

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


**BUREAU OF LAND MANAGEMENT  
REDDING FIELD OFFICE  
6640 Lockheed Drive  
REDDING, CA 96002**

**FINDING OF NO SIGNIFICANT IMPACT**

In accordance with the National Environmental Policy Act of 1969, 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 office of the U.S. Bureau of Reclamation and the Bureau of Land Management, Redding Field Office, have found that the Proposed Action, supported by the analysis disclosed in the final Environmental Assessment/Initial Study for the Trinity River Channel Rehabilitation Site: Deep Gulch (River Mile [RM] 82.4-82.9) and Sheridan Creek (RM 81.6-82.4), will result in no significant impacts on the human environment considering the context and intensity of impacts.


Supporting documentation in the EA portion of the EA/IS was prepared to meet the requirements of NEPA. For the purposes of NEPA, the EA is tiered to the *Trinity River Mainstem Fishery Restoration Program Environmental Impact Statement* and incorporates by reference the *Channel Rehabilitation and Sediment Management Activities for Remaining Phase 1 and Phase 2 Sites, Part 1: Final Master Environmental Impact Report*.

*Recommended by:*

  
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Trinity River Restoration Program


26 May 2017  
Date

*Approved by:*

  
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Executive Director,  
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5/26/2017  
Date  
FONSI No. TR-EA0117

*Approved by:*

 ACTING FOR  
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Field Manager, Redding Field Office,  
Bureau of Land Management (Co-Lead Agency)

26 MAY 2017  
Date  
FONSI No. DOI-BLM-CA-N060-2017-014-EA

FINDING OF NO SIGNIFICANT IMPACT  
Trinity River Channel Rehabilitation Site  
Deep Gulch (River Mile 82.4-82.9) and  
Sheridan Creek (River Mile 81.6-82.4)

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**BACKGROUND AND NEED**

The Bureau of Reclamation (Reclamation) completed the Trinity River Division (TRD) of the Central Valley Project (CVP) in 1964, blocking passage of salmonids and lamprey to habitat upstream of Lewiston Dam and restricting anadromous fish to habitat downstream. The TRD also eliminated coarse sediment transport from over 700 square miles of the upper watershed. Trans-basin diversions from Lewiston Lake diminished annual flows by up to 90 percent and altered the hydrologic regime of the Trinity River for a 40-mile reach downstream. The consequences of diminished flows included encroachment of riparian vegetation, establishment of riparian berms, and changes in alluvial processes 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 function, and adversely affected fish habitat.

In 1994, the U.S. Fish and Wildlife Service (USFWS) as the federal lead agency and Trinity County as the California Environmental Quality Act (CEQA) lead agency began the National Environmental Policy Act (NEPA) process for developing the Trinity River Mainstem Fishery Restoration Environmental Impact Statement (EIS)/Environmental Impact Report (EIR). The 2000 Record of Decision (ROD) for the Trinity River Mainstem Fishery Restoration Final Environmental Impact Statement/Environmental Impact Report (FEIS/EIR) (December 19, 2000; USDI 2000) directed Reclamation and the USFWS to

implement the Flow Evaluation Alternative, coupled with additional watershed protection efforts (described in the Mechanical Restoration Alternative), as the Preferred Alternative identified in the FEIS/EIR to restore the Trinity River's anadromous fishery. Through the Trinity River Restoration Program (TRRP), the ROD directed Reclamation 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. As a project-level NEPA document, the FEIS/EIR provides guidance for policy decisions associated with managing Trinity River flows, and as a programmatic NEPA document, it provides first-tier support of related mechanical restoration and sediment management actions. The 2009 Master EIR provides more specific analysis of non-flow elements of the TRRP and was incorporated by reference in the NEPA document for the Proposed Action to support NEPA decisions required by Reclamation and the Bureau of Land Management (BLM).

The TRRP, acting under the guidance of the Trinity Management Council (TMC), provides the overall program direction required to implement the 2000 ROD. TMC member agencies include Reclamation, USFWS, National Marine Fisheries Service (NMFS), U.S. Forest Service (USFS), the Hoopa Valley Tribe (HVT), the Yurok Tribe (YT), the California Natural Resources Agency represented by the California Department of Fish and Wildlife (CDFW) and the California Department of Water Resources (DWR), and Trinity County. In addition to providing technical expertise for the design and review of the rehabilitation sites, 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 implementation of the ROD, and both the Deep Gulch site (originally labeled Lower Chapman Ranch) and the Sheridan Creek site were identified as Phase 2 sites in the ROD. The Trinity River Channel Rehabilitation Sites: Deep Gulch (River Mile [RM] 82.4-82.9) and Sheridan Creek (RM 81.6-82.4) project (Proposed Action) includes reducing riparian encroachment, placement of large woody debris (LWD, 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 areas (woody and wetland species) and management of upland mixed conifer habitats to mimic historic conditions is included in the Proposed Action. These rehabilitation activities would increase habitat suitability and availability for salmonids and other native fish and wildlife species during a wide range of river flow conditions.

## **PROPOSED ACTION**

The Proposed Action includes work at both the Deep Gulch and Sheridan Creek sites, located in part on public lands managed by the BLM Redding Field Office. Construction activities at the site are anticipated to begin in 2017 and continue through 2018.

The Deep Gulch and Sheridan Creek rehabilitation sites share activity areas and have been combined into one project area for purposes of the analysis. The project area encompasses approximately 177 acres, which include 138 acres of BLM-managed land and 39 acres of private land within the boundaries of the two sites. The Deep Gulch site is in Section 19 of Township 33 North, Range 10 West on the *Junction City, California* 7.5-minute U.S. Geological Survey (USGS) quadrangle, Mount Diablo Base and Meridian. The river elevation at the site is approximately 1,480 feet above mean sea level (msl). The

Sheridan Creek rehabilitation site abuts the downstream (northern) boundary of the Deep Gulch rehabilitation site. This site is in Section 18 of Township 33 North, Range 10 West on the *Junction City, California* 7.5-minute USGS quadrangle, Mount Diablo Base and Meridian.

Land ownership and the project boundary are shown on Figure 2-2 of the EA/IS. TRRP staff, with interdisciplinary review from the BLM and TMC technical staff, developed the site boundaries to incorporate the rehabilitation activities described in Chapter 2 of the EA/IS.

Access to the Deep Gulch site is via dirt roads west of Sky Ranch Road, which intersects State Route 299 southeast of Junction City and north of the site, and from Sky Ranch Road through the Sheridan Creek site to the north. Access to the Sheridan Creek site is via a dirt road, referred to as Dredger Place, off the west side of Sky Ranch Road at the northeast corner of the site. The road continues into the Deep Gulch site to the south. The location of this project in relation to other TRRP sites is illustrated in Figure 1-1 of the EA/IS.

The project area encompasses a stretch of the Trinity River that includes several sensitive features (e.g., Ice Box Hole) that were taken into consideration in the design and environmental review process (see Figure 2-1 of the EA/IS). Although some mature riparian vegetation occurs on alluvial features, upland vegetation adjacent to the project area is characterized as scattered stands of mixed conifer/hardwood forest with an understory of shrubs and grasses.

Rehabilitation activities directed by the ROD and further described in the EA/IS, in conjunction with annual ROD flow releases, are expected to contribute to the restoration of the Trinity River mainstem fishery. Implementing channel rehabilitation work at the Deep Gulch and Sheridan Creek 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 Action Alternative. After consideration of the environmental commitments and project design features listed in Chapter 2 of the EA/IS, impacts from the Proposed Action would be less than significant pursuant to NEPA. Details concerning these alternatives and other alternatives considered but not carried forward for evaluation are included in Chapter 2 of the EA/IS.

An interdisciplinary team of the TRRP identified discrete activity areas within the boundaries of the Deep Gulch and Sheridan Creek sites. Each activity area was established to meet a suite of specific objectives in conformance with the overall goals and objectives outlined for the TRRP. Activity areas are labeled using an alpha-numeric system based on the type of activity that would occur in a specific place. 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; and construction staging/use areas are identified with a C followed by the construction site number.

The TRRP has developed programmatic objectives for channel rehabilitation projects that are described in Chapter 2 of the EA/IS. Ultimately, the goals of the channel rehabilitation efforts are to provide functional aquatic habitat for all life stages of anadromous salmonids over a range of flow conditions; to provide suitable salmonid rearing habitat, presently believed to be a limiting factor in the system; and to

reestablish healthy alluvial river geomorphic processes that will maintain high-quality salmonid habitat at a dynamic equilibrium.

The activities proposed at the Deep Gulch and Sheridan Creek sites are briefly described below; additional details are provided in Chapter 2 of the EA/IS.

## **Deep Gulch Rehabilitation Activities**

At the Deep Gulch site, the design focus would be on modifying the channel of the Trinity River to restore riverine processes and enhancing the floodplain through restoration of native riparian vegetation and excavation of terraces and floodplain surfaces. Critical features considered in the design process include Ice Box Hole and Ed's Hole (see Figure 2-1), historic dredge tailing deposits, public river access, and adjacent residences. Most activities would take place in the upstream (southern) half of the site.

### ***Floodplain Modifications (DG R-1 and DG R-1A)***

These activity areas encompass approximately 3.99 acres on the right bank (east side) of the river at the upstream (southern) end of the rehabilitation site. Existing terrace and floodplain surfaces would be lowered by up to 7 feet to create a lower floodplain composed of two main topographic structures. The larger of the two structures would consist of a surface that slopes downvalley and away from the river toward a swale (DG R-1A) that drains into an alcove at the downstream end of the floodplain. The edge of this surface nearest the river would remain at its existing elevation. The other topographic structure would be a smaller excavation that allows backwater to inundate another portion of the constructed floodplain at moderate flow levels.

The constructed floodplain would provide slow-water habitat that increases in area with an increase in discharge. The area of inundated habitat would cover nearly the entire floodplain area as discharge approaches bankfull stage. The activity area would eventually provide wood and organic material as well as trophic production to the aquatic ecosystem, and serve as a high-flow refugia with abundant cover. The habitat value of the floodplain is expected to increase as it becomes vegetated through natural recruitment and planting. Some bank erosion may occur along the floodplain adjacent to the DG IC-1 channel expansion (west side of DG R-1), but other major topographic changes would not be expected.

### ***Diagonal Bar Complex Creation (DG IC-1, DG IC-2, DG R-2, and DG IC-3)***

These activity areas are just west of DG R-1 in the upstream (southern) portion of the rehabilitation site and encompass approximately 1.32 acres. Both banks would be excavated to increase the bankfull channel width and lower the existing floodplain surface to a level about 2 feet below the baseflow water surface, matching the existing bed elevation at its downstream end. A medial bar would be constructed at DG IC-2 to form the crest of the diagonal complex. The medial bar would be built so that it would be fully inundated at flows near 2,500 cfs. At DG IC-3, a bar and wood structure would extend about 40 feet into the channel from the left bank downstream of DG R-2. Together with the bar at DG IC-2, they would create a diagonal structure that extends from upstream right to downstream left and would be cross cut by a pair of channels along the toe of each bank.

The diagonal bar complex is intended to greatly increase local hydraulic and habitat diversity over a wide range of flows. At lower flows, the medial bar would emerge, which would double the length of emerged

edge habitat in the area. At higher flows, the medial bar would submerge and would provide cover, slower flowing water, and large eddies. The habitat value provided by the medial bar would increase as riparian vegetation becomes established on its surface. Topographic and ecological complexity is also expected to increase as high flows reshape the bar, bed, and banks. Modest bank erosion that further widens the channel is likely.

#### ***Side Channel Creation (DG R-3 and DG IC-4)***

These activity areas are just downstream (north) of DG R-2 and IC-3 on the left bank of the river. They encompass approximately 0.48 acre. A baseflow side channel would be created at DG R-3, and a wood structure that extends 15 feet into the main channel immediately downstream of the side channel inlet would be installed at DG IC-4. The elevation of the new side channel inlet would allow surface water flow in the side channel at a rate of about 15 cfs during baseflow periods. In addition, the inlet would be constructed to allow hyporheic flow into the side channel regardless of whether surface water connectivity is maintained in the future. Flow into the side channel would continue through existing low areas and sections of excavated channel into an alcove that grades into the mainstem channel bed near the center of the site.

The new side channel is intended to provide additional rearing habitat at low and intermediate flows. The wood structure along the side channel is intended to help prevent clogging of the side channel inlet and would provide a small amount of additional cover and slow water habitat. The side channel would provide rearing habitat indefinitely. The inlet design incorporates hyporheic flow to ensure future function even if the inlet aggrades.

#### ***Wood Jam Installation (DG IC-5)***

This activity area is on the right bank of the river across from DG R-3 and encompasses approximately 0.14 acre. A wood jam would be installed at this activity area. The top elevation of the jam would be constructed approximately equal to the water surface elevation at the design discharge of 8,500 cfs. The back of the structure (the side away from the river) would be anchored with vertical posts<sup>1</sup>, which would not be keyed far into the floodplain. This would allow flood flows to potentially scour the floodplain behind the structure, increasing complexity and possibly creating additional aquatic habitat.

The wood jam is intended to increase hydraulic and habitat diversity by causing bed scour at its base, creating an eddy in its lee, and providing direct cover habitat. Zones of scour and deposition associated with the jam would shorten the length of bed lacking local topographic relief. High flows would scour the bed near the leading edge of the jam, and deposition of fine gravel and sand is expected in portions of the eddy zone.

#### ***Floodplain Modifications and Wood Jam Installation (DG R-4, DG IC-6, DG IC-7, and DG IC-8)***

These activity areas are on the right bank of the river near the downstream or northern portion of the rehabilitation site. These activity areas encompass approximately 1.76 acres. At the DG R-4 activity area, the floodplain surface would be lowered. The upstream third of the excavated floodplain would be constructed so that it would inundate at flows as low as 2,000 cfs. A wood jam would be installed at DG

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<sup>1</sup> Anchoring may include the use of pile-driving equipment at one or more activity areas.

IC-6 on the existing bank immediately downstream of the intersection between the low floodplain and the main channel. The top elevation of the wood jam would be the same as the existing top of the bank.

The downstream two-thirds of the excavated floodplain would slope downstream but away from the river toward a swale that empties into a series of three alcoves. Existing terrace and floodplain surfaces would be lowered to varying degrees. Inundation of this downstream section of floodplain would begin at moderate flow by backwater entering the swale from the alcove. Three sections of existing bank between the alcoves would remain unexcavated, increasing the topographic complexity of the surface. A wood jam would be installed at DG IC-7 on the existing bank at the upstream edge of the middle of the three unexcavated areas. The top elevation of the wood jam would be near the existing top of bank. Another wood jam would be installed at DG IC-8 on the existing bank immediately downstream of the alcove.

The upstream third of the floodplain at DG R-4 would inundate at very low discharge levels, and the lack of downstream gradient would keep flow velocities very low. This floodplain is expected to provide abundant high-quality rearing habitat; more habitat would become available with increasing discharge due to backwatering from downstream. The entire excavated area would be inundated at discharges near 4,500 cfs. The unexcavated portions of bank in this area would create local eddies, promote local scour, and provide riparian cover. All three of the wood jams associated with this floodplain are also intended to promote local scour and hydraulic diversity. The wood jam at DG IC-8 is intended to split the flow, draining toward the main channel from the downstream part of the floodplain and potentially causing incision of an additional alcove on the right side of the wood jam. The entire floodplain would serve as a high-flow refugia with abundant cover. The habitat value of the floodplain would increase as it becomes vegetated through natural recruitment and planting. Some bank erosion may occur adjacent to the main channel, but other major topographic changes are not expected.

#### ***Woody Materials Installation (DG IC-9, DG IC-10, and DG IC-11)***

These activity areas are along the left and right banks, respectively, near the DG R-3 and DG IC-5 activity areas in the middle portion of the rehabilitation site. The DG IC-11 activity area is on the right bank near the DG R-4 activity area. These activity areas encompass approximately 0.28 acre. Woody debris would be installed in the baseflow channel to provide immediate cover habitat and a substrate for primary and macroinvertebrate production.

### **Sheridan Creek Rehabilitation Activities**

At the Sheridan Creek site, the design focus is on modifying the channel of the Trinity River to restore riverine processes and enhancing the floodplain through creation of multiple wetland/pond complexes. Critical features considered in the design process are illustrated on Figure 2-1 of the EA/IS (e.g., Sheridan Hole). In-channel activities would include creation of a meander complex and installation of woody material (e.g., wood jams and structures). Riverine activities would include both elevating and constricting the floodplain. Wetland activities include creating wetland/pond complexes along both sides of the river and connecting them to the river.

#### ***Meander Complex (SC IC-1, SC IC-2, SC IC-4, SC IC-5, SC IC-6, SC R-1, and SC R-2)***

These activity areas are adjacent to one another along the main channel and left bank of the river in the upstream (southern) end of the rehabilitation site. These activity areas encompass a total of

approximately 4.97 acres. A meander complex would include two constructed bars and alcoves, excavated bends with scour pools, a constructed riffle, and two raised floodplains. Overall, the meander complex would increase sinuosity and hydraulic complexity in this reach to create a diverse suite of habitats. The meander complex is also intended to increase shear stress along the right edge of an old dredger tailings pile to promote bank erosion and to provide additional sediment for transport and deposition downstream.

The meander complex would end about 230 feet just upstream of Sheridan riffle, one of the most important and highly used spawning riffles on the mainstem Trinity River. It would be constrained upstream by the valley wall on river left and preservation of the spawning riffle downstream. The separation between the complex and spawning riffle is important in order to minimize changes to the velocity and shear stress fields across the existing spawning riffle where redds are typically located. Overall, the meander complex is expected to be self-maintaining, with minor adjustments to the channel and planform dimensions following high flows.

Bars and alcoves would be constructed to adjust the river meander. The bars would have variable flow widths ranging from 84 feet at baseflow to a bankfull width of 200 feet. Gravel, cobble, excavated materials, and boulders would be placed in the river to create the bars. The maximum size of added substrate (excluding boulders that vary between 3 and 6 feet in diameter) would be 12 to 14 inches in diameter, consistent with the existing range of substrate size that allows for long-term geomorphic processes. The proposed substrate for the constructed bars is expected to remain semi-stable under the modeled shear stress. In addition, alcoves would be excavated to create shallow/slow water habitat on the backside of the constructed bars. Once constructed, large wood would be incorporated into the bars, and the surface of these bars would be planted with native vegetation to reduce flow velocity and promote depositional processes.

At the SC IC-1 and IC-5 activity areas, the river banks would be excavated to modify the bend and create scour pools and side slope transitions, while alluvial material would be placed in the river to increase hydraulic complexity. The outer bank of SC IC-5 is expected to erode over time, widening the channel and creating a more gradual transition back to the original downstream channel. The bank erosion process is expected to reach quasi-equilibrium without substantial lateral channel migration (i.e., without corresponding growth of the SC IC-6 bar), although lateral migration is desirable if it occurs.

The floodplain on river left would be raised at activity areas SC R-1 and R-2 to maintain flow conveyance in the mainstem channel and minimize overbank bypass flows. Floodplain modifications would include some excavation of the banks and placement of fill, primarily gravel and cobble. Woody material may also be incorporated opportunistically into these activity areas

#### ***River Left Wetland Complex (SC W-1, SC W-2, SC W-3, SC U-1, SC IC-3, SC R-3, and SC R-4)***

These activity areas are adjacent to one another on the left bank of the river and extend from the border of SC R-1 and R-2 activity areas about 1,200 feet downstream. These activity areas encompass approximately 3.78 acres. The U-1 activity area consists of an ephemeral stream that conveys seasonal flow onto the existing floodplain on river left, just west of SC W-1. The activity area encompasses approximately 0.37 acre. A wetland/pond complex would be constructed at the SC W-1, W-2, and W-3 activity areas, and the floodplain would be modified at the SC R-3 and R-4 activity areas. The ephemeral stream at the U-1 activity area would be modified to direct flow to the SC W-1 activity area. A large



wood jam would be installed at the SC IC-3 activity area, which is between the floodplain modifications proposed at SC R-1 and R-2.

The floodplain and wetland complexes are designed to provide a large area of high-quality rearing habitat across a wide range of flows, as well as off-channel over-summer and over-winter habitat for both fry and presmolt salmonids. Due to the high density of redds in this reach, juvenile fish densities are anticipated to be very high. These complexes would help reduce densities of rearing fish, especially for those migrating into this area. The floodplain and wetland complex is also intended to raise local groundwater levels to promote robust riparian forest growth and enhance riparian and salmonid habitat. In addition, the complex was designed to protect high-quality adult steelhead holding habitat in the downstream portion of the site by keeping overbank velocities low and locating the floodplain outlets of SC W-2 and W-3 upstream of SC IC-10.

Three wetland/pond complexes would be constructed at the SC W-1, W-2, and W-3 activity areas. The ponds would have variable depths: 6 to 8 feet during summer baseflow conditions and as much as 10 to 12 feet when the ponds are inundated during higher flows. The ponds would be constructed adjacent to existing riparian vegetation to optimize shade and cover, and wood would be placed in the ponds to enhance juvenile rearing habitat. Shade plus groundwater connectivity are expected to maintain water temperatures adequate for fry/juvenile rearing. The small ephemeral channel at the SC U-1 activity area would be redirected to flow into the wetland/pond complex at SC W-1. An existing scrub wetland at SC W-3 would be modified to enhance the functions and values of the wetland/pond complex by conversion of this scrub wetland.

Floodplain swales would provide surface water connections between the wetland ponds and the Trinity River. The swales would be compound features that are 25 feet wide and 1 foot deep, with an inner swale that is 10 feet wide and 2 feet deep. The swales would allow overbank flows to backwater into the wetland ponds when mainstem flows are greater than about 1,200 cfs and would provide fish passage between the wetlands and the river under those conditions. Riparian floodplains surrounding the wetland complex are designed to progressively inundate between 2,500 cfs and 4,500 cfs to provide rearing habitat and promote natural riparian vegetation recruitment that increases cover and habitat quality over the long term.

The SC W-3 wetland and floodplain maintain a minimum buffer distance of 125 feet from the hydraulic mining debris fan on river left at the confluence of Deep Gulch (located immediately upstream of Sheridan Hole). The buffer would prevent the sedimentation of the constructed features from ongoing erosion of the toe of the Sturdivant Tunnel Debris Fan and maintain the existing mainstem outflow connection, preventing outflow and associated sediment from draining into SC W-3. The SC IC-3 wood jam is also intended to reduce sediment delivery from the mainstem directly into the wetlands. This wood jam would contain various rootwads, logs, whole trees, and slash.

Floodplain constrictions would be established between each wetland complex. These constrictions are designed to reduce overbank flow velocities during high-discharge events in excess of 6,000 cfs. The flow paths in and out of the river-left floodplain and wetland complex would work together with the floodplain constrictions to limit overbank flow velocities. Hyporheic connections through SC R-3 and R-4 would be established to increase groundwater exchange between all three wetland ponds.

Riparian planting and natural recruitment would revegetate the floodplains over time to create a robust and diverse riparian forest. Native vegetation from the excavated pond areas (e.g., mugwort) would be salvaged during the initial excavation efforts for incorporation into wetland revegetation efforts after grading is completed. Overbank flows are expected to cause some minor changes in the pond and floodplain configuration post construction. The wetland ponds are anticipated to maintain their general depth and volume for many decades because mainstem sediment supply would be restricted by the SC IC-3 feature and the existing riparian vegetation along the mainstem. Over time, the pond bottoms would accumulate organic matter that could reduce porosity and reduce (but not eliminate) groundwater connectivity. The potential warming effect caused by reduced groundwater connectivity is expected to be offset by development of a riparian forest that provides shade and organic input. Fines would most likely accumulate in the SC IC-3 wood jam, reducing the amount of surface water flowing into SC W-1 over time.

#### ***Sheridan Creek (SC W-4)***

Sheridan Creek and Sheridan Spring are currently disconnected from each other and from the Trinity River as a result of remnant dredger tailings piles. This activity area encompasses approximately 0.1 acre near Sheridan Spring. A channel would be constructed by excavating material from the adjacent tailings pile to intercept perennial flow from Sheridan Spring and redirect it across an old road surface and through tailings piles to a well-vegetated riparian corridor. Both Sheridan Spring and Sheridan Creek contribute to an elevated groundwater table that supports the riparian corridor. This riparian corridor forms contiguous, gently sloping habitat that connects SC W-4 to W-5 and contains several ephemeral wetlands. Over the long term, the constructed channel is expected to remain very stable because of the perennial source of water emanating from Sheridan Spring.

#### ***River Right Wetland Complex (SC W-5)***

This activity area is near the northern portion of the rehabilitation site on the right bank of the river. It encompasses approximately 1.46 acres of an elevated floodplain terrace adjacent to high-quality spawning habitat upstream of Sheridan Hole. At this activity area, the floodplain would be lowered and an off-channel wetland would be constructed. The purpose of the wetland complex is to provide high-flow refugia and intermittent access to the off-channel wetland that supports over-summer and over-winter habitat for juvenile salmonids.

Fish passage between the mainstem and this area would be possible when the mainstem flow exceeds approximately 2,500 cfs and the off-channel wetland backwaters. The bottom of this feature would be about 8 feet below the mainstem water surface at 450 cfs to facilitate a groundwater connection that maintains a perennial wetland with water temperatures suitable for salmonids. Post construction, new riparian vegetation on the SC W-5 floodplains would provide shade and additional water temperature benefits in the wetland as the vegetation matures.

#### ***Downstream Wood Jam Complex (SC IC-7, SC IC-8, SC IC-9, SC IC-10, and SC R-5)***

Wood jam complexes would be established along the right bank at these activity areas. These activity areas encompass approximately 0.57 acre. The SC IC-7 activity area would provide high-quality rearing habitat. The wood jams at SC IC-8 and IC-10 are intended to increase bar complexity as well as collect and store woody debris being transported during high flow events.

Individual wood structures would create local scour and deposition zones on bar surfaces to create bar complexity and a patchier mosaic of riparian vegetation and fish habitat. The wood structures may temporarily collect more wood material from the river during high flows, but would be overtopped frequently. Local scour and deposition patterns around and downstream of the wood structures would be dynamic over time. The wood structures would not appreciably change the location or the magnitude of shear stress magnitude across the nearby spawning riffles or Sheridan Hole downstream.

The wood feature at SC IC-9 would be designed and built consistent with site conditions at the time of construction within an existing fan deposit to mimic a natural slide deposit that contains both wood and sediment. The wood and boulders would increase mainstem complexity next to and downstream of the structure. Over time, the wood feature is expected to degrade, and the wood and rocks would mobilize downstream, mimicking a natural small debris flow.

In addition to the activity areas described above, several beaver dam analog (BDA) features would be constructed in conjunction with the wetland complexes on either side of the river. The specific locations of these features will be identified during construction based on input from regulatory agencies, engineers, and biologists. These features would consist of buried posts that provide a framework for willow cuttings to be woven between the posts in a manner that would regulate water depth in the wetland upstream.

### **River Crossings (DG X-1, DG X-2, SC X-1, and SC X-2)**

Four temporary crossings would provide access across the river at two locations within each site. These temporary crossings would be constructed fords to facilitate access for construction-related traffic. If required, temporary bridges would be used when crossings are needed outside the summer (July 15-September 15) in-channel work window. All temporary crossings would be designed and constructed to support for heavy equipment, such as trucks, excavators, and scrapers. All temporary crossings would be constructed in a manner that does not impede navigability at the site.

### **Upland Storage (DG U-1, DG U-2, DG U-3, DG U-4, SC U-1, SC U-2, SC U-3, SC U-4, and SC U-5)**

Nine upland storage areas would be used throughout the project area. Each of these sites would be located on elevated terraces or upland areas above the 100-year floodplain. In addition to serving as the primary contractor use areas, some of these areas would also be used for processing and stockpiling coarse sediment for future local coarse sediment augmentation. Post-project, upland plantings and wood habitat piles would be used to rehabilitate and revegetate portions of the site to increase habitat complexity for a variety of avian, reptilian, and mammalian species.

### **Contractor Use Areas (DG C-1, DG C-2, DG C-3, DG C-4, DG C-5, SC C-1, SC C-2, SC C-3, SC C-4, SC C-5, SC C-6, SC C-7, SC C-8, SC C-9, SC C-10, SC C-11, SC C-12, SC C-13, and SC C-14)**

To support the rehabilitation activities, nineteen designated contractor use areas were identified by the design team to avoid sensitive resources. These areas would be used for stockpiling materials, staging equipment, contractor parking, and similar activities.

## **Access Routes ( DG A-1, DG A-2, DG A-3, DG A-4, DG A-5, DG A-7, DG A-9, SC A-1, SC A-2, SC A-3, SC A-4, SC A-5, SC A-6, SC A-7, and SC A-10)**

Primary access to the upstream portion of the Deep Gulch rehabilitation site would be from Sky Ranch Road through DG C-1, DG C-2, and U-1 via connections to DG A-1 from DG A-2 and A-3. Generally, these access areas would be 40 feet wide to allow flexibility in the alignment so that off-highway trucks and other heavy equipment can use these activity areas for two-way traffic. Administrative access to this site would be available via an existing road (DG A-1). That portion of DG A-1 from Sky Ranch Road to DG C-2 would primarily be used for administrative access and would not be improved for construction access. Access area DG A-6 identified in the Draft EA/IS has been excluded from the Proposed Action in response to a comment from an adjacent landowner. Access between activity areas during rehabilitation activities would be via the temporary access routes, which would be decommissioned after both the Deep Gulch and Sheridan Creek sites have been constructed and revegetation efforts have been successfully completed. Access routes DG A-4 and A-5 may be required for a longer period of time to access the lower portion of Deep Gulch and the upstream portion of the Sheridan Creek site in the event construction is staged over multiple years.

Access to the Sheridan Creek rehabilitation site from Sky Ranch Road would be via a private native surface road in the northeast corner of the site. Access is initially via Dredger Place (SC A-7); following a split in the road approximately 500 feet west of Sky Ranch Road, access follows the right fork on an unnamed road that crosses onto BLM land. The road then connects with other existing routes that parallel the river upstream to the Deep Gulch project site. Access between activity areas during rehabilitation activities would be via existing unmaintained primitive roads within the project boundary. Access roads SC A-1, A-2, A-3, A-6, and A-10 on river right follow existing roads; these roads would be widened to enable two-way construction traffic. Upon completion of the rehabilitation activities, access roads SC A-2, A-3, and A-6 would be rehabilitated for use as unmaintained, non-motorized access routes on BLM land. Access roads SC A-7, A-4, and A-6 would be rehabilitated consistent with pre-construction conditions. Access road SC A-5 would provide temporary access between river left activity areas and would be decommissioned after work on the river left activity areas is complete.

Once construction activities end, a portion of the DG C-1 or U-1 activity areas, which are entirely on BLM lands, would be graded to create a small parking area (up to 10 parking spaces) and an interpretive display (e.g., historic mining landscape, TRRP activities) accessible from Sky Ranch Road. Beyond this parking area, a route for high-clearance vehicles would remain after project construction to provide public access through these activity areas to a new turn-around area near the end of access route DG A-1 in the vicinity of its intersection with access route DG A-3. Figure 2-2 in the EA/IS illustrates the location of this proposed turn-around. Vehicular access to the riparian corridor, the adjacent floodplain, and Ice Box Hole would be blocked at the turn-around; however, pedestrian/equestrian access to BLM lands on the river, via an existing native-surface route (access route DG A-2), would remain. The existing user-created access route (DG A-1) would be closed to motorized vehicles upon completion of the project, recontoured to match the existing topography, and revegetated.

## **REVEGETATION**

Revegetation at both the Deep Gulch and Sheridan rehabilitation sites would include preparing planting areas; planting a mixture of wetland, riparian, and upland plant species; and installing plant protection over woody plants after planting. Members of the Native American community use a number of the plant

species used for revegetation at these sites for various purposes. Revegetation efforts may also include the use of anadromous salmonid carcasses as a source of supplemental fertilizer in an effort to reintroduce marine nutrients into the riparian ecosystem. The plantings would include plants salvaged from the sites, nursery container stock available from USFS nurseries and/or commercial sources, live hardwood poles, bareroot trees, and herbaceous plugs. Mulch and other tree protection and stabilization devices (e.g., stakes, fencing, cages) would be installed after the planting is done. These devices would be removed once the revegetation efforts are deemed successful by the TRRP, typically within a 3-year period after vegetation is established. Revegetation activities may start during the latter part of construction efforts (e.g., planting and watering as appropriate) and would continue primarily in the wet season (October through March) after final grading and site stabilization measures are completed. Planting and seeding efforts may extend into the year following construction, depending on site and weather conditions. Herbaceous bare root material and hardwood poles would be used if planting occurs in or after November.

The TRRP anticipates that most planting areas would not require watering post project. However, given recent drought years, some intermittent watering of planted areas during dry conditions may increase plant survival. If this subsequent irrigation is needed, gasoline pumps and hoses would be brought into the site, probably via river rafts. Equipment would be used to water plants as needed, stored on site for use during dry periods, or brought in as water demands require. Any irrigation measures would be temporary and would assist the plants in establishing their roots and in long-term survival. Revegetation maintenance measures would be undertaken to meet permit and/or land owner/agency requirements; most of the maintenance measures are expected to occur within the first 3 years post-construction.

The revegetation plan at the Deep Gulch rehabilitation site includes approximately 6.8 acres within six elevation zones; 12.4 acres would be seeded and mulched. Each zone would have different combinations of herbaceous, shrub, and tree species. Plantings in wetland and toe zones would be herbaceous and have approximately 3 feet between plant centers, with about 5,500 plants per acre. Plantings in willow, cottonwood, and transition zones would be sedges, shrubs, and trees and have approximately 5 to 8 feet between plant centers, with about 872 plants per acre. Plantings in upland zones would be shrubs and trees and have approximately 10 to 12 feet between plant centers, with about 326 plants per acre.

The revegetation plan at the Sheridan Creek rehabilitation site includes approximately 5.75 acres within seven elevation zones and up to 40.3 acres that would be seeded and mulched. Each zone would have different combinations of herbaceous, shrub, and tree species. Plantings in wetland and toe zones would be herbaceous and have approximately 3 feet between plant centers, with about 5,500 plants per acre. Plantings in willow, cottonwood, and transition zones would be sedges, shrubs, and trees and have approximately 5 to 8 feet between plant centers, with about 872 plants per acre. Plantings in upland zones would be shrubs and trees and have approximately 10 to 12 feet between plant centers, with about 455 plants per acre.

Throughout both sites, trees, shrubs, forbs, and herbs would be planted immediately alongside select constructed features and islands of remnant riparian vegetation. Cottonwoods and tree willows are target woody riparian species because of their ability to meet the riparian goal in the next 30 to 50 years. Revegetating constructed features (e.g., floodplains, side channels) improves the complexity of aquatic habitats in the 300 cfs to 2,000 cfs range; covers areas where non-native, invasive, and less preferable plant species could grow; and speeds the recovery of activity areas. The revegetation plan was designed

to complement the functional values and structural diversity of remnant riparian vegetation after construction by planting tree and shrub species together. To varying degrees, activity areas that are cleared would be revegetated with black cottonwood, shiny willow, and red willow in an arrangement that promotes greater riparian patch interior area and continuity with existing vegetation. Revegetation of the activity areas is expected to increase the riparian corridor width and riparian connectivity throughout the site. Post-project riparian land cover types would cover a greater area and be less linear in shape than the existing narrow and often discontinuous patches of riparian and upland vegetation.

## **PROPOSED ACTION SUMMARY**

Overall, the activities proposed for the Deep Gulch and Sheridan Creek sites are intended to emphasize reconnecting the river's floodplain with the river, 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.

The Proposed Action meets the requirements of the 2000 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 Resource Management Plan (RMP), as amended. The Riparian Revegetation Management Plan, prepared in cooperation with the CDFW, U.S. Army Corps of Engineers (Corps), and the Regional Water Quality Control Board – North Coast Region (Regional Water Board), will be followed 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 monitoring requirements are provided as Appendix D to the EA/IS.

## **FINDINGS**

The No-Project Alternative and Proposed Action 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, 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 Action (as discussed fully in the EA/IS), there would be no significant impacts to the quality of the human environment; therefore, an environmental impact statement or a supplement to the existing environmental impact statement is not necessary and will not be prepared.

### ***Land Use***

The Proposed Action 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 Action 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, impacts on land use would be less than significant.

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

Implementation of the Proposed Action, including the environmental commitments and project design features listed in Chapter 2 of the EA/IS, would be consistent with the 10 healthy river attributes described in the Trinity River Flow Evaluation Study, the basis for the TRRP efforts to restore and enhance native fish and wildlife populations. It is also consistent with the Aquatic Conservation Strategy, as described in Appendix C of the EA/IS). Project construction activities and disturbance would increase the potential for short-term wind and water erosion. However, project implementation would include project design features such as sediment and erosion control measures to reduce and avoid potential short-term construction impacts on soils. Therefore, impacts on these resources would be less than significant.

### ***Water Resources***

Based on the Corps' Hydraulic Engineering Center River Analysis System (HEC-RAS) model used by Trinity County to assess compliance with Trinity County's General Plan and Zoning Ordinance, implementation of the Proposed Action, 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, impacts on water resources would be less than significant.

### ***Water Quality***

Implementation of the Proposed Action, 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 project design features, such as placing clean rock berms around work areas and isolating them from the river, would be implemented to avoid and reduce water quality impacts. Therefore, impacts on water quality would be less than significant.

### ***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 TRD 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 Action.

Reclamation continues to engage in informal technical consultation with NMFS in order to update the 2000 Biological Opinion. In support of a formal re-consultation under Section 7 of the ESA and to obtain an updated Biological Opinion, Reclamation is currently preparing a new Biological Assessment that focuses on advances in and changes to actions associated with the TRRP Implementation Program since 2000 (i.e., the rationale for the continuing adaptation of techniques for channel rehabilitation and fine and coarse sediment management since program inception) that will be used by the NMFS as the information basis for writing a new Biological Opinion. While the reinitiated Section 7 consultation is underway, the 2000 Biological Opinion remains in effect for the Proposed Action. Reclamation will continue to coordinate with NMFS as it implements the terms and conditions of the 2000 Biological Opinion.

Temporary construction impacts on fish-rearing habitat would be minimized through implementation of environmental commitments and project design features. In the long term, changes to physical rearing habitat associated with project implementation are expected to be beneficial. Collective improvements in fluvial channel dynamics contributed by the Proposed Action, 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 spawning and rearing habitat for all life stages of anadromous salmonids. Because effects would be generally localized and because the Proposed Action includes commitments and project design features to avoid and minimize adverse impacts on fish, effects to fisheries resources would be less than significant.

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

Construction activities associated with the Proposed Action would result in a temporary loss of riparian vegetation and waters of the U.S. However, in the long term, floodplain function and riverine processes would be restored by revegetation of alluvial features, particularly floodplains. Upland features (i.e., terraces) would also be restored, primarily by converting old dredge tailing deposits into productive wildlife habitat. Overall, the Proposed Action would increase structural and species diversity, and would speed reestablishment of native riparian and upland vegetation. Long-term changes in river inundation periods are expected to increase both seasonal and perennial riparian habitats as well as offset impacts to wetlands and other waters. Construction activities associated with the Proposed Action would result in the loss of waters of the U.S., including wetlands. The project is designed to enhance the functions and services of the aquatic system, including wetlands and other waters.

The Proposed Action was planned to directly benefit riparian and upland habitat and function and has the potential to affect wildlife, including special-status wildlife species (designated BLM or USFS sensitive species and/or federally listed threatened and endangered species). Specific environmental commitments and project design features are included in the Proposed Action to ensure that activities occur in a manner that addresses potential impacts to special-status species, including avian and amphibian species.

As stated in the EA/IS, based on a site-specific assessment by a BLM biologist in 2015 in conjunction with additional site reviews performed by NSR's certified wildlife biologist in 2016, no species listed or proposed for listing under the ESA, or designated critical habitat, are present within the project area. During development of the Master EIR/EA/IS, Reclamation conducted informal consultation with the USFWS concerning effects to the ESA-listed northern spotted owl. Based on the consultation, known



lack of suitable habitat and nests in the area, and Trinity River bird distribution data, Reclamation determined that there would be no effect on the northern spotted owl (*Strix occidentalis caurina*). The project area was specifically evaluated for northern spotted owl habitat and was considered unsuitable. The project area does not encompass or occur within designated critical habitat for the northern spotted owl; therefore, there would be no effect to northern spotted owl or its designated critical habitat.

The Proposed Action, including the environmental commitments and project design features listed in Chapter 2 of the EA/IS, combined with riparian revegetation measures, would ensure that the Proposed Action will not result in significant impacts to vegetation, wildlife, and wetlands.

### ***Recreation***

Congress designated the Trinity River as a National Wild and Scenic River in 1981. Implementation of the Proposed Action would result in a long-term benefit to the form and function of the Trinity River relative to the values existed on the date of designation, thereby enhancing the Outstandingly Remarkable Values for which it was designated as a Wild and Scenic River, including its anadromous fishery. Implementation of the Proposed Action would alter the riverine environment; however, construction activities would not permanently affect the scenic or recreational values of the Trinity River for which it was designated.

Although the Proposed Action could result in limited temporary interruptions of public access and use, primarily at the upper end of the Deep Gulch site, public river access would continue to be available upstream (e.g., Evans Bar) and downstream (e.g., Junction City) of the project area throughout the construction period. Potential disruptions to recreational activities within the project area would be temporary and minimal. Construction of the Proposed Action could affect the safety of recreational users, so signage would be employed to notify river users to be cautious of heavy equipment in the river corridor. Construction activities associated with the Proposed Action could lower the Trinity River's aesthetic values for recreationists by increasing its turbidity; however, increases in turbidity are expected to be localized and of short duration.

### ***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 long-term increased economic activity. Because of the limited size and duration of the project, impacts on socioeconomic conditions, population, or housing would be negligible.

### ***Cultural Resources***

Implementing the Proposed Action would result in no adverse effect on historic properties pursuant to Section 106 of the National Historic Preservation Act (NHPA), as implemented through the TRRP Programmatic Agreement [PA; Section 106 alternative program pursuant to 36 CFR § 800.14(b)]: *Programmatic Agreement Among the U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, U.S. Bureau of Land Management, Hoopa Valley Tribe, California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Implementation of the Trinity River Mainstem Fishery Restoration*, executed on August 31, 2000, and in effect until August 31, 2020. All known cultural resources have been recorded and documented, as described in Chapter 3 of the EA/IS.

The cultural resources investigation identified nine historic mining sites within or adjacent to the project boundary. In addition, two prehistoric cultural resources, one a site and the other an isolated find, were identified in this investigation. The identified site is assumed eligible for listing on the NRHP and may potentially contribute to the eligibility of other nearby sites. In consultation with Reclamation and BLM heritage resource staff, the boundaries of the project were modified to exclude the site from potential project-related impacts. The recorded isolate is by definition not eligible for NRHP inclusion. Although it is within the Area of Potential Effect, the isolate would be avoided during ground-disturbing activities. At several locations, certain components of dredge tailing sites were avoided in the project design in order to ensure that they could contribute to a larger district of tailings created by the Junction City Dredge Company. Figure 2-1 illustrates sensitive features, including one historical feature, that were avoided during the planning process.

The avoidance of these sites, in conjunction with the inclusion of environmental commitments and design measures described in Table 2-5 of the EA/IS, would ensure that implementation of the Proposed Action would have no significant effect to cultural resources.

### ***Air Quality***

Construction activities would generate short-term and localized fugitive dust, gas and diesel emissions, and smoke that could affect air quality. Reclamation would implement project design features, including requiring provisions in construction documents that minimize construction-related impacts on air quality in order to minimize impacts to air quality.

### ***Visual Resources***

Potential impacts of project activities on visual resources would include changes brought about by the removal of vegetation, construction of inundated surfaces, creation of access roads, and the presence of equipment in the project area. These activities could result in temporary degradation and/or obstruction of a scenic view from key observation areas. Over the long-term, implementation of the Proposed Action 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. The 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. Retention of existing topographic features as well as natural revegetation and manual planting would lessen the degree of visual impacts and improve the aesthetic quality of the affected reach of the Trinity River.

### ***Hazardous Materials***

Activities associated with the Proposed Action would use potentially hazardous materials (e.g., oil and fuels) associated with the operation of vehicles and construction equipment during implementation. Implementation of best management practices would minimize the potential for any project-related hazardous materials to become a public hazard. These practices would ensure that impacts with respect to hazardous materials would be less than significant.

### ***Noise***

During the construction phase of the Proposed Action, noise from construction activities would temporarily dominate the noise environment in the project area. Based on comments received on the Draft EA/IS, the size and location of several activity areas were adjusted to increase the distance between these areas and adjacent private parcels. Construction noise would be temporary and expected to occur primarily between the months of July and December. To minimize potential noise impacts, construction activities would be scheduled between 7:00 a.m. and 7:00 p.m. Monday through Saturday. During working hours, Reclamation would ensure that the contractor operates all equipment to minimize noise impacts to nearby sensitive receptors (residences adjacent to the project area, etc.). Noise impacts resulting from implementation of the Proposed Action would be temporary and minimal.

### ***Public Services and Utilities/Energy***

The Proposed Action would not disrupt electrical or telephone service within or adjacent to the project area. Implementation of the Proposed Action could result in disruption to emergency services, school bus routes, or student travel routes during construction activities. A project-specific traffic control plan, including traffic control associated with project activities, would be implemented. The Proposed Action is not expected to cause more than minimal disruptions to public services, if any. Access for mobilization and demobilization of heavy equipment, however, may require a higher level of traffic control for local roadways and may disrupt traffic flow and circulation before, during, and after construction. Disruptions resulting from mobilization and demobilization of heavy equipment are expected to be minimal and of short duration.

### ***Transportation/Traffic Circulation***

Construction activities associated with the Proposed Action would increase truck and worker vehicle trips leading to and from the project area, primarily along Sky Ranch Road. Throughout the construction periods, the amount of daily construction equipment traffic would be limited by staging the construction equipment and vehicles in the project area boundary for the duration of work. Impacts related to short-term increases in vehicle trips would be minimal. Use of area roads by project-related trucks and heavy equipment would increase wear and tear on the local roadways. Traffic safety hazards could arise for motorists, bicyclists, pedestrians, and equestrians in the vicinity of the construction access routes as a result of the movement of project-related trucks and heavy construction equipment. The contractor would be required to implement a traffic control plan during construction to maximize public safety and maintain traffic flow. Impacts to transportation and traffic circulation would be minimal to moderate, but temporary and insignificant.

### ***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. Under the Proposed Action, the Trinity River would continue to support tribal trust assets. Several short-term impacts would occur that would affect Tribal Trust assets, including geology, fluvial geomorphology, and soils; water quality; fishery resources;

and vegetation, wildlife, and wetlands. These impacts are generally associated with construction activities that would temporarily affect resources in the project area. Potential impacts on Tribal Trust assets would be minimized by project design criteria implemented to protect Tribal Trust assets. The impacts that would occur to Tribal Trust assets would be less than significant.

### ***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 compared to other area residents. No disproportionate or specific health risks or other impacts to low-income or minority groups would be associated with the Proposed Action.

### **SUMMARY**

Implementation of the Proposed Action is expected to 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 Action in the Trinity River Channel Rehabilitation Sites: Deep Gulch (River Mile [RM] 82.4-82.9) and Sheridan Creek (RM 81.6-82.4) EA/IS, it has been determined that implementation of the Proposed Action will not have significant environmental impacts beyond those already addressed in the EA, is in conformance with the BLM's Resource Management Plan, and will not have a significant effect on the quality of the human environment considering the context and intensity of impacts. Therefore, an EIS is not needed and will not be prepared.

This finding is based on my consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR '1508.27), both with regard to the context and to the intensity of the impacts described in the EA or as articulated in the letters of comment.

I have considered the potential intensity/severity of the impacts anticipated from the project decision relative to each of the ten areas suggested for consideration by the CEQ. With regard to each:

- 1) ***Impacts that may be both beneficial and adverse.*** 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 Action at the Deep Gulch and Sheridan Creek sites is expected to provide localized improvements in aquatic and riparian habitats currently present at the site. The Proposed Action 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 project will not result in any significant impacts.
- 2) ***The degree to which the proposed action affects public health and safety.*** Public health and safety are not significantly affected by the project. Due to the limited duration of the Proposed Action 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 construction activities.

- 3) ***Unique characteristics of the geographic area such as proximity of historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*** 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 Proposed Action 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. The Proposed Action 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, 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) ***The degree to which the effects on the quality of the human environment are likely to be highly controversial.*** 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.
- 5) ***The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*** The Draft EA/IS was made available for a 30-day public review period when the document was submitted to the California State Clearinghouse on March 8, 2017. The document was circulated to local, state, and federal agencies and to interested organizations and individuals for review and comment on the analysis. The official public review period was extended by the lead agencies through April 14, 2017. Concurrent with this review period, public notice was provided to solicit additional comments from the public and interested parties. Public notice includes posting on the TRRP website; advertisements in the Trinity Journal and Redding Searchlight newspapers; letters mailed to local landowners; email notices to interest groups; and signage posted at the TRRP's office in Weaverville, California, and the Junction City Post Office, Junction City, California, informing the public of the availability of the EA/IS for review.

A public open house meeting was held on March 15, 2017, concurrent with the public comment period, to inform residents and stakeholders of proposed activities and to seek comments on the Draft EA/IS. Five comment submittals were received on the Draft EA/IS during the public comment period. The federal and state lead agencies have responded to the comments received. The comment letters and responses from the lead agencies are included as Appendix B of the EA/IS. In addition to updating the EA/IS based on public involvement activities that have occurred since the Draft EA/IS was released for public comment and adding the public comments and responses in Appendix B, minor edits and updates were made to the EA/IS. Key changes to the Draft EA/IS included adjustments to the size and location of several activity areas to reduce potential impacts on sensitive receptors, clarification of the implementation schedule for the

Proposed Action, exclusion of activity area DG A-6, and addition of an access route open to motorized vehicles on BLM lands to the upstream portion of the Deep Gulch site.

The project area illustrated on Figure 2-2 of the EA/IS includes both public and private lands; all activity areas were developed to avoid residential properties, although access routes and ancillary features (water wells) are within one or more activity areas. While public access to BLM lands within the project area is limited, access via the river corridor is available for various recreational activities (e.g., fishing). Representatives of the TRRP and the Trinity Management Council (e.g., Yurok Tribe, Hoopa Valley Tribe) have been working closely with the residents of the greater Sky Ranch Road community and other interested parties (e.g., Trinity County) since the initial planning/design process began in 2014. Since that time, TRRP staff and design team representatives have met numerous times with individual landowners, as well as with other interested parties (e.g., local fishing guides) to describe the proposed activities, exchange ideas on how to make the Proposed Action more acceptable to the local community, adjust project boundaries to reduce impacts to landowners and other users, and discuss the advantages and disadvantages of combining the two sites in one environmental review and subsequent construction project.

With this history in mind, the temporary implementation activities associated with the Proposed Action are expected to have minimal effects on area residents. The public comments were addressed with input from technical staff from the lead, cooperating, and responsible agencies (see Appendix B of the EA/IS). No highly controversial environmental effects were identified.

There are no known effects on the human environment that are highly uncertain or involve unique or unknown risks. The effects of the Proposed Action have been clearly evaluated in the EA/IS. Similar activities have been completed at past channel rehabilitation sites both upstream (Lorenz Gulch in 2013) and downstream (Upper Junction City in 2012), and collected data and analyses have determined that no unique or unknown impacts to the human environment have resulted.

- 6) ***The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*** These actions do not set a precedent for other projects that may be implemented to meet the goals and objectives of the TRRP. The Trinity River Flow Evaluation Report and, subsequently, the Trinity River Mainstem Fishery Restoration EIS and 2000 ROD collectively 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 the Proposed Action and other recently implemented projects.
- 7) ***Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*** There are no known significant cumulative effects from this Proposed Action and other projects implemented or planned on areas separated from the affected area of this Project beyond those assessed. Cumulative impacts are analyzed in Chapter 4 of the EA/IS. 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, later supplemented by the 2009 Master EIR and updated in the EA/IS for the Deep Gulch and Sheridan Creek sites. 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 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 Proposed Action, but not to an extent that would cause significant impacts to downstream water quality.

- 8) ***The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.*** 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 and the Yurok Tribe as both sit on the TMC, which oversees the TRRP, and both tribes participated in the design of these projects. The Hoopa Valley Tribe is also a signatory to the TRRP PA. Pursuant to the TRRP 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. Based on environmental commitments and project design features listed in Chapter 2 of the EA/IS, the decision maker has determined that the Proposed Action will not result in the destruction of scientific, cultural, tribal, or historic resources.
- 9) ***The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.*** 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 for the Trinity River Mainstem Fishery Restoration EIS and its effects on Southern Oregon/Northern California Coast coho salmon, Sacramento River winter-run chinook salmon, central valley spring-run chinook salmon, and central valley steelhead addressing foreseeable TRRP activities was written in response to a biological assessment that reflected the findings in the Trinity River Mainstem Fishery FEIS/EIR. The opinion was written because Trinity River coho salmon are federally listed as threatened and because the action may affect, and is likely to adversely affect, coho salmon. 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 and less than significant.

During development of the Master EIR, Reclamation, in coordination with BLM, conducted informal consultation with the USFWS concerning effects to the ESA-listed northern spotted owl. Based on the consultation, known lack of suitable habitat and spotted owl nests in the area, and Trinity River bird distribution data, Reclamation determined that there would be no effect on the northern spotted owl. The Deep Gulch and Sheridan Creek sites were specifically evaluated by a

BLM biologist for northern spotted owl habitat and were considered unsuitable. The project area does not encompass or occur within designated critical habitat for the northern spotted owl; therefore, there would be no effect to northern spotted owl or its designated critical habitat. Reclamation and the BLM determined that a biological assessment was not required since the Proposed Action 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 Proposed Action.

- 10) *Whether the action threatens 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 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 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 Proposed Action described in this finding is fully consistent with BLM's RMP, the FLPMA, and CEQA. The following permits are required to authorize the project:

- Section 404, Clean Water Act, Nationwide Permit 27 (San Francisco District, Corps);
- Section 401, Clean Water Act Water Quality Certification (Regional Water Quality Control Board, North Coast Region);
- Section 10, Endangered Species Act, Incidental Take Permit (NMFS);
- 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 for the Redding Field Office with respect to resource management conditions. The Proposed Action is also consistent with the direction provided in the BLM's Trinity River Recreation Area Management Plan.

## **IMPLEMENTATION DATE**

The Proposed Action is expected to be constructed beginning in summer 2017, pending environmental clearances. Initial in-river construction is scheduled to be completed by September 2017; subsequent construction in the remaining activity areas would resume in the spring of 2018 and be completed by December 2018. Revegetation will take place during construction and in fall and winter months following construction through the fall of 2010.



## **CONTACT**

For additional information concerning the Proposed Action, contact Brandt Gutermuth, Project Manager, Trinity River Restoration Program, P.O. Box 1300, and 1313 Main Street, Weaverville California, 96093. Phone: (530) 623-1800.