or minimize impacts to roosting special-status bats and the ring-tailed cat, the following measures shall be implemented:</p> <p><b>9a:</b> A pre-construction survey for roosting bats and ring-tailed cats shall be conducted prior to any removal of trees <math>\geq 12</math> inches in diameter at 4.5 feet above grade. The survey shall be conducted by a qualified biologist. No activities that would result in disturbance to active roosts of special-status bats or dens of ring-tailed 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 shall determine the extent of a construction-free zone to be implemented around the roost. If a bat maternity roost or hibernacula or a ring-tailed cat den is present, Measures 9b and/or 9c shall be implemented. CDFG shall also be notified of any active bat nurseries within the disturbance zones.</p> <p><b>9b:</b> If an active maternity roost or hibernacula is found, the project shall be redesigned to avoid the loss of the tree occupied by the roost, if feasible. If the project</p>
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**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
	<p>cannot be redesigned to avoid removal of the occupied tree, demolition of that tree shall 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 shall 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 CDFG), by opening the roosting area to allow air flow through the cavity. Demolition shall then follow no sooner 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 shall 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><b>9c:</b> If an active ring-tailed cat 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 shall 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-tailed cats to escape during the darker hours.</p>	<p>cannot be redesigned to avoid removal of the occupied tree, demolition of that tree shall 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 shall 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 CDFG), by opening the roosting area to allow air flow through the cavity. Demolition shall then follow no sooner 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 shall 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><b>9c:</b> If an active ring-tailed cat 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 shall 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-tailed cats to escape during the darker hours.</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
Level of Significance after Mitigation	Less than significant	Less than significant
<b>Impact 3.7-10: Construction activities associated with the project could result in the temporary loss of non-breeding habitat for several special-status birds.</b>		
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
<b>Impact 3.7-11: Construction activities associated with the project could result in impacts to BLM and USFS sensitive species.</b>		
Mitigation Measures	Since no significant impacts for the Pacific fisher were identified, no mitigation is required. Mitigation measures 5a, 5b, and 5c will reduce the impacts to the foothill yellow-legged frog to a less-than-significant level. Mitigation measures 9a and 9b will reduce the impacts to special-status bat species to a less-than-significant level.	Since no significant impacts for the Pacific fisher were identified, no mitigation is required. Mitigation measures 5a, 5b, and 5c will reduce the impacts to the foothill yellow-legged frog to a less-than-significant level. Mitigation measures 9a and 9b will reduce the impacts to special-status bat species to a less-than-significant level.
Level of Significance after Mitigation	Less than significant	Less than significant
<b>Impact 3.7-12: Construction activities associated with the project could restrict terrestrial wildlife movement through the project area.</b>		
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

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
<p><b>Impact 3.7-13: Implementation of the project could result in the spread of non-native and invasive plant species.</b></p>		
<p>Mitigation Measures</p>	<p><b>13a:</b> When using imported erosion control materials (as opposed to rock and dirt berms), use only certified weed-free materials, mulch, and seed.</p> <p><b>13b:</b> Preclude the use of rice straw in riparian areas.</p> <p><b>13c:</b> Limit any import or export of fill to material known to be weed free.</p> <p><b>13d:</b> Require the construction contractor to thoroughly wash all equipment prior to entering the County. Equipment shall be inspected to ensure that it is free of plant parts as well as soils, mud, or other debris that may carry weed seeds.</p> <p><b>13e:</b> Use a mix of native grasses, forbs, and non-persistent non-native species (mix to be developed in cooperation with members of the TCWMC) for disturbed areas that are subject to infestation by non-native and invasive plant species. Where appropriate, a heavy application of mulch will be used to discourage introduction of these species.</p> <p><b>13f:</b> After completion of final grading activities, Reclamation shall coordinate with members of the Trinity County Weed Management Cooperative (TCWMC) to identify high priority areas that shall be treated using planting plugs of native grass species to accelerate occupation of disturbed sites and increase the likelihood of reestablishing a self-sustaining population of native plant species.</p> <p><b>13g:</b> Within the first 3 to 5 years post-project, if it is determined that the project has caused non-native invasive vegetation to out-compete desired planted or</p>	<p><b>13a:</b> When using imported erosion control materials (as opposed to rock and dirt berms), use only certified weed-free materials, mulch, and seed.</p> <p><b>13b:</b> Preclude the use of rice straw in riparian areas.</p> <p><b>13c:</b> Limit any import or export of fill to material known to be weed free.</p> <p><b>13d:</b> Require the construction contractor to thoroughly wash all equipment prior to entering the County. Equipment shall be inspected to ensure that it is free of plant parts as well as soils, mud, or other debris that may carry weed seeds.</p> <p><b>13e:</b> Use a mix of native grasses, forbs, and non-persistent non-native species (mix to be developed in cooperation with members of the TCWMC) for disturbed areas that are subject to infestation by non-native and invasive plant species. Where appropriate, a heavy application of mulch will be used to discourage introduction of these species.</p> <p><b>13f:</b> After completion of final grading activities, Reclamation shall coordinate with members of the Trinity County Weed Management Cooperative (TCWMC) to identify high priority areas that shall be treated using planting plugs of native grass species to accelerate occupation of disturbed sites and increase the likelihood of reestablishing a self-sustaining population of native plant species.</p> <p><b>13g:</b> Within the first 3 to 5 years post-project, if it is determined that the project has caused non-native invasive vegetation to out-compete desired planted or</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	native colonizing riparian vegetation, opportunities to control these non-native species shall 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 TCWMC and the Trinity County Board of Supervisors.	native colonizing riparian vegetation, opportunities to control these non-native species shall 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 TCWMC and the Trinity County Board of Supervisors.
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	<p><b>1a</b> Reclamation or its contractor shall provide precautionary signage to warn recreational users of the potential safety hazards associated with project construction activities. Signs and/or buoys shall be placed within and directly adjacent to the project boundaries along the Trinity River in accordance with the requirements specified in Title 14, Article 6 of the California Code of Regulations. Notification signs shall be posted at the Bucktail Hole River Access and at the privately owned River Oaks Resort, Trinity River Resort and RV Park, and the Old Lewiston Bridge RV Resort. Additionally, public notification of proposed project construction activities and associated safety hazards shall be circulated in the local <i>Trinity Journal</i> newspaper.</p> <p><b>1b</b> Reclamation will repair and/or replace any facilities that may be inadvertently affected by project activities at</p>	<p><b>1a</b> Reclamation or its contractor shall provide precautionary signage to warn recreational users of the potential safety hazards associated with project construction activities. Signs and/or buoys shall be placed within and directly adjacent to the project boundaries along the Trinity River in accordance with the requirements specified in Title 14, Article 6 of the California Code of Regulations. Notification signs shall be posted at the Bucktail Hole River Access and at the privately owned River Oaks Resort, Trinity River Resort and RV Park, and the Old Lewiston Bridge RV Resort. Additionally, public notification of proposed project construction activities and associated safety hazards shall be circulated in the local <i>Trinity Journal</i> newspaper.</p> <p><b>1b</b> Reclamation will repair and/or replace any facilities that may be inadvertently affected by project activities at</p>
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**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	the Sven-Olbertson Watchable Wildlife Area or the Bucktail Hole River Access. This measure would include installation of interpretive signage consistent with the requirements of the STNF and BLM. A pre-construction meeting with STNF and BLM will be used to identify the level of vegetative screening that will be retained at these recreation sites.	the Sven-Olbertson Watchable Wildlife Area or the Bucktail Hole River Access. This measure would include installation of interpretive signage consistent with the requirements of the STNF and BLM. A pre-construction meeting with STNF and BLM will be used to identify the level of vegetative screening that will be retained at these recreation sites.
Level of Significance after Mitigation	Less than significant	Less than significant
<b>Impact 3.8-2: Construction of the project could result in an increased safety risk to recreational users or resource damage to lands within the project boundaries.</b>		
Mitigation Measures	<b>2a</b> Please see mitigation measure 1a above.	<b>2a</b> Please see mitigation measure 1a above.
Level of Significance after Mitigation	Less than significant	Less than significant
<b>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</b>		
Mitigation Measures	<p><b>3a</b> 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 listed in the Basin Plan for the North Coast Region (2001) is summarized below.</p> <ul style="list-style-type: none"> <li>▪ Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher</li> </ul>	<p><b>3a</b> 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 listed in the Basin Plan for the North Coast Region (2001) is summarized below.</p> <ul style="list-style-type: none"> <li>▪ Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher</li> </ul>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
	<p>percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.</p> <p><b>3b</b> To ensure that turbidity levels do not exceed the threshold listed above during river’s edge and in-channel 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 and in-channel 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><b>3c</b> Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project. Decompaction or furrowing of 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 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.</p>	<p>percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.</p> <p><b>3b</b> To ensure that turbidity levels do not exceed the threshold listed above during river’s edge and in-channel 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 and in-channel 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><b>3c</b> Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project. Decompaction or furrowing of 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 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.</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
Level of Significance after Mitigation	Less than significant	Less than significant
<b>Impact 3.8-4: Implementation of the project could affect Wild and Scenic River values.</b>		
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 Socioeconomic, 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	Beneficial	Beneficial

**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

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
<b>Impact 3.9-3: Implementation of the project would result in an increased demand for housing during construction.</b>		
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
<b>Impact 3.9-4: Implementation of the project would result in concentrated population growth.</b>		
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

3.10 Tribal Trust

<b>Impact 3.10-1: Implementation of the project may reduce the quantity or quality of trust assets.</b>		
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

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
3.11 Cultural Resources		
<b>Impact 3.11-1: Implementation of the proposed project could cause a substantial adverse change in the significance of a known cultural resource.</b>		
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
<b>Impact 3.11-2: Implementation of the proposed project could potentially result in disturbance of undiscovered prehistoric or historic resources.</b>		
Mitigation Measures	<p><b>2a</b> Prior to initiation of construction or ground-disturbing activities, all construction workers shall be alerted to the possibility of discovering cultural resources. This includes prehistoric and/or historic resources. Personnel shall be instructed that upon discovery of buried cultural resources, work within 50 feet of the find shall be halted and Reclamation’s designated archaeologist consulted. Once the find has been identified, Reclamation will make the necessary plans for treatment of the cultural resources and for the evaluation and resolving adverse affect to historic properties pursuant to the PA for compliance with the NHPA.</p> <p><b>2b</b> If 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</p>	<p><b>2a</b> Prior to initiation of construction or ground-disturbing activities, all construction workers shall be alerted to the possibility of discovering cultural resources. This includes prehistoric and/or historic resources. Personnel shall be instructed that upon discovery of buried cultural resources, work within 50 feet of the find shall be halted and Reclamation’s designated archaeologist consulted. Once the find has been identified, Reclamation will make the necessary plans for treatment of the cultural resources and for the evaluation and resolving adverse affect to historic properties pursuant to the PA for compliance with the NHPA.</p> <p><b>2b</b> If 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</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	<p>be of Native American origin, the Native American Heritage Commission (NAHC) will be notified within 24 hours of determination, as required by Public Resources Code, Section 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. If Native American human remains and associated items are discovered on Federal lands, they will be treated according to provisions set forth in the Native American Protection and Repatriation Act (25 U.S.C. 3001) as well as Reclamations’ Directives and Standards.</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 mitigation for historical or unique archaeological resources takes place.</p>	<p>be of Native American origin, the Native American Heritage Commission (NAHC) will be notified within 24 hours of determination, as required by Public Resources Code, Section 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. If Native American human remains and associated items are discovered on Federal lands, they will be treated according to provisions set forth in the Native American Protection and Repatriation Act (25 U.S.C. 3001) as well as Reclamations’ Directives and Standards.</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 mitigation for historical or unique archaeological resources 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 (PM<sub>10</sub> and PM<sub>2.5</sub>) levels.**

Mitigation Measures	<b>1a:</b> Reclamation shall include provisions in the construction bid documents specifying that the contractor	<b>1a:</b> Reclamation shall include provisions in the construction bid documents specifying that the contractor
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**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	<p>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> <p>Inactive construction areas will be watered as needed to ensure dust control.</p> <p>Pursuant to the California Vehicle Code (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).</p> <p>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.</p> <p>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.</p> <p>All paved access roads, parking areas, and staging areas shall be swept (with water sweepers) at each construction site, as required by Reclamation.</p> <p>Roads will be swept (with water sweepers) if visible soil material is carried onto adjacent public roads, as required by Reclamation.</p> <p>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.</p> <p>Reclamation or its contractor shall designate a person to</p>	<p>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> <p>Inactive construction areas will be watered as needed to ensure dust control.</p> <p>Pursuant to the California Vehicle Code (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).</p> <p>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.</p> <p>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.</p> <p>All paved access roads, parking areas, and staging areas shall be swept (with water sweepers) at each construction site, as required by Reclamation.</p> <p>Roads will be swept (with water sweepers) if visible soil material is carried onto adjacent public roads, as required by Reclamation.</p> <p>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.</p> <p>Reclamation or its contractor shall designate a person to</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	monitor dust control and to order increased watering as necessary to prevent transport of dust offsite. This person will also respond to citizen complaints.	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	<b>2a:</b> Reclamation shall include provisions in the construction bid documents specifying that the contractors shall comply with NCUAQMD Rule 104 (3.0) Particulate Matter. 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).	<b>2a:</b> Reclamation shall include provisions in the construction bid documents specifying that the contractors shall comply with NCUAQMD Rule 104 (3.0) Particulate Matter. 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).
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	<b>3a:</b> 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. <b>3b:</b> In general, all requirements of a NCUAQMD “NON-Standard” burn permit will be met for burning. Burn	<b>3a:</b> 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. <b>3b:</b> In general, all requirements of a NCUAQMD “NON-Standard” burn permit will be met for burning. Burn
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**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	<p>management planning may include but not be limited to:</p> <p>Ensure that burning occurs only on approved burn days as defined by the NCUAQMD (determined via calling 1-866-BURN-DAY).</p> <p>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 (&lt; 10 mph), and temperature will be low (&lt; 80° F)</p> <p>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.</p> <p>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> <p><b>3c:</b> 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>management planning may include but not be limited to:</p> <p>Ensure that burning occurs only on approved burn days as defined by the NCUAQMD (determined via calling 1-866-BURN-DAY).</p> <p>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 (&lt; 10 mph), and temperature will be low (&lt; 80° F)</p> <p>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.</p> <p>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> <p><b>3c:</b> 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

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
3.13 Environmental Justice		
<b>Impact 3.13-1: Implementation of the project could adversely affect a minority or low-income population and/or community.</b>		
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
<b>Impact 3.14-1: Implementation of the project could result in the degradation and/or obstruction of a scenic view from key observation areas.</b>		
Mitigation Measures	<ul style="list-style-type: none"> <li>▪ In order to minimize impacts to visual resources resulting from the removal of vegetation within the project area, mitigation measures 1a through 1c (e.g., revegetation), as described in Section 3.7 (Vegetation, Wildlife, and Wetlands), will be implemented where applicable for either alternative.</li> <li>▪ Visual impacts related to water quality (i.e., the potential for increased turbidity to adversely impact the aesthetic quality of the river) will be mitigated through the implementation of mitigation measures 3a through 3c, as described in Section 3.8 (Recreation). These measures will be implemented where applicable for either alternative.</li> </ul>	<ul style="list-style-type: none"> <li>▪ In order to minimize impacts to visual resources resulting from the removal of vegetation within the project area, mitigation measures 1a through 1c (e.g., revegetation), as described in Section 3.7 (Vegetation, Wildlife, and Wetlands), will be implemented where applicable for either alternative.</li> <li>▪ Visual impacts related to water quality (i.e., the potential for increased turbidity to adversely impact the aesthetic quality of the river) will be mitigated through the implementation of mitigation measures 3a through 3c, as described in Section 3.8 (Recreation). These measures will be implemented where applicable for either alternative.</li> </ul>
Level of Significance after Mitigation	Less than significant	Less than significant

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
<b>Impact 3.14-2: Implementation of the project could substantially change the character of, or be disharmonious with, existing land uses and aesthetic features.</b>		
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
<b>Impact 3.14-3: The project may be inconsistent with the federal or state Wild and Scenic River Acts or Scenic Byway requirements.</b>		
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

<b>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.</b>		
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

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
<b>Impact 3.15-2: Construction activities associated with the project may interfere with emergency response/evacuation plans by temporarily slowing traffic flow.</b>		
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
<b>Impact 3.15-3: Implementation of the project may contribute to area wildland fire potential and catastrophic fire behavior.</b>		
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
<b>Impact 3.15-4: Implementation of the project may contribute to an increased risk of landslide or flooding.</b>		
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

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	Proposed Action	Alternative 1
3.16 Noise		
<b>Impact 3.16-1: Construction activities associated with the project would result in noise impacts to nearby sensitive receptors.</b>		
Mitigation Measures	<p><b>1a:</b> Construction activities near residential areas (i.e., sensitive receptors 1-3 and 5-6) 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><b>1b:</b> Reclamation shall require in construction specifications that the contractor maintain all construction equipment with manufacturer’s specified noise muffling devices.</p> <p><b>1c:</b> 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><b>1a:</b> Construction activities near residential areas (i.e., sensitive receptors 1-3 and 5-6) 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><b>1b:</b> Reclamation shall require in construction specifications that the contractor maintain all construction equipment with manufacturer’s specified noise muffling devices.</p> <p><b>1c:</b> 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

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
3.17 Public Services and Utilities/Energy		
<b>Impact 3.17-1: Implementation of the project could disrupt existing electrical and phone service during the construction phase.</b>		
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
<b>Impact 3.17-2: Construction of the project could result in the generation of increased solid waste.</b>		
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
<b>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.</b>		
Mitigation Measures	<p><b>3a:</b> 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><b>3b:</b> Reclamation shall stipulate in the contract specifications that the contractor must provide 72-hour notice to the local emergency providers (i.e., TCSD, CDF, DCCVFD , and Trinity Life Support Ambulance)</p>	<p><b>3a:</b> 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><b>3b:</b> Reclamation shall stipulate in the contract specifications that the contractor must provide 72-hour notice to the local emergency providers (i.e., TCSD, CDF, DCCVFD , and Trinity Life Support Ambulance)</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	prior to the start of temporary closures.	prior to the start of temporary closures.
Level of Significance after Mitigation	Less than significant	Less than significant
<b>Impact 3.17-4: Construction of the proposed project could result in a substantial use of nonrenewable energy resources.</b>		
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.
Level of Significance after Mitigation	N/A	N/A

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
<b>Impact 3.18-3: Implementation of the project would affect access to adjacent land uses.</b>		
Mitigation Measures	<p><b>3a</b> Construction bid documents will require that access be maintained throughout the construction period for all private residences adjacent to the project boundary and access roads on the left side of Trinity River.</p> <p><b>3b</b> During the construction phase of the project, Reclamation shall limit the amount of daily construction equipment traffic by staging most construction equipment and vehicles within the project boundary throughout the work period.</p>	<p><b>3a</b> Construction bid documents will require that access be maintained throughout the construction period for all private residences adjacent to the project boundary and access roads on the left side of Trinity River.</p> <p><b>3b</b> During the construction phase of the project, Reclamation shall limit the amount of daily construction equipment traffic by staging most construction equipment and vehicles within the project boundary throughout the work period.</p>
Level of Significance after Mitigation	Less than significant	Less than significant
<b>Impact 3.18-4: Construction activities would increase local roadway wear-and-tear.</b>		
Mitigation Measures	<p><b>4a</b> Reclamation or its contractor shall perform a pre-construction survey of federal, state, and private roads to determine the existing roadway conditions of the construction access routes. An agreement would be entered into prior to construction that would detail the pre-construction conditions and post-construction requirements for potential roadway rehabilitation.</p>	<p><b>4a</b> Reclamation or its contractor shall perform a pre-construction survey of federal, state, and private roads to determine the existing roadway conditions of the construction access routes. An agreement would be entered into prior to construction that would detail the pre-construction conditions and post-construction requirements for potential roadway rehabilitation.</p>
Level of Significance after Mitigation	Less than significant	Less than significant
<b>Impact 3.18-5: Construction activities could pose a safety hazard to motorists, bicyclists, and pedestrians.</b>		
Mitigation Measures	<p><b>5a:</b> Reclamation shall include provisions in the contract specifications that require the construction contractor to</p>	<p><b>5a:</b> Reclamation shall include provisions in the contract specifications that require the construction contractor to</p>

**Table ES-1. Summary of Impacts and Mitigation Measures  
Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7**

	<b>Proposed Action</b>	<b>Alternative 1</b>
	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.	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.
Level of Significance after Mitigation	Less than significant	Less than significant

**Impact 3.18-6: Construction activities would affect the Lewiston Bridge and Old Lewiston Bridge.**

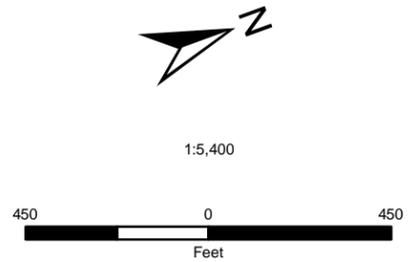
Mitigation Measures	Since no significant impact was identified for this alternative, no mitigation is required.	Since no significant impact was identified for this alternative, no mitigation is required.
Level of Significance after Mitigation	N/A	N/A



File Location: G:\Projects\10102\_TRRP\_Lewisston\GIS\Working\_MXD\10102\_DG-Lew4\_Fig\_2-2a\_TreatAreas\_PA.mxd Source: NSR, Inc.; USBR; USDA Prepared: 10/31/2007 bmoore



- Site Boundary (131.5 acres)
  - River Mile (RM)
  - Access Road - Existing
  - Access Road - New
  - Staging Area (C)
- Activity Area**
- In Channel (IC)
  - Riverine (R)
  - Upland (U)
- Treatment Area**
- Recontouring
  - Constructed Floodplain (1000-4500 cfs)
  - Alcove
  - Coarse Sediment Addition
  - Grade Control Removal
  - Constructed Floodplain (6000 cfs)
  - Low-Flow Sidechannel (300 cfs)
- CW - Cableway**  
**DC - Deadwood Creek**  
**FG - Dept. of Fish & Game**  
**HG - Hoadley Gulch**  
**SO - Sven Olbertson**

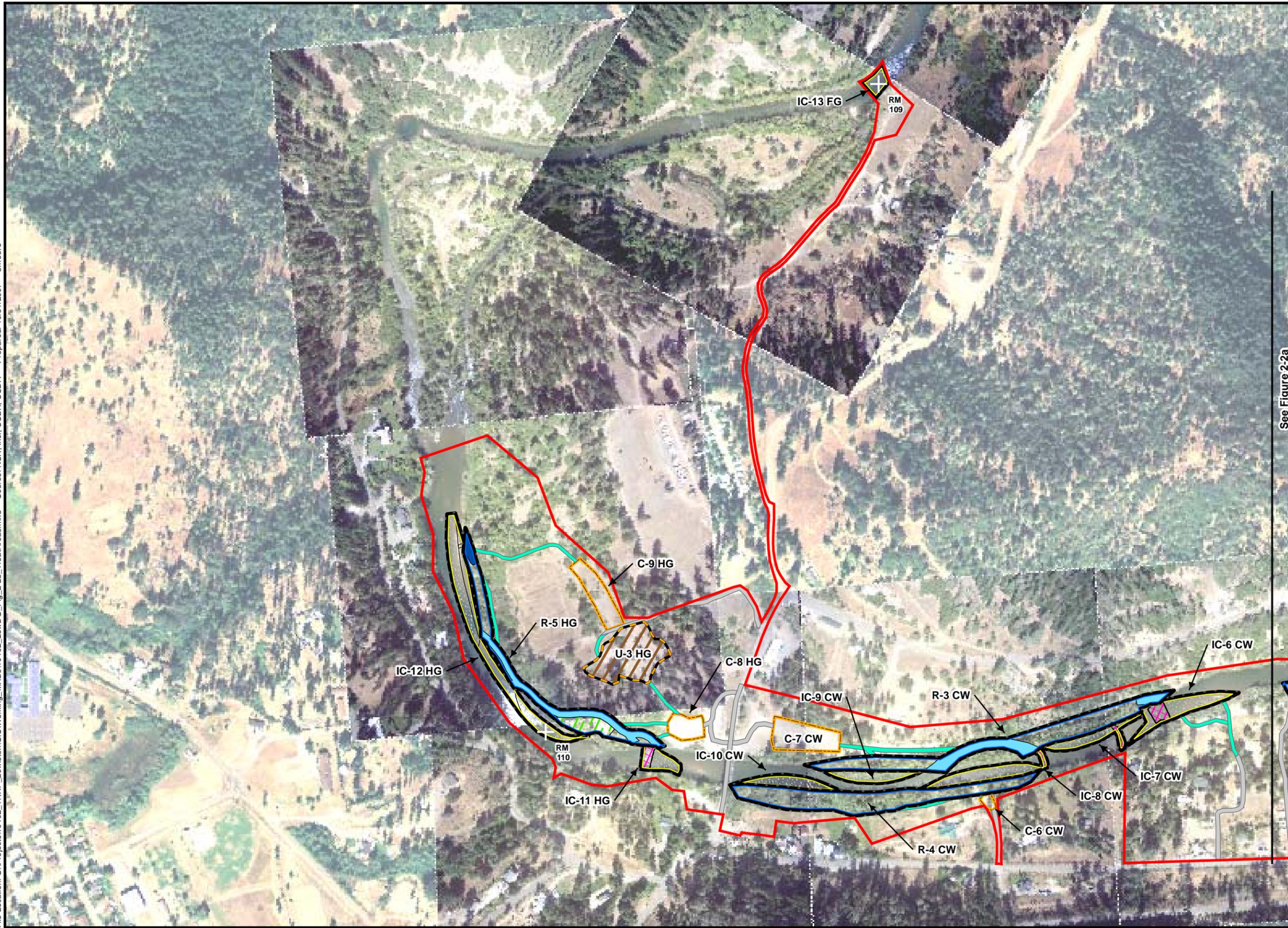


Aerial photography:  
2005  
2006

Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7

**Figure 2-2a**  
**Proposed Action Activity Areas**

File Location: G:\Projects\10102\_TRRP\_Lewisston\GIS\Working\_MXDs\10102\_LewDG\_Fig\_2-2b\_TreatAreas.mxd Source: NSR, Inc.; USBR, USDA Prepared: 10/31/2007 bmoore



- Site Boundary (131.5 acres)
- River Mile (RM)
- Access Road - Existing
- Access Road - New
- Staging Area (C)

**Activity Area**

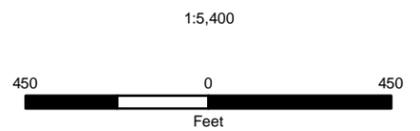
- In Channel (IC)
- Riverine (R)
- Upland (U)

**Treatment Area**

- Recontouring
- Constructed Floodplain (1000-4500 cfs)
- Alcove
- Coarse Sediment Addition
- Grade Control Removal
- Constructed Floodplain (6000 cfs)
- Low-Flow Sidechannel (300 cfs)

- CW - Cableway**
- DC - Deadwood Creek**
- FG - Dept. of Fish & Game**
- HG - Hoadley Gulch**
- SO - Sven Olbertson**

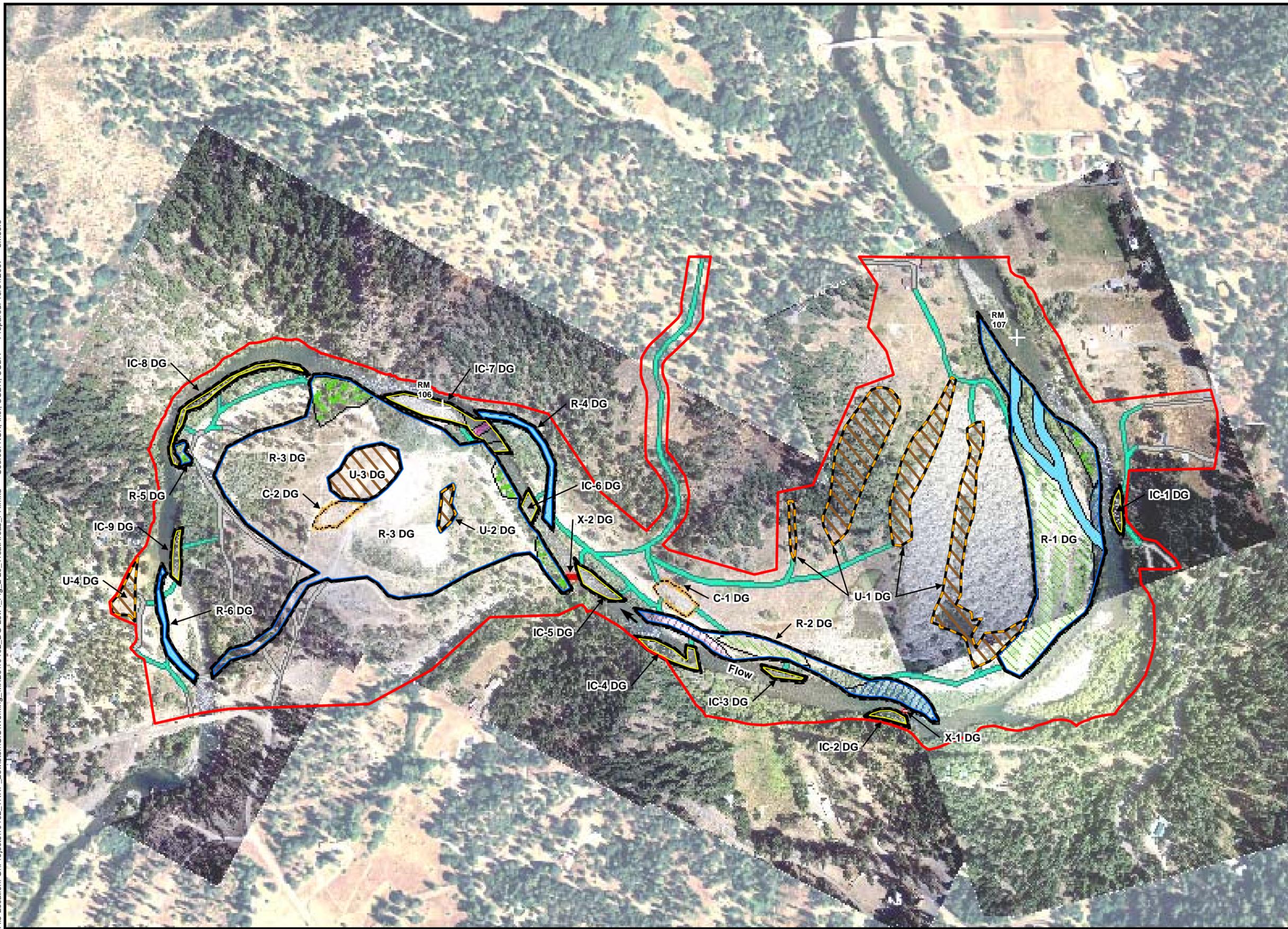
See Figure 2-2a



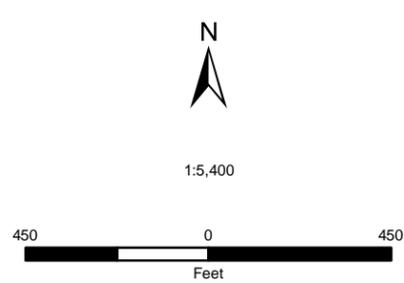
Aerial photography:  
2005  
2006

**Figure 2-2b**  
**Proposed Action Treatment Areas**

File Location: G:\Projects\10102\_TRRP\_Lewisston\GIS\Working\_MXD\10102\_DG-Law4\_Fig.2-2c\_TreatAreas\_PA.mxd Source: NSR, Inc.; USBR, USDA Prepared: 10/31/2007 bmoore



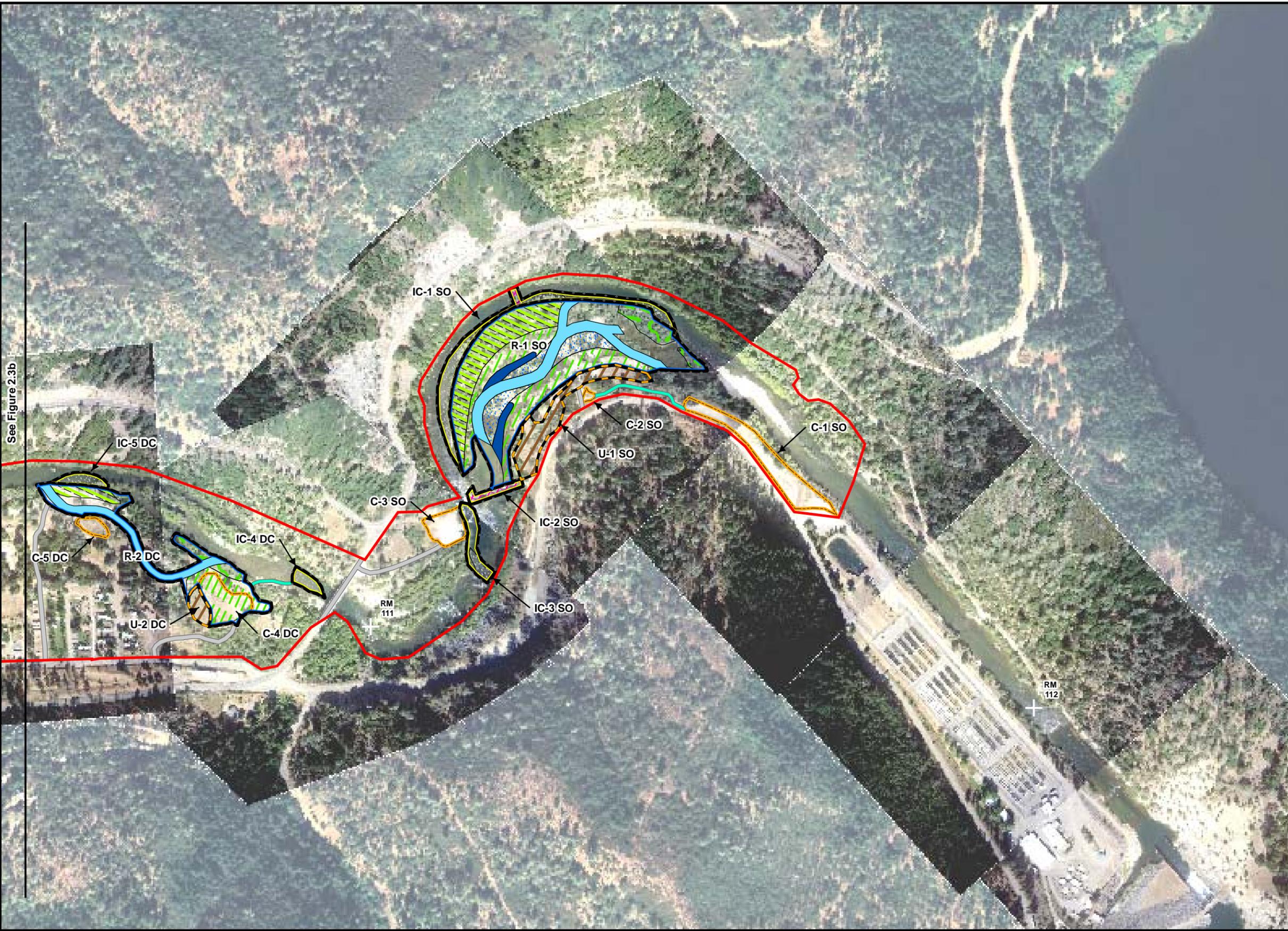
- Site Boundary (152 acres)
  - River Mile (RM)
  - Access Road - Existing
  - Access Road - New
  - Staging Area (C)
  - Crossing (X)
- Activity Area**
- In Channel
  - Riverine
  - Upland
- Treatment Area**
- Coarse Sediment Addition
  - Grade Control Removal
  - Constructed Floodplain (450 cfs)
  - Constructed Floodplain (6000 cfs)
  - Medium-Flow Sidechannel (1000 cfs)
  - Low-Flow Sidechannel (300 cfs)
  - Vegetation Removal
- CW - Cableway**  
**DC - Deadwood Creek**  
**FG - Dept. of Fish & Game**  
**HG - Hoadley Gulch**  
**SO - Sven Olbertson**



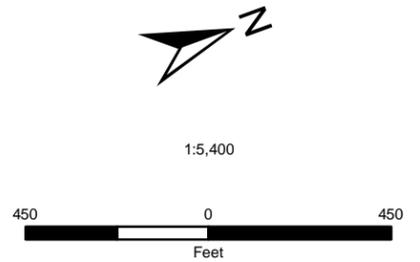
Aerial photography:  
2005  
2006

**Figure 2-2c**  
**Proposed Action Treatment Areas**

File Location: G:\Projects\10102\_TRRP\_Lewisston\GIS\Working\_MXD\10102\_DG-Lew4\_Fig\_2.3a\_TreatAreas\_Alt-1.mxd Source: NSR, Inc.; USBR; USDA Prepared: 10/31/2007 bmoore

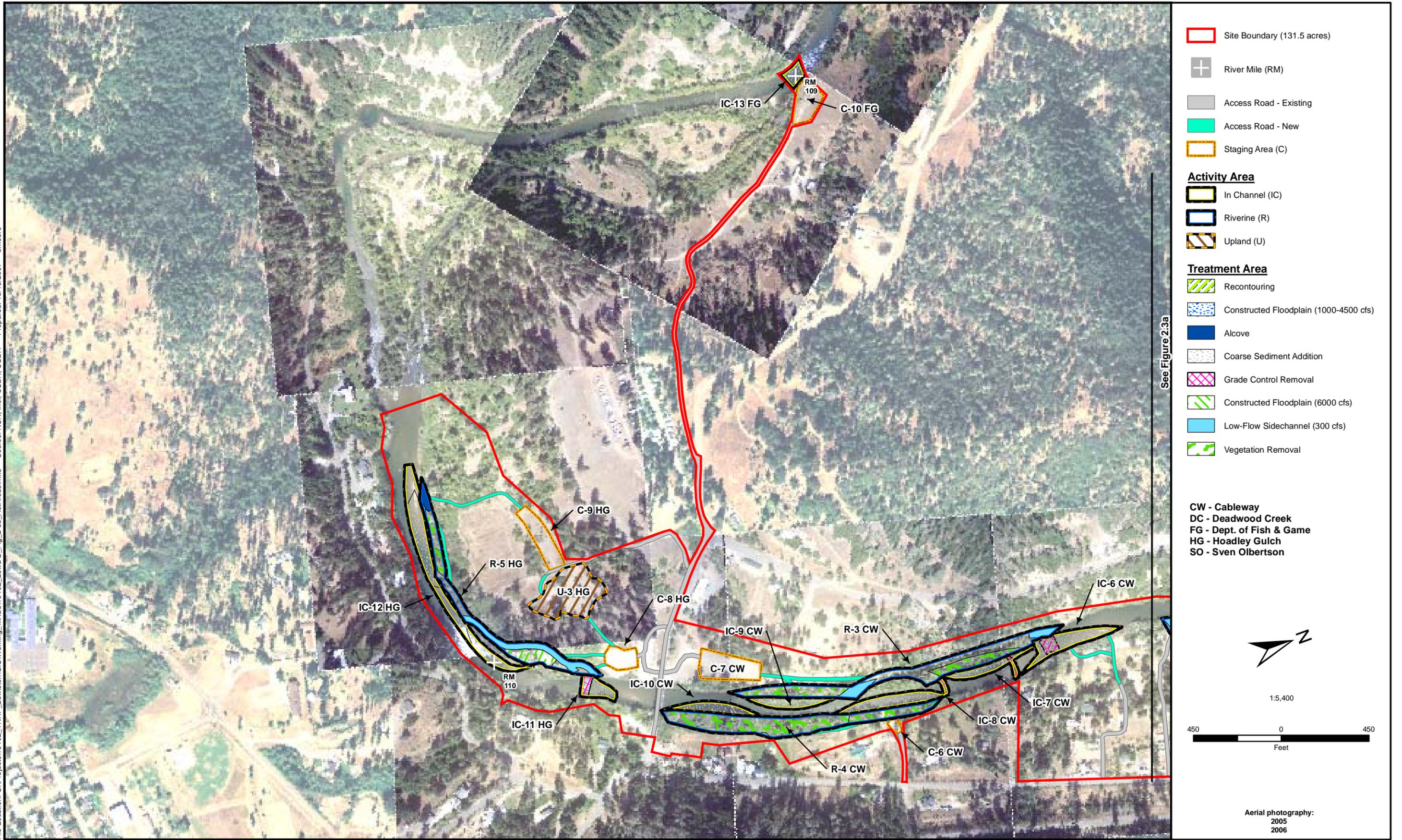


- Site Boundary (131.5 acres)
  - River Mile (RM)
  - Access Road - Existing
  - Access Road - New
  - Staging Area (C)
- Activity Area**
- In Channel (IC)
  - Riverine (R)
  - Upland (U)
- Treatment Area**
- Recontouring
  - Constructed Floodplain (1000-4500 cfs)
  - Alcove
  - Coarse Sediment Addition
  - Grade Control Removal
  - Constructed Floodplain (6000 cfs)
  - Low-Flow Sidechannel (300 cfs)
  - Vegetation Removal
- CW - Cableway**  
**DC - Deadwood Creek**  
**FG - Dept. of Fish & Game**  
**HG - Hoadley Gulch**  
**SO - Sven Olbertson**



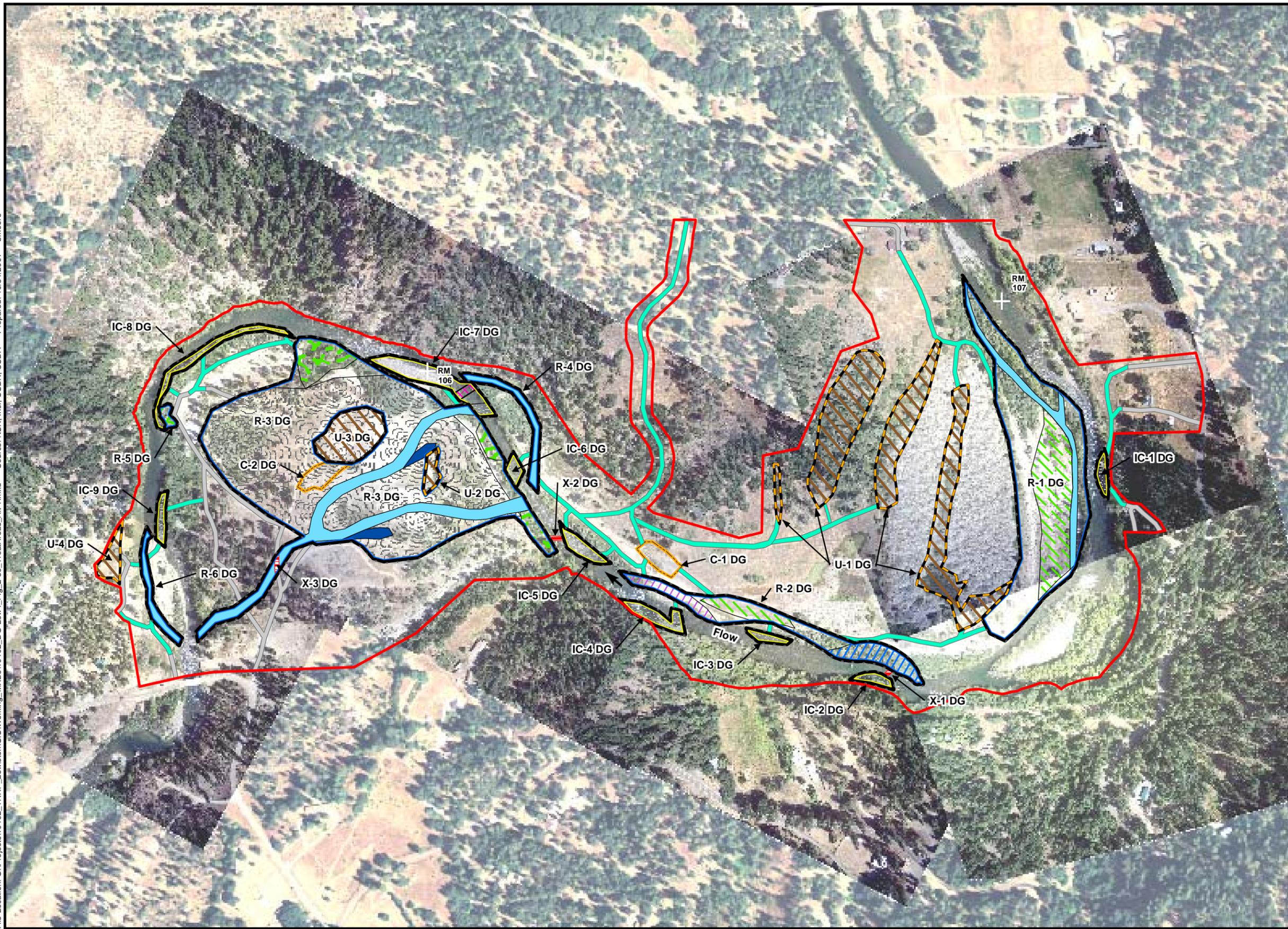
Aerial photography:  
2005  
2006

**Figure 2.3a**  
**Alternative 1 Treatment Areas**

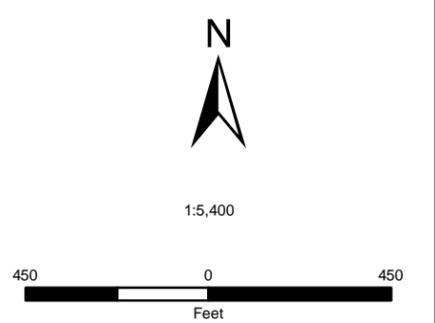


**Figure 2.3b**  
**Alternative 1 Treatment Areas**

File Location: G:\Projects\10102\_TRRP\_Lewisston\GIS\Working\_MXD\10102\_DG-Law4\_Fig-2.3c\_TreatAreas\_Alt1.mxd Source: NSR, Inc.; USBR; USDA Prepared: 10/31/2007 bmoore



- Site Boundary (152 acres)
  - River Mile (RM)
  - Access Road - Existing
  - Access Road - New
  - Staging Area (C)
  - Crossing (X)
- Activity Area**
- In Channel (IC)
  - Riverine (R)
  - Upland (U)
- Treatment Area**
- Alcove
  - Gravel Source and Floodplain Restoration
  - Coarse Sediment Addition
  - Grade Control Removal
  - Constructed Floodplain (450 cfs)
  - Constructed Floodplain (6000 cfs)
  - Medium-Flow Sidechannel (1000 cfs)
  - Low-Flow Sidechannel (300 cfs)
  - Vegetation Removal
- CW - Cableway**  
**DC - Deadwood Creek**  
**FG - Dept. of Fish & Game**  
**HG - Hoadley Gulch**  
**SO - Sven Olbertson**



Aerial photography:  
2005  
2006

**Figure 2.3c**  
**Alternative 1 Activity Areas**