Trinity River Channel Rehabilitation Sites: Bucktail (River Mile 105.45-107.0)

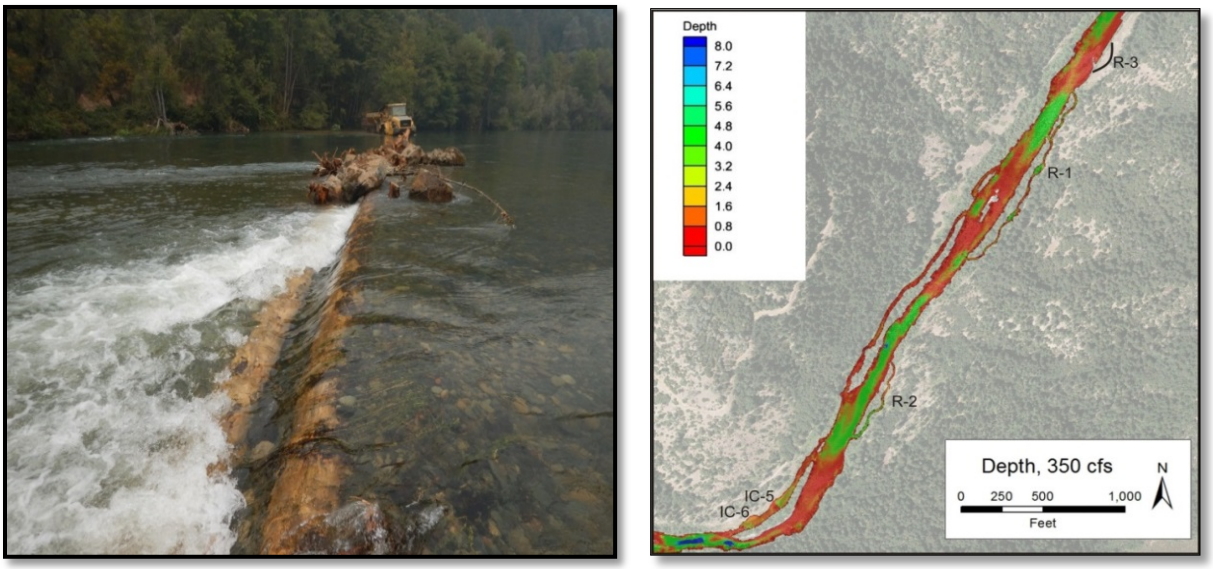
Project Initial Study
Environmental Checklist and Evaluation of Environmental Impact

This Initial Study Checklist tiers to:

The Trinity River Mainstem Fishery Restoration Environmental Impact Statement/ Environmental Impact Report

and

The Channel Rehabilitation and Sediment Management Activities for Remaining Phase 1 and Phase 2 Sites, Part 1: Final Master Environmental Impact Report and Part 2: Environmental Assessment/Final Environmental Impact Report (State Clearinghouse # 2008032110)



Limekiln Gulch 2015 Rehabilitation Site and Modeling of Predicted Depths for Design Conditions

November 2015

California Lead Agency for CEQA
North Coast Regional Water Quality Control Board

Project Proponent and Federal Lead Agency for NEPA
Trinity River Restoration Program
U. S. Department of the Interior
Bureau of Reclamation

Federal Co-lead Agency for NEPA
U. S. Department of Interior, Bureau of Land Management

Project Proponent's Consultant
North Wind Services, LLC

Trinity River Channel Rehabilitation Sites: Bucktail
Initial Study Checklist and Evaluation of Environmental Impact

Project Information

Overview

The United States Department of Interior (USDI) Bureau of Reclamation (Reclamation) proposes to conduct mechanical channel rehabilitation activities on the mainstem Trinity River downstream of Lewiston Dam at the Bucktail Rehabilitation Site (River Mile [RM] 105.45-107.0). The proposed work at the Bucktail site includes some activities within the downstream end of the Dark Gulch Rehabilitation Site boundary (immediately adjacent to the Bucktail site) that was originally completed in 2008 (U.S. Bureau of Reclamation and Trinity County Resource Conservation District 2008) and the upstream end of the Lowden Ranch Rehabilitation Site boundary that was originally completed in 2010 (Regional Water Board and Reclamation 2009). These work areas are now included in the Bucktail Rehabilitation Site boundary. The activities proposed at the Bucktail site are hereafter referred to as the "Proposed Project" or "Project." Project work would be part of the ongoing Trinity River Restoration Program's (TRRP) work to restore the anadromous fishery of the Trinity River. The proposed river channel rehabilitation activities would recreate complex salmon and steelhead habitat, enhance natural river processes for the benefit of wildlife, and provide conditions suitable for reestablishing native riparian vegetation.

The fundamental purpose of the TRRP is to restore historic river processes to the river via implementation of the 2000 Record of Decision (ROD) for the Trinity River Mainstem Fishery Restoration Final Environmental Impact Statement/Environmental Impact Report (Trinity River FEIS/EIR; USFWS et al. 2000). It is the intent of the TRRP to recreate a properly functioning river, albeit on a smaller scale, in order to increase naturally spawning anadromous fish populations to levels that existed prior to construction of the Lewiston and Trinity Dams. The target reach for Trinity River restoration is the approximately 40-mile length of river downstream of Lewiston Dam to the confluence of the North Fork Trinity. In this reach, the ROD outlined six integral components for execution:

- Implementation of a variable annual flow regime according to recommendations provided in the Trinity River Flow Evaluation Report (USFWS and HVT 1999),
- Mechanical channel rehabilitation,
- Fine and coarse sediment management,
- Watershed restoration,
- Infrastructure improvement, and
- Adaptive environmental assessment and management.

In general, the TRRP approach to channel rehabilitation is to reconnect the river with its floodplain. This reconnection requires selective removal of terraces and riparian berms (i.e., berms that are anchored with woody vegetation and consolidated sand deposits) that developed after the Lewiston and Trinity Dams were completed and historic peak scouring flows were lost. Along with berm removal, the approach involves physical alteration of floodplains to inundate more frequently, placement of large wood, and removal of riparian vegetation at strategic locations to promote the alluvial processes necessary for the restoration and maintenance of complex riverine habitats.

The TRRP acts under guidance of the Trinity Management Council (TMC), a collaborative board of natural resource managing agencies, tribes, and local government. TMC member agencies include Reclamation, U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), U.S. Forest Service (USFS), Hoopa Valley Tribe, Yurok Tribe, 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. Technical experts associated with each of these entities participate in the design and review of the rehabilitation sites.

The attached Trinity River Channel Rehabilitation Sites: Bucktail Environmental Assessment/Initial Study (EA/IS) was prepared by Reclamation, in coordination with the BLM, a federal land manager at the site and federal co-lead for National Environmental Policy Act (NEPA; 42 USC, Section 4321 et seq.) review. These federal agencies worked with the North Coast Regional Water Quality Control Board (Regional Water Board), as the California state lead agency, to analyze the potential impacts of the proposed activities according to NEPA and the California Environmental Quality Act (CEQA; California Public Resources Code [PRC], Section 21000 et seq.) guidelines. The results of these analyses are recorded in the attached Bucktail EA/IS, which meets all NEPA and CEQA requirements for environmental analyses and disclosure of potential impacts. The analysis in the EA/IS is incorporated by reference into this IS Checklist. See Figure 1 in the attached EA/IS for project location.

Project History and Background

Completion of the Trinity and Lewiston Dams in 1964 blocked anadromous fish access to habitat upstream of Lewiston Dam restricting them to habitat below the 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, and fossilization of point bars at various locations along the river, as far downstream as the North Fork Trinity River. These geomorphic changes reduced the diversity of riparian age classes and riparian vegetation species, impaired floodplain access, and adversely affected fish habitat.

In 1981, in response to declines in salmon and steelhead populations, the Secretary of the Interior directed the USFWS to initiate a 12-year flow study to determine the effectiveness of flow restoration and other mitigation measures for impacts of the Trinity River Division of the Central Valley Project. Then, in 1984, Congress enacted the Trinity River Fish and Wildlife Program to further promote and support management and fishery restoration actions in the Trinity River Basin. Under this program, in addition to other actions, nine pilot bank rehabilitation projects between Lewiston Dam and the North Fork Trinity River were implemented between 1991 and 1993. In 1992, Congress enacted the Central Valley Project Improvement Act. One purpose of the Central Valley Project Improvement Act (Section 3406(b)(23)) was to protect, restore, and enhance fish, wildlife, and associated habitats in the Trinity River Basin. The act also directed the Secretary of the Interior to finish the 12-year Trinity River Flow Evaluation Report and to develop recommendations "regarding permanent instream fishery flow requirements, Trinity River Division operating criteria, and procedures for the restoration and maintenance of the Trinity River fishery." The Trinity River Flow Evaluation Final Report was ultimately published in 1999 by the USFWS and the Hoopa Valley Tribe, providing a framework for restoration activities below Lewiston Dam as well as the basis for the preferred alternative in the concurrent programmatic environmental analysis.

In 1994, the USFWS as the NEPA lead agency and Trinity County as the CEQA lead agency began the public process for developing the Trinity River EIS/EIR. The ROD for the Trinity

River FEIS/EIR (December 19, 2000; USDI 2000) directed USDI agencies to implement the Flow Evaluation Alternative, which was identified as the Preferred Alternative in the Trinity River FEIS/EIR (USFWS et al. 2000). The ROD set forth prescribed Trinity River flows for five water-year types: extremely wet (815,200 acre-feet annually [afa]), wet (701,000 afa), normal (646,900 afa), dry (452,600 afa), and critically dry (368,600 afa). The flows prescribed by the 2000 ROD are deemed to constitute the "existing [hydrological] environment" for CEQA purposes, and are considered the basis for the environmental analysis under both NEPA and CEQA.

The ROD for the Trinity River FEIS/EIR specified that mechanical channel rehabilitation activities would be implemented on the mainstem Trinity River between Lewiston Dam and the North Fork Trinity River. Conceptually, the overall intent of these activities was to selectively remove fossilized berms (berms that have been anchored by extensive woody vegetation root systems and consolidated sand deposits); revegetate and provide conditions for regrowth/sustenance of native riparian vegetation; and reestablish alternate point bars and complex fish habitat similar in form to those that existed prior to the construction of the Trinity River Division. Since development of the ROD, the TRRP has included large-scale use of wood (large woody debris [LWD] or large wood) and skeletal bar features to restore habitat and geomorphic form and function within the Trinity River.

The Trinity River FEIS/EIR identified 44 potential channel rehabilitation sites and three potential side-channel sites for consideration by the TRRP (USFWS et al. 2000). These sites were originally prescribed for rehabilitation in the Trinity River Flow Evaluation Report (USFWS and HVT 1999) and included in the preferred alternative identified in the ROD. Site selection was based on identifying locations where the maximum amount of habitat for native anadromous fishes could be initiated through construction projects, and then enhanced or maintained by a combination of river flows plus coarse sediment augmentation. Consequently, the original sites were chosen based largely on the existence of riparian berms and where channel morphology, sediment supply, and high-flow hydraulics would encourage a dynamic alluvial channel. The ROD prescribed rehabilitation efforts at these sites to be implemented in phases. Ultimately, sites at which rehabilitation activities could be implemented were selected using criteria that identified physical features and processes such as channel morphology, sediment supply, and high-flow hydraulics that would encourage a dynamic alluvial channel. Factors such as property ownership, access to the sites, and engineering and economic feasibility were also considered in the site selection process. Early TRRP planning efforts resulted in the identification of two phases, Phase 1 and Phase 2. As mentioned earlier, the Bucktail site contains portions of the Dark Gulch and Lowden Ranch sites. The Dark Gulch site was a Phase 1 site, the effects of which were analyzed in the Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4 to 111.7 EA/EIR (U.S. Bureau of Reclamation and Trinity County Resource Conservation District 2008). The Lowden Ranch site was also a Phase 1 site, which was analyzed in the Channel Rehabilitation and Sediment Management Activities for Remaining Phase 1 and Phase 2 Sites, Part 1: Final Master Environmental Impact Report and Part 2: Environmental Assessment/Final Environmental Impact Report(Regional Water Board and Reclamation 2009). Information from those documents is incorporated by reference.

In 2009 the Channel Rehabilitation and Sediment Management Activities for Remaining Phase 1 and Phase 2 Sites, Part 1: Final Master Environmental Impact Report and Part 2: Environmental Assessment/Final Environmental Impact Report (Master EIR – EA/ EIR) was prepared by Reclamation and the Regional Water Board for proposed channel rehabilitation and sediment management activities at the Remaining Phase 1 and Phase 2 sites along the Trinity River between Lewiston Dam and the North Fork of the river. The document, which is hereinafter

referred to in its entirety as the Master EIR/Programmatic EA, is divided into two parts. Part 1 is a Master EIR, which is a programmatic document prepared in part to meet the requirements of CEQA. This part is analogous to the federal Trinity River FEIS/EIR (USFWS et al. 2000) programmatic document prepared in 2000 and described above. This part of the document evaluates the environmental impacts of the proposed rehabilitation and sediment management activities at the TRRP's remaining Phase 1 and Phase 2 sites. From a programmatic perspective, it provides a discussion of the existing conditions, environmental impacts, and mitigation measures required to comply with CEQA (California PRC, Section 21000 et seq.). In addition to addressing direct and indirect impacts associated with the Proposed Project and alternatives, the Master EIR/Programmatic EA addresses cumulative and growth-inducing impacts that could be associated with activities at the Remaining Phase 1 and Phase 2 sites. Part 2 is an EA/EIR, an integrated NEPA/CEQA document that utilizes programmatic environmental analyses from Part 1 and evaluates the environmental impacts of the proposed channel rehabilitation and sediment management activities at a project-specific level for the Remaining Phase 1 sites. The Part 2 EA/EIR was prepared to comply with NEPA (42 USC, Section 4321 et seq.) and CEQA (California PRC, Section 21000 et seq.).

The EA portion of the Master EIR/Programmatic EA tiers from the Trinity River FEIS/EIR (USFWS et al. 2000). However, the Trinity County Board of Supervisors – the CEQA lead agency for the Trinity River FEIS/EIR –never certified the EIR portion of the 2000 FEIS/EIR for the Trinity River Mainstem Fishery Restoration Program. Therefore, the EIR portion of the Trinity River FEIS/EIR was not available for the CEQA portion of this document, or other earlier TRRP CEQA documents, to "tier" from. Consequently, four joint EA/EIRs were completed to analyze TRRP channel rehabilitation projects between 2004 and 2008[1]. Based upon the similarity of these projects and their environmental impacts, and agreement that future TRRP projects would have similar impacts, a separate programmatic document, the Master EIR/Programmatic EA was developed.

The Regional Water Board acted as lead agency for the Master EIR/Programmatic EA (State Clearinghouse number 2008032110) and subsequent site specific EA/ISs. The Master EIR/Programmatic EA provides a discussion of the existing conditions, environmental impacts, and mitigation measures required to comply with CEQA (California PRC, Section 21000 et seq.). In addition to addressing direct and indirect impacts associated with the Proposed Project and alternatives, the Master EIR/Programmatic EA addresses cumulative and growth-inducing impacts that could be associated with activities at the remaining Phase 1 and Phase 2 sites. The Master EIR/Programmatic EA includes a brief chronology summarizing the most pertinent management actions that have occurred relevant to the Trinity River Basin between 1938 and 2008 (Section 1.4.4., page 1-8). Additional details concerning the legislative and management history can be found in the Trinity River FEIS/EIR (USFWS et al. 2000) and the EA/Final EIRs for TRRP projects constructed between 2005 and 2008[1]. These documents are on file at the TRRP office in Weaverville, California, available on the TRRP website (www.trrp.net), and at the Weaverville public library. The Master EIR/Programmatic EA (Section 1.4.5, pages 1-10 through 1-15) also contains a summary of the various restoration activities that have been undertaken since the signing of the ROD, as well as brief discussions of other watershed

[1] Hocker Flat (Reclamation and California DWR 2004), the Canyon Creek Suite (Reclamation and Regional Water Board 2006), Indian Creek (Reclamation and TCRCD 2007), and Lewiston-Dark Gulch (Reclamation and TCRCD 2008).

restoration programs and activities occurring within the basin; additional information is available on the TRRP website[2].

The Regional Water Board certified the Master EIR/Programmatic EA on August 25, 2009. Under California Code of Regulations, Title 14, Section 15177, after a Master EIR has been prepared and certified, subsequent projects, which the lead agency determines as being within the scope of the Master EIR, will be subject to only limited environmental review. CEQA guidelines (California Code of Regulations, Title 14, Section 15177, subd. (b)(2)) state that the preparation of a new environmental document and new written findings will not be required if, based on a review of the IS prepared for the subsequent project, the lead agency determines, on the basis of written findings, that no additional significant environmental effect will result from the proposal, no new additional mitigation measures or alternatives are required, and that the project is within the scope of the Master EIR. Whether a subsequent project is within the scope of the Master EIR is a question of fact to be determined by the lead agency based upon a review of the IS to determine whether there are additional significant effects or new additional mitigation measures or alternatives required for the subsequent project that are not already discussed in the Master EIR.

The Master EIR/Programmatic EA meets the elements required for a Program EIR pursuant to California Code of Regulations, Title 14, Section 15168. Therefore, the Master EIR/Programmatic EA provides programmatic CEQA level review, from which the Bucktail Project – a subsequent site-specific project – is tiered. The attached Bucktail EA/IS contains a site-specific project description and site-specific details for environmental impact analyses required to apply for enrollment under General Permit R1-2010-0028 for Trinity River channel rehabilitation activities, which the Regional Water Board will consider in making its determination and approval decision.

Project Location

The general setting for the TRRP is within the 40-mile reach of the mainstem Trinity River between Lewiston Dam and the confluence of the North Fork Trinity (see Figure 1 in the attached EA/IS). The entire stretch is designated under the National and California State Wild and Scenic River Systems to preserve its Outstandingly Remarkable Values, which include the river's free flowing condition, anadromous and resident fisheries, outstanding geologic resource values, scenic values, recreational values, cultural and historic values, and the values associated with water quality. The segment of the Trinity River encompassed by the Proposed Project is classified and managed as a "Recreational" reach by the BLM and the Shasta-Trinity National Forest. Lands under BLM administration are managed in accordance with BLM's Redding Resource Management Plan (RMP). See Section 3.2.1.3, Relevant Land Use Plan, of the attached EA/IS for more details on the BLM's land use management plan.

The Bucktail site (RM 105.45-107.0) is a 110.38-acre site that begins approximately at the Bucktail Bridge and extends upstream approximately 1.5 miles to just downstream of RM 107.0. This site is located on the Lewiston, California 7.5-minute U.S. Geological Survey (USGS) quadrangle, in Township 33 North, Range 9 West, Sections 23 and 24 and, Mount Diablo Base and Meridian (MDB&M). The majority of the land within this site is privately owned (70.43) and BLM manages the remainder of the land in the site (39.95 acres).

The river elevation at this site is approximately 1,750 feet above msl. Access to the site is via Browns Mountain Road, off of Old Lewiston Road. The current Bucktail site boundary includes a portion of the previously constructed Dark Gulch and Lowden Ranch sites. The Dark Gulch

[2] On the TRRP website go to http://www.trrp.net/?page_id=409.

Rehabilitation Site was designed and constructed by TRRP in 2008, and the Lowden Ranch Rehabilitation Site was constructed in 2010. The Bucktail environmental study limit (ESL) and responsible land managers/owners are shown on Figure 2 of the attached EA/IS.

Project Description

The Proposed Project includes specific activities within the Bucktail site boundaries. The activities proposed are similar to those implemented at previous channel rehabilitation sites and include: reducing riparian encroachment; large wood placement; physical alteration of alluvial features (e.g., floodplains and side channels); construction of large wood hydraulic and habitat structures; and removal/replacement of riparian and upland vegetation at strategic locations. Extensive revegetation of native riparian vegetation is also planned. The specific activities that would occur within the site boundaries are shown on Figure 3 and described in Chapter 2 of the attached EA/IS. Consistent with the CEQA Guidelines (Section 15176 (a) and (c)), the information contained in Chapter 2 of the attached EA/IS describes the timing, type, size, intensity, and location of the activities associated with the Proposed Project as currently planned. Designers are continuing to refine designs that are presented in the EA/IS. Conditions in the field at the actual time of construction may result in slight changes to designs. Assumptions were made in the analysis that would accommodate minor design changes. If substantial changes are made to the Proposed Project that would result in additional impacts above those analyzed in the EA/IS, then subsequent NEPA/CEQA analyses would be conducted.

Because a portion of the land within the project area boundaries is managed by the BLM, a BLM Right-of-Grant (a.k.a., Right-of Way), would be issued to Reclamation, pursuant to Title V of the Federal Land Policy and Management Act (43 USC 1761 et seq.). All project design features, mitigation measures, and best management practices (BMPs) developed through the attached EA/IS would be considered for incorporation into all BLM project authorizations.

Surrounding Land Uses and Environmental Setting

The Trinity River originates in the rugged Salmon-Trinity Mountains of northern California in the northeast corner of Trinity County. The Trinity River Basin encompasses the majority of Trinity County and the easternmost portion of Humboldt County. The mainstem Trinity River flows a total of 170 miles from its headwaters to its confluence with the Klamath River at Weitchpec, on the Yurok Indian Reservation. The Trinity River passes through Trinity County, Humboldt County, the Hoopa Valley Indian Reservation, and the Yurok Indian Reservation. Much of the basin is composed of federal lands managed by the USFS, BLM, and, to a lesser extent, Reclamation. Ownership along the Trinity River corridor is a mixture of public, tribal, and private lands.

The Trinity River flows generally southward until impounded by Trinity Dam and Lewiston Dam. The river drains a watershed of approximately 2,965 square miles; about one-quarter of this area is above Lewiston Dam. From Lewiston Dam, the river flows westward for 112 miles until it enters the Klamath River near the town of Weitchpec, 43.5 miles upstream from the Pacific Ocean. The Klamath River flows northwesterly from its confluence with the Trinity River before entering the Pacific Ocean.

Topography of the Trinity River Basin is predominantly mountainous with a heavily forested basin. Elevations in the watershed range from 8,888 feet above mean sea level (msl) at Sawtooth Mountain in the Trinity Alps to 300 feet above msl at the confluence of the Trinity and Klamath rivers. Land use within the Trinity River Basin is greatly influenced by the large amount of public lands, much of which is used for timber production and other natural resource-related uses. The area's numerous lakes and rivers provide many recreational opportunities, including

fishing and boating. Private uses along the Trinity River are generally limited to scattered residential and commercial development. Two scenic byways, State Route (SR-) 299 and SR-3, cross the county. SR-299 is the primary travel corridor through Trinity County, connecting the Central Valley with the coastal communities of Humboldt County.

Environmental Factors Potentially Affected

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

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

Summary of Mitigation Measures

Refer to the *Trinity River Channel Rehabilitation Sites: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Chapter 3 and Appendix A: Mitigation Monitoring and Reporting Program and Project Design Elements, for a list of mitigation measures/project design features that are included as part of the Proposed Project.

Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION, will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project (mitigation measures) have been made by or agreed to by the project proponent.

Under California Code of Regulations, title 14, section 15177, after a Master EIR[3] has been prepared and certified, subsequent projects which the lead agency determines as being within the scope of the Master EIR will be subject to only limited environmental review. Mitigation measures from the Master EIR will be implemented.

☐ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Signature Date

[3] North Coast Regional Water Quality Control Board and U.S. Bureau of Reclamation. 2009. Channel rehabilitation and sediment management for remaining Phase 1 and Phase 2 sites. Master environmental impact report, environmental assessment/ environmental impact report. Trinity River Restoration Program. August 2009. SCH#2008032110

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify: a) the significance criteria or threshold, if any, used to evaluate each question; and b) the mitigation measure identified, if any, to reduce the impact to less than significance.

Environmental Checklist and Explanatory Notes

I. AESTHETICS Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Have an adverse effect on a scenic vista?	☐	☐	☒	☐
b) Damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
d) Create a new source of light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.12.

II. AGRICULTURE RESOURCES In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program in the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for timber production (TPZ)?	☐	☐	☒	☐
d) Involve other changes in the existing environment that, due to their location or nature, could individually or cumulatively result in loss of Farmland, to non-agricultural use?	☐	☐	☒	☐

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.2.

III. AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is	☐	☒	☐	☐

III. AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	**Potentially Significant**	**Less Than Significant With Mitigation**	**Less Than Significant**	**No Impact**
non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?				
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
f) Otherwise degrade the atmospheric environment?	☐	☐	☒	☐
g) Substantially alter air movement, moisture, temperature or other aspects of climate?	☐	☐	☒	☐

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.11.

IV. BIOLOGICAL RESOURCES Would the project:	**Potentially Significant**	**Less Than Significant With Mitigation**	**Less Than Significant**	**No Impact**
a) Have an adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have an adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☒	☐	☐
c) Have an adverse effect on Corps of Engineers jurisdictional wetlands either individually or in combination with the known or probable effects of other activities through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐
g) Otherwise degrade the biotic environment?	☐	☒	☐	☐

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.6 and 3.7.

V. CULTURAL RESOURCES Would the project:	**Potentially Significant**	**Less Than Significant With Mitigation**	**Less Than Significant**	**No Impact**
a) Cause an adverse change in the significance of a historical resource, as defined in Section 15064.5?	☐	☒	☐	☐
b) Cause an adverse change in the significance of an archaeological resource, pursuant to Section 15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.10.

VI. GEOLOGY AND SOILS Would the project:	**Potentially Significant**	**Less Than Significant With Mitigation**	**Less Than Significant**	**No Impact**
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☒	☐
b) Result in soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.3.

VII. GREENHOUSE GAS EMISSIONS Would the project:	**Potentially Significant**	**Less Than Significant With Mitigation**	**Less Than Significant**	**No Impact**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.11.

VIII. HAZARDS AND HAZARDOUS MATERIALS Would the project:	**Potentially Significant**	**Less Than Significant With Mitigation**	**Less Than Significant**	**No Impact**
a) Create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Have hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

VIII. HAZARDS AND HAZARDOUS MATERIALS Would the project:	**Potentially Significant**	**Less Than Significant With Mitigation**	**Less Than Significant**	**No Impact**
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and consequently result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) Be located within the vicinity of a private airstrip, and consequently result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.13.

IX. HYDROLOGY AND WATER QUALITY Would the project:	**Potentially Significant**	**Less Than Significant With Mitigation**	**Less Than Significant**	**No Impact**
a) Violate any applicable water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in erosion or siltation on- or off-site?	☐	☒	☐	☐
d) Alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff?	☐	☒	☐	☐
f) Place housing within a 100-year floodplain, as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
g) Place within a 100-year floodplain structures that would impede or redirect flood flows?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury, or death involving: 1) flooding, including flooding as a result of the failure of a levee or dam, or 2) inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

IX. HYDROLOGY AND WATER QUALITY Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
i) Otherwise degrade water quality?	☐	☒	☐	☐
j) Change the amount of surface water in a water body?	☐	☐	☐	☒
k) Change currents or the course or direction of water movements?	☐	☐	☒	☐

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Sections 3.4 and 3.5.

X. LAND USE AND PLANNING Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural communities' conservation plan?	☐	☐	☒	☐

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.2.

XI. MINERAL AND ENERGY RESOURCES Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Result in the loss of availability of a known mineral that would be of value to the region and the residents of the state?	☐	☐	☒	☐
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☒	☐
c) Result in the use of energy or non-renewable resources in a wasteful or inefficient manner?	☐	☐	☒	☐

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.3.

XII. NOISE Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Generate or expose persons to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generate or expose persons to excessive ground-borne vibration or ground-borne noise levels?	☐	☒	☐	☐
c) Result in a permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and consequently expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) Be within the vicinity of a private airstrip, and consequently expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.14.

XIII. POPULATION AND HOUSING Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.9.

XIV. PUBLIC SERVICES Would the project result in 1) adverse physical impacts associated with the provision of new or physically altered governmental facilities, or 2) the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Fire protection?	☐	☐	☐	☒
b) Police protection?	☐	☐	☐	☒
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Roads?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.15.

XV. RECREATION	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.8.

XVI. TRANSPORTATION/TRAFFIC Would the project:	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐
b) Exceed, either individually or cumulatively, a	☐	☐	☒	☐

level of service standard established by the county congestion management agency for designated roads or highways?				
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☒	☐
g) Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒
h) Adversely affect rail, waterborne, or airborne transportation?	☐	☐	☐	☒

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.16.

XVII. UTILITIES AND SERVICE SYSTEMS Would the project:	**Potentially Significant**	**Less Than Significant With Mitigation**	**Less Than Significant**	**No Impact**
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, for any of the following utilities?				
i) Water treatment or distribution facilities?	☐	☐	☐	☒
ii) Wastewater collection, treatment, or disposal facilities?	☐	☐	☐	☒
iii) Storm water drainage facilities?	☐	☐	☐	☒
iv) Electric power or natural gas?	☐	☐	☐	☒
v) Communications systems?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Refer to *Trinity River Channel Rehabilitation Site: Bucktail (River Mile 105.45-107.0) Environmental Assessment/Initial Study*, Section 3.15.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects, as defined in Section 15130.)	☐	☒	☐	☐
d) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

References:

North Coast Regional Water Quality Control Board and United States Bureau of Reclamation. 2009. Channel Rehabilitation and Sediment Management Activities for Remaining Phase 1 and Phase 2 Sites, Part 1: Final Master Environmental Impact Report and Part 2: Environmental Assessment/Final Environmental Impact Report. SCH #2008032110

United States Department of Interior. 2000. Record of Decision: Trinity River Mainstem Fishery Restoration Final Environmental Impact Statement/Environmental Impact Report. Washington D.C.

USFWS and Hoopa Valley Tribe. 1999. Trinity River Flow Evaluation Study, Report to the Secretary of the Interior, US Department of the Interior, Washington, D.C.

USFWS, U.S. Bureau of Reclamation, Hoopa Valley Tribe, and Trinity County (USFWS et al.). 2000. Trinity River Mainstem Fishery Restoration Final Environmental Impact Statement/Environmental Impact Report. State Clearinghouse No. 1994123009. October 2000.

U.S. Bureau of Reclamation and Trinity County Resource Conservation District. 2008. Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4 to 111.7. Environmental Assessment/ Environmental Impact Report. Trinity River Restoration Program. February 2008. SCH#2007042161.