

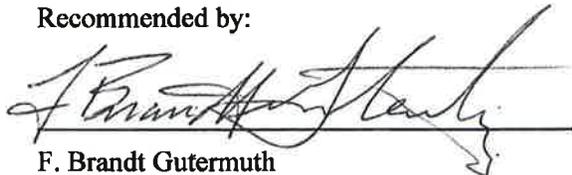
U.S. BUREAU OF RECLAMATION
MID-PACIFIC REGION
NORTHERN CALIFORNIA AREA OFFICE
TRINITY RIVER RESTORATION PROGRAM
WEAVERVILLE, CALIFORNIA

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) has found that the Proposed Project, supported by the *Trinity River Channel Rehabilitation Sites: Douglas City (River Mile 93.6-94.6) and Lorenz Gulch (River Mile 89.4-90.2) Environmental Assessment/Initial Study (EA/IS)*, will result in no significant impacts on the human environment considering the context and intensity of impacts.

Supporting documentation in the EA/IS was prepared to meet the requirements of NEPA as well as the California Environmental Quality Act (CEQA). The EA/IS is tiered to the *Trinity River Mainstem Fishery Restoration Program Environmental Impact Statement (EIS) and Channel Rehabilitation and Sediment Management Activities for Remaining Phase 1 and Phase 2 Sites, Part 1: Final Master Environmental Impact Report (Master EIR)*. Much of the impact analysis for the Douglas City and Lorenz Gulch Rehabilitation Sites Project is discussed in the Master EIR.

Recommended by:



F. Brandt Gutermuth
Environmental Scientist,
Trinity River Restoration Program

5/24/13

Date

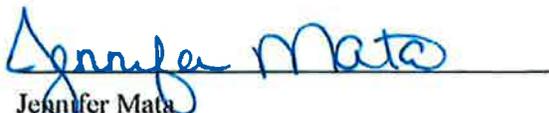
Approved by:



Robin Schrock
Executive Director,
Trinity River Restoration Program, Lead Agency

5/24/13

Date
FONSI No. TR-EA0113



Jennifer Mata
Field Manager, Redding Field Office
Bureau of Land Management (BLM), Co-lead Agency

5/24/13

Date
FONSI No. DOI-BLM-CA-N060-2013-040-EA

This finding is made only for authorization pursuant to BLM Authority.

FINDING OF NO SIGNIFICANT IMPACT

Trinity River Channel Rehabilitation Sites

Douglas City (River Mile 93.6-94.6) and

Lorenz Gulch (River Mile 89.4-90.2)

LEAD AGENCY

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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 Lake to the Sacramento River basin altered the hydrologic regime of the Trinity River, diminishing annual flows by up to 90 percent. Consequences of diminished flows included encroachment of riparian vegetation, establishment of riparian berms,¹ and fossilization of point bars at various locations along the river, as far downstream as the North Fork Trinity River. These geomorphic changes resulted in a decrease in the diversity of species and age classes of riparian vegetation along the river, impaired floodplain access, and adversely affected fish habitat.

In 1994, the U.S. Fish and Wildlife Service (USFWS) as the federal lead agency began the National Environmental Policy Act (NEPA) process for developing the Trinity River Mainstem Fishery Restoration Environmental Impact Statement (EIS). 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 agencies to implement the Flow Evaluation Alternative as the Preferred Alternative identified in 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 Program. The FEIS 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 related mechanical restoration and sediment management actions.

The TRRP, acting under the guidance of the Trinity Management Council (TMC), provides overall program direction to restore, enhance, and conserve the natural production of anadromous fisheries, native plant communities, and associated wildlife resources of the Trinity River basin. The TRRP provides technical and administrative support to the TMC related to both scientific evaluation of restoration progress and management implementation. The TRRP is responsible for the overall

¹ The condition is not as extensive as early studies indicated (e.g., the Trinity River Flow Evaluation Final Report 1999).

implementation of the ROD. The Douglas City and Lorenz Gulch Rehabilitation Sites Project (“Proposed Project” or “Project”) is part of the mechanical channel rehabilitation component of the ROD that is designed to create, restore, and enhance the full range of anadromous fish habitats in the Trinity River by restoring fluvial processes. Activities to restore fluvial processes include rescaling the river channel and floodplain and augmenting gravel at high-flow placement areas. Specifically, this project includes reducing riparian encroachment, large woody debris (LWD) placement, physical alteration of alluvial features (e.g., floodplains and side channels), construction of hydraulic structures (wood and log features), and removal/replacement of riparian vegetation at strategic locations. Extensive revegetation of native riparian vegetation (woody and wetland species) and management of upland mixed conifer habitats, to mimic historic conditions, is also planned. These rehabilitation activities are expected to increase habitat suitability and availability for salmonids and other native fish and wildlife species during a wide range of river flow conditions.

PROPOSED PROJECT

The Proposed Project includes work at the Douglas City Rehabilitation Site and work at the Lorenz Gulch Rehabilitation Site. Activities at the sites would begin in 2013.

The Douglas City Rehabilitation Site is located on the Trinity River (RM 93.6-94.6). The site is immediately adjacent to State Route 299 (SR-299) and occupies the floodplain and alluvial terrace features on both sides of the Trinity River. The Douglas City Bridge (RM 94) is in the center of the Project reach. The Lorenz Gulch Rehabilitation Site (RM 89.4-90.2) is 22 miles downstream of Lewiston Dam and covers approximately 0.8 miles of river. The site is located along Steiner Flat Road, downstream of Douglas City, and ends 0.2 miles above the Dutton Creek confluence. Rehabilitation activities as described in the Master EIR, combined with ROD flow releases, are expected to contribute to the restoration of the Trinity River mainstem fishery. Implementing channel rehabilitation work at the Douglas City and Lorenz Gulch sites would continue implementation of the ROD and would contribute to the restoration of aquatic habitat in the mainstem Trinity River through the development of properly functioning channel conditions.

The EA/IS for the project considered two alternatives: the No-Project Alternative and the Proposed Project Alternative. After inclusion of all mitigation measures (discussed in detail in Section 2.4.2 and Appendix A of the EA/IS), no significant impacts were determined for the Proposed Project 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 Chapter 2 of the EA/IS. The Proposed Project, summarized below, maximizes environmental benefits with less-than-significant environmental impacts and is preferred for implementation.

An interdisciplinary team of the TRRP identified discrete activity areas within the boundaries of the Douglas City and Lorenz Gulch sites. Activity areas were identified based on the type of activity that would occur in a specific place and include in-channel, riverine, upland, and construction staging work areas, and roads. For each site, riverine activities are labeled with an R followed by the construction site number (e.g., R-1, R-2); upland activities are labeled with a U followed by the construction site number; in-channel work areas are identified with an IC; wetland/pond areas are identified with a W; temporary river crossings are identified with an X; staging/use areas are characterized with a C; and roads are identified as existing or new. The TRRP has developed programmatic objectives for channel rehabilitation projects that are described in Chapter 2 of the EA/IS. 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 the channel rehabilitation efforts is to: provide functional aquatic habitat for all life stages of anadromous salmonids over a range of flow conditions; provide suitable salmonid rearing habitat, which is presently believed to be a limiting factor in the system; and reestablish healthy alluvial river geomorphic processes, which will ultimately maintain high-quality salmonid habitat at a

dynamic equilibrium. The activities proposed at the sites are summarized below; additional details are provided in Chapter 2 of the EA/IS.

Douglas City Rehabilitation Site:

Work at the Douglas City Rehabilitation Site is divided into three areas – downstream of the Douglas City Bridge, upstream of the Douglas City Bridge, and the bank naturalization work area. These separations are used in the following section to describe which activities will occur in which portion of the Project area. Actions at the Douglas City site that are downstream of the Douglas City Bridge and the bank naturalization work are proposed for construction in 2013, as funding is available, and actions that are upstream of the Douglas City Bridge would be completed beginning in 2014. Access roads and contractor use areas identified in the EA/IS could be used at any time during Project implementation.

Downstream of the Douglas City Bridge:

Remnant Infrastructure Debris Removal and Disposal (R-4)

Area R-4 includes removal and disposal of abandoned and remnant infrastructure such as pipe, concrete and bridge piles associated with Weaverville Community Service District (CSD) water withdrawal infrastructure (that presently supplies water to Weaverville and Douglas City) and past Caltrans Highway construction materials (e.g., old bridge materials that may be found). The purpose of this activity area is to: enhance the visual aesthetics of the Weaver Creek delta; reduce bank and bed armoring; and enhance/maintain dynamic alluvial properties within the Weaver Creek delta.

Bank Revetment Infrastructure Protection (R-5)

Area R-5 activities involve design and construction of a 'fish friendly' bank revetment incorporating wood and large boulders between the Douglas City Bridge pier/abutment and the Weaverville CSD infiltration gallery. This activity area is located along the lower portion of Weaver Creek as it flows into the Trinity River. The structure extends upstream from the mouth of Weaver Creek along the right bank and consists of regularly spaced logs with rootwads facing perpendicular to flow that are stabilized through partial burial and driven piles that also support a matrix of smaller logs oriented perpendicular to flow. Willows would be interplanted and boulders would be placed on the toe of the revetment to reduce the number of large logs required and to provide stability. The purpose of this activity area is to: prevent erosion along the right bank of Weaver Creek; protect existing and proposed infrastructure; promote pool scour on lower Weaver Creek; provide hydraulic and escape cover for juvenile Chinook and coho salmon and steelhead; and create holding habitat along the right bank of Weaver Creek and near the confluence with the Trinity River for upstream migrating adults.

Infiltration Gallery Footprint (R-6)

Area R-6 provides an area where the Weaverville CSD would have the option to repair/replace their infiltration gallery/water source during the channel rehabilitation construction work. The purpose is to support the Weaverville CSD community by facilitating needed infrastructure repair.

Mid-Channel Bar and Large Wood Placement (IC-5)

Activity area IC-5 is a mid-channel bar along the left bank of the Trinity River, just downstream of the Douglas City Bridge. In this area, large wood pieces would be placed at the upstream end of the existing bar, with rootwads facing upstream (parallel to flow). Smaller logs, skewed to the flow, would then be placed downstream of the larger pieces. The structure would intercept flow and mobile wood, encouraging local bed scour, and create a low velocity area on the downstream end of the bar to encourage sediment deposition and to create hydraulic refuge for salmonids. The logs would be stabilized by the rootwads, through partial burial of the downstream end of the logs, and by interplanting with willows. The axis of the structure would be angled toward the left bank to promote sediment deposition. The structures would be partially inundated at 450 cfs and overtopped at flows of approximately 2,000 cfs. The purpose of this activity area is to: create a site for riparian regeneration by reducing flow velocities and encouraging deposition of sediment and nutrients downstream from the structure; promote

left bank/medial bar deposition and growth; increase channel complexity and sinuosity; increase right bank and Weaver Creek delta scour; increase large wood storage and retention; and provide hydraulic and escape cover for juvenile Chinook and coho salmon and steelhead.

Mid Channel Bar and Large Wood Placement (IC-6)

Activity area IC-6 is a mid-channel bar on the downstream end of the Project area near the left bank. Large wood pieces would be placed at the upstream end of the bar, with rootwads facing upstream (parallel to flow), with smaller logs placed perpendicular to flow, either upstream of the rootwads (thereby intercepting flow and mobile wood, and creating scour) or downstream of the rootwads (creating a low velocity hydraulic shadow that encourages sediment deposition and can be used as cover by salmonids). The logs placed on the bar, and the bar itself, would direct flow towards the right bank and would promote scour there to maintain existing salmonid adult holding habitat. The structures would be partially inundated at 450 cfs and 4,000 cfs, and completely overtopped, along with the entire bar, at around 6,200 cfs. The IC-6 feature would be designed to create a stable hard point within the channel that would divert flows away from the left bank at lower flows and would create an alcove along the right bank during higher flows. The purpose of this activity area is to promote transverse bar development and right bank scour; increase channel complexity and sinuosity; and increase large wood storage and retention. The site would provide immediate habitat benefits for juvenile and adult salmonids.

Bank Excavation (Channel Expansion) (IC-7)

Area IC-7 activities include excavation of a new mainstem channel. The mainstem channel would be constructed through some small existing islands such that the low flow channel width would be < 75 feet at 450 cfs. Approximately 3,200 cubic yards (CY) of material would be excavated from the right bank to match or deepen the current channel thalweg depth, approximately 250 feet long and 20 feet wide at the apex. Large wood pieces, root balls facing upstream at the downstream end of excavation (1-2 feet diameter and greater than 15 feet long), would be placed at the activity area along the right bank of the constructed mainstem channel. A pool, 40 feet long by 6 feet wide and 6 feet deep, would be excavated at the apex of the expansion area. The purpose of IC-7 is to: promote transverse bar development, right bank scour, pool formation, and scour; increase mainstem channel complexity and sinuosity; increase yellow-legged frog habitat; increase adult holding habitat; and increase fry and juvenile rearing habitat that meets cover, depth, and velocity criteria for targeted flows (300 to 2,000 cfs).

Boulder Habitat Placement (IC-8)

Area IC-8 activities consist of placing large boulders (ranging from 4-8 feet in diameter) along the left bank between RM 93.6 and 93.8. Boulders would be placed in clusters of four to six using an excavator from in-river or a crane staged from SR-3. The boulders would enhance the existing run by creating local variations in flow direction and velocity. The purposes of this activity area are to: promote small pool development through local bed scour and deposition; improve existing adult holding along the left bank; and increase channel complexity.

Temporary River Crossing (X-1, X-2, X-3)

Temporary crossings would provide access across the river, or in the case of X-1, across Weaver Creek. The X-1 crossing would utilize a temporary bridge that would provide access to the U-1 spoils area. The X-2 and X-3 temporary crossings would be low water ford crossing or other site improvements to facilitate access for construction-related traffic. X-2 would provide access to the IC-5 activity area and X-3 would provide access to the IC-6 activity area. Both the IC-5 and IC-6 areas consist of mid-channel bars and large wood placement.

Upland Spoils (U-1)

Area U-1 provides an area to place up to 20,000 CY of material that would be excavated from the R and IC activity areas. At a minimum, the area would be seeded and mulched at the end of the 2013 construction season and planted with upland vegetation after the Project is completed in the future.

Access Roads (C-2, C-7)

Construction access roads are classified as existing or temporary. Access roads are classified based on the public or private landowners' goals and objectives for their property. C-2 designates existing access roads and C-7 designates temporary access roads. Within the Project site, existing access roads would predominantly be utilized. Because scrapers would likely be utilized for excavation of channels and floodplains, these continuous loop haul roads would be essential for safety and efficiency. Post-project, access roads would be returned to pre-construction condition, decommissioned, or left as improved, according to landowner approval.

Contractor Use Area (C-5, C-6, C-8, C-9)

Contractor use areas would be used for construction access, staging, stockpiling, mobilization, gravel processing, and other necessary construction activities during implementation. These contractor use areas are designated primarily as support areas, though boulders may also be taken from these zones for use in-river. Depending on landowner goals and objectives, each contractor use area may be improved back to pre-construction condition or decommissioned.

Bank Naturalization Area:***Bank Naturalization (BN-1, BN-2)***

The bank naturalization area is approximately 4 acres in size and is located between RM 94.5 and RM 94.7, extending 1,150 feet along the left bank of the Trinity River, 0.4 miles upstream of the Douglas City Bridge and 1 mile downstream from the confluence of Indian Creek and the Trinity River. The bank naturalization work includes two activity areas. Area BN-1 is located within three private parcels at the upstream end of the site. The existing surface in area BN-1 would be re-contoured in a band 20-30 feet wide along the river's edge to lower the existing surface by between 1 and 5 feet, creating a more natural surface that slopes gradually toward the river before terminating at an inner bank 1 to 2 feet high. Re-grading would include removal of much of the fine substrate that currently underlies the lawns and replacing it with river bed material consisting of poorly sorted coarse sand, gravel, and small cobbles. An estimated 950 CY of very fine sand would be excavated in area BN-1 and spoiled on site or removed to an appropriate location. Approximately 550 CY of coarser alluvium would be acquired to provide the fill material needed for re-contouring area BN-1. This surface would then be planted with native riparian vegetation, such as willow, cottonwood, and sedges. Area BN-2 covers the remaining downstream portion of this activity area. Work in area BN-2 would consist of riparian planting only. Both areas would be irrigated as necessary. The purpose of this activity area is to improve riparian habitat conditions along the Trinity River and to develop a demonstration site for landowners who may be interested in promoting native riparian vegetation and natural river conditions on private lands. The contoured and developed gravel and revegetated Project areas are expected to: provide increased low velocity fish habitat at flows that are greater than base (450 cfs flows); provide terrestrial input to the river (e.g., invertebrates and woody material); and increase vegetation available for riparian obligate species (e.g., migratory birds).

Upstream of the Douglas City Bridge:***High Flow Channel (R-1)***

Area R-1 includes construction of a 1,500 to 2,000 cfs high flow scour channel and would require excavation of approximately 2,200 CY of material 1 to 3 feet deep. Actions would avoid large trees and the area would be planted with wetland and riparian patch types and willow clumps. Large wood would be placed throughout the constructed surfaces. The purpose of this activity area is to: increase groundwater elevations from the backside of the floodplain; improve riparian natural regeneration and planting success; increase the complexity of the floodplain; and provide off channel juvenile rearing opportunities for flows greater than 2,000 cfs.

Side Channel Enhancement: Bank Lowering and Shaping (R-2, R-3)

Area R-2 consists of excavation activities that would lower surfaces adjacent to the existing and proposed side channel. Bench inundation would vary from 450 cfs to 2,000 cfs throughout the activity area. Excavation of approximately 1,500 CY of material is expected. Wetland and riparian patch types and willow clumps would be planted and large wood would be placed throughout constructed surfaces. Work in this activity area would avoid areas of existing vegetation. The purpose of this activity is to: promote off-channel juvenile rearing areas that meet depth, velocity, and cover criteria when flows are greater than 2,000 cfs; provide areas for natural riparian recruitment; promote development of patchy riparian vegetation; increase floodplain and side channel complexity; and increase large wood storage.

Left Bank Skeletal Bar, Alcove, & Large Wood Habitat Structures (IC-1)

Area IC-1 activities include placing approximately 3,800 CY of coarse sediment (3 to 8 inch diameter) in combination with wood and vegetation, so that the bar does not move downstream. Construction would incorporate the alcove and scour channel along the right bank and include large wood 1-2 feet in diameter along the high flow scour channel and at the head of the skeletal bar to help shoal flows into IC-2 and maintain IC-1 in place. The purpose of this activity area is to promote right bank scour and force mainstem capture into IC-2. Activity area IC-1 works with the IC-2 activity area to: create a forced meander and increase sinuosity and channel complexity; promote pool development on the outside of the meander; provide juvenile rearing areas that meet depth, velocity, and cover criteria for targeted flows of 300 to 2,000 cfs; increase large wood storage and retention; and increase sediment storage and retention.

Side Channel Enhancement: Bank Lowering and Shaping (IC-2)

Area IC-2 actions include lowering the surface to construct a new mainstem channel by excavating approximately 12,000 CY of material (half meander wavelength) making the thalweg 2-6 feet deeper than the existing mainstem channel. Large wood would be placed along the right bank of the constructed mainstem channel. A skeletal bar would be constructed from the existing left bank of the island through an existing side channel so that the low flow channel width of the constructed mainstem channel is < 75 feet at 450 cfs (approximately 750 CY). Portions of existing islands would be removed to promote mainstem capture. Wetland and riparian patch types and willow clumps would be planted and large wood would be placed along the right bank of the constructed surfaces. Activity area work would avoid existing vegetation or incorporate it into the design feature. The purpose of this activity area is to: increase mainstem channel complexity and sinuosity; increase fry and juvenile rearing habitat that meets cover, depth, and velocity criteria for targeted flows of 300 to 2,000 cfs; provide areas for natural riparian recruitment; promote mainstem deposition; increase yellow-legged frog habitat; increase bed and bank scour; and increase adult holding habitat.

Right Bank Skeletal Bar, Alcove, & Large Wood Habitat Structures (IC-3)

Area IC-3 activities include placement of approximately 1,000 CY of coarse sediment (4 to 8 inches in diameter), incorporation of an alcove and scour channel along the right bank, and incorporation of large wood 1-2 feet in diameter in the high flow scour channel and at the head of the skeletal bar. The purpose of this activity area is to: confine flows and promote left bank scour into bedrock in order to deepen existing adult holding; increase sinuosity and channel complexity; provide juvenile rearing areas that meet depth, velocity, and cover criteria for targeted flows of 300 to 2,000 cfs; and increase large wood storage.

Side Channel Enhancement: Large Wood Placement & Bar Building (IC-4)

Area IC-4 activities include placement of large wood (0.5-2 feet in diameter and greater than 10 feet in length), with root balls facing upstream, within the existing side channel and placement of approximately 3,000 CY of coarse sediment. The small wood habitat structures are intended to provide additional cover for salmonids within constructed habitat features (side channels, swales, alcoves, and rearing ponds). They would be placed in close proximity to reduce distance to cover and improve rearing habitat. They typically are made up of approximately five large wood pieces with several raked members, and would be partially backfilled with woody slash and native alluvium. The purpose of this activity area is to:

promote off-channel juvenile rearing areas that meet depth, velocity, and cover criteria for targeted flows of 300 to 2,000 cfs; increase channel and floodplain complexity by promoting local bank and bed scour and deposition; increase large wood storage; increase channel complexity and sinuosity; increase coarse sediment storage; create sites for riparian regeneration by reducing flow velocities and encouraging deposition of sediment and nutrients on the floodplain; create off-channel habitat for non-riverine species (e.g., turtles); and capture woody material mobilized by high flows and transported from upstream.

Temporary River Crossing (X-1)

Temporary crossings provide access across the river or a tributary in this case. This temporary crossing over Weaver Creek would consist of a temporary bridge or other site improvements to facilitate access for construction-related traffic. X-1 would provide access to all the river right work upstream of the Douglas City Bridge within the site boundary including the U-1 spoils area for use in all Project phases.

Access Roads (C-2, C-7)

Construction access roads are classified as existing or temporary. Access roads are classified based on the public or private landowners' goals and objectives for their property. C-2 designates existing access roads and C-7 designates temporary access roads. Within the Project site, existing access roads would predominantly be utilized. Because scrapers would likely be utilized for excavation of channels and floodplains, these continuous loop haul roads would be essential for safety and efficiency. Post-project, access roads would be returned to pre-construction condition, decommissioned, or left as improved, according to landowner approval.

Contractor Use Area (C-3, C-4, C-10, C-11)

Contractor use areas would be used for construction access, staging, stockpiling, mobilization, gravel processing, and other necessary construction activities during implementation. These contractor use areas are designated primarily as support areas, though boulders may also be taken from these zones for use in-river. Depending on landowner goals and objectives, each contractor use area may be improved back to pre-construction condition or decommissioned.

Revegetation (Upstream and Downstream of Douglas City Bridge):

The Douglas City revegetation design mimics vegetation patterns found on different landforms of less disturbed regional streams and is similar to developing designs using a zonation approach (Hoag 1999; Hoag and Landis 1999). The revegetation approach to the Douglas City site varies on the type of design element constructed or existing conditions within the Project area. The Douglas City grading plan avoids removing patches of existing riparian vegetation within the site that currently provide cover and a readily available seed source immediately after construction. The existing side channel slopes would be planted to provide cover for wildlife and fish, shade the channel, speed riparian vegetation recovery, and increase woody plant and age class diversity. Constructed benches and bars are specifically targeted for woody riparian revegetation. A variety of plant clusters with a combination of species would be planted. During revegetation at the Douglas City site approximately 1.3 acres of zonal planting would occur in addition to 139 riparian clusters and 47 upland clusters.

At this site, upland plant clusters with combinations of different native species associated with naturally occurring terraces adjacent to the site would be planted. Habitat continuity and ecotone diversity between the riparian corridor and adjacent upland areas at channel rehabilitation sites is important for maintaining wildlife corridors, which function to facilitate local movement and critical proximity to and from food, cover, and water.

Open areas on previously constructed benches that already flood more frequently would be planted with an arrangement that promotes greater riparian patch interior area, continuity with existing vegetation, and increases riparian corridor width. The revegetation planting design also increases the area and structural diversity of remnant riparian vegetation after construction by planting tree and shrub species together to complement existing vegetation. Revegetation is planned to cover greater area and be less linear in shape than the existing riparian vegetation at the site.

Lorenz Gulch Rehabilitation Site:

Activities at the Lorenz Gulch site are proposed for construction beginning in 2013, as funding is available.

Boulder Habitat Placement (IC-1, IC-7)

In the IC-1 and IC-7 activity areas, boulders would be placed in clusters within an existing run to enhance adult holding. There would be four clusters comprised of four to six, 4-foot diameter rocks each. When placed in the river they would have localized effects on gravel deposition within the vicinity of the boulders. These features would create localized eddies and local variations in velocity and flow direction. These localized variations in hydraulics and creation of “pocket water” would create small holding areas for adult fish.

Large Wood Structure – Engineered Log Jam (IC-2)

The large wood structure at IC-2 would be placed to constrict the width of the Trinity River. It would be comprised of large wood stems with intact rootwads, large wood stems, tree tops, wood slash and brush, and alluvium. This ELJ would consist of 30 or more logs specifically designed for placement in this location. The ELJ would be designed to persist through all ROD flows and would likely require a crane mounted hammer for installation of vertical piles. This structure would have an approximately 30 foot by 30 foot footprint, with a variable height up to 11 feet above the channel bed. Wood estimates are for 25 rootwads with stems 12 to 24 inches in diameter, 25 tree stems 12 to 24 inches in diameter, 125 CY of slash and tree tops with intact branches, and approximately 650 CY of alluvial backfill with particle sizes 12 inches in diameter and smaller. The purpose of the structure is to cause flow constriction (hydraulic diversity), expansion, and scour; rack mobile wood; and provide cover for all life stages of salmonids (habitat diversity). It would increase wood loading and retention in the Project reach. It is anticipated that scour would be generated along the edge of structure. Construction of this feature would create cover and eddy zones that increase and enhance areas suitable for salmonid rearing, resulting in a local increase in holding habitat in areas of scour.

Split Flow Channel Complex with Medial Bar and Engineered Log Jam (IC-3, IC-4)

This element consists of a split flow channel (IC-3) around a vegetated medial bar/island (IC-4) located between the current alignment of the Trinity River and the proposed flow split. The IC-3 split channel would be 500 feet long and require 10,900 CY of excavation. The IC-4 island would be 0.35 acres in area and would require 3,300 CY of fill. The IC-4 bar/island would utilize existing ground and vegetation on the eastern half, whereas the western half would be constructed by placing native alluvium ranging from gravel to 12-inch diameter boulders along the existing right bank of the river. The mixture of materials would generally not be mobile, but would rather provide a mixture of particle sizes to interlock in long term maintenance of the vegetated medial bar. The head of the island would be anchored with a large wood structure with a top elevation near the 7,500 cfs water stage. This ELJ would consist of 30 or more logs specifically designed for placement in this location. Mature trees present on the IC-4 island feature are expected to recruit to the channel over time, while natural riparian establishment and succession would provide cover and sustain wood recruitment into the future. The large wood structure at the apex of the IC-4 island is expected to rack mobile wood and increase residence time of wood in the reach. The split flow channel itself is sized to carry approximately 50 percent of the mainstem Trinity River flow at all discharge levels. The split flow complex would create several directional changes in flow, with flow accelerations, eddies, shallow water shoreline, and greater hydraulic complexity than exhibited by existing conditions. This feature would create additional area for fry and juvenile rearing by effectively doubling the length of wetted edge throughout the footprint of the structure, providing additional cover, and increasing hydraulic variability over existing conditions. This element would provide additional rearing habitat over a range of low to intermediate discharge levels by increasing shoreline length, shallow water area, eddies, and cover.

Berm Removal (IC-6)

The berm removal at the IC-6 activity area involves removal of 380 lineal feet of riparian berm and fine sediment on the left bank of the Trinity River near RM 90.1. Berm removal at this location would create a channel expansion immediately upstream from an existing riffle, which would enhance spawning habitat by encouraging gravel deposition on the riffle head. In addition, removal of the fine sediment along the left bank would enhance the hydraulic connectivity between the mainstem Trinity River and the R-2 side channel by shortening the groundwater flow path into the R-2 channel and eliminating fine sediment that could reduce substrate permeability. The IC-6 feature is expected to re-establish vegetation in the long term, at locations and elevations corresponding to the ROD flow regime. Additional gravel deposition is expected to improve spawning habitat on the nearby riffle head. Some additional shallow wetted edge would be provided at intermediate flows, with cover developing over time. Anticipated benefits from site evolution include enhanced spawning on the nearby riffle due to deposition of smaller gravel than is currently present on the riffle.

Low Flow Side Channel on Right Bank with IC-5 Wood Habitat Structure (R-1)

The R-1 activity area consists of a baseflow side channel that maintains a year-round surface water connection to the mainstem Trinity River at both ends. To assist in maintaining flow into the side channel and to increase habitat and hydraulic diversity, a large wood habitat structure would be placed at the head of the island created by construction of the R-1 side channel. The R-1 side channel is intended to immediately provide fry and juvenile rearing habitat. The R-1 side channel would increase fry and juvenile rearing habitat availability at all flow levels. Rearing habitat conditions would be optimal at low and moderate discharge levels, and rearing area availability would increase over existing conditions at all discharges. The IC-5 habitat structure (as well as the one proposed at activity area IC-8) would be a relatively small wood structure as compared to the proposed ELJs and would probably be constructed with less than 15 logs.

Hyporheic Side Channel / High Flow Channel (R-2)

Flow in the R-2 side channel would be supplied through a hyporheic (subsurface water flow) connection at its upstream end when mainstem discharges are less than 3,000 cfs. The inlet to the side channel would begin to inundate at 3,000 cfs, at which time the side channel would begin to convey surface flow. The R-2 feature would increase the availability of salmonid rearing habitat over a wide range of discharges. The side channel would add about 2,400 feet of additional wetted margin with cover that is available at all flow levels. The area of available habitat increases as the associated R-3 floodplain becomes inundated at flood discharges. This feature would provide additional fry and juvenile rearing habitat at all flows.

Floodplain and Banks along Left Side Channel with IC-8 Wood Habitat Structure to Maintain Downstream Alcove (R-3)

The R-3 activity area is a floodplain corridor excavated from the left side terrace along the R-2 side channel. A large wood habitat structure would be constructed on the left bank of the R-2 and R-3 activity areas, where these confluence with the mainstem. This structure would be smaller than the ELJs proposed at IC-2 and IC-4 and would probably be comprised of less than 15 logs. The IC-8 habitat structure would maintain the alignment of the side channel's outflow (alcove) into the mainstem so that high flows would scour and maintain depths over time. The area would be planted with riparian vegetation to establish vegetation in a terrace area that is currently of little ecological value. Once these surfaces become vegetated they would provide short and long term cover for wildlife and fish, shade the channel, and increase woody plant diversity. The overall tendency of the side channel overbank areas is depositional, and it is anticipated that these areas would accumulate fine sediment over time. This floodplain would increase the suitable area for fry and juvenile rearing during flood events.

Floodplain on Left Bank (R-4)

Work in activity area R-4 involves excavation of coarse terrace alluvium along the left bank to create a floodplain with complex topography. The topography of the R-4 floodplain surface includes a swale that grades into a base-flow alcove that inundates progressively with rising discharge. This aspect of the

feature's topography is intended to minimize flow conveyance and flow velocities across the floodplain, thereby maximizing rearing habitat within the feature boundaries at higher flow levels and maintaining stream power in the mainstem. The purpose of the R-4 floodplain is to provide salmonid rearing habitat over a wide range of intermediate and high flows, as well as to promote the development of riparian vegetation and wildlife habitat in an area that is presently occupied by a terrace surface with low ecological value. To optimize riparian recruitment, the floodplain is designed so that a significant portion of surface is inundated at 3,000 cfs. However, portions of the surface nearer the margin of the existing mainstem channel remain emergent at flows up to about 4,500 cfs. This feature would increase rearing habitat area and hydraulic refugium at all flows, with the largest increases occurring when discharge is greater than 4,500 cfs.

Alcove (R-5)

The R-5 alcove/floodplain would require excavation of 3,000 CY and is intended to provide both functions of a floodplain and an alcove, depending upon the stage of the Trinity River. At low discharges, below approximately 7,500 cfs, the R-5 feature is inundated from downstream, like an alcove. There is some circulation through the feature, and water is not completely still. At discharges in excess of 7,500 cfs, the feature exhibits flow-through in a downstream direction, with water overtopping at the upstream end and flowing downstream. The frequency of flow-through connection is approximately every other year. By nature, this feature is depositional and contains ground surfaces with suitable soils and moisture content for growing vegetation. Future evolution would depend upon the balance between the frequency of high discharges that disturb vegetation and scour fine sediment, balanced with the establishment of vegetation and retention of fine sediments. The feature is largely backwatered from downstream for most time periods. However, at discharges in excess of 7,500 cfs, the feature exhibits flow from upstream to downstream and can be considered as a conveyance area as part of the active channel. The R-5 activity area would create habitat suitable for fry and pre-smolt Chinook salmon at all discharges, however, the design specifically targeted the creation of additional habitat at flows where the "dip" in Trinity River available habitat occurs, at approximately 800 to 2,000 cfs.

Pond (W-1)

Activity area W-1 is a pond that would be excavated into the left terrace adjacent to the R-2 side channel. The pond's inlet and outlet would both connect to the R-2 side channel. The pond would be fully disconnected from other surface water at baseflow, but become connected through its outlet at about 2,000 cfs. The inlet would be overtopped at 4,500 cfs, allowing flow through the pond to begin at that discharge. The pond is designed to provide a range of water depths, including deep areas needed for thermal stratification. It would be bounded by areas of terrace lowering designed to provide areas for the establishment of riparian vegetation. It is likely that the pond would accumulate fine sediment and organic matter over a long timeframe and eventually evolve to become a wet meadow. The pond would increase habitat available to western pond turtle and yellow-legged frog, and would provide off-channel rearing habitat for juvenile Coho salmon. The pond would provide connected rearing habitat and refugia during peak events, as well as year-round off-channel rearing habitat.

Temporary River Crossing (X-1)

Construction of a temporary ford crossing over the Trinity River is proposed at the X-1 activity area to provide access for vehicles and construction equipment during low-flow conditions (approximately 300 to 600 cfs). This temporary ford crossing would be designed and constructed to meet the requirements for heavy equipment such as trucks, excavators, and scrapers. Due to requirements to retain navigability and minimize impacts to aquatic resources, at least 1/3 of this ford crossing would be submerged to a depth of at least 1 foot under low-flow conditions. The ford crossing would be constructed using native alluvial materials excavated from the bed and bank of the Trinity River, from activity areas, or adjacent sources. Vehicular crossings to the left bank would be minimized to reduce the potential for a spill of hazardous materials into the river.

Access Improvements, Boulder Harvest, and Spoils Area (U-1)

Work in the U-1 activity area includes improving the parking and access at the Hidden Bar area as well as restricting vehicular access in the riparian (e.g., R-1) and downstream (e.g., C-7) areas on the right bank. Improved public access would include a developed boat ramp and parking area, and potentially, addition of a toilet in the future. Vehicular access would be restricted from the river corridor in conformance with the BLM Redding Resource Management Plan (RMP); this exclusion of vehicles would also improve water quality. A portion of this activity area is designated for disposal of excess excavated soil and gravel, beyond that needed for improvements. Excess excavated material would be placed and contoured in a manner that has minimal impacts to riverine, wetland, and cultural site features.

Upland Spoils (U-2, U-3)

Materials excavated from river right would be spoiled in the U-2 area. Materials excavated from river left would be spoiled in the U-3 area to stay above the maximum fishery flows (MFF; 11,000 cfs plus spring tributary accretion) and Federal Emergency Management Agency 100-year floodplain boundaries. The U-3 footprint would be minimized as possible to reduce impacts to existing habitat. Prior to spoiling, boulders would be opportunistically harvested from the location for use in the Project. Use of the U-3 area would result in minimal impacts to riverine, wetland, and cultural site features. The area would be revegetated post-project; in the long term, revegetation would support development of native species seed sources and may provide for recruitment of LWD to the Trinity River.

Contractor Use Areas (C-1, C-4, C-5, C-6, and C-7)

Construction access, staging, stockpiling, mobilization, and other necessary construction activities for the contractor to use as necessary during the implementation period would occur in these activity areas. These contractor use areas are designated primarily as support areas, though boulders may also be taken from these zones for use in-river. The main contractor use area is a large flat area located on river right adjacent to Steiner Flat Road on the BLM river access property. The C-1 activity area would provide temporary construction access to the river for construction of instream features in the Hidden Bar area. Decompaction of the downstream portion of the bar would occur post-construction to address consolidation from vehicle traffic. The upstream portion of the Hidden Bar (in C-1) would be developed into a boat launch. Increased bar mobility would result post-project due to decompaction of the bar, in conjunction with restricted vehicle access to the downstream portion of the bar post-construction.

Existing Access Road (C-2)

C-2 is an existing access road that would be utilized to access features for construction and to transport materials. Minor clearing, grading, shaping, or decommissioning of roads onsite would occur according to BLM (land management plan) guidance. Portions of the existing road network would be decommissioned after construction to prevent vehicular access within the active river channel and C-7 area. Vegetation would be established post-project.

Natural Forest Health Area (C-3)

The 11 acre C-3 activity area is an upland area located in Township 33 North, Range 10 West, in the SE corner of Section 35, on a hillslope along the left bank of the Trinity River. The C-3 area includes tree densities often in excess of 200 per acre with 100 percent canopy closure. Consequently, the area is targeted for selective removal of approximately 160 small and suppressed-growth trees in order to achieve stand conditions that would be more reflective of historical mature forest conditions. Thinning would occur on slopes less than about 30 percent (about 2/3 of the C-3 area). The Natural Forest Health Area would seek to accelerate the development of habitat that is representative of the mature old growth forest that historically existed along the Trinity River. Implementation of the following management actions would accelerate development of post-project target conditions; however, even with Project implementation, development of these mature stand conditions would require time (10-30 years) to develop depending on the exact location. Desired Future Conditions would include: 1) mean diameter at breast height (dbh) of trees > 18 inches; 2) canopy closure of > 60 percent; 3) dominant trees of > 60 feet

tall; 4) an average of about 15 trees per acre between 18 and 35 inch dbh; and 5) a stand of dominant conifers (six trees per acre) that are 35 inch dbh or greater.

Selective removal of smaller trees (generally 6 to 20 inch dbh with none exceeding 30 inch dbh), would set the trajectory for Desired Future Condition of the C-3 area and would provide a source of intermediate and smaller sized wood material to be used for construction of ELJs and wood habitat structures. Conifers that are encroaching on large oak and madrone trees (e.g., >20 inch dbh) would be prioritized for removal in order to release these hardwoods for continued and faster growth.

Trees would be selectively marked for removal in the field by a BLM forester in coordination with biological and cultural resource staff. No entry zones for heavy equipment would be marked by the BLM cultural resources staff. An excavator would retrieve marked trees with root wads and limbs intact, as possible. Chainsaws would be used to remove selected trees from steep areas adjacent to marked access and wood removal routes. Trees cut with chainsaws would be skidded to the designated wood removal trails. Trees and slash would be removed by an excavator or loaded via logging tongs along designated skid paths to the C-5 contractor use area. The wood material would be stockpiled and sorted for use in construction of in-river wood structures. Following tree removal, skid trails would be decommissioned and the landscape rehabilitated to natural conditions.

This action would establish conditions conducive for old growth trees to increase vigor, thereby decreasing susceptibility to insects and disease, and establishing a stand that is more resilient to fire. In addition to providing a source of large wood material for construction, this action would help maintain riparian shading and future wood loading to the Trinity River. It is anticipated that approximately 40 additional trees (6 to 20 inch dbh) would be marked by BLM staff throughout the site boundary for selective removal in order to enhance safety and forest health within the Project site boundaries.

Revegetation

The Lorenz Gulch revegetation design mimics vegetation patterns found on different landforms of less disturbed regional streams and is similar to developing designs using a zonation approach (Hoag 1999; Hoag and Landis 1999). The revegetation approach to the Lorenz Gulch site varies on the type of design element constructed or existing conditions within the Project area. The grading plan avoids removing patches of existing riparian vegetation within the site that currently provide cover and a readily available seed source immediately after construction. The existing side channel slopes would be planted to: provide cover for wildlife and fish; shade the channel; speed riparian vegetation recovery; and increase woody plant and age class diversity. Constructed benches and bars are specifically targeted for woody riparian revegetation. A variety of plant clusters with a combination of species would be planted (approximately 1.8 acres of zonal planting and 28 riparian clusters are planned). No upland plant clusters would be planted.

Over the long term, revegetated areas should be greater in area and more structurally complex than existing vegetation at the site. Trees, shrubs, forbs and herbs would be planted along side channels and islands of remnant riparian vegetation to immediately improve the complexity of aquatic habitats in the 300 cfs to 2,000 cfs range, and to cover areas where less preferable plant species could grow (i.e., sweet-clover (*Melilotus* spp.), Bermuda grass (*Cynodon* spp.), Himalayan blackberry (*Rubus discolor*), and narrowleaf willow (*Salix exigua*)).

Proposed Project Summary:

Overall, the activities proposed for the Douglas City and Lorenz Gulch Rehabilitation Sites are intended to emphasize reconnecting the river's floodplain with the river, establishing or expanding side-channel habitat, and enhancing the bed and banks of the Trinity River to promote well-distributed aquatic habitat (wetted edge habitat) over a range of flows. Collectively, these activities are intended to enhance aquatic habitat for anadromous fish under a range of flow conditions. Excavation activities at Lorenz Gulch are

expected to yield approximately 26,200 CY from construction and no excavation activities are planned for Douglas City.

The Proposed Project 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, the National Historic Preservation Act, and the BLM Redding RMP, as amended by the Northwest Forest Plan. The Riparian Revegetation Management Plan, prepared in cooperation with the California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (USACE), and the Regional Water Quality Control Board – North Coast Region (Regional Water Board), will be implemented to ensure that riparian habitat (e.g., riparian vegetation) is restored in a manner (species and size classes) that supports the TRRP objective of restoring the form and function of an alluvial river over time. Implementation of the Riparian Revegetation Management Plan will also ensure that the State of California’s requirement of “no net-loss of riparian habitat” is met through 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 Draft Master EIR.

FINDINGS

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

Land Use

The Proposed Project is located in Trinity County, California and would be consistent with Trinity County’s General Plan and Zoning Ordinance, which provides development standards for land in Trinity County, including areas located within the Trinity River floodplain. Short-term land use impacts resulting from the Proposed Project would be minimal because of Project design criteria that require maintenance of public and private access to the Trinity River, adjacent residents, and businesses. Additionally, Project implementation would not prevent existing land uses from continuing or impede future land uses. Therefore, the Proposed Project would not have a significant impact on land use.

Geology, Fluvial Geomorphology, and Soils

Implementation of the Proposed Project is consistent with the 10 healthy river attributes described in the Trinity River Flow Evaluation Study that provide a basis for the TRRP efforts to restore and enhance native fish and wildlife populations. Project construction activities and disturbance would increase the potential for short-term wind and water erosion. However, Project implementation would include sediment and erosion control measures to reduce and avoid potential short-term construction impacts on soils. Therefore, the Proposed Project would not have significant impacts on geologic resources or processes.

Water Resources

Based on the USACE Hydraulic Engineering Center River Analysis System (HEC-RAS) model, implementation of the Proposed Project, including excavation or placement of alluvial materials in the 100-year floodplain and low-flow channel, would not increase the base flood elevation of the Trinity River. Additionally, Project implementation would not result in significant risk of injury, death or loss involving flooding or erosional processes. The proposed activities are expected to have minimal, if any,

effects on groundwater elevations or groundwater quality. Therefore, the Proposed Project would not have a significant impact on water resources.

Water Quality

Implementation of the Proposed Project, including construction activities in and 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 would be staged and timed to minimize potential water quality effects, and appropriate mitigation measures would be implemented to avoid and reduce water quality impacts. Therefore, the Proposed Project would not have a significant impact on water quality.

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 and sediment management 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. Subsequent to the ROD, NMFS provided the TRRP with documentation necessary to ensure that the 2000 Biological Opinion did in fact consider the types of activities associated with the Proposed Project. 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 project implementation. Collective improvements in fluvial channel dynamics contributed by the Proposed Project in conjunction with future channel rehabilitation projects throughout the Trinity River between Lewiston Dam and the North Fork Trinity River are ultimately expected to improve rearing habitat diversity for all anadromous salmonids. Because of the Proposed Project's 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 Project 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 processes. Revegetation of alluvial features (i.e., floodplains) would increase structural and species diversity and would speed reestablishment of native riparian vegetation. Long-term changes in river inundation periods are expected to increase both seasonal and perennial riparian habitats.

Reclamation has conducted informal consultation with the USFWS concerning effects to the ESA-listed northern spotted owl (*Strix occidentalis caurina*). Aerial imaging, data interpolation, and pedestrian surveys indicate that habitat within the Project area does not possess features associated with suitable nesting, roosting, or foraging habitat for 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 the Forest Service's Redwood Sciences Laboratory, Reclamation determined that a biological assessment was not required because the project would have no effect on the northern spotted owl or its critical habitat. Riparian habitat, which is considered a sensitive natural community by the CDFW, is present in the Project areas along the Trinity River. Critical Winter Range for raptors is also present in areas along the Trinity River.

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 riparian revegetation, ensure that the Proposed Project will not result in significant impacts to vegetation, wildlife, and wetlands.

Recreation

The Trinity River was federally designated as a National Wild and Scenic River in 1981. Implementation of the Proposed Project would result in a long-term benefit to the form and function of the Trinity River, thereby enhancing the Outstandingly Remarkable Values for which it was designated as a Wild and Scenic River, including its anadromous fishery. Implementation of the Project would alter the riverine environment; however, construction under the Project would not permanently affect the scenic or recreational values of the Trinity River for which it was designated. Although the Proposed Project could result in limited temporary interruptions of public access and use, river access would continue to be available.

Currently, there are a number of river access points located in the vicinity of the Douglas City site. These recreation areas provide a variety of recreation opportunities such as fishing, whitewater rafting, picnicking, and wildlife viewing. Because the Lorenz Gulch site is comprised entirely of BLM-managed lands, it also offers a variety of recreational opportunities, such as fishing, rafting, and swimming. The Hidden Bar area within the Lorenz Gulch site is popular with recreationists. Although access currently occurs in the Hidden Bar area, the Trinity River Recreation Activity Management Plan (1983) indicates no authorized vehicle access for launching boats at Hidden Bar. With construction of this rehabilitation site, motorized travel would be officially authorized to Hidden Bar, and as funding allows, new facilities (parking, boat access, and possibly a toilet) may be developed by the BLM. Implementation of the Proposed Project would expand recreation access by officially opening the route to Hidden Bar to motorized travel, and developing new and better access to the Hidden Bar area. Because of the continued availability of river use and access, the generally localized effects, and inclusion of mitigation measures to protect recreationists, impacts on recreation resulting from Project implementation would not be significant.

Socioeconomics, Population, and Housing

The Proposed Project could directly generate short-term income growth through the payment of wages and salaries, but would result in little long-term increased economic activity. Because of the limited Project size and duration, there would be no significant impact on socioeconomic conditions, population, or housing.

Tribal Trust

TRRP's overarching goals of restoring, enhancing, and conserving the natural production of anadromous fisheries, native plant communities, associated wildlife resources, and overall health of the Trinity River basin are consistent with federal Tribal Trust responsibilities. The primary TRRP goals originate partly from the federal government's trust responsibility to protect fishing rights for ceremonial, subsistence, and commercial purposes of the region's Indian tribes. Several short-term impacts that would affect Tribal Trust assets are considered acceptable provided that long-term fishery and healthy river goals are supported. These impacts are generally associated with construction activities, which would temporarily affect fish and wildlife resources, vegetation, and water quality in the rehabilitation sites. Potential impacts on Tribal Trust assets would be minimized by Project design criteria and mitigation measures implemented to protect Tribal Trust assets. While some level of impact to fisheries and water quality cannot be avoided during construction activities, the impacts that would occur to these Tribal Trust assets would be kept at a less-than-significant level. Therefore, the Proposed Project would not have a significant impact on Tribal Trust assets.

Cultural Resources

Implementation of the Proposed Project would effectively avoid, minimize or mitigate impacts to cultural resources as described in the Programmatic Agreement (PA) executed between Reclamation and the State Historic Preservation Office in 2000. By following the stipulations of the PA, there would be minimal impacts to cultural resources and all actions under CEQA and the National Historic Preservation Act would be fulfilled. Reclamation will continue to work with BLM cultural staff to ensure that implementation plans are consistent with the PA. Reclamation commits to fulfilling the stipulations of the PA prior to implementation of the Proposed Project. If cultural materials or human remains are encountered during work for the Project, construction would be halted and the proper agency contacted. Because of the pre-project cultural resource survey and mitigation measures to cover potential finds during construction, impacts to cultural resources during implementation of the Proposed Project would not be significant.

Air Quality

Construction associated with the Proposed Project requires the use of equipment that would temporarily contribute to air pollution in the Trinity River basin in the form of ozone precursors, particulate matter (PM₁₀), and greenhouse gas emissions. Because Reclamation would include provisions in construction contract documents that minimize construction-related impacts on air quality resulting from Project activities, the Proposed Project would not result in a significant impact on air quality.

Environmental Justice

There is no evidence to suggest that the Proposed Project would cause a disproportionately high adverse human health or environmental effect on minority or low-income populations. The Proposed Project would not have a significant impact on environmental justice issues.

Visual Resources

Over the long-term, implementation of the Proposed Project is expected to complement the visual resources and aesthetic values of the Project area by restoring the function and form typical of an alluvial river. Design of the Proposed Project incorporates the diversity of the landscape and vegetation types in the Project vicinity into the character of the rehabilitated riverine and upland areas. 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. Changes to the landscape would not be noticeable in the long term. Based on these findings, the Proposed Project would not have a significant impact on aesthetics.

Hazardous Materials

Implementation of the Proposed Project would potentially release hazardous materials through accidental spills that could pose a public hazard. However, Reclamation would ensure that the contractor follows Best Management Practices to prevent the release of hazardous materials into the environment (e.g., oils, gasoline) and to provide adequate response measures in case a spill does occur. These practices would ensure that implementation of the Proposed Project would not have a significant impact with respect to hazardous materials.

Noise

Construction and traffic associated with the Proposed Project would generate noise. To minimize potential noise impacts, construction activities would be scheduled between 7:00 a.m. and 7:00 p.m. Monday through Saturday. Additional time constraints may be imposed for activities occurring immediately adjacent to residences. During working hours, Reclamation would ensure that the contractor operates 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. Therefore, no significant effects to public services would result from implementation of the Proposed Project.

Transportation/Traffic Circulation

Implementation of the Proposed Project would minimize the use of heavy construction equipment to transport material to and from the Project 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 from ingress or egress of construction equipment or during hauling of restoration materials to the site. For safety reasons, Reclamation would ensure that the contractor implements a traffic control plan to protect the public during construction. Implementation of these planning measures would ensure that no significant effects to traffic circulation would result from Project implementation.

SUMMARY

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

FINDING OF NO SIGNIFICANT IMPACT IN ACCORDANCE WITH 40 CFR 1508.27

After considering the environmental effects described for the Proposed Project in the EA/IS for the Douglas City and Lorenz Gulch Rehabilitation Sites, it has been determined that it will not have a significant effect on the quality of the human environment considering the context and intensity of impacts. Therefore, an environmental impact statement is not needed. This determination is based on the analysis in the EA/IS 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 Proposed Project at the Douglas City and Lorenz Gulch Rehabilitation Sites is expected to provide localized improvements in aquatic and riparian habitats currently present at the sites. The Project will 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 project.** Due to the limited duration of the Project and implementation of public safeguards, public safety will not be at risk. Standard Reclamation practices for notifying the public of heavy equipment activities will be implemented during Project activities.
- 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.** Although there will be no significant adverse effects in these areas, the Project will result in a minor amount of disturbance to river attributes while enhancing the outstandingly remarkable value—the anadromous fishery—for which the river was designated in the Wild and Scenic River system. 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 Project, which involves implementation of a subset of channel rehabilitation actions from 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, effects of the Proposed Action on the quality of the human environment are not expected to be highly controversial.** Preliminary designs for the Proposed Project were discussed with the public during an open house on October 12, 2010 at the Douglas City School in Douglas City, California. Designs were then discussed at two public meetings, both of which were held at the North Fork Grange Hall in Junction City, California – one on February 11, 2011 and one on July 27, 2011. At that time, the designs for both sites were made ready for public review and NEPA/CEQA analyses. However, to incorporate stakeholder feedback and adaptive management input made by the TRRP's Scientific Advisory Board (SAB) during the Phase I review, the 2011 project concepts were redesigned. Public meetings to discuss updated designs for the Douglas City and Lorenz Gulch Rehabilitation Sites were held at the Trinity Alps Golf Course on November 14, 2012 and at the Douglas City School on December 11, 2012. These meetings kept landowners and residents current with the planning process for the Proposed Project and specifically sought their input.

As part of the public involvement process for the Douglas City and Lorenz Gulch sites, Reclamation used a stream restoration decision analysis and design guidance tool (Stream Project Tool) that was created to define and implement a rational, objectives-driven approach to evaluating and designing stream restoration projects. Using the Stream Project Tool, stakeholders were given the opportunity to participate in the scoring of proposed alternative designs for these two sites. The design team developed design objectives to more clearly identify desired features or processes within the rehabilitation alternatives for use with the Stream Project Tool. Each objective carried a specific metric or method for measuring the proposed objective within the design. For example, fry rearing habitat was assigned a performance measure range based on the change in habitat area per use-day. Therefore, participants were able to contribute their opinions of design alternatives in a quantifiable manner using a ranking system to assign preference for some design objectives versus others. The alternatives that contained more objectives that were viewed as favorable to the stakeholders scored higher, and those alternatives measured greater in the dominance analysis that followed the ranking process. The design team also used the Stream Project Tool to evaluate the proposed alternatives. The results helped the design team characterize stakeholder concerns by their positions within well-defined categories, and showed what design objectives caused a particular design alternative to rank higher. This allowed feature inclusion/placement to be modified earlier than had been possible on past rehabilitation site designs.

In addition to the meetings listed above, TRRP staff has worked closely with the local Trinity River Guides Association (TRGA) to understand their concerns and to adjust the Proposed Project to alleviate these concerns where possible. TRRP staff have attended fishing guide meetings and floated the river with individual guides in order to gain their project insights. TRRP staff members will continue to meet with local groups (e.g., fishing guides and mining groups) and landowners from the Douglas City area in order to obtain stakeholder input and to address concerns.

The EA/IS was made available for public review when the document was submitted to the State Clearinghouse on March 8, 2013. The document was circulated to local, state, and federal agencies and to interested organizations and individuals for review and comment on the analysis provided in the document. The public scoping period ran for 30 days from March 8 to April 12, 2013. An open house was held on March 20, 2013 at the Douglas City School to describe the Proposed Project and receive public input. Concurrent with this review period, public notice was provided to solicit additional comments from the public and interested parties. Public notice included: advertisement(s) in the local Trinity Journal newspaper, letters mailed to local landowners, notices to email interest groups, and public notice posted at the project sites informing the public of the availability of the EA/IS for review.

Three comments were received during the public comment period for the EA/IS. One letter was received from the TRGA, one from the CDFW, and one from a private individual with a mining claim

located within the Douglas City site boundary. A summary of these comment letters and the responses from the TRRP are included in EA/IS (Appendix B). In addition, minor edits were made within to the Draft EA/IS (section 3.12) to: 1) clarify BLM's use of the Visual Resource Management system for evaluating scenic values along the restoration reach and within the designated Wild and Scenic River corridor, and 2) tie the programmatic wild and scenic Section 7 Analysis and Determination from the Master EIR to the specific project areas at Douglas City and Lorenz Gulch. With input from technical staff from the lead, cooperating, and responsible agencies, environmental, social, and economic issues were addressed such 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 the Proposed Project have been clearly evaluated in the EA/IS. Similar activities have been completed at past channel rehabilitation sites and collected data and analyses have determined that no unique or unknown impacts to the human environment have resulted.
- 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 environmental effects of future projects will be analyzed based on need dictated by the ROD, but the need will be balanced by any new information collected during implementation of this Project and other recently implemented projects.
- 7) **There are no known significant cumulative effects from this Proposed 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/IS, 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 Project is intended to improve the alluvial processes and function of the mainstem Trinity River and at the same time improve 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 Project, 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.** Reclamation and the BLM work closely with the Hoopa Valley Tribe (HVT) and the Yurok Tribe as both sit on the Trinity Management Council, which oversees the TRRP, and both participate in the designing of these projects. The HVT is also a signatory on the PA. Pursuant to the PA (Stipulation IV) Reclamation has consulted with Indian tribes, Native American organizations, and individuals regarding implementation of the PA and its stipulations to protect tribal interests. A Native American Heritage Commission (NAHC) sacred lands requests identified the Nor-Rel-Muk, Ms. Carol Y. Bowen, the Wintu Tribe and Toyon - Wintu Center, the Wintu Educational and Cultural Council, the Redding Rancheria, and Tsnungwe Council as Native American individuals and organizations with an interest in the area. Letters were sent to these entities to inform them of the proposed Douglas City and Lorenz Gulch work in 2013. Based on Project design and measures described in the EA/IS, the decision maker has determined that the Project will not result in the destruction of scientific, cultural, tribal, or historic resources.
- 9) **The Project 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.** A biological

opinion addressing foreseeable TRRP activities 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 Project.

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 U.S. Forest Service), and Trinity River bird distribution data provided by the Redwood Sciences Laboratory, Reclamation determined that a biological assessment was not required since the 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 defined for the Project.

- 10) Implementation of the Project does not threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment.** Implementation of the Proposed Project does not threaten violation of any laws. Its implementation meets requirements under the ROD, the ESA, the Clean Water Act, the Federal Land Protection and Management Act (FLPMA), NEPA, the Clean Air Act, the Wild and Scenic Rivers Act, the National Historic Preservation Act, and BLM's RMP for the Redding Field Office.

The Project described in this finding is fully consistent with BLM's RMP, FLPMA, and CEQA. The following permits are required to authorize the project:

- Section 404, Clean Water Act, Nationwide Permit 27 (San Francisco District, U.S. Army Corps of Engineers);
- Section 401, Clean Water Act Water Quality Certification (Regional Water Quality Control Board – North Coast Region);
- Section 10, Endangered Species Act, Incidental Take Permit (National Marine Fisheries Service);
- Encroachment Permits (Trinity County or California Department of Transportation); and
- Floodplain Development Permit (Trinity County).

Findings Required by Other Laws and Regulations

The proposed action to implement the rehabilitation activities, including those specifically under the jurisdiction of BLM, is consistent with the intent of the RMP with respect to resource management conditions. The Project is also consistent with the direction provided in the BLM's Trinity River Recreation Area Management Plan.

Implementation Date

The Proposed Project is expected to be constructed in 2013 and 2014. Work is expected to begin in early July 2013 and potentially in June in future years, depending on financial and environmental clearances. Heavy civil construction will end in-river in September and will be completed each year by December. Revegetation will be conducted, as needed, in fall and winter months following construction.

Contact

For additional information concerning the Proposed Project, contact Brandt Gutermuth, Project Manager, Trinity River Restoration Program, P.O. Box 1300, and 1313 Main Street, Weaverville California, 96093.