3.8 Recreation

This section describes the recreational resources and uses within the project boundaries and the potential impacts to recreation associated with implementation of the No-Action Alternative, the Proposed Action, and Alternative 1. The project's conformance with the federal and state Wild and Scenic Rivers Acts (WSRAs) is also evaluated. The following evaluation is also based on a review of local land use plans and policies related to recreational uses and field reconnaissance to identify potential recreational opportunities at the project sites.

3.8.1 Affected Environment/Environmental Setting

Regional Setting

Trinity County has a vast array of recreational resources, such as rivers, lakes, wildernesses, and scenic byways. The major rivers in Trinity County are the Trinity River, South Fork Trinity River, North Fork Trinity River, New River, Mad River, and Eel River. These rivers provide recreational opportunities such as fishing, kayaking, rafting, recreational mining, and camping.

The Trinity River was designated as a National Wild and Scenic River in 1981 by the Secretary of the Interior. The designated reach extends from Lewiston Dam downstream to Weitchpec. Three tributaries to the Trinity River are also designated as Wild and Scenic Rivers: the New River and the South and North Forks of the Trinity River. These tributaries enter the Trinity River downstream of the project boundaries.

The TRD includes three impoundments in Trinity County: Buckhorn Reservoir, Trinity Lake, and Lewiston Reservoir. These lakes provide recreational opportunities such as boating, fishing, and camping. Trinity Lake is situated in the northeast section of Trinity County and has a surface area of approximately 16,400 acres. Lewiston Reservoir is immediately downstream of Trinity Dam and is operated as a re-regulation facility that provides water to Whiskeytown Reservoir. Buckhorn is a small reservoir on Grass Valley Creek that offers recreational fishing.

There is one congressionally designated wilderness area in close proximity to the TRD. The Salmon-Trinity Alps Wilderness provides recreational opportunities, such as hiking, backpacking, horse packing, hunting, and angling. Located in the northern part of Trinity County, this wilderness area is the primary watershed for the Trinity River.

Two scenic byways cross Trinity County: the Trinity Heritage Scenic Byway and the Trinity Scenic Byway. These byways provide scenic travel routes through Trinity County for residents and visitors. The Trinity Heritage Scenic Byway is along SR 3. It begins in Weaverville and ends north of Weed. The byway detours from SR 3 at several locations. It leaves SR 3 seven miles north of Weaverville and turns east onto County Road 204 for nine miles to the town of Lewiston. The route provides opportunities for sightseeing in Lewiston and a side trip to the TRSSH. The byway then heads north on County Road 105 paralleling Lewiston Lake to Trinity Dam and the southern tip of Trinity Lake before rejoining SR 3. It continues north on SR 3 to Guy Covington Drive and the historic Bowerman Barn. The Trinity Heritage

Scenic Byway then backtracks to SR 3 north and passes through the communities of Trinity Center, Carrville, and Coffee Creek. Ten miles north of Coffee Creek at the base of Scott Mountain, it veers northeast along Parks Creek Road and the upper Trinity River. The route travels another 40 miles from the Parks Creek Road intersection to Interstate 5.

The federal government manages about 72 percent of the land in Trinity County. BLM is the primary land manager for public lands between Lewiston Dam and the confluence of the North Fork Trinity River and the mainstem Trinity River. The STNF manages the NRA, including the reach of the Trinity River immediately downstream of the TRSSH. The STNF is the primary federal land manager between the confluence of the North Fork Trinity River and the mainstem Trinity River and the confluence of the New River and the Trinity River. Six Rivers National Forest manages federal lands located between the New River and the Hoopa Valley Indian Reservation. The HVT manages lands within the Hoopa Valley Indian Reservation.

The Trinity River provides year-around recreation opportunities. These opportunities include boating, kayaking, canoeing, rafting, inner-tubing, fishing, swimming, wading, camping, gold panning, nature study, picnicking, hiking, and sightseeing. Fishing for Chinook salmon, steelhead, and rainbow and brown trout are major recreational activities on the Trinity River throughout the year. With the development and implementation of the TRRP, the type, location, and timing of recreational activities continues to evolve.

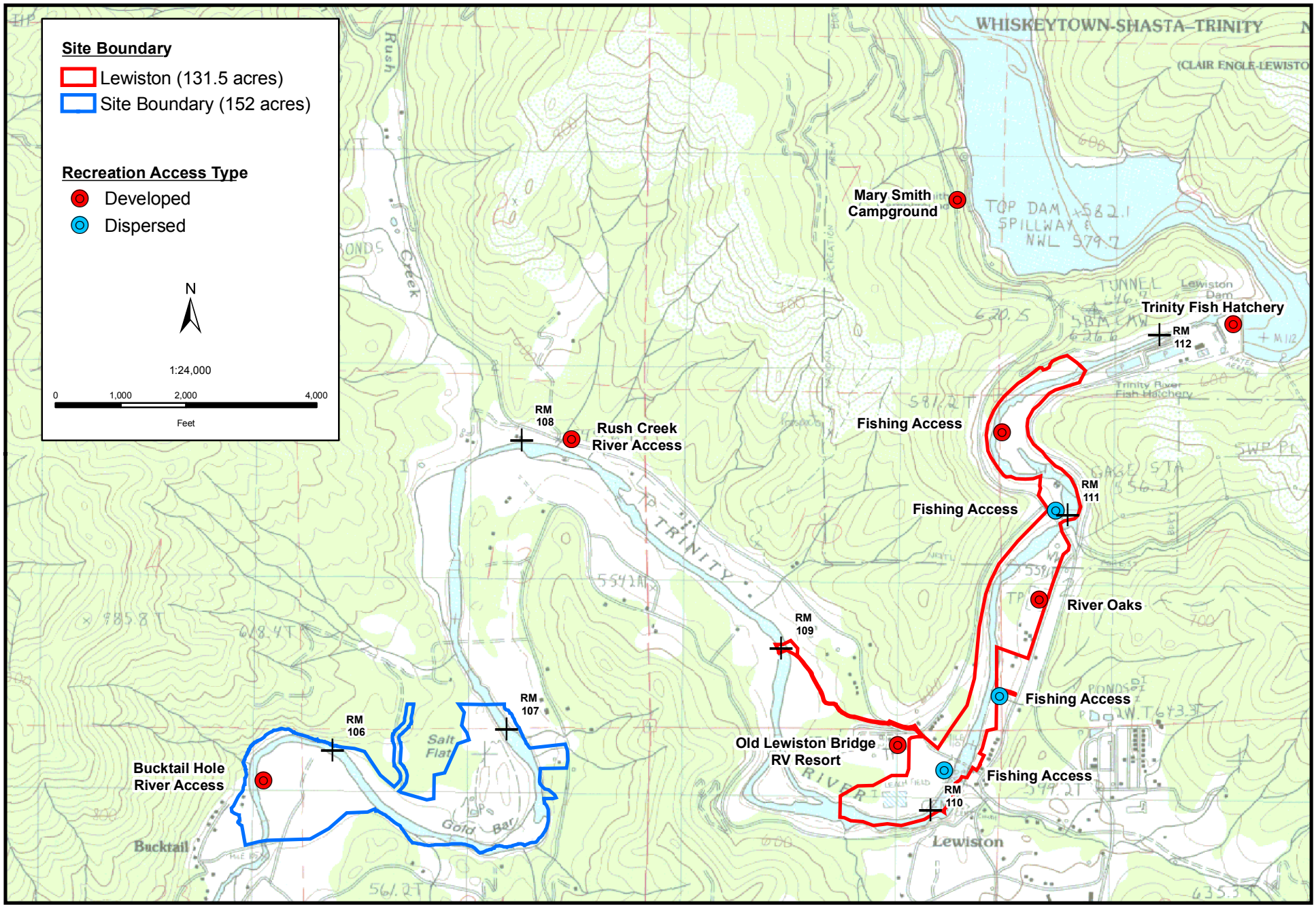
Developed recreation areas along the Trinity River consist of private campgrounds, resorts, and lodges; public campgrounds and picnic areas; and fishing access sites. Approximately 35 developed recreation sites are located along the Trinity River corridor. More than 200 river access sites were inventoried in 1979 between Lewiston Dam and Weitchpec. Expanded whitewater recreation resulting from post-ROD flows has increased the use of these recreation sites (Duane Miller, BLM, pers. comm. 2006)

Local Setting

There are a variety of residential subdivisions, commercial enterprises, and public facilities along the corridor of the Trinity River. Within the vicinity of the project boundaries are residential developments, some commercial development (e.g., River Oaks Resort, Old Lewiston Bridge RV Resort, Backyard Outfitters, Trinity Fly Shop, Mountain Valley Grill, BP Mini Mart), and public facilities (e.g., Lewiston Elementary School, Post Office).

Currently, there are three privately owned recreation facilities, one STNF recreation facility, one CDFG recreation facility, two BLM developed river access points, and three undeveloped river access points located within or near the project boundaries. Table 3.8-1 provides a summary of these sites, and Figure 3.8-1 shows recreation areas in the general vicinity of the project boundaries. These recreation areas provide a variety of recreation opportunities such as fishing, whitewater rafting, picnicking, and wildlife viewing.

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_8-1_Recreation.mxd Source: North State Resources, Inc.; USGS, BOR Prepared: 08/21/2007 bmoore



North State Resources, Inc.

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

Figure 3.8-1
Recreation

Table 3.8-1
Recreation within the Vicinity of the Lewiston–Dark Gulch Rehabilitation Sites

Developed Recreation	
River Oaks Resort	Privately owned facility adjacent to the Trinity River that provides overnight accommodations (RV sites, tent sites) and mobile home park.
Trinity River Resort and RV Park	Privately owned facility adjacent to the Trinity River that provides overnight accommodations (RV sites, tent sites, and cottages).
Old Lewiston Bridge RV Resort	Privately owned facility adjacent to the Trinity River that provides overnight accommodations (RV sites, tent sites, and cottages).
Trinity River Salmon and Steelhead Hatchery	Operated by the CDFG and open to the public; an artificial spawning facility for salmon and steelhead.
Sven-Olbertson	Watchable Wildlife Area (STNF)
Mary Smith Campground	USFS-owned campground adjacent to the Trinity River that provides day and overnight accommodations (tents).
Bucktail Hole River Access	BLM river access point that provides public restrooms and trash receptacles.
Rush Creek River Access	BLM-owned river access point that provides public restrooms and trash receptacles.
Dispersed Recreation	
River access sites	There are four undeveloped river access sites located within the project boundaries. These sites are situated on either private or public land and provide river access for fishing and primitive boat launch sites for rafts, canoes, kayaks, and other watercraft that can be carried to the river's edge.

3.8.2 Relevant Plans and Policies

Federal

Wild and Scenic Rivers Act

Congress enacted the National WSRA in 1968 to protect free-flowing rivers with "outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values." The entire mainstem of the Trinity River was designated as a National Wild and Scenic River by the Secretary of the Interior in 1981, primarily because of the river's anadromous fishery. Approximately 97.5 miles of the river are also classified as recreational under the National WSRA. BLM is the river management agency from Lewiston to Helena, and the STNF is the river management agency from Helena to the boundary of the Hoopa Valley Indian Reservation. The BLM classifies the mainstem Trinity River from 100 yards below Lewiston Dam downstream of the project boundary to Cedar Flat (an area located

approximately 30 miles west of the project boundary) as recreational. The BLM's management objectives are to:

- enhance recreation opportunities related to use of the Trinity River, including mineral collection;
- maintain scenic quality along the river corridor; and
- protect and enhance the anadromous fisheries of the Trinity River.

The federal WSRA designates qualifying free-flowing river segments as wild, scenic, or recreational. The WSRA establishes requirements applicable to water resource projects affecting wild, scenic, or recreational rivers in the National Wild and Scenic Rivers System, as well as rivers designated on the National Rivers Inventory. Under the WSRA, a federal agency may not assist in the construction of a water resources project that would have a direct and adverse impact on the free-flowing, scenic, and natural values of a wild or scenic river. If a project would affect the free-flowing characteristics of a designated river or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area, it should be undertaken in a manner that would minimize adverse impacts and should be developed in consultation with the administering agency. The Trinity River was designated a Wild and Scenic River due in part to its "outstandingly remarkable resource," the fishery (P.L. 90-542). Consultation required under Section 7 of the WSRA was prepared to specifically address requirements under the federal WSRA and is provided as Appendix D.

Shasta-Trinity National Forest Land and Resource Management Plan

The STNF LRMP contains Forest goals, standards, and guidelines designed to guide the management of the STNF. The following goals, standards, and guidelines relative to recreational issues associated with the project area were excerpted from the STNF LRMP (USDA Forest Service 1995).

Recreation

Goals (LRMP pp. 4-4 through 4-6):

- Manage the STNF land base and resources to provide a variety of high quality outdoor recreation experiences.
- Increase emphasis on areas of national significance, such as Mt. Shasta, the NRA, and the Wild and Scenic Rivers System.
- Encourage use of the STNF by the disadvantaged, physically challenged, and minorities.

Standards and Guidelines (LRMP pp. 4-23 through 4-24):

- Manage developed recreation sites according to designated ROS classes.
- Provide barrier free recreation facilities that are accessible to physically challenged individuals. Emphasize these facilities at urban interface and other developed recreation locations.
- Prepare objectives and prescriptions for managing vegetation in and around developed recreation sites.

- Provide interpretive services to direct visitors to their recreation destinations, to facilitate understanding of resource management activity, and to acquaint them with unique or special features on the STNF and the function of forest ecosystems.
- Management direction for the STNF NRA will be based on and responsive to the following (as written in Title 36, Code of Federal Regulations, Section 251.40[a]):
  - provide public outdoor recreation opportunities;
  - conserve scenic, scientific, historic, and other values that contribute to public enjoyment; and
  - manage, use, and dispose of renewable natural resources which will promote, but do not significantly impair, public recreation or conservation of scenic, scientific, historic, or there values contributing to public enjoyment.
- Continue to improve access to rivers, streams, and lakes for water-oriented recreation activities consistent with the LRMP. Continue to provide access to hunting, fishing, and wildlife viewing areas.
- Promote partnerships with user groups to assist in the operation, maintenance, and development of recreation sites and facilities.
- Encourage the private sector to help provide needed recreation sites, facilities, and services with a development level consistent with the environmental setting and appropriate studies.

Management Guide for the Shasta and Trinity Units of the Whiskeytown-Shasta-Trinity National Recreation Area

The Management Guide for the Whiskeytown-Shasta-Trinity NRA contains management strategies intended to achieve or maintain a desired condition. These strategies take into account opportunities, management recommendations for specific projects, and mitigation measures needed to achieve specific goals. The following strategies related to recreation issues associated with the project area were excerpted from the Management Guide (USDA Forest Service 1996).

Recreation: Land Based (Management Guide pp. IV-7 through IV-8):

- All interpretive signing within the NRA will be coordinated between Recreation and other resource program areas to insure consistency in message and presentation. Applicable recommendations from the NRA Interpretive Plan will be incorporated as opportunities arise.
- Emphasis will be given to maintenance and replacement of directional signs within the NRA.
- Bear management in NRA recreational facilities will include the provision of bear-proof facilities, such as dumpsters and food lockers in high bear concentration areas, an active education/signing program, and coordination with CDFG.
- All design opportunities to develop or improve recreation facilities will take into consideration higher development level needs of RV users and accessibility for disabled.

State

Wild and Scenic Rivers Act

Under the California WSRA, the segment of the Trinity River that encompasses the project sites is designated as “scenic” and “recreational.” These classifications were designated in 1980, a year prior to the federal designation of the Trinity River as a Wild and Scenic River. Public Resources Code

(5093.53[b]) defines "scenic rivers" as "those rivers or segments of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads." "Recreational rivers" are defined in the Public Resources Code (5093.53[c]) as being "those rivers or segments of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past. There are no permits required for the project under the State WSRA.

Local

Trinity County General Plan Goals and Objectives

The Trinity County General Plan contains goals and policies designed to guide the future physical development of the County, based on current conditions. The following goals and policies related to recreation issues associated with the project were taken from the applicable elements of the General Plan (Trinity County 2001).

County Wide Goals and Objectives

General Plan Goals

1. To retain the mountain beauty, the vast wilderness areas and the open character of Trinity County
2. To provide additional facilities for camping, picnicking, boating, and sightseeing, both public and private

To encourage recreation as the primary economic resource of the County Land Use Element Goals

Cultural

Retain the rural character of Trinity County by:

- Encouraging uses that fit with the land
- Considering the "rights" of the individual when making decisions as well as the "rights" of the community
- Seeking information and cooperation from state and federal agencies within Trinity County

Economic

Maintain and enhance a viable economic base for Trinity County by:

- Encouraging tourism

Lewiston Community Plan Goals and Objectives

The Lewiston Community Plan covers the area centered on the Trinity River from Lewiston Lake to slightly downstream of the confluence of Grass Valley Creek and the Trinity River.

Economic Development

Goal: To encourage recreation development as a viable sector of the economy.

- Develop existing publicly owned access areas to the river to meet the needs of visitors to the area.

Parks and Recreation

Goal: To provide for access to the Trinity River in a manner that recognizes and respects the rights of existing development.

- Develop a River Access Plan that relies predominantly upon public lands for access to and along the Trinity River.
- Insure that the proper level of services is provided at river access points.

Trinity County Subdivision Ordinance

The Trinity County Subdivision Ordinance, Section 16.08.130, identifies the Trinity River below Lewiston Dam as a "Public Waterway." This ordinance requires "reasonable public access" for subdivisions on public waterways if no existing reasonable public access exists, as determined by the Planning Commission or Board of Supervisors. Reasonable public access includes access to or along a river, stream, or reservoir by highway, foot trail, bike trail, horse trail, or other means. In determining what constitutes "reasonable public access," many factors are considered, including the type of riverbank; the various appropriate recreational, educational, and scientific uses that are possible; the likelihood of trespass on private property and reasonable means of avoiding such trespass; public safety; and other such information.

"Reasonable public access" on a public waterway pursuant to the Trinity County Subdivision Ordinance and the California Subdivision Map Act is not required for the project.

Project Consistency with the Trinity County General Plan and Community Plans

This section compares the goals and objectives of the Proposed Action to the relevant local planning policies to determine if there are any inconsistencies.

The goals and objectives described in Chapter 1 are generally compatible with the applicable General Plan goals and policies summarized above. The overall goal of the Proposed Action is to rehabilitate the site so that it functions in a manner that is closer to historic conditions (e.g., pre-Lewiston Dam). Although there will be excavation of alluvial materials within and adjacent to the Trinity River that would result in temporary and short-term interruption of public and private access to the river within the project boundary, the project would be temporary and will include mitigation measures intended to reduce impacts to recreational values during project implementation.

In the long-term, opening of the floodplain may allow for increased public use of the river within the project boundary, particularly for in-river recreation.

3.8.3 Environmental Consequences/Impacts and Mitigation Measures

Methodology

The analysis consists of identifying recreational resources (parks and recreation facilities) in or near the project boundaries and determining whether implementation of the Proposed Action would have an

impact on these resources. This analysis is a qualitative assessment of the impacts to potential recreational uses associated with this segment of the Trinity River.

In addition to evaluating the impacts on recreational opportunities, the project was evaluated for consistency with Trinity County recreation objectives and both state and federal Wild and Scenic River designations. The WSRA Section 7 Determination for the Lewiston–Dark Gulch Rehabilitation Project is included as Appendix D.

Significance Criteria

Impacts associated with recreational uses would be considered significant if the project would:

- conflict with established or planned recreational uses within the project boundary;
- substantially affect existing recreational opportunities; or
- result in an increase in the use of the existing neighborhood, regional parks, public lands in general, or other recreational facilities such that substantial deterioration of these facilities would occur or be accelerated.

The following criteria were also used to determine whether impacts to riverine recreation would be significant:

- substantial increase in turbidity so as to negatively affect recreation aesthetics;
- incompatibility with the federal or state Wild and Scenic River designation, defined as jeopardizing the river's anadromous fishery resources or scenic and recreational qualities; or
- non-compliance with Trinity County recreation resource objectives.

Impacts and Mitigation Measures

Table 3.8-2 summarizes the potential recreation impacts resulting from implementation of the project.

Table 3.8-2. Summary of Recreation Impacts for the No-Action Alternative, Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.8-1.	Construction associated with the project could disrupt recreation activities in the Trinity River.			
NI	S	S	LS	LS
Impact 3.8-2.	Construction of the project could result in an increased safety risk to recreational users or resource damage to lands within the project boundaries.			
NI	S	S	LS	LS

Table 3.8-2. Summary of Recreation Impacts for the No-Action Alternative, Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.8-3.	Construction associated with the project could lower the river's aesthetic value for recreationists by increasing turbidity levels in the Trinity River.			
NI	S	S	LS	LS
Impact 3.8-4.	Implementation of the project could affect Wild and Scenic River values.			
NI	LS	LS	N/A[1]	N/A[1]

Notes:
LS = Less than Significant S = Significant SU = Significant Unavoidable
NI = No Impact B = Beneficial N/A = Not Applicable
[1]Because this potential impact is less than significant, no mitigation is required.

Impact 3.8-1: Construction associated with the project could disrupt recreation activities such as boating, fishing, and swimming in the Trinity River. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, there would be no disruption to recreation activities such as boating, fishing, and swimming in the Trinity River because the project would not be constructed.

Proposed Action and Alternative 1

As previously discussed, the Trinity River supports in-stream recreational uses, primarily whitewater recreation and fishing. These in-stream recreational activities take place throughout the year, but are more prevalent between the months of April and December. Access to the Trinity River is available on public and private lands, including undeveloped foot paths and improved access points. Public use is prohibited at some of these access points. Public access is provided on lands managed by the STNF and BLM, as well as lands owned by CDFG. Access to the river provides a variety of water-based recreational activities as well as general wildlife viewing opportunities.

During implementation of either the Proposed Action or Alternative 1, there would be construction equipment and activity within the active river channel, the floodplain, and adjacent to the river banks. Project activities, including vegetation removal and grading, will occur within and adjacent to the STNF Sven-Olbertson Watchable Wildlife Area and BLM's Bucktail Hole River Access. Overall, treatments proposed within the activity areas described in Chapter 2 may result in short-term interruptions to public access. However, river access will remain available at a variety of locations within and downstream of the project boundaries. This impact is considered significant, even though potential disruptions to recreational activities within the project boundaries would be temporary.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified for this alternative, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

1a Reclamation or its contractor shall provide precautionary signage to warn recreational users of the potential safety hazards associated with project construction activities. Signs and/or buoys shall be placed within and directly adjacent to the project boundaries along the Trinity River in accordance with the requirements specified in Title 14, Article 6 of the California Code of Regulations. Notification signs shall be posted at the Bucktail Hole River Access and at the privately owned River Oaks Resort, Trinity River Resort and RV Park, and the Old Lewiston Bridge RV Resort. Additionally, public notification of proposed project construction activities and associated safety hazards shall be circulated in the local *Trinity Journal* newspaper.

1b Reclamation will repair and/or replace any facilities that may be inadvertently affected by project activities at the Sven-Olbertson Watchable Wildlife Area or the Bucktail Hole River Access. This measure would include installation of interpretive signage consistent with the requirements of the STNF and BLM. A pre-construction meeting with STNF and BLM will be used to identify the level of vegetative screening that will be retained at these recreation sites.

Significance after Mitigation

Less than significant

Impact 3.8-2: Construction of the project could result in an increased safety risk to recreational users or resource damage to lands within the project boundaries. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, there would be no safety risks to recreational users or resource damage to lands within the project boundaries because the project would not be constructed.

Proposed Action

During construction of the Proposed Action, there would be heavy equipment activity and construction vehicle traffic directly adjacent to the Trinity River. Excavation activities associated with in-channel treatment areas would require construction work within the river channel for a short period of time (approximately 1 week). The river crossings are expected to be in place for up to 4 weeks during the low-flow period. These crossings would require the placement of gravel access pads within the river channel

during the construction period. These construction-related activities could distract recreational users (e.g., boaters, anglers) for a short period of time (approximately 3 to 6 weeks during the low-flow period). The in-channel activities would be accomplished in a way that minimizes impacts to navigation safety and after construction is complete, the gravel access pads will be modified to preclude any vehicular traffic while ensuring that the channel is navigable to boaters. Although it would be temporary, this would be considered a significant impact. Vehicular access to activity areas, including those used for long-term gravel stockpiling would be limited to authorized personnel. After construction, these access areas will be evaluated by Reclamation, STNF and BLM to identify the specific prescriptions required to reduce safety risks to recreational users and to prevent resource damage to lands within the project boundaries.

Alternative 1

Potential impacts to recreational users and resource damage to lands within the project boundaries resulting from implementation of Alternative 1 are similar to those under the Proposed Action. These impacts are considered significant.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

2a Please see mitigation measure 1a above.

Significance after Mitigation

Less than significant

Impact 3.8-3: Construction activities associated with the project could lower the Trinity River's aesthetic values for recreationists by increasing turbidity levels in the Trinity River. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, turbidity levels in the Trinity River would not increase because the project would not be constructed.

Proposed Action and Alternative 1

The Proposed Action could increase turbidity in the Trinity River for some distance downstream. The level of this increase would largely be dependent on the flow regime at the time of the discharge. The flows that typically contribute to good fishing tend to be clear, and nominal increases in turbidity may

affect the recreational experience of anglers and the aesthetic values of other user groups. Water quality objectives for the Trinity River specifically prohibit increases in the levels of other materials in a way that causes nuisance or adversely affects beneficial uses (i.e., recreation).

The Basin Plan includes two specific prohibitions directed at construction, logging, and other associated non-point source activities:

- The discharge of soil, silt, bark, sawdust or other organic and earthen material from any logging, construction or associated activity of whatever nature into any stream or watercourse in the basin in quantities deleterious to fish, wildlife or other beneficial uses is prohibited.
- The placing or disposal of soil, silt, bark, slash or sawdust or other organic and earthen material from any logging, construction or associated activity of whatever nature at locations where such material could pass into any stream or watercourse in the basin in quantities deleterious to fish, wildlife or other beneficial uses is prohibited.

Alternative 1 would include slightly more in-channel work than the Proposed Action. Implementing either the Proposed Action or Alternative 1 would have the potential to increase turbidity and total suspended solids during construction activities. Fine sediments could be suspended in the river for several hours following excavation activities. The extent of downstream sedimentation would be a function of the instream flow velocity and particle size. For example, fine-grained sediments like silts and clays could be carried several thousand feet downstream of the excavation areas, while larger-sized sediments like sands and gravels would tend to drop out of the water column within several feet of the construction limit. Increased turbidity and suspended solids levels would adversely affect water quality (refer to Section 3.5, Water Quality) and could also adversely affect anadromous fish species that are known to occur in the Trinity River (refer to Section 3.6, Fisheries Resources). This would therefore be considered a significant impact.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

3a Turbidity increases associated with project construction activities shall not exceed the Regional Water Board water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity Riverlisted in the Basin Plan for the North Coast Region (2001) is summarized below.

- Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.

3b To ensure that turbidity levels do not exceed the threshold listed above during river's edge and in-channel project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge and in-channel construction activities. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed. Monitoring frequency shall be a minimum of every 2 hours during periods of increased turbidity.

3c Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project. Decompaction or furrowing of riparian areas is expected to stop delivery of storm water to the river; however, BMPs, including silt fences, sediment filters, dewatering activities, and routine monitoring to verify effectiveness, may be necessary. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until river levels rise and inundate the floodplain. All sediment containment devices and erosion control devices will be inspected daily during the construction period to ensure that the devices are functioning properly. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.

Significance after Mitigation

Less than significant

Impact 3.8-4: Implementation of the project could affect Wild and Scenic River values. No Impact for the No-Action Alternative; Less-than-Significant Impact for the Proposed Action and Alternative 1

No-Action Alternative

Under the No-Action Alternative, there would be no adverse impacts to Wild and Scenic River values because the project would not be constructed.

Proposed Action and Alternative 1

Construction and implementation of the Proposed Action or Alternative 1 would have a temporary impact on the scenic and recreational components of the Trinity River's Wild and Scenic River values. However, the impact on scenic values would be less than significant because the rehabilitation activities would enhance the overall form and function of the Trinity River, thereby enhancing the outstandingly remarkable values for which it was designated a Wild and Scenic River. Temporary impacts on the scenic quality of the river are also discussed above under Impact 3.8-3 and in Section 3.14, Aesthetics.

The impact on recreational values would also be less than significant because access to the river would be available from areas adjacent to the project boundaries. Temporary impacts on recreation are also discussed above under Impacts 3.8-1 and 3.8-2.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

Since no significant impact was identified for these alternatives, no mitigation is required.

Significance after Mitigation

N/A

3.9 Socioeconomics, Population, and Housing

This section presents information on regional and local socioeconomic conditions, population, and housing and the potential impacts of the Proposed Action and alternatives on these resources. Poverty rates and population by race and ethnicity are discussed in Section 3.13, Environmental Justice. Much of this section has been taken directly from Trinity County 2007: Economic and Demographic Profile (Center for Economic Development 2004).

Under CEQA, the "[e]conomic or social impacts of a project shall not be treated as significant impacts on the environment" (CEQA Guidelines Section 15131). Consequently, this section addresses CEQA issues only to the extent that the potential social or economic impacts of the Proposed Action would have either a direct impact or would result in reasonably foreseeable indirect impacts on the physical environment.

3.9.1 Affected Environment/Environmental Setting

Regional Setting

Regional Labor Market

Trinity County is a rural region with substantial amounts of public land. As a result, the region is largely dependent on natural resources and tourism for its economic base.

Data concerning the labor force, employment, and unemployment were obtained from the California Employment Development Department (EDD), which estimates labor force and employment statistics for all counties in the state. Data for employment by industry were collected from the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) through the Regional Economic Information System (REIS). Differences in calculation methods and differences regarding what is considered employment may account for differences in EDD and REIS employment data (Center for Economic Development 2001).

Labor Force

Labor force refers to the total civilian labor force and is the number of non-institutionalized people age 16 and older who are working or looking for work and who are not in the military. The total labor force includes wage and salaried workers, proprietors, and household workers. The average annual labor force is the 12-month average labor force for a given year. Since 1996, the labor force in Trinity County has increased an average of 0.08 percent annually; however, between 2005 and 2006, there was a nearly 4 percent decrease (Center for Economic Development 2004). The majority of the total labor force is concentrated in Weaverville and Hayfork. The primary communities in Trinity County are shown in Figure 3.9-1.

Employment

Employment refers to total civilian employment as calculated by the EDD. Total civilian employment is the number of people employed in both the private sector and the non-military public sector. Employment includes wage and salaried workers, proprietors, and household workers.

Employment rates in Trinity County between 1990 and 2006 exhibited a modest growth trend of approximately 5 percent (an increase of 320 jobs). Although a decline in the timber industry and associated jobs accounted for some annual declines during this period, employment projections indicate that employment rates will stay relatively steady in Trinity County in upcoming years (Center for Economic Development 2007). Increased tourism- and transportation-related jobs are anticipated to bolster job growth in the coming years. Despite mill closures in both Weaverville and Hayfork, these two communities continue to be the county's largest employment centers.

Unemployment

Unemployment refers to the annual average civilian unemployment rate and represents the percentage of the total civilian labor force that is not employed. Trinity County's unemployment rate has been consistently higher than the California average since 1990 (Center for Economic Development 2007). For example, the statewide unemployment rate was 9.5 percent in 1993; Trinity County's unemployment rate in the same year was 16.8 percent (Center for Economic Development 2007). While there was a steady decrease in Trinity County's unemployment rate between 1993 and 2001, it began to rise again in 2004. In 2005, unemployment levels in Trinity County once again began to decline, and in 2006, the unemployment rate reached its lowest level since 1990 (Center for Economic Development 2007).

The county's labor market depends on such factors as distance to SR 299 and distance to Weaverville, the county's business center and largest labor market. Ruth/Mad River, Hayfork, Zenia/Kettenpom, and Hyampom do not have ready access to SR 299 or Weaverville, and they have fewer job opportunities and a larger unemployment rate. In contrast, communities located on SR 299, such as Helena, Junction City, and Douglas City, from which Weaverville can be accessed directly, have smaller unemployment rates. Lewiston is about 5 miles north of SR 299 and is within reasonable commuting distance to Weaverville

Employment by Industry

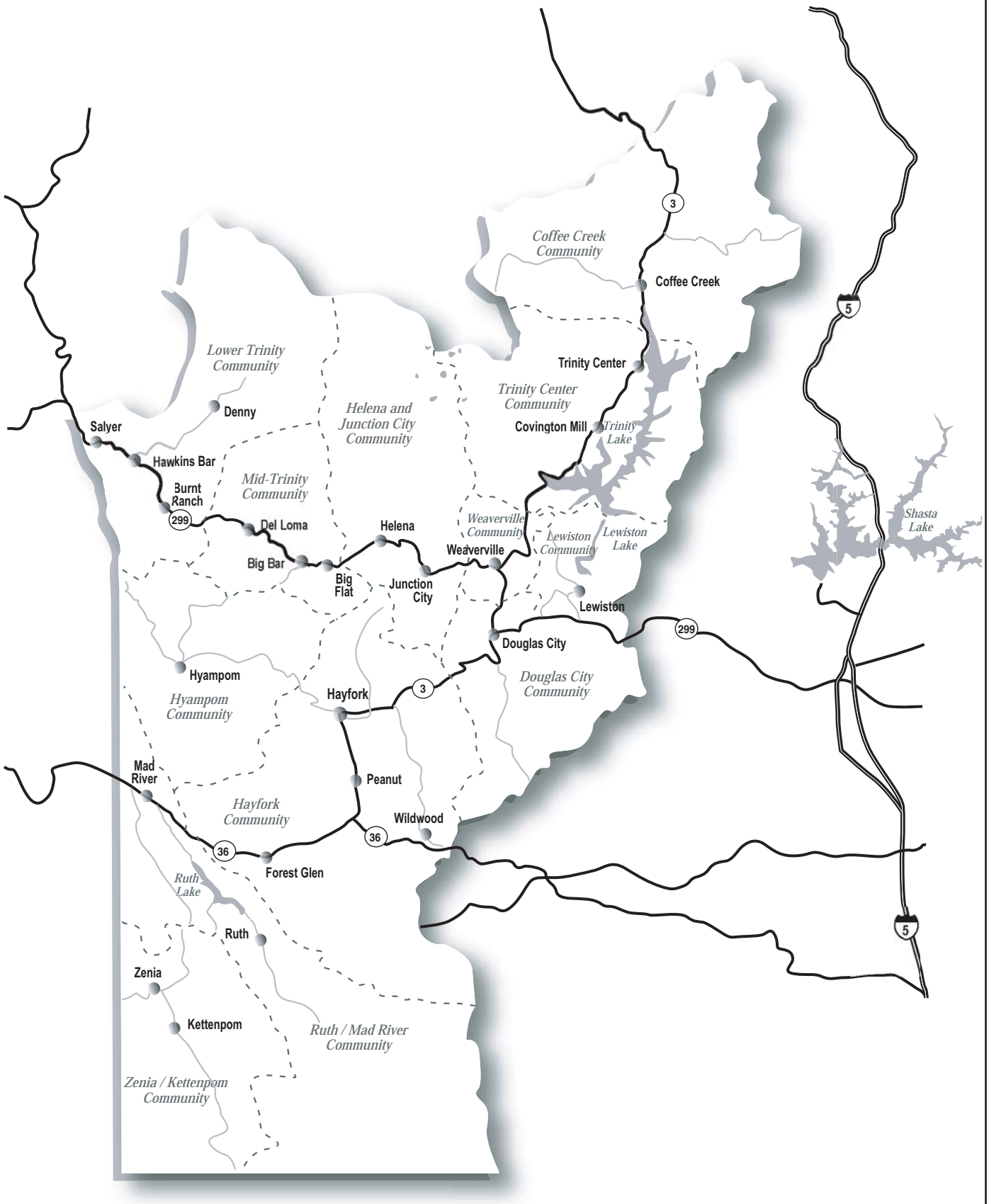
In this section, industries are defined using the Standard Industrial Classification Manual, published by the Executive Office of the President, U.S. Office of Management and Budget (1987). The measurement of employment by industry is based on the type of industry and the annual average number of full-time and part-time jobs for a given industry in a particular year.

The industrial employment trend in Trinity County is a function of the county's ample recreational opportunities and tourism. Consequently, service industries, including hotels and lodging, recreation services, museums, auto repair, and engineering and management services, continue to experience growth. The industry with the highest earnings is government and public administration.

Income

Per Capita Income

Data from the U.S. Bureau of the Census (Census) and the BEA show that per capita income levels in Trinity County tend to be significantly below state levels. Per capita income is the average income computed for every man, woman, and child in a particular group. The Census derives per capita income by dividing the total income of a particular group by the total population in that group (excluding patients



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North State Resources, Inc.

Figure 3.9-1
Trinity County Communities

or inmates in institutional quarters). Per capita income data for Trinity County and California are shown in Table 3.9-1.

Table 3.9-1. Per Capita Income, Trinity County and California

Year	Trinity County	California
1990	$14,469	$21,882
1991	$14,824	$21,983
1992	$15,605	$22,650
1993	$15,842	$22,833
1994	$15,863	$23,348
1995	$16,445	$24,339
1996	$16,999	$25,373
1997	$17,693	$26,521
1998	$18,208	$28,240
1999	$19,084	$29,698
2000	$19,995	$32,334
2001	$21,223	$32,877
2002	$21,689	$32,803
2003	$21,859	$33,400
2004	$22,653	$35,219

Source: Adapted from Center for Economic Development 2004; State of California Employment Development Department 2007.

The data in Table 3.9-1, compiled by the CED using the Census, the California Department of Finance, and the California EDD databases, show that while the per capita income of Trinity County and the state are both increasing, Trinity County continues to lag far behind the state, with its per capita income approximately 36 percent below that of the state in 2004.

Median Household Income

Median household income is the midpoint of the distribution of household incomes. Half of all households have incomes above this level, and half have incomes below this level. Median household income in Trinity County, though increasing, is lower than the state median household income. From 2000 to 2004, median household income in the county increased by 5 percent, which is comparable to the 6 percent increase in median household income for the state, measured over the same period (Center for Economic Development 2004). However, median household income in Trinity County continues to lag behind the state median by approximately 39 percent (based on 2004 data) (Center for Economic Development 2007). This represents an average of $19,587 less money available for each household in the county than for each household in the rest of the state.

Regional Population

The population of Trinity County is generally characterized by stagnant growth, with higher proportions of white and retirement-age persons and lower proportions of Hispanic and young working-age persons. The county's demographics are influenced by the fact that approximately 75 percent of its land is federally owned and 10 percent is in private industrial timber production, much of which is restricted from development by Timber Production Zone zoning. Thus, only 15 percent of the county is private land usable for development purposes. The county's rugged terrain and remote location also influence its demographics by limiting the developable area. Education levels of residents are typical of most of rural northern California, with a greater proportion of high school graduates and a smaller proportion of college graduates.

Total Population/Population Density

Population estimates are based on the number of people who were residing within the county boundaries, either permanently or temporarily, on January 1 of the given year. Total population includes foreign and domestic migrant workers. Trinity County's population continues to grow at a considerably lower rate than California on average, and was projected by the U.S. Census Bureau in 2000 to be ranked 54th in total population out of 58 California counties by 2004 (U.S. Census Bureau). Between 1990 and 2003, the county experienced only a 3 percent increase in population compared to an estimated 16 percent increase in California's population during the same period (U.S. Census Bureau 2005). A decline in the timber industry and an attendant loss of jobs has had a significant effect on the county's population.

Trinity County has a population density well below the population density of California as a whole. The population density of the county in 2006 was estimated at 4.4 persons per square mile, while the population density of California was estimated at approximately 240 persons per square mile (Center for Economic Development 2004). Most of the population of Trinity County is concentrated in Weaverville, Hayfork, and Lewiston (Figure 3.9-1). The communities with the lowest population concentrations, Coffee Creek and Zenia/Kettenpom, are in some of the most remote areas of the county (Figure 3.9-1).

Demographics related to Trinity County's racial and ethnic composition are discussed in detail in Section 3.13, Environmental Justice.

Housing

Each year, the California Department of Finance, Demographic Research Unit, estimates the number of housing units located in each county and incorporated place, as well as California as a whole. Housing units are estimated by adding new construction and units included in annexations and subtracting demolitions from the Census benchmark. The total number of housing units in Trinity County in 2006 is estimated at 8,346. The total number of occupied housing units is estimated at 5,843 (State of California 2006).

Local Setting

Lewiston offers limited services, including several commercial enterprises, a U.S. Post Office, the TRSSH, and Lewiston Elementary School. It also includes a few recreation-based businesses such as the

Trinity River Resort and RV Park, the Old Lewiston Bridge RV Resort, and the River Oaks Resort. These businesses provide economic benefits to the local community and the county; however, the Lewiston community is primarily residential and does not provide significant socioeconomic benefit to Trinity County beyond property tax revenues. Existing land uses in the general vicinity of the project sites are primarily rural residential or lands managed by federal or state agencies.

Planned Developments in the Vicinity of Lewiston

Zoning designations within the project area are largely rural residential and resource lands. Because these parcels are located directly adjacent to the river, portions of many of them fall into the Flood Hazard and Open Space designation zones, making further development in these areas difficult. There is little likelihood that any parcels in the project vicinity would be further subdivided in the future due to minimal county services (e.g., community water service); therefore, there is little potential for increased development densities. Most of the public land in the area is managed by the STNF, BLM, Reclamation, and CDFG.

3.9.2 Relevant Plans and Policies

Trinity County General Plan Goals

The following General Plan goals have been established by the County:

1. To provide more diverse sources of income and stabilize the economy.
2. To provide a higher average in income levels.

Land Use Element Goals and Objectives

Cultural

Goal: Retain the rural character of Trinity County by:

- Limiting dwelling density based on retention of rural character and conservation of important resources, including historic sites and structures, and wildlife.
- Considering the "rights" of the individual when making decisions as well as the "rights" of the community.

Goal: Encourage adequate housing and residential space to keep pace with a moderate population growth by:

- Clearly designating those areas in which additional housing is necessary and desirable.
- Minimizing the "bureaucratic machinery" a landowner faces when attempting to develop housing that is consistent with this plan.
- Avoiding the need for increased public services.
- Keeping density, and thus demand, as low as possible in the most rural areas.
- Determining "threshold" densities that require expensive public services.
- Exploring outside funding possibilities available to the County when new or improved services must be provided.

Economic

Goal: Maintain and enhance a viable economic base for Trinity County by:

- Maintaining as many privately owned prime timber, agricultural, mineral, sport and commercial fishery, and animal-producing lands as possible.
- Encouraging tourism.
- Implementing the General Plan so that it is applied fairly and consistently and by stabilizing land-use regulations.

Lewiston Community Plan Goals

This plan includes the area centered on the Trinity River from Lewiston Lake to slightly downstream of Grass Valley Creek.

Economic Development

Goal: To provide more diverse sources of income and stabilize the local economy.

- Create and encourage development of an employment intensive area within the central core area of Lewiston.

Goal: To encourage recreation development as a viable sector of the local economy.

- Develop the Historical Section of Lewiston as a Historical District oriented towards increasing tourism.
- Further develop and expand recreation developments along Rush Creek Road in order to provide for additional tourist camping facilities.
- Develop existing publicly owned access areas to the river to meet the needs of visitors to the area.
- Develop a community signage program to inform visitors of areas of interest in the community.

Goal: To provide for the economic viability of existing businesses which serve community residents.

- Maintain a balance between the need for additional community commercial sites and available land.
- Concentrate community commercial facilities within the community core area.

Goal: To ensure resource production lands continue to be utilized for such purposes.

- Encouragement of timber harvesting activities on the basis of sustained yield.
- Protection of resource areas from encroachment by incompatible uses.

Trinity County Housing Policies

In order to provide an adequate supply of housing, the County has established the following policies:

1. Encourage the overall production of housing.
2. Encourage the production of housing opportunities for all income groups.
3. Work towards improving infrastructure capacity.

4. Encourage the production of housing for persons with special housing needs.
5. Encourage the repair and rehabilitation of existing housing stock.
6. Ensure that there are adequate sites available to support future housing needs.
7. Prevent discrimination in housing.
8. Encourage citizen participation during the preparation of the housing element and other general and community plan documents.

Project Consistency with the Trinity County General Plan and Community Plans

The goals and objectives described in Chapter 1 are generally compatible with the applicable General Plan goals and policies summarized above. The overall goal of the Proposed Action is to rehabilitate the sites so that they function in a manner that is closer to historic conditions (i.e., pre-Lewiston Dam).

Enhancement of river recreation and tourism opportunities associated with the Trinity River would contribute to the local economy by creating new job and business opportunities, increasing the business volume of existing businesses, and adding to the current tax base. The County's General Plan and the Lewiston Community Plan have set goals aimed at moderate increases in population growth, encouraging area tourism, improving the condition of existing homes, and encouraging housing production. Implementation of the Proposed Action would provide a basis for economic growth and is thus consistent with local and county planning goals and objectives.

3.9.3 Environmental Consequences/Impacts and Mitigation Measures

Methodology

The following section provides a brief overview of the analytic methods used to assess the potential socioeconomic impacts of the Proposed Action and alternatives. These methods included qualitative assessments of potential impacts associated with employment, income, conflicts with county and local plans, population growth, displacement of persons and businesses, and community disruption. For the purpose of this assessment, Trinity County is considered to be the area of potential socioeconomic impact.

The generation of employment results in social benefits, even if the employment is short-lived. Implementation of the Proposed Action would generate new, temporary employment opportunities for Trinity County residents. Income generation is one measure of economic activity in a community. Income growth spurs secondary economic impacts that ultimately result in increased employment activities. The Proposed Action could directly generate income growth through the payment of wages and salaries. The duration of income growth, however, is an important consideration in determining the significance of an income change. Little increased long-term economic activity is likely to result from short-term income growth unless such growth is substantial.

Significant increases in population concentration or growth can produce negative socioeconomic impacts, such as a lack of affordable housing, or can result in socioeconomic benefits, such as increased local revenues. The potential for the Proposed Action to result in an increase in population concentration or an increase in population growth has been qualitatively assessed.

The displacement of people (through loss of residences or places of employment) generally results in negative socioeconomic impacts, such as a decrease in the local work force and loss of employment opportunities, in addition to the direct impact to the people concerned. The potential of the Proposed Action to result in the displacement of people has been qualitatively assessed.

Significance Criteria

For NEPA purposes, changes in employment and incomes rates are considered significant only if the change is equal to or greater than a minimum threshold of 10 percent, which is the minimum threshold at which there could be a regional impact. Other criteria relevant under NEPA are:

- The project would result in the displacement of an existing business;
- The project would induce substantial growth or concentration of population; or
- The project would displace a large number of people.

For purposes of CEQA, under which "[e]conomic or social impacts of a project shall not be treated as significant impacts on the environment," project impacts on population and housing are relevant only if they either (i) directly relate to an impact on the physical environment, in which case a lead agency may, but need not, consider economic or social impacts in determining whether such physical impacts are significant, or (ii) would result in a reasonably foreseeable indirect impact on the physical environment (See CEQA Guidelines, § 15131). Under CEQA, a proposed project would have a significant impact on population and housing if it

- induces substantial growth in an area, either directly or indirectly;
- displaces substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; and/or
- displaces substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Impacts and Mitigation Measures

Table 3.9-2 summarizes the socioeconomic impacts that could result from construction and operation of the project.

Table 3.9-2. Summary of Socioeconomics Impacts for the No-Action Alternative, Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.9-1	Construction of the project would provide temporary employment opportunities for construction workers in Trinity County.			
NI	B	B	B	B
Impact 3.9-2	Implementation of the project could result in the disruption or displacement of local businesses or persons.			
NI	LS	LS	N/A[1]	N/A[1]

Table 3.9-2. Summary of Socioeconomics Impacts for the No-Action Alternative, Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.9-3	Implementation of the project would result in an increased demand for housing during construction.			
NI	LS	LS	N/A[1]	N/A[1]
Impact 3.9-4	Implementation of the project would result in concentrated population growth.			
NI	LS	LS	N/A[1]	N/A[1]

Notes:
LS = Less than Significant NI = No Impact B = Beneficial N/A = Not Applicable
[1]Because this potential impact is less than significant, no mitigation is required.

Impact 3.9-1: Construction of the project would provide temporary employment opportunities for construction workers in Trinity County. ***No Impact for No-Action Alternative; Beneficial Impact for Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action alternative, no new employment opportunities would be created because the project would not be constructed.

Proposed Action and Alternative 1

Project implementation would generate temporary construction-related employment in Trinity County. The number of design, construction, and clerical positions required to complete the Proposed Action or Alternative 1 is undetermined, but implementation of either alternative is expected to add a small percentage to existing local jobs. The duration of this employment would depend on the length of the contracting and construction period (anticipated to be approximately 6 months). In addition, the Proposed Action and Alternative 1 would provide direct local employment opportunities only if workers are hired from the local labor force. Either action alternative would result in a short-term beneficial socioeconomic impact.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Impact 3.9-2: Implementation of the project could result in the disruption or displacement of local businesses or persons. ***No Impact for No-Action Alternative; Less-than-Significant Impact for Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, no disruption or displacement of local businesses would take place because the project would not be constructed.

Proposed Action and Alternative 1

Although several local businesses are located within or in close proximity to the Lewiston site, economic impacts associated with implementation of the Proposed Action or Alternative 1 would be less-than-significant. Some temporary, minor disruptions of river access at resorts such as the River Oaks Resort may occur, but the timing of construction activities to avoid interfering with the community's important economic periods, such as major fish runs, would maintain impacts at a less-than-significant level. Neither the Proposed Action nor Alternative 1 would require the displacement of any business or a significant disruption in business operations in the project area, therefore the impact would be less than significant.

Several residences are located in close proximity to the project sites. However, none are close enough to disrupt or displace the people living in them. This impact would therefore be less than significant.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Impact 3.9-3: Implementation of the project would result in an increased demand for housing during construction. ***No Impact for No-Action Alternative; Less-than-Significant Impact for Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, no increased demand for housing during construction would take place because the project would not be constructed.

Proposed Action and Alternative 1

The area surrounding the community of Lewiston is a rural residential area. Few rental opportunities exist within the Lewiston Community Plan area. What rental property does occur in adjacent rural residential areas is typically seasonal rental property available for recreational pursuits. More affordable and more readily available short-term rentals are concentrated in the nearby community of Weaverville. A short-term increase in the demand for housing in Weaverville could occur as a result of construction

workers seeking lodging during the construction period. This would be a less-than-significant impact because of the short time during which there would potentially be an increase in the demand for housing demand.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Impact 3.9-4: Implementation of the project would result in concentrated population growth. *No Impact for No-Action Alternative; Less than Significant Impact for Proposed Action and Alternative 1*

No-Action Alternative

Under the No-Action Alternative, there would be no population increases during or after construction because the project would not be constructed.

Proposed Action and Alternative 1

Implementation of the Proposed Action or Alternative 1 would have a less-than-significant effect on the population numbers of any Trinity County community either during or after construction. Since the majority of workers employed by the project would be drawn from the local work force and because the work is anticipated to be completed in a relatively short period of time, there would be no concentrated population increases associated with the Proposed Action or Alternative 1.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

3.10 Tribal Trust

The United States has a trust responsibility to protect and maintain rights reserved by, or granted to, federally recognized tribes and individual Indians by treaties, statutes, and executive orders. These rights are sometimes further interpreted through court decisions and regulations. The trust responsibility requires that all federal agencies, including Reclamation, take all actions reasonably necessary to protect Indian trust assets.

Indian trust assets are legal interests in property held in trust by the federal government for federally recognized Indian tribes or individual Indians. "Assets" are anything owned that has monetary value. "Legal interest" means there is a property interest for which there is a legal remedy, such as compensation or injunction, if there is improper interference. Indian trust assets do not include things in which a tribe or individual Indians have no legal interest.

Indian trust assets can be real property, physical assets, or intangible property rights, such as a lease or a right to use something. Indian trust assets cannot be sold, leased, or otherwise alienated without the approval of the United States. While most Indian trust assets are located on-reservation, they can also be located off-reservation. Examples of things that can be Indian trust assets are land, minerals, hunting and fishing rights, water rights, and instream flows.

3.10.1 Affected Environment/Environmental Setting

The need to restore and maintain the natural production of anadromous fish in the mainstem Trinity River originates partly from the federal government's trust responsibility to protect the fishery resources of the region's Indian tribes. The Trinity River Basin Fish and Wildlife Restoration Act of 1984 (Public Law 98-541) expressly acknowledges tribal interest in the basin's fishery resources by declaring that the measure of successful restoration of the Trinity River fishery includes the "ability of dependent tribal…fisheries" to participate fully, through enhanced in-river "harvest opportunities, in the benefits of restoration." In addition, the 1992 CVPIA specifically recognizes the federal trust responsibility in regard to the Trinity River fishery. The project could potentially affect anadromous fish, non-anadromous fish, water, wildlife, vegetation, and overall riverine health. These impacts could consequently affect the sociocultures and economies of tribes.

This section focuses principally on the interests of the Hoopa Valley and Yurok Tribes since, of the Indian tribes of the Klamath/Trinity Region, their interests could be the most directly affected by the project. It should be understood, however, that potential project impacts are pertinent to the Karuk and Klamath people as well, since they share a common regional heritage.

Regional Setting

The United States' recognition of the importance of rivers and fish to the Indian people of the Klamath/ Trinity Region is exemplified by the very shape and location of the lands first set aside for their reservations. The Secretary's own instructions at the time were "to select these reservations from such 'tracts of land adapted as to soil, climate, water privileges, and timber, to the comfortable and permanent

accommodation of the Indians'" (U.S. Fish and Wildlife Service et al. 2000). In 1855, Indian Agent S. Whipple, when speaking of the Yurok, noted that, "The river is abundantly supplied with Salmon. A fine large fish quite easily taken by the Indians and which is very properly regarded by the Indian as his staff of life" (U.S. Fish and Wildlife Service et al. 2000).

In that same year, President Pierce established the Klamath River Reservation. The reservation (not to be confused with the Klamath Reservation in Oregon) was designated as a strip of territory commencing at the Pacific Ocean and extending 1 mile in width on each side of the Klamath River for a distance of approximately 20 miles. This reservation was created entirely within the aboriginal territory of the Yurok. Although the federal government's intent was to eventually move all the region's Indians onto the Klamath River Reservation, only some Yurok and Tolowa were moved. Flooding along the Klamath River in 1862 led to the closing of the area's Indian Bureau office and contributed to the erroneous belief that the reservation had been abandoned, though it was still occupied by the Yurok (U.S. Fish and Wildlife Service et al. 2000).

On August 21, 1864, the Department of the Interior (DOI) issued a proclamation and instructions that established the Hoopa Valley Reservation on the Trinity River pursuant to legislation enacted by Congress that same year. The reservation is 12 miles square and bisected by 15 miles of the river (it has often been called the Square or the 12-mile Square). In 1876, President Grant issued an Executive Order formally establishing the boundaries of the Hoopa Valley Reservation, and provided that the land contained within those boundaries "be withdrawn from public sale, and set apart in California by act of Congress approved April 8, 1864" (U.S. Fish and Wildlife Service et al. 2000).

Efforts soon began to provide a single contiguous homeland for the region's Indian people by connecting the Klamath River Reservation to the Hoopa Valley Reservation. Paris Folsom, a Special Agent for the DOI, proposed that the two reservations be connected in his "Report of Special Agent on Conditions and Needs of Non-Reservation Klamath Indians," sent to the Commissioner of Indian Affairs in 1885.

In 1891, President Harrison extended the Hoopa Valley Reservation from the mouth of the Trinity River to the ocean, thereby encompassing and including the Hoopa Valley Reservation, the original Klamath River Reservation, and the connecting strip between. By that time, as a result of the Dawes Act of 1887, much of the Klamath River Reservation and extension lands (the 20-mile strip that connected the two reservations is commonly referred to as the "Connecting Strip" or "Extension") not already claimed as allotments by resident Indians had been opened up to non-Indian settlement. This led to checkerboard ownership of the Yurok portions of both the Extension and former Klamath River Reservation. Through various means, several timber companies quickly consolidated and heavily logged much of this land.

From 1891 through 1988, the Hoopa Valley Reservation was composed of the Hoopa Valley Square, the Extension, and the original Klamath River Reservation. In 1988, Congress, under the Hoopa-Yurok Settlement Act, separated the Hoopa Valley Reservation into the present Yurok Reservation (a combination of the original Klamath River Reservation and Extension) and Hoopa Valley Reservation. Figure 3.10-1 shows the current reservation boundaries.

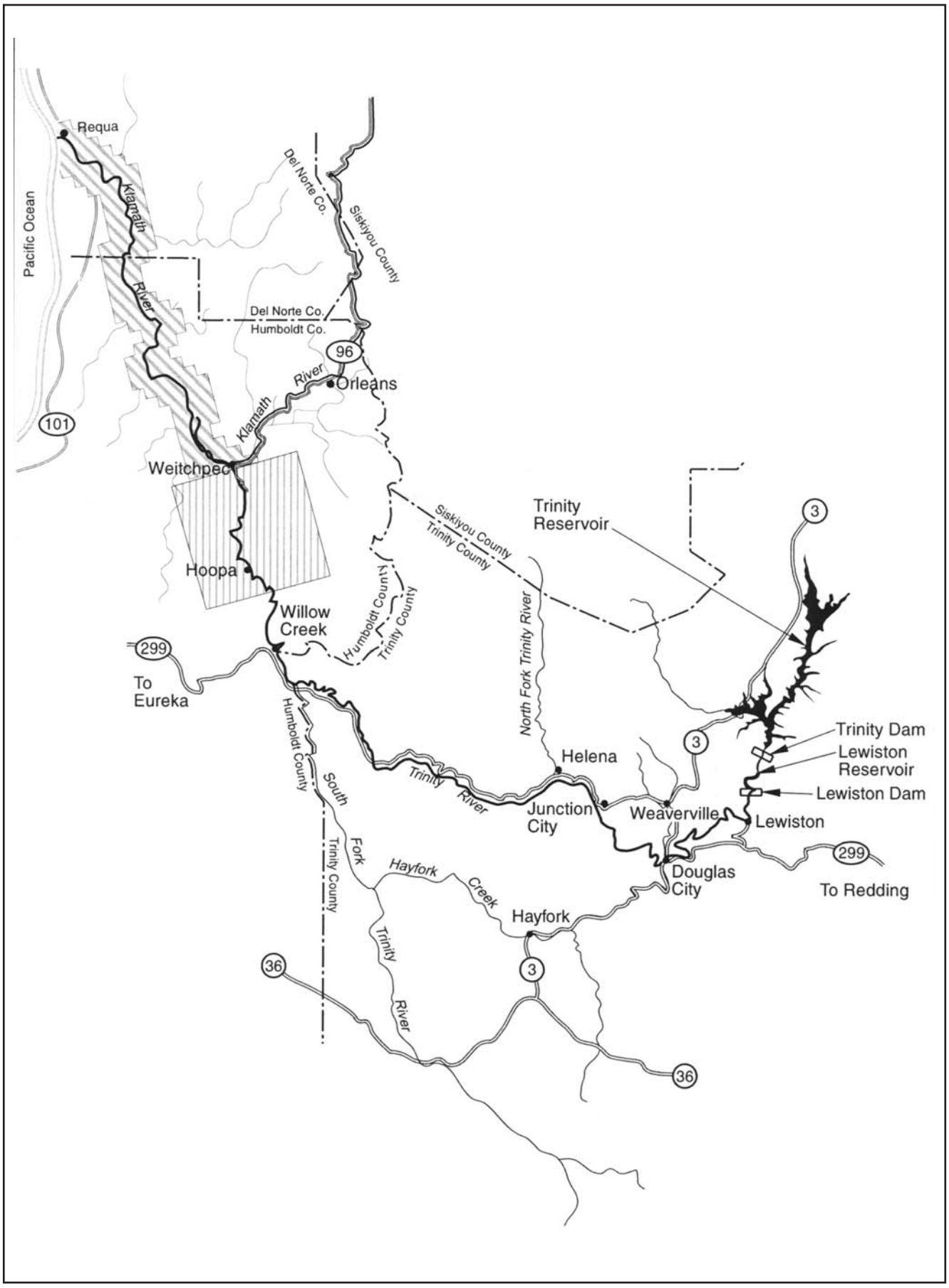

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Figure 3.10-1
Trinity Basin Reservations

Indian Federally Reserved Rights

By first creating reservations "for Indian purposes," the United States sought to provide the Hoopa Valley and Yurok Tribes with the opportunity to remain mostly self-sufficient, exercise their rights as sovereigns, and maintain their traditional ways of life (U.S. Fish and Wildlife Service 2000). Implicit in this objective was an expectation that the federal government would protect the Tribes and their resources, a protection that extended beyond reservation borders.

The United States has a trust responsibility to protect tribal trust resources. In general, this tribal trust responsibility requires that the United States protect tribal fishing and water rights, which are held in trust for the benefit of the tribes (U.S. Department of the Interior 1995). This trust responsibility is one held by all federal agencies. For the project, Reclamation is obligated to ensure that project operations do not interfere with the tribes' senior water rights. Pursuant to its trust responsibility and consistent with its other legal obligations, Reclamation must also prevent activities under its control that would adversely affect Tribal fishing rights, even when those activities take place off-reservation.

Fishing Rights

Salmon, steelhead, sturgeon, and lamprey that spawn in the Trinity River pass through the Hoopa Valley and Yurok Reservations and are harvested in tribal fisheries. The fishing traditions of these tribes stem from practices that far pre-date the arrival of non-Indians. Accordingly, when the federal government established what are today the Hoopa Valley and Yurok Indian Reservations on the Trinity and lower Klamath Rivers, it reserved for the benefit of the Indian tribes of those reservations a right to the fish resources in the rivers running through them. The Yurok and Hoopa Valley Tribes' federally reserved fishing rights entitle them to take fish for ceremonial, subsistence, and commercial purposes. The United States has long recognized the rights of the Hoopa Valley and Yurok Tribes of the Klamath/Trinity River basin to fish. The federal government, as trustee, has an affirmative obligation to manage federally reserved Indian rights for the benefit of federally recognized Indian tribes. Federally reserved Indian fishing rights are vested property rights held in trust by the United States for the benefit of the Indians. These rights have been acknowledged and confirmed by the executive, legislative, and judiciary branches of the federal government in a number of authorities including: (1) Secretarial Issue Document on Trinity River Fishery Mitigation, issued January 14, 1981; (2) Opinion of the Solicitor of the DOI re: Fishing Rights of the Yurok and Hoopa Valley Tribes (M-36979: October 4, 1993); (3) the CVPIA (3406 (b) (23)); and (4) *Parravano v. Babbitt*, 837 F. Supp. 1034 (N.D. Calif. 1993), 861 F. Supp. 914 (N.D. Calif. 1994), affirmed 70 F.3d 539 (9th Cir. 1995), cert. denied, 518 U.S. 1016 (1996).

In most cases, federally reserved Indian fishing rights cannot be supplanted by state or federal regulation. The above-referenced 1993 Solicitor's opinion: (1) reaffirms the historic and legal basis of the federally reserved fishing rights of the Hoopa Valley and Yurok Tribes; (2) acknowledges the federal government's cognizance of the importance of fish to these Indians at the time it first established reservations on their behalf; (3) concludes that the tribes' federally reserved fishing rights entitle them to harvest quantities of fish on their reservations sufficient to support a moderate standard of living, or 50 percent of the harvestable share of the Klamath-Trinity basin fishery, whichever is less; (4) recognizes that under the current depleted condition of the fishery, a 50 percent allocation does not adequately meet the tribes'

needs; and (5) argues that it was the degree of the Hoopa Valley and Yurok tribes' dependence on fisheries at the time their reservations were first created or expanded, and not the tribes' specific uses of the fish, that is relevant in quantifying their federally reserved fishing rights.

Today, the reserved fishing right includes the right to harvest quantities of fish that the Indians require to maintain a moderate standard of living, unless limited by the 50 percent allocation. Specifically, the tribes have a right to harvest all trust species of Klamath and Trinity River fish for their subsistence, ceremonial, and commercial needs. Tribal harvest of these species is guided by conservation requirements outlined in carefully developed tribal harvest management plans.

Water Rights

In addition to fish, the tribes have reserved rights to water. The concept of reserved rights in general, and Indian reserved water rights specifically, originated just after the start of the 20th Century with Winters v. United States, 207 U.S. 564 (1908). The ruling in this case, commonly referred to as the Winters Doctrine, states that when the federal government established a reservation, it implicitly reserved a quantity of water necessary to fulfill the purposes of said reservation. Generally, all original documents related to the establishment of reservations—treaty, executive order, or statute—indicate, at a minimum, that the purpose of the reservations is to provide a permanent home for the tribe(s) in question. In cases where reservations have been created with specific language stating or implying reserved fishing, hunting, gathering, or other rights, the Winters Doctrine has been interpreted to mean that adequate water supplies for these purposes have been reserved (even in addition to more general uses; see U.S. v. Adair, 723 F.2d 1410 [9th Cir. 1983]).

The DOI Solicitor's office reaffirmed these rights with respect to Reclamation's activities, stating that "Reclamation is obligated to ensure that project operations not interfere with the Tribes' senior water rights. This is dictated by the doctrine of prior appropriations as well as Reclamation's trust responsibility to protect tribal trust resources" (U.S. Department of the Interior 1995). Furthermore, the Solicitor's office notes that the Secretary, "through Reclamation, must operate reclamation projects consistent with vested, fairly implied senior Indian water rights" (U.S. Department of Interior 1995). Further, absent a "completed adjudication or other determination of the senior water rights," projects must be "operated based on the best available information."

Rights to Wildlife and Vegetation Resources

While the focus of the legal history surrounding Indian rights to resources has concentrated on water and fisheries, it is important to recognize that other resources, such as wildlife and vegetation, are extremely important to the tribes, and the tribes have assessed that these are no less reserved. In the case of the Hoopa Valley and Yurok Tribes, the decline in the health of the region's rivers has limited the availability of grasses and other plants important to traditional basketry, art, and medicine. Thus, while anadromous fish are the focus of the TRRP, other trust assets such as vegetation are embodied in the federal government's trust responsibility and, accordingly, need to be considered in the decision-making process.

Potentially Affected Indian Trust Assets

Indian tribes of the Klamath/Trinity Region have firmly established federally protected rights to numerous natural resources. These general resource groupings represent culturally important Indian trust assets. A partial list of trust assets is presented in Table 3.10-1. While each tribe has its own uses for the species and resources listed, the table provides a general summary of what these uses are.

Table 3.10-1. Partial List of Klamath/Trinity Region Tribal Assets

Asset	Primary Uses by Tribes
Aquatic Resources[1]	
Water	Subsistence, ceremonial, commercial, medicine
Fall Chinook salmon	Subsistence, ceremonial, commercial
Spring Chinook salmon	Subsistence, ceremonial, commercial
Summer steelhead	Subsistence, ceremonial, commercial
Fall steelhead	Subsistence, ceremonial, commercial
Winter steelhead	Subsistence, ceremonial, commercial
Coho salmon	Subsistence, ceremonial, commercial
Pacific lamprey	Subsistence, ceremonial, commercial
Sturgeon	Subsistence, ceremonial, commercial
Eulachon	Subsistence, ceremonial, commercial
Terrestrial Resources	
Willow shoots	Basketry, ceremonial
Cottonwood	Basketry
Wild grape	Basketry
Bulrush	Basketry
Hazel sticks	Basketry and weaving, ceremonial
Tules	Medicine
Spearmint	Medicine, subsistence
Blackberries	Subsistence
Bear	Subsistence
Bald eagle	Ceremonial
Blue heron	Ceremonial
Mallard	Ceremonial

[1]While many of the fish listed are not currently commercially harvested by the tribes of the region, all these trust species were historically used for commercial purposes and the tribes continue to have the right of commercial harvest.

Cultural Environment

Native uses of natural resources and the cultural significance of those resources have developed over many centuries. Since time immemorial, native people have lived in the heavily forested drainages of the Klamath and Trinity rivers and adjacent streams in northwestern California. Over time, they learned to efficiently use the natural bounty of their territories; hunting, fishing, and gathering were the foundation of their societies. Tribes in the area included the Chilula, Hoopa Valley, Nongatl, Tsnungwe, and

Whilkut, which spoke Athabascan languages; the Chimariko, Karuk, and Shasta, which spoke Hokan languages; the Wintun, which spoke a Penutian language; and the Wiyot and Yurok, which spoke Algonkian languages.

Some of these tribes, such as the Chilula, no longer exist. Others, including the Chimariko and Wintu, have not been officially recognized by the United States as a distinct and sovereign people. In fact, among the Indian peoples still present within the region, only the Hoopa Valley, Karuk, Klamath, and Yurok Tribes have received this recognition.

The aboriginal lands of the Hupa people are centered on the drainages of the Hoopa Valley of the Trinity River. The aboriginal lands of the Yurok were generally centered on the Klamath River drainage from the mouth of the river at the Pacific Ocean up to and including the Slate Creek drainage. Yurok ancestral territory also extends up the Trinity River to Tank Creek and includes the village of Oslegoits, 6 miles from the Trinity's confluence with the Klamath.

There have always been strong social, cultural, and economic ties among the tribes of the Klamath/Trinity basin, based in large part on a shared reliance on the region's rivers and associated resources, particularly salmon. This reliance extends well beyond subsistence and commerce to the cultural and social fabric of their societies, as evidenced by their traditional, ceremonial, and spiritual ways of life that focus and center on the rivers and the fish, wildlife, and vegetation they support. For Indians of the Klamath/Trinity Region, the interaction and identification with the natural environment define their cultures, lifestyles, and religions; therefore, the degradation of the natural environment has had a profoundly devastating impact.

Local Setting

Based on consultation with the Tribes and Reclamation, the project sites contain Trust assets, including fish, vegetation, and wildlife. Please refer to section 3.6 (Fishery Resources) and section 3.7 (Vegetation and Wildlife) for a discussion of these resources. While no specific use of the sites by the Tribes has been identified, the Trinity River provides a valuable corridor that connects these resources to the Hoopa Valley and Yurok Tribes.

3.10.2 Environmental Consequences/Impacts and Mitigation Measures

The purpose of this section is to evaluate the potential impacts of the alternatives on tribal trust assets and the subsequent effects those impacts may have on the Indian tribes of the Klamath/Trinity basin.

Methodology

While the project is aimed at improving the river's anadromous fisheries, an assessment of how project construction may actually affect the Indian trust assets of the Hoopa Valley and Yurok Tribes must be performed, as directed in the DOI Departmental Manual, Part 512, Chapter 2, and Reclamation's Indian Trust Asset Policy. Toward this end, the Indian trust asset impact evaluation focuses on the potential effect of the project on the health of the Trinity River because the river's overall health is a primary factor in determining the availability of fish and, therefore, the ability of the Hoopa Valley and Yurok Tribes to exercise their federally reserved fishing rights. Thus, increased numbers of Chinook salmon and Pacific

lamprey, and the rejuvenation of other trust assets, represent an expected beneficial byproduct of improved riverine health. The potential tribal trust impacts are not evaluated on a trust asset by trust asset basis.

Significance Criteria

Nothing in CEQA expressly requires lead agencies to consider projects' impacts on tribal trust assets as a distinct category of impacts. Therefore, no specific significance criteria were applied in the evaluation of potential consequences on tribal trust assets. Any potential modification of, or change in, the quantity or quality of downstream tribal trust assets is, however, evaluated. With its focus on the physical environment, CEQA requires agencies to focus on impacts to specific natural or environmental resources, some of which, such as fish, wildlife, and water quality, might be indirectly related to tribal trust values.

Although CEQA does not expressly require the application of specific significance criteria for potential impacts to Indian trust assets, NEPA requires the evaluation of potential impacts to Indian trust assets as a distinct category of impacts. This evaluation assessed the impacts of the project from any modification or change in the value, use, quantity, quality, or enjoyment of downstream Indian trust assets.

Impacts and Mitigation Measures

Table 3.10-2 summarizes potential impacts on Indian trust assets that would result from implementation of the project.

Table 3.10-2. Summary of Tribal Trust Impacts for the No-Action Alternative, Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.10-1. Implementation of the project may reduce the quantity or quality of trust assets.				
NI	LS	LS	N/A[1]	N/A[1]

Notes:
LS = Less than Significant S = Significant SU = Significant Unavoidable
NI = No Impact B = Beneficial N/A = Not Applicable
[1]Because this potential impact is less than significant, no mitigation is required.

Impact 3.10-1: Implementation of the project may reduce the quantity or quality of Indian trust assets. ***No Impact for No-Action Alternative; Less-than-Significant Impact for Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, the project would not be implemented, and no impact to tribal trust assets would occur.

Proposed Action and Alternative 1

Under either alternative, the Trinity River would continue to support tribal trust assets. The short-term impacts described in Section 3.3 (Geology, Fluvial Geomorphology, and Soils); Section 3.5 (Water Quality); Section 3.6 (Fishery Resources); and Section 3.7 (Vegetation, Wildlife, and Wetlands) would occur if the project is implemented. These impacts are expected to be short-term and to be outweighed by the overall benefits to tribal trust assets through implementation of the TRRP. Therefore, this impact would be less than significant.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

Since no significant impact was identified for the alternatives, no mitigation is required.

Significance after Mitigation

N/A

3.11 Cultural Resources

This section describes the prehistory, ethnography, and history of the Trinity River region and summarizes the findings of a cultural resources records search and cultural resources report prepared by Reclamation. The information contained in this section provides a general context for understanding the importance, origin, and types of cultural resources that are located within and near the proposed Lewiston-Dark Gulch Rehabilitation Project. Because neither the Proposed Action nor the alternatives would affect cultural resources outside of the Trinity River basin, the following discussion will address only those cultural resources associated with the Trinity River basin. Specific archaeological details of the Lewiston-Dark Gulch project are discussed in confidential report 07-NCAO-001: *Archaeological Investigation of the Lewiston and Dark Gulch Channel Rehabilitation Project Areas for the Trinity River Restoration Project, Trinity County, California*, by the Bureau of Reclamation, Sacramento, California (U.S. Bureau of Reclamation 2007).

3.11.1 Affected Environment/Environmental Setting

Regional Archaeology and Ethnography

Five periods of prehistory have been described for California's northwest coastal region, which includes the Trinity River basin. These periods are the Paleo-Indian (10,000-6,000 B.C.), Lower Archaic (6,000-3,000 B.C.), Middle Archaic (3,000-1,000 B.C.), Upper Archaic (1,000 B.C.-A.D. 500), and Emergent (A.D. 500-1800). Periods are characterized by their "pattern," a term that refers to a culture's technology as revealed by the type and sophistication of its tools, such as stone or bone projectile points used for hunting, warfare, or fishing; stone metates and manos used to grind seeds; and mortars and pestles used to grind acorns.

At the time of Euro-American contact, the Chimariko, Hupa, Tsnungwe, Wintu, and Yurok Indian tribes inhabited the Trinity River region (to the Klamath River confluence) and the area inundated by Trinity Lake and Lewiston Reservoir. The Wintu are thought to have been the primary inhabitants of lands encompassed by the Lewiston-Dark Gulch sites.

Chimariko

The Chimariko inhabited a 20-mile reach of the Trinity River extending from approximately Big Bar to the mainstem river's confluence with the South Fork Trinity River. The Chimariko lived in an area with abundant natural resources. The staples of their diet were salmon and acorns, but deer, elk, bear, pine nuts, seeds, berries, roots, and small mammals were also important food sources.

Little is known of the Chimariko social organization since their culture was destroyed at an early date. The information that remains indicates that the largest social unit was the village. Each village had a headman, which was a hereditary lifelong position passed through the male line. Status in Chimariko society was determined by wealth or a combination of wealth and birth. Only fragmentary data on Chimariko religion and myths exist. Although the Chimariko language no longer exists, it is thought to have been of Hokan stock.

Hupa

The Hupa inhabited the lower reaches of the Trinity River in the region surrounding the river's confluence with the Klamath River. The Hupa relied heavily on salmon and acorns as food sources, but also used other fish, nuts, seeds, roots, deer, elk, rodents, and fowl.

As with many native groups of northwest California, the highest political entity was the village, but the Hupa had no formal chief or ruling council, and were instead ruled by individuals having prestige based on wealth. Wealth was defined in terms of the possession of nonsubsistence goods (usually imported items) gained by such means as trade, gambling, and indemnities. The Hupa excelled in woodworking and basket making (twined basketry).

The Hupas remained undisturbed until the 1850s, when the discovery of gold in the Trinity River basin attracted would-be miners into the area. In 1864, the Interior Department established the Hoopa Valley Reservation, centered near the confluence of the Trinity and Klamath rivers, followed by establishment of a boarding school in 1893. A business council was formed by the community in 1933, and that same year a public school was opened on the reservation. Today, the Hoopa Reservation is California's largest and most populous reservation. It is home to more than 2,000 members and maintains the largest accumulation of tribal funds in the state.

Wintu

At the time of Euro-American contact, most of the western side of the Sacramento Valley (north of Suisun Bay) was inhabited by Wintun-speaking people. Early in the anthropological study of the region, Powers had recognized a linguistic and cultural distinction between the southern membership of this large group (i.e., the Patwin) and the people occupying the northern half of the western valley (Powers 1976). Subsequent linguistic analyses resulted in the present division of Wintuan into a southern (Patwin) group, a central (Nomlaki) group, and a northern (Wintu) Wintuan stock. Clearly, however, the central and northern Wintus are very closely related and share numerous cultural traits and attributes.

The Wintu were divided into nine subgroups distributed from Cottonwood Creek in the south, northward through Shasta County and into portions of Trinity and Siskiyou counties, and westward into portions of southern Trinity and northern Tehama counties. Within the general vicinity of the project boundaries, the Wintu inhabited the Trinity River basin upstream of Junction City, including the area inundated by Trinity Lake and Lewiston Reservoir.

Wintu subsistence was based on three main staples: deer, acorns, and salmon. All three of these food sources were abundant along the mainstem Trinity River and its primary tributaries, although acorns and deer were available only seasonally.

The available ethnographic information documents a complex pattern of land use, settlement, and subsistence. The salmon runs, the locations of seasonally available big game (especially deer), and the distribution of acorn-yielding oak trees made it necessary that the Wintu periodically travel far from their home territory. Although these extended forays were often arduous, they allowed the Wintu an

opportunity to collect non-native raw materials, such as obsidian and other utilitarian materials that could not be obtained through trade.

The contemporary Wintu community is relatively small in terms of the number of individuals. Currently, there is only one federally recognized group of Northern Wintu, located on the Redding Rancheria, but at least four additional Northern Wintu groups dispersed throughout Shasta and Trinity counties are in various stages of seeking federal recognition.

Yurok

The Yurok inhabited California's northwestern coastline from Little River to Damnation Creek, although their ancestral territory included the Klamath River corridor from the estuary upstream to Slate Creek near present-day Trinity Lake. Food sources included salmon, ocean fish, sturgeon, sea lion, whale, elk, deer, and duck, with acorns, berries, bulbs, and grass seed rounding out the traditional diet.

Yurok life is defined by extended families affiliated with villages and represented by head spokespersons. Ceremonial wealth and rights to subsistence resource areas determine familial standing within Yurok social structure. Yurok are recognized for their highly stylized art forms and their skills in making redwood canoes, weaving fine baskets, hunting, and, especially, riverine salmon fishing. Many ancient traditions are continued through contemporary times.

Today, the Yurok Tribe is the largest Native American tribe in California, with nearly 5,000 enrolled members. The Yurok Reservation, which occupies 63,035 acres centered along the Klamath River corridor, is the size of many cities or counties, but does not have the tax base, gaming, or other business revenues available to create sustainable economic development on the Reservation. Poverty among the Yurok Tribe exceeds 80 percent.

History

Regional History

The region's first recorded European exploration occurred in 1845 when Major Pierson P. Reading discovered and named the Trinity River (the English translation of "Trinidad") when he mistakenly thought that the river emptied into the Pacific Ocean at Trinidad Bay. It is probable that fur traders like Jedediah Smith visited the region prior to 1845, although there is no written documentation available.

Major Pierson B. Reading, who owned a ranch in the northern Sacramento Valley, made several expeditions into Trinity County beginning in 1845. After doing some gold prospecting in Shasta County, he began prospecting what is now called Readings Creek in 1848. He and a large crew worked the creek down to Readings Bar at its confluence with the Trinity River. After six weeks, they returned to Shasta County with approximately $80,000 in gold. The news of his discovery triggered a rush to Trinity County between 1848 and 1850 (Jones 1981).

Boom towns quickly sprang up throughout the basin, with Weaverville and Trinity Center being among the largest, and nearly every flat and bar along the river was subsequently prospected. Within the area of

potential effect (APE), the community of Lewiston was founded to support mining activities in the upper Trinity River basin. A number of ranchers also came with the miners of the 1850s and supplemented the existing farming population. Milling lumber was also an important local industry in the late 1800s because the mines used large quantities of lumber for flumes, shoring, housing, and general equipment (Colby 1982; Medin 1998). In fact, there were more people living in the Trinity area in the 1850s than have ever inhabited the area at any one time since. In 1853, it was estimated that close to 2,000 Chinese alone lived and worked in Weaverville. This boom, however, was relatively short lived.

One of the early surveyors of the area was William S. Lowden, who purchased 160 acres along the Trinity River west of Lewiston in 1852 near the APE at Dark Gulch. He became one of the most prominent settlers in the county as he not only maintained a productive ranch, but he also worked as an express rider, surveyor, land attorney, and a road builder. The Lowden family also pursued mining and logging activities and developed a stage stop and hotel. In 1855, he built a toll bridge across the river to connect existing pack trails and the first wagon road (Grass Valley or Buckhorn Road) into the county in 1858 (Jones 1981).

Following the discovery of gold near Reading's Creek in 1848, various placer mining claims were established and mining continued off and on through the 1960s (Bradley 1941). The development of mining technology can be characterized as a progression of techniques that improved upon former methods to increase the volume of gravels that could be processed and the efficiency of mining gold. Improvements in technology that allowed the scale of mining operations to increase necessitated more capital investment. A few entrepreneurs formed companies to develop larger mines. Companies reinvested their profits, which were often not enough to develop a promising load. Speculators encouraged outside investment, usually from San Francisco, but by the 1870s, they were soliciting financial backing from the eastern United States and Europe (Kelley 1959; Medin 1998).

Early miners typically employed hand equipment, including pans, picks and shovels, cradles, sluice boxes, and various combinations thereof. The initial strategy focused on panning stream bed deposits. Gold became difficult to extract by the 1860s as the easily worked deposits along the river were played out. As the profitability of gold mining decreased by the 1870s, many miners sold their claims to become farmers, who sold their produce to miners, pack trains, stage companies, and local restaurants and hotels. The federal census data show that by 1870, only 15 percent of the work force was engaged in mining while 26 percent were farming (Elliot and Moore 1880; Medin 1998; Moore 1970). While many Euro-American miners abandoned their claims, Chinese miners and mining companies continued to mine (Kelly and McAleer 1986).

Ground sluicing became common in the 1850s as a way to access gold deposits in the stream channels and on the land above the river and creeks. By the 1860s, this technique was the dominate method of gold mining (Kelly and McAleer 1986). A ground sluice is a channel or trough in the ground, often hand dug to achieve the correct slope, through which gold bearing gravels are washed. Unlike the previous sluice box and cradle operations, ground sluicing required large quantities of water with which to excavate the ground. This need resulted in the construction of extensive networks of ditches, flumes, and penstocks. The intent was to reach bedrock since gold deposits are typically richest in the contact zone

between the bedrock and overlying gravels. The practice of ground sluicing generally declined after about 1900. The method for ground sluicing was the antecedent to hydraulic mining (Kelly and McAleer 1986; Lindstrom 1988; Medin 1998; Ritchie 1981; Tibbetts 1997).

The advent of hydraulic mining was one of the major innovations for placer mining gold. Pressurized water directed by a hose and nozzle system, call a monitor or giant, was used to remove overburden and wash gold-bearing gravels through elaborate systems of sluice boxes. The hydraulic technology created a boom as it allowed mining to expand to the higher benches previously inaccessible due to their distance from water. The peak of hydraulic mining lasted from the 1860s to the 1880s, when the nation's first environmental lawsuits led to its strict regulation and eventual demise (Medin 2007). The millions of tons of silt, sand, and gravel that washed down from the mines was the industry's undoing. With the Sawyer injunction of 1884, the industry collapsed and the hydraulic miners abandoned the diggings for other work.

The refinement of placer mining culminated with dredging. Dredges were used where large placer fields existed in river canyons, such as those along the Trinity River, beginning during the late 1890s (Trinity County Historical Society 1974). Dredging operations were sporadic up to the turn of the century because this system for recovering gold was still fairly new and many operations were unsuccessful. Experimentation and refinement led to more effective gold recovery and, by 1905, a more efficient system of revolving screens and shaking tables to separate gold from sand and gravels had been invented and used successfully. Dredge mining along the Trinity River boomed during the 1910s and 1920s as dredging became more efficient and a profitable business involving major investors, foreign and domestic (Medin 2007; Trinity County Historical Society 1974).

After about 1918, the end of World War I, larger, electrically driven dredges were constructed that were capable of stacking waste rock much higher than the smaller steam-powered dredges. Drag-line dredges never became as large as the bucket-line dredges, and their associated tailings deposits remained markedly smaller in height and proportion. The hallmark of dredge mining is the tailings piles, which are still visible along the river. In addition, the two types of dredges deposited tailings in different arrangements.

World War II curtailed mining activity, and large-scale operations were shut down permanently after 1942, when the United States entered the war. Much of the usable infrastructure needed for mining operations was removed and used as scrap to support the war effort.

As the gold disappeared and railroads expanded, logging became a more important local industry than mining. Communities in the Trinity River Basin developed economies based on timber harvesting, although accelerated harvesting and economic growth in the timber industry did not come about until after World War II, when modernization and improved technologies occurred. From World War II until about 1994, the timber industry was considered the economic engine for the county.

Local History

The evidence for ground sluice and dredge mining along the Trinity River is prominent in portions of the APE for the Proposed Action. The APE broadly defines the area where rehabilitation activities are planned and where cultural resources might be affected. Ground sluice mining within the APE at Dark Gulch likely occurred between about 1860 and 1910. Dredging throughout the Lewiston and Dark Gulch APE occurred between about 1912 and 1940 and obscured almost all visible remains of prior mining operations.

Claim records show that a mineral patent for placer mining in the NE ¼ NW ¼ of Sec. 24 and the SE ¼ SW ¼ of Sec. 13, T.33N., R.9W. was issued to George W. Wood in 1874. This is the same location where a network of sluice channels and hand-stacked rock alignments were identified, covering approximately 4.5 acres on the edge of a river terrace. The nearest documented site of ground sluice mining is the Ohio Flat Mining District on the south side of the Trinity River in Grass Valley across from Trinity House Gulch. This site is about one and a half river miles downstream of the APE at Dark Gulch. Studies of the ground sluice channels and features, associated artifacts, and tree ring dates at the Ohio Flat site demonstrate that mining activity occurred from the 1860s to about 1910. Claim records indicate that this site was mined primarily by Chinese individuals and companies (Kelly and McAleer 1986).

By 1900, Lewiston had developed into a sizeable mining community and ground sluice, hydraulic, and dredge mining are documented along this reach of the Trinity River before 1900. A total of about 14 bucket-line dredges operated on the Trinity River, three of which are documented to have mined the Trinity River at Lewiston and Dark Gulch. These dredges, the Trinity (Gold) Dredging Company, the Gardella Dredge, and the Gold Bar Dredge, were built locally and were a steady source of employment for residents of Lewiston, Douglas City, Minersville (now inundated by Trinity Lake), and other communities along the river. Dredging in the APE at Lewiston can be reasonably attributed to the Trinity and Gold Bar dredges and dredging at Dark Gulch to the Gardella and Gold Bar dredges (California State Mining Bureau 1922, 1923, 1941; Jones 1981; Trinity County Historical Society 1974).

The construction of Trinity and Lewiston dams between 1956 and 1962 greatly changed the character of the APE at Lewiston. Both dams are zoned earth fill structures. Trinity Dam is 538 feet high with a crest length of 2,450 feet and Lewiston Diversion Dam is 91 feet high and 754 feet wide at the crest (U.S. Bureau of Reclamation 1961). The dredge tailings near each dam were removed and used for construction of the dams. Additionally, Reclamation constructed headquarters, a housing project, shopping center, and new school, expanding the community of Lewiston to accommodate the great influx of workers (Jones 1981). The construction of the dam and facilities for the resident population modified the topographic relief within the APE dramatically. Compared to the extent of dredge tailings illustrated on USGS quadrangle maps, it is apparent that nearly all visible tailings in the Lewiston area were removed or altered beyond recognition.

Present Environment

Regional Setting

The Trinity River basin remains a culturally significant area for several Native American tribes, including the Hupa, Wintu, Yurok, and descendants of the now extinct Chimariko. Not only do these tribes have ties to this region that pre-date written history, but some modern-day tribal members try to continue many of the traditional uses of the area's natural resources, such as salmon fishing. However, retaining a culture in the wake of dam construction that was traditionally and inextricably tied to the pre-dam river ecology has resulted in conditions that are less than ideal for the continuation of some traditional practices. Changes to native land use practices brought about by the dam, current land uses, and increased population densities define a totally different kind of interaction by the native people with their environment.

A long history of flooding, fire, and vandalism have taken their toll on many potentially historically significant resources in the region. Few commercial mining operations remain, and most current mining is recreational. A decline in the timber industry resulting primarily from changes in human values has had a significant effect on the regional economy. Mill closures and fewer logging-related jobs have created a generally depressed economy in the region. However, some communities such as Weaverville have turned to their historic downtowns and rich mining history to develop a new economic base built on tourism.

Local Setting

Area of Potential Effect

Reclamation negotiated a Programmatic Agreement (PA) with the California State Historic Preservation Offices (SHPO) and the Advisory Council on Historic Preservation in November of 2000 (Appendix F) for Section 106 compliance regarding the Trinity River Main Stem Fishery Restoration Project. By design, the programmatic APE is general in nature and encompasses a larger area than the specific locations identified for restoration. The PA outlines how Reclamation conducts Section 106 compliance as well as provides direction on how to deal with resources identified within the programmatic APE. Specific locations for restoration activities within the programmatic APE are delineated individually. An APE for each of these project specific locations is the subject of Section 106 compliance pursuant to the PA.

The APE for cultural resources was established by identifying the specific locations where restoration efforts would take place at Lewiston and Dark Gulch (Figure 3.11-1). The APE is represented by a series of adjacent, as well as discontinuous areas, along the Trinity River. Access to the APE would be via existing roads and staging would occur in previously developed areas. Restoration activities, including some staging area and access route development, are proposed within the 10- year floodplain. Excess materials would be stockpiled on and near the existing tailings at Gold Bar (U-1 DG) and Bucktail Bar (R-3 DG).

Archaeological and Historical Information Sources

A records search for the Trinity River-wide APE was conducted in support of this EA/Draft EIR, and an additional records search was conducted for the general project area using the Northeast Center of the California Historical Resources Information System at Chico State University. Reclamations' records were also reviewed. Only one archaeological survey was identified in the APE. The U.S. Bureau of Reclamation (2002) surveyed Bucktail Bar in the APE at Dark Gulch. Records show one historic property, Bridge 5C-32, located in the APE at Lewiston. This bridge, over which Lewiston Turnpike crosses the Trinity River, is listed on the National Register of Historic Places under Criterion C as a distinctive example of a type and method of construction. It is one of only three remaining bridges built by the San Francisco Bridge Company. This Baltimore truss span, built in 1901, is the longest of the three. The bridge was built in 1900 by James "Cap" Phillips, who was part of the Olney Phillips family that had kept the original toll bridge across the river. This bridge replaced the original covered bridge (Trinity County Historical Society 1981). The original bridge, built in 1851, was the first bridge across the Trinity River at Lewiston. It was washed away a few years later, as were subsequent bridges, until the present steel bridge (Bridge 5C-32) was constructed (Jones 1981).

Native American Consultation

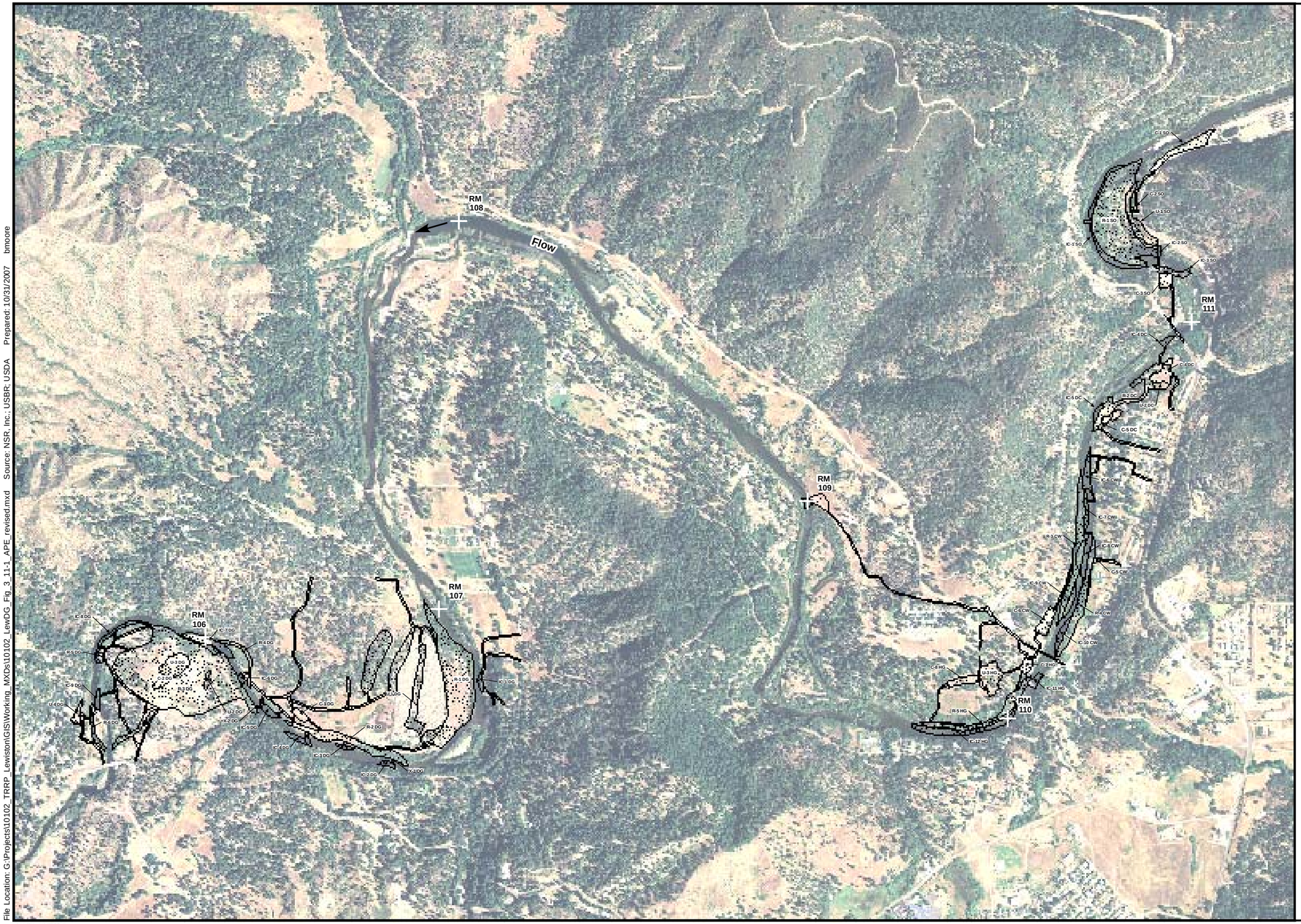
The Hoopa Valley Tribe (HVT) is a signatory of the PA and was an active participant in the preparation of the Trinity River Restoration Mainstem Fishery Restoration EIS/EIR. The HVT is a strong supporter of the TRRP and is a member of the Trinity Management Council, which provides guidance for TRRP staff. The HVT was notified of the Lewiston-Dark Gulch Project pursuant to the 36 CFR Part 800 regulations. The Native American Heritage Commission previously identified two federally recognized tribes and four non-federally recognized Indian groups as possibly having cultural resource information applicable to the Lewiston-Dark Gulch Project area and its vicinity. Letters of inquiry were sent to these tribes and non-federally recognized groups to determine the presence of cultural resources within the APE pursuant to 36 CFR Part 800.4(a)(3) and (4). To date, Reclamation has received no response to these inquiries.

Field Inventory and Evaluation

Three cultural resources were recorded during these surveys and are documented in the archaeological specialist's report (U.S. Bureau of Reclamation 2007).

Site 07-TRRP-001

The majority of Bucktail Bar appears to have been dredge mined. Situated a little east of center are two discernable deposits of dredge tailings, recorded as the 07-TRRP-001, that seem to be the last clear remnant of dredging activity. The two sets of tailings cover 3 acres and 1 acre, respectively, and are about 200 feet from the left bank of the Trinity River. The north tailings pile is approximately 10 feet high. The south tailings pile is about 7 feet high and situated lower in elevation than the northern tailings at the base of a large cut bank and may simply be a result of the previous gravel mining operation. These remains, and most of Bucktail Bar, have been affected by gravel mining operations and periodic high water events. Based on the size of the deposit and the extent of apparent dredging, the last type of dredge



Area of Potential Effects

Note: Numbered areas represent specific activity areas defined in Chapter 2.

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

N

1:13,200

1,100 0 1,100
Feet

Aerial photography: July 2005

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_11-1_APE_revised.mxd Source: NSR, Inc.; USBR; USDA Prepared: 10/31/2007 bmoore

North State Resources, Inc.

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

Figure 3.11-1
Area of Potential Effects Evaluated for the Lewiston and Dark Gulch Sites

to operate here was most likely a bucket-line dredge. Dredging at this site may be reasonably attributed to the Gardella Dredge and/or the Gold Bar Dredge, which reportedly operated on the Trinity River between Lewiston and Dark Gulch from about 1922 to 1925 and about 1930, respectively.

Site 07-TRRP-002

This site has two adjacent components that dominate the center of the river bar (Figures 5 and 6). Component A is a set of drag-line dredge tailings and Component B is a set of large bucket-line dredge tailings. Component A abuts the western edge of Component B. While no records have been found identifying a drag-line dredging operation at or near this site, the bucket-line dredge tailings may also be reasonably attributed to the Gardella Dredge and/or the Gold Bar Dredge.

Component A

This component consists of a group of conical-shaped tailings and associated ponds likely created by drag-line (doodlebug) dredger activity. The site is roughly triangular and covers approximately 5 acres. The southern edge of the site is about 90 feet from the Trinity River and is periodically inundated by high water. Most of the tailings piles occur in a roughly L-shaped cluster, measuring about 300 feet east to west and 300 feet north to south. The clustered tailings are only slightly overgrown around their base. Several isolated tailings piles are located in the northern and western portions of the site and are mostly overgrown by grasses.

The tailings piles measure about 20 feet in height and up to 30 feet in diameter at their base. They are composed primarily of cobbles ranging in size from 5 to 12 inches. The two western ponds are generally oblong in shape, measuring approximately 35 feet wide by 130 feet long and 60 feet wide by 200 feet long. The two eastern ponds are roughly square, measuring about 200 feet by 300 feet and 130 feet by 300 feet. The ponds are about 10 feet deep on average and hold water most of the year, sustaining riparian marsh habitat. The ponds bracket the north-south portion of the L-shaped cluster, two on either side.

Component B

This component consists of a massive field of tailings likely resulting from a large table stacker type dredge. The area is roughly oval-shaped with the long axis oriented north-south, measuring approximately 650 feet by 1,300 feet along those axis and covers about 16 acres. The northern and southern edges of the site are about 200 feet from the Trinity River while the eastern edge is about 300 feet from the river bank.

The field of tailings is more or less evenly split down the long axes by a trough that opens at the southern end and diminishes toward the north end. Tailings primarily include cobbles ranging in size from 5 to 12 inches, which were deposited in irregular hedge-rows. The deposits are an average of 40 feet high. The top edges of the piles are oriented roughly east-west, indicating Gold Bar was dredged in a north-south direction. The rows are not clearly defined, but it appears that 10 to 12 rows were made by the dredger.

Site 07-TRRP-003

This site is composed of a network of ditches, sluice channels, and hand-stacked rock alignments on the third river terrace that covers approximately 4.6 acres. The western sluice channel is discontiguous from the sluice network immediately east of it. This sluice is about 380 feet long by an average of 45 feet wide and is about 6 feet deep. The sluice channel is oriented north-south with the south end opening onto the second river terrace and covers about 0.4 acre. Except for the south end, the sluice has a roughly V-shaped cross-section. A shallow ditch measuring about 12 inches wide on average by about 6 inches deep connects to the sluice at its northernmost point. This shallow ditch also forks and another shallow ditch of similar size connects to the northeast side of the sluice. Rocks were hand-stacked along the sides of the sluice channel, and hand-stacked rock alignments are most apparent at the south end.

The network of sluice channels covers approximately 4.2 acres, which measures about 1,056 feet at the longest axis and averages about 196 feet at the widest axis. This area of sluice channels is oriented slightly northeast to southwest. The northernmost sluices are oriented east-west, the southern most sluices are oriented north-south, and the sluice channels in between fan out to orient roughly northwest to southeast. The sluice network appears as a series of abrupt down-cuts on the terrace all along the eastern boundary of the site and proceed to open toward the river. A network of shallow ditches, measuring between 6 inches and 12 inches wide and between 6 inches and 12 inches deep, also connect to the sluice channels along the eastern boundary.

There is a remnant of a larger ditch at the northwest quarter of the sluice network. This ditch is oriented northeast to southwest. The highest point of the remaining berm is on the southeast side of the ditch and is about 5 feet tall. The ditch is about 2 feet deep and 4 feet wide. The south and central portions of the sluice network are moderately to densely vegetated with pine, oak, and fir trees. A thick layer of duff covers the hand-stacked rock alignments and sluice channels. Tree diameters range from less than 1 foot to 2 feet. The northern portion of the sluice network has fewer trees and is characterized by hand-stacked alignments and piles of bare rock.

Determinations of Eligibility for Inclusion in the National Register

Historic resources, sites 07-TRRP-001, 07-TRRP-002, and 07-TRRP-003, constitute the only cultural resources identified during field work. Determinations of eligibility for listing on the National Register of Historic Places (NRHP) of each of the identified cultural resources within the APE are presented in detail in the archaeological specialist's report (U.S. Bureau of Reclamation 2007). Reclamation determined that 07-TRRP-001 and 07-TRRP-002 were not eligible for listing on the NRHP pursuant to 36 CFR Part 60.4 because they lack the historical associations and site attributes that convey their significance as part of the gold mining industry that helped shape the economic growth of Trinity County and the City of Lewiston. Reclamation is still in the process of evaluating site 07-TRRP-003. Final determinations of eligibility will be presented in the EA/ Final EIR.

3.11.2 Regulatory Setting

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, as amended (16 USC 470 *et seq*.), is the primary federal legislation that outlines the federal government's responsibility consider the effects of its actions on historic properties. The 36 CFR Part 800 regulations that implement Section 106 of the NHPA describe how federal agencies address these effects. Historic properties are defined as those cultural resources listed, or eligible for listing, on the NRHP. The criteria for National Register eligibility are outlined at 36 CFR Part 60.

Compliance with Section 106, outlined at 36 CFR Part 800, follows a series of steps that are designed to identify interested parties, determine the APE, conduct cultural resource inventories, determine if historic properties are present within the APE, and assess effects on any identified historic properties. The regulations at 36 CFR Part 800.5 require federal agencies to apply the criteria of adverse effect to historic properties identified within the APE. The criteria of adverse affect, defined at 36 CFR Part 800.5(a)(1), states that:

> "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association."

If historic properties will be subject to adverse affects, Reclamation will follow the stipulations of the PA for compliance with the NHPA to resolve those adverse affects. Reclamation will develop a Historic Property Treatment Plan (HPTP) pursuant to Paragraph III(d) of the PA that will outline measures to mitigate the adverse effects in consultation with Indian Tribes, the State Historic Preservation Officer, and other PA signatories.

State

Office of Historic Preservation

California Public Resources Code Section 21083.2 and 21084.1 requires public agencies to consider the effects of their actions on historical resources and unique archaeological resources. Historical resources are defined as any cultural resource listed on, or determined eligible for listing on, the California Register of Historical Resources (CRHR) (California Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5, subds (a) and (b)). The CRHR includes cultural resources listed, or formally determined eligible for listing, on the NRHP as well as some California State Landmarks and Points of Historical Interest. A unique archaeological resource is defined as an artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it meets the criteria for listing on the CRHR and the NRHP pursuant to California Public Resources Code, Section 21083.2, Subd. [g]).

The public agency has a responsibility to assess whether the actions of a project will cause a substantial adverse change in the significance of a historic resource or unique archaeological resource pursuant to California Public Resources Code Section 21084.1. If a project will adversely affect historic resources or unique archaeological resources, the agencies will resolve those affects in consultation with the Office of Historic Preservation.

Additionally, California Public Resources Code Section 5024 requires consultation with the Office of Historic Preservation (OHP) when a project may affect historical resources located on state-owned land.

As noted above, CEQA also requires lead agencies to consider whether projects will affect "unique archaeological resources." California Public Resources Code Section 21083.2, subdivision (g), states that "'unique archaeological resource' means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person" (California Public Resources Code, Section 21083.2, subd. [g]).

Local

Trinity County General Plan Goals and Objectives

The Trinity County General Plan contains goals and policies designed to guide the future physical development of the county, based on current conditions (Trinity County 2001). In its Land Use Element, Trinity County outlines a system of historic designations intended to categorize historic buildings and natural landmarks that have been identified within the county. Categorization of these historic resources is useful for determining which structures merit submission to the NRHP to determine eligibility for listing.

The following goals and policies relevant to cultural resource issues associated with the Proposed Action, particularly those linked with Native American cultures, were taken from the applicable elements of the General Plan (Trinity County 2001), including the Lewiston Community Plan (Trinity County 1986).

Lewiston Community Plan Goals and Objectives

This plan includes the area centered on the Trinity River from Lewiston Lake to slightly downstream of the confluence of Grass Valley Creek and the Trinity River.

Community Design

Goal: To encourage the preservation of historical structures within the Plan Area.

- Provide for flexibility in land development standards so that retention and rehabilitation of historical structures is encouraged.

Project Consistency with the Trinity County General Plan and Community Plans

The objectives of the Proposed Action are consistent with the applicable general plan goals and policies summarized above. Implementation of the Proposed Action, or alternatives to the Proposed Action, will not result in the demolition or relocation of historic structures.

3.11.3 Environmental Consequences/Impacts and Mitigation Measures

An APE for the cultural resource inventory and evaluation was established by Reclamation in accordance with the rehabilitation activities proposed within the project boundaries. The field survey and inventory for the project performed by Reclamation archaeologists from February 5 through 7, 2007, and on October 24, 2007, was intended to identify and subsequently evaluate any cultural resources eligible for listing as a historic property on the NRHP.

Significance Criteria/Determination of Effect

The activities associated with rehabilitation of the Lewiston and Dark Gulch sites were evaluated to determine how they might affect cultural resources. Impacts on cultural resources are considered significant if implementation of the proposed project would potentially disturb unique cultural resources or properties on or eligible for the NRHP.

For historical resources, the lead agencies have reviewed both the federal NHPA and CEQA in order to determine thresholds of significance. As noted above, CEQA provides that a project may cause a significant environmental effect if the project "may cause a substantial adverse change in the significance of an historical resource" (Public Resources Code, Section 21084.1. CEQA Guidelines Section 15064.5 defines a "substantial adverse change in the significance of an historical resource to mean "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines, Section 15064.5, subd. (b)(1).

CEQA Guidelines Section 15064.5, subdivision (b)(2), defines "materially impaired" (for purposes of the definition of "substantial adverse change . . .") as follows:

The significance of an historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the

Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA. (CEQA Guidelines, Section 15064.5, subd. (b)(2))

With these definitions in mind, the lead agencies considered impacts on historical resources eligible for the NRHP or CRHR to be significant if the Proposed Action, or alternatives to the Proposed Action, would alter their eligibility for the NRHP or CRHR by:

- Physically destroying or materially altering the characteristics of the historical resource that convey its historical significance and justify its eligibility for listing on the NRHP or CRHR;
- Introducing visual, audible, or atmospheric elements out of character with the historical resource and its setting in such a way as to demolish or materially alter the characteristics that convey its historical significance and justify its eligibility for listing on the NRHP or CRHR;
- Causing the historical resource to be subject to neglect to such a degree that the characteristics that convey its historical significance and justify its eligibility for listing on the NRHP or CRHR will be materially impaired; or
- Resulting in the historical resource being transferred, leased, or sold, with the probability that the characteristics that convey its historical significance and justify its eligibility for listing on the NRHP or CRHR will be materially impaired.

In addition, based on CEQA Guidelines Section 15064.5 and Appendix G of the CEQA Guidelines, the Proposed Action and the alternatives would have significant effects if they would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

Impacts and Mitigation Measures

Table 3.11-1 summarizes the potential cultural resource impacts resulting from construction and operation of the project.

Table 3.11-1. Summary of Cultural Resources Impacts for the No-Action Alternative, the Proposed Action and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.11-1:	Implementation of the proposed project could cause a substantial adverse change in the significance of a known cultural resource.			
NI	LS	LS	N/A	N/A
Impact 3.11-2:	Implementation of the proposed project could potentially result in disturbance of undiscovered prehistoric or historic resources.			
NI	PS	PS	LS	LS

Notes:
LS = Less than Significant PS = Potentially Significant NI = No Impact N/A = Not Applicable
[1]Because this potential impact is less than significant, no mitigation is required.

Impact 3.11-1. Implementation of the proposed project could cause a substantial adverse change in the significance of a known cultural resource. ***No Impact for No-Action Alternative; Less-than-Significant Impact for Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, there would be no effects to historic properties pursuant to 36 CFR Part 800.4(d)(1) because the project would not be constructed.

Proposed Action and Alternative 1

Implementation of either the Proposed Action or Alternative 1 would not affect known historic properties pursuant to 36 CFR Part 800.4(d)(1). As previously discussed under "Local Setting," the APE was surveyed for the presence of cultural resources. Three cultural resources were identified, and two have been determined not eligible for listing on the NRHP. Therefore, the Proposed Action or Alternative 1 would not affect historic properties pursuant to 36 CFR Part 800.4(d)(1) for 07-TRRP-001 and 07-TRRP-002. The eligibility of 07-TRRP-003 for listing on the NRHP has not yet been determined; however, the activities described in Chapter 2 have been designed to avoid any sites that could be eligible for protection under the NRHP.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

No significant impacts have been identified; therefore, no mitigation is required.

Significance after Mitigation

N/A

Impact 3.11-2: Implementation of the proposed project could potentially result in disturbance of undiscovered prehistoric or historic resources. ***No Impact for No-Action Alternative; Potentially Significant Impact for Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, there would be no effects on historic properties because the project would not be constructed.

Proposed Action and Alternative 1

Although unlikely considering the existing level of disturbance, buried archaeological resources that have not been previously recorded may be uncovered during construction. Due to the proximity to the Trinity River, unrecorded prehistoric cultural resources associated with habitation by Native Americans may be present. Ground-disturbing activities associated with construction could disrupt or adversely affect unknown subsurface archaeological resources. This would be a potentially significant impact.

Similar to the Proposed Action, construction activities associated with Alternative 1 could affect previously unrecorded archaeological and historical resources. Ground-disturbing activities associated with construction could disrupt or adversely affect unknown subsurface archaeological resources. Any such impacts produced by Alternative 1 would be a potentially significant impact.

Mitigation Measures

No-Action Alternative

No significant impacts have been identified; therefore, no mitigation is required.

Proposed Action and Alternative 1

2a: Prior to initiation of construction or ground-disturbing activities, all construction workers shall be alerted to the possibility of discovering cultural resources. This includes prehistoric and/or historic resources. Personnel shall be instructed that upon discovery of buried cultural resources, work within 50 feet of the find shall be halted and Reclamation's designated archaeologist consulted. Once the find has been identified, Reclamation will make the necessary plans for treatment of the cultural resources and for the evaluation and resolving adverse affect to historic properties pursuant to the PA for compliance with the NHPA.

2b: If human remains are encountered on non-federal lands during construction, work in that area must be halted, and the Trinity County Coroner's Office shall be immediately contacted. If the remains are determined to be of Native American origin, the Native American Heritage Commission (NAHC) will be notified within 24 hours of determination, as required by Public Resources Code, Section 5097. The NAHC will notify designated Most Likely Descendants, who will provide recommendations for the treatment of the remains within 24 hours. The NAHC will mediate any disputes regarding treatment of remains. If Native American human remains and associated items are discovered on federal lands, they will be treated according to provisions set forth in the Native

American Protection and Repatriation Act (25 U.S.C. 3001) as well as Reclamations' Directives and Standards.

If the find is determined to be a historical resource or a unique archaeological resource, as defined by CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or other appropriate mitigation shall be made available. Work may continue on other parts of the proposed project while mitigation for historical or unique archaeological resources takes place.

Significance after Mitigation

Less than significant

3.12 Air Quality

This section evaluates the air quality impacts associated with implementation of the Proposed Action. Air emissions from construction are measured against standards provided by the North Coast Unified Air Quality Management District (NCUAQMD).

3.12.1 Affected Environment/Environmental Setting

Regional Setting

Climate and Topography

According to the Soil Survey of Trinity County, California, Weaverville area (U.S. Department of Agriculture 1998), Trinity County has a climate characterized by hot, dry summers and moderate winters. Trinity County typically has an average summer high temperature of 93.9 º Fahrenheit (F), an average winter low temperature of 28.8 ºF, and an average annual snowfall of 15.8 inches (Center for Economic Development 2004). The Trinity Alps have elevations in excess of 9,000 feet and an essentially alpine climate. The average annual precipitation for Trinity County ranges from 30 inches in the lower elevations to 70 inches in the higher elevations. Most precipitation results from major storms from the Pacific Ocean; however, a few short thunderstorms during summer occur during most years.

Table 3.12-1 provides a summary of average weather parameters recorded at the Trinity River Hatchery Weather Station in Lewiston, California, which is immediately upstream of the project boundary.

Table 3.12-1. Climatological Data For Trinity County (1974–2005)

Weather Parameter	Measurement
Average annual temperature	54.8 ºF
Average high temperature in January	48.1 ºF
Average low temperature in January	32.1 ºF
Average high temperature in July	92.3 ºF
Average low temperature in July	52.4 ºF
Highest recorded temperature	113 ºF
Lowest recorded temperature	4ºF
Average annual precipitation	32.37 inches
Average days of precipitation per year	90 days
Average annual snowfall	17.8 inches
Highest recorded annual snowfall	86.5 inches

Source: Western Regional Climate Center 2005

Within Trinity County, the local airflow is strongly controlled by deeply dissected mountains. The higher mountain ridges receive precipitation as snow and hold most of it until late spring. The lower elevations are dominated by rainfall, with occasional snow during most winters. Dense morning fog typically occurs in the valleys of the Trinity River basin during the winter and occasionally throughout the rest of the year.

Air Quality Management

The North Coast Air Basin (NCAB) comprises five counties in northwest California: Del Norte, Humboldt, Trinity, Mendocino, and a portion of Sonoma County. Figure 3.12-1 illustrates the NCAB in relation to all air basins in California. The North Coast Unified Air Quality Management District (NCUAQMD) is responsible for monitoring and reporting air quality for three of these counties, Humboldt, Del Norte, and Trinity counties. The NCUAQMD is located in the far northwestern portion of California and encompasses approximately 7,134 square miles. The NCUAQMD is bordered on the west by the Pacific Ocean and extends from the Oregon border south, approximately 140 miles to the Mendocino County line.

Air quality in Trinity County is influenced by a number of factors, including stationary sources such as residential wood heating, non-stationary sources such as motor vehicle exhaust, forest management (prescribed fire), and the meteorology of a given area. The NCUAQMD has defined the following general source categories for air pollution:

- Industrial: Sawmills, power plants, gravel plants, other heavy industry
- Commercial: Gas stations, body shops, restaurants, dry cleaners, etc.
- Residential: Home heating, backyard burning, paint and solvent use, etc.
- Mobile: Cars, planes, trains, and other transportation sources
- Agricultural: Forest management burning, field burning, herbicide use, etc. (North Coast Unified Air Quality Management District 1998)

Federal Requirements

The 1977 federal Clean Air Act (CAA) requires the EPA to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for the following "criteria"1 air pollutants: ozone (O_3); carbon monoxide (CO); nitrogen dioxide (NO_2); sulfur dioxide (SO_2); suspended particulate matter (PM10 and PM2.5); and lead (Pb).

Pursuant to the 1990 CAA amendments, the EPA has classified air basins (or portions thereof) as either "attainment" or "non-attainment" for each criteria air pollutant, based on whether or not the NAAQS have been achieved. All three counties of the NCUAQMD are currently designated as attainment for all federal standard criteria pollutants.

State Requirements

The California Air Resources Control Board (CARB), California's state air quality management agency, regulates mobile source emissions and oversees the activities of County Air Pollution Control Districts and regional Air Quality Management Districts. The CARB regulates local air quality indirectly by establishing state ambient air quality standards and vehicle emission standards.

[1]Termed "criteria" pollutants because EPA publishes criteria documents to justify the choice of standards.

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Figure 3.12-1
California Air Quality Basins

California has adopted ambient standards that are more stringent than the federal standards for the criteria air pollutants. These standards are referred to as the California Ambient Air Quality Standards (CAAQS). Table 3.12-2 summarizes federal and state ambient standards for criteria air pollutants.

Table 3.12-2. Federal and State Criteria Pollutant Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Standard	State Standard
Ozone	1-hour 8-hour	0.12 ppm 0.18 ppm	0.09 ppm —
Carbon monoxide	8-hour 1-hour	9 ppm 35 ppm	9 ppm 20 ppm
Nitrogen dioxide	Annual arithmetic mean 1-hour	0.053 ppm	— 0.25 ppm
Sulfur dioxide	Annual arithmetic mean 24-hour 3-hour 1-hour	0.030 ppm 0.14 ppm — —	— 0.04 ppm — 0.25 ppm
Fine particulate matter (PM2.5)	24-hour Annual arithmetic mean	65 µg/m^3 15 µg/m^3	65 µg/m^3 12 µg/m^3
Respirable particulate matter (PM10)	24-hour Annual arithmetic mean	150 µg/m^3 50 µg/m^3	50 µg/m^3 20 µg/m^3
Lead	30-day average Calendar quarter	— 1.5 µg/m^3	1.5 µg/m^3 —

Notes: ppm = parts per million; µg/m^3 = micrograms per cubic meter
Source: California Air Resources Board 2005

Under the California Clean Air Act (CCAA), which is patterned after the federal CAA, areas within California have been designated as attainment or non-attainment with respect to the state ambient air quality standards. All three counties of the NCUAQMD are currently designated as non-attainment for the state standard for particulate matter less than 10 microns in aerodynamic diameter (PM10) and as attainment for the federal standard. The state standard for PM10 is 50 µg/m^3 (micrograms per cubic meter) as a maximum 24-hour average and 30 µg/m^3 as an annual average of the 24-hour values. The federal standard for PM10 is 150 µg/m^3 as a maximum 24-hour average and 50 µg/m^3 as the annual average of the 24-hour values (North Coast Unified Air Quality Management District 1995). A non-attainment designation means that the particulate concentrations in these counties exceed the levels set by California to protect public health.

PM10 monitoring results show that the three largest cities within the NCUAQMD (Crescent City, Eureka, and Weaverville) have had exceedances of the 24-hour standard for PM10. The largest contributors to PM10 are fugitive road dust, residential fuel combustion, industrial wood and paper mills, and forest management burning (North Coast Unified Air Quality Management District 1995).

PM10 sampling showed that woodstove emissions during the winter months, when added to the already occurring PM10 levels, are the primary cause of high PM10 values in the NCUAQMD. PM10 sampling in Weaverville alone showed that woodstove emissions contributed approximately 55 percent of PM10 measured at an average of samples over 50 $\mu g/m^3$ (24-hour state standard) during high PM10 episodes, and approximately 30 percent of PM10 measured at an average for all samples collected over a year (North Coast Unified Air Quality Management District 1995). These samples were collected at the Weaverville Courthouse, which is approximately 5 miles north of the project boundary.

As part of its overall strategy to meet the state's health-based standard for PM10, the NCUAQMD adopted a PM10 Attainment Plan (North Coast Unified Air Quality Management District 1995). Included in the plan are measures to reduce PM10 emissions from mobile sources, as well as from woodstoves and other combustion sources. The program funds reductions in nitrogen oxide (NO_x) emissions, PM10, and toxic compounds contained in diesel exhaust.

Local Requirements

The NCUAQMD has established air quality emission thresholds for stationary sources in the entire North Coast Air Basin, which can be used to assess impacts to air quality in Trinity County. Air quality emission significance thresholds (the potential of a new or modified stationary source to emit air contaminants that would equal or exceed significant emission rates in tons per year) for stationary sources are presented in Table 3.12-3.

Table 3.12-3. Air Quality Emission Significance Thresholds, North Coast Unified Air Quality Management District

Air Contaminant	Significant Emission Rate (tons per year)
Carbon monoxide	100
Nitrogen oxides	40
Sulfur dioxide	40
Particulate matter	25
PM10	16
Ozone	40 (as volatile organic compounds [VOC])
Lead	0.6
Asbestos	0.007
Beryllium	0.0004
Mercury	0.1
Vinyl chloride	1
Fluorides	3

Table 3.12-3. Air Quality Emission Significance Thresholds, North Coast Unified Air Quality Management District

Air Contaminant	Significant Emission Rate (tons per year)
Sulfuric acid mist	7
Hydrogen sulfide (H_2S)	10
Total reduced sulfur (including H_2S)	10
Reduced sulfur compounds (including H_2S)	10

Source: North Coast Unified Air Quality Management District 2005

North Coast Unified Air Quality Management District

The NCUAQMD establishes policies, regulations, and permit procedures for Humboldt, Del Norte, and Trinity counties. The following district air quality control rules applicable to the Proposed Action were taken from Air Quality Rules and Regulations (North Coast Unified Air Quality Management District 2005).

Rule 104 (3.0) - Particulate Matter

3a General Combustion Sources: A person shall not discharge particulate matter into the atmosphere from any combustion source in excess of 0.46 grams per standard cubic meter (0.20 grams per standard cubic foot) of exhaust gas, calculated to 12 percent carbon dioxide (CO_2); or in excess of the limitations of New Source Performance Standards applicable to provisions set out in Rule 104(11.0).

Rule 104 (4.0) - Fugitive Dust Emissions

4.1 No person shall do or allow handling, transporting, or open storage of materials in such a manner which allows or may allow unnecessary amounts of particulate matter to become airborne.

4.2 Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions:

4.2.1 Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust.

4.2.2 Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Containment methods can be employed during sandblasting and other similar operations.

4.2.4 The use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.

4.2.5 The application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts.

4.2.7 The prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

Trinity County General Plan Goals and Objectives

The Trinity County General Plan contains goals and policies designed to guide the future physical development of the county, based on current conditions. The General Plan contains all the state-required elements, including community development and design, transportation, natural resources, health and safety, noise, housing, recreation, economic development, public facilities and services. The General Plan contains a Safety Element which addresses air quality issues.

The following goals and policies related to air quality issues associated with the Proposed Action were taken from the applicable elements of the General Plan (Trinity County 2001), including the Lewiston Community Plan (Trinity County 1986).

County-Wide Goals and Objectives

Safety Element

The following goals, objectives, and policies were excerpted from the Safety Element and are applicable to the project.

Air Quality Goal

- Continue to maintain a high standard of air quality in Trinity County
- Ensure burning projects will not diminish air quality
- The burning of any material shall comply with burning permits, conditions and/or standards established by the NCUAQMD.

The General Plan does not identify specific goals, objectives, or policies for air quality associated with vehicular emissions and rehabilitation projects.

Lewiston Community Plan Goals and Objectives

The Lewiston Community Plan covers approximately 10,227 acres centered on the Trinity River from Lewiston Lake to slightly downstream of Grass Valley Creek. The Lewiston Community Plan does not contain any goals or objectives specific to air quality issues.

Project Consistency with the Trinity County General Plan and Lewiston Community Plan

This section compares the goals and objectives of the project to the relevant local planning policies (i.e., Trinity County General Plan, Lewiston Community Plan) to determine if there are any inconsistencies.

The goals and objectives described in Chapter 1 are generally compatible with the applicable General Plan goals and policies for air quality summarized above. The overall goal of the Proposed Action is to rehabilitate the site so that it functions in a manner that is closer to historic conditions (i.e., pre-Lewiston Dam). Although excavation of alluvial materials along the Trinity River would result in temporary, short-

term emissions of fugitive dust and PM10, the Proposed Action will include mitigation measures intended to reduce airborne dust and construction vehicle emissions generated during project implementation.

Existing Air Quality Conditions

The CARB publishes summaries of air quality monitoring data from locations throughout the state. In addition, the CARB maintains air quality monitoring sites for PM10 in Weaverville. The CARB regional air quality monitoring network provides information on ambient concentrations of criteria air pollutants. Monitored ambient air pollutant concentrations reflect the number and strength of emissions sources and the influence of topographical and meteorological factors. The nearest monitoring station to the project is located at the Trinity County Courthouse, 101 Court Street in Weaverville (Weaverville basin), which is approximately 5 miles north of the project boundary. Pollutant concentrations measured at this station may not be generally representative of background air pollutant concentrations in the general vicinity of the Proposed Action because of the influence the Trinity River corridor exerts on local air quality in association with local weather conditions.

Particulate Matter

Suspended or respirable particulate matter (airborne dust) consists of particles small enough to remain suspended in the air for long periods of time. PM10 consists of particulate matter 10 microns2 or less in diameter, which can be inhaled and may cause adverse health impacts. Particulate matter in the atmosphere results from a variety of dust- and fume-producing industrial and agricultural operations, combustion, and atmospheric photochemical reactions. Some of these operations, such as construction activities (i.e., excavation and disposal of alluvial materials), primarily contribute to increases in local PM10 concentrations, while others, such as vehicle traffic, have an impact on regional PM10 concentrations.

EPA has promulgated new standards for particulate matter less than 2.5 microns in diameter, or PM2.5. PM10 includes all particles that are 10 microns or less in diameter; therefore, PM2.5 is a subset of PM10. Typically, 30 to 80 percent of all PM10 is in the PM2.5 range.

Table 3.12-4 shows PM10 concentrations in Weaverville over a 10-year period. All PM10 concentrations are expressed in micrograms per cubic meter. The state standard for PM10 is 50 µg/m3 as a maximum 24-hour average, and the federal standard for PM10 is 150 µg/m3 as a maximum 24-hour average. In 1999, it was calculated that PM10 concentrations (24-hour average) exceeded the state standards for more than 30 days. This relatively high PM10 level was attributed to an unusually large number of wildland fires in the vicinity of the Weaverville basin during the late summer months.

[2] A micron is one one-millionth of a meter.

Table 3.12-4. PM10 Monitoring Data for Weaverville (1995-2004)

Criteria	Year	Estimated Days Over National Standard	Estimated Days Over State Standard	High 24-Hour Average	
				National	State
24-Hour Average	2004	--	--	42.5	42.5
	2003	--	--	56.5	53.9
	2002	--	--	52.3	52.5
	2001	0.0	--	72.6	72.0
	2000	0.0	18.8	50.8	51.1
	1999	0.0	24.3	99.6	94.9
	1998	0.0	18.1	46.2	46.5
	1997	0.0	17.8	54.0	54.0
	1996	0.0	--	72.0	63.0
	1995	0.0	--	41.0	--

Source: California Air Resources Board 2002, http://www.arb.ca.gov/adam/welcome.html

3.12.2 Environmental Consequences/Impacts and Mitigation

Methodology

Data for the impacts analysis were taken from the following reports on local and regional air quality: Particulate Matter Attainment Plan (North Coast Unified Air Quality Management District 1995), Summary of Air Monitoring Data in the North Coast Unified Air Quality Management District (North Coast Unified Air Quality Management District 1997), North Coast Air Quality Facts (North Coast Unified Air Quality Management District 1992), Air Quality Rules and Regulations (North Coast Unified Air Quality Management District 2005), and the Trinity County General Plan (Trinity County 2001). The air quality analysis is qualitative, and was conducted by assessing anticipated construction-related impacts of the project and comparing them to existing and anticipated future air quality conditions. Because the Proposed Action would generate very little traffic, quantitative data on traffic were not compiled (see Section 3.18, Traffic and Circulation), and specific information on local construction activities was not available. The results are compared to local and national ambient air quality emissions and concentrations standards to determine the significance of the impacts.

Significance Criteria

According to Appendix G of the CEQA Guidelines, a project will normally have an adverse impact on air quality if it would

- violate any ambient air quality standard;
- contribute substantially to an existing or projected air quality violation;
- conflict with or obstruct implementation of any applicable air quality plan;

- result in a cumulatively considerable net increase of any criteria pollutant (e.g., PM10) for which the region is in non-attainment under an applicable state ambient air quality standard;
- expose sensitive receptors to substantial pollutant concentrations;
- result in substantial air emissions or deterioration of air quality;
- create objectionable odors;
- alter air movement, moisture, or temperature, or result in any change in climate, either locally or regionally; or
- produce toxic air contaminant emissions that exceed the air pollution control district's threshold level for health risk.

Since the first two criteria include violation of either federal or state air quality standards, these criteria will also be used to determine significance for NEPA compliance.

The NCUAQMD has not formally adopted a CEQA threshold of significance for compounds such as CO, NO_x, PM10, and SO_2, but does use the significant emission rates listed in Table 3.12-3 as a baseline when evaluating a project's potential impacts to air quality (Torzynski, pers. comm. 2004).

Impacts and Mitigation Measures

Table 3.12-5 summarizes the potential air quality impacts resulting from implementation of the project.

Table 3.12-5. Summary of Air Quality Resource Impacts for the No-Action Alternative, Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.12-1.	Construction activities associated with the project could result in an increase in fugitive dust and associated particulate matter (PM_{10} and $PM_{2.5}$) levels.			
NI	S	S	LS	LS
Impact 3.12-2.	Construction activities associated with the project could result in an increase in construction vehicle exhaust emissions.			
NI	S	S	LS	LS
Impact 3.12-3.	Construction activities associated with the project and removal of vegetation could result in vegetative materials that managers will decide to burn.			
NI	S	S	LS	LS

Notes:
LS = Less than Significant S = Significant SU = Significant Unavoidable
NI = No Impact B = Beneficial N/A = Not Applicable
[1]Because this potential impact is less than significant, no mitigation is required.

Impact 3.12-1: Construction activities associated with the project could result in an increase in fugitive dust and associated particulate matter (PM10 and PM2.5) levels. ***No***

Impact for the No-Action Alternative; Significant Impact for the Proposed Action, and Alternative 1

No-Action Alternative

Under the No-Action Alternative, there would be no construction-related increase in fugitive dust and associated particulate matter levels because the project would not be constructed.

Proposed Action and Alternative 1

Construction associated with the Proposed Action and Alternative 1 would require the use of equipment that would temporarily contribute to air pollution within the Trinity River basin. Construction excavation and grading are sources of fugitive dust emissions (PM10) that could have a temporary impact on local air quality. Dust emissions would primarily be associated with removal of vegetation, excavation and disposal of earthen materials, and equipment travel on unpaved road surfaces.

As discussed previously, the project is located within the NCAB, where PM10 levels are in non-attainment. The generation of fugitive dust during construction would be considered a temporary and short-term significant impact at a local level due the non-attainment status. To the extent possible, revegetation would be coordinated with construction so that the amount of bare ground is limited. Revegetation would not commence until plants are dormant and fall wet conditions have returned.

Generation of fugitive dust and particulate matter levels associated with construction of the Proposed Action would be less than under Alternative 1 primarily due to the increase of activities at R-3 DG, floodplain removal and gravel processing. To the extent possible, revegetation will be coordinated with construction so that the amount of bare ground is limited. Revegetation would not commence until plants are dormant and fall wet conditions have returned. Short-term impacts associated with the generation of fugitive dust during construction would be considered a significant impact.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

1a Reclamation shall include provisions in the construction bid documents specifying that the contractor shall implement a dust control program to limit fugitive dust and particulate matter emissions. The dust control program may include, but will not be limited, to the following elements, as appropriate:

- Inactive construction areas will be watered as needed to ensure dust control.
- Pursuant to the California Vehicle Code (Section 23114), all trucks hauling soil or other loose material to and from the construction site shall be covered or shall maintain adequate freeboard to

ensure retention of materials within the truck's bed (e.g., ensure 1-2 feet vertical distance between top of load and the trailer).

- Excavation activities and other soil-disturbing activities shall be conducted in phases to reduce the amount of bare soil exposed at any one time. Mulching with weed-free materials may be used to minimize soil erosion, as described in Section 3.3, Geology, Fluvial Geomorphology, and Soils, and Section 3.5, Water Quality.
- Watering with either equipment and/or manually shall be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.
- All paved access roads, parking areas, and staging areas shall be swept (with water sweepers), as required by Reclamation.
- Roads shall be swept (with water sweepers) if visible soil material is carried onto adjacent public roads, as required by Reclamation.
- All ground-disturbing activities with the potential to generate dust shall be suspended when winds exceed 20 miles per hour, as directed by the NCUAQMD.
- Reclamation or its contractor shall designate a person to monitor dust control and to order increased watering as necessary to prevent transport of dust offsite. This person will also respond to citizen complaints.

Significance after Mitigation

Less than significant

Impact 3.12-2: Construction activities associated with the project could result in an increase in construction vehicle exhaust emissions. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, there would be no increase in construction vehicle exhaust emissions because the project would not be constructed.

Proposed Action and Alternative 1

Construction associated with the project would require the use of equipment that would temporarily contribute to air pollution in the Trinity River basin. Exhaust emissions from heavy equipment during construction may contribute to air pollution. Project construction activities would generate emissions from diesel- and gasoline-powered equipment and vehicles. Diesel particulate is an identified Hazardous Air Pollutant (HAP) and Toxic Air Contaminant (TAC), emissions of which should be minimized. In this regard, the length of the construction will require the contractor to comply with NCUAQMD Rule 104 (3.0) Particulate Matter or use portable internal combustion engines registered and certified under the state portable equipment regulation.

Construction vehicle exhaust emissions associated with the Proposed Action would be slightly less than under Alternative 1. Alternative would increase the overall activity area that could be treated by about 17

acres, primarily at the Dark Gulch site. Either the Proposed Action and Alternative 1 would have a significant impact on air quality from vehicle exhaust emissions.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

2a Reclamation shall include provisions in the construction bid documents specifying that the contractors shall comply with NCUAQMD Rule 104 (3.0) Particulate Matter. This compliance could occur through the use of portable internal combustion engines registered and certified under the state portable equipment regulation (Health & Safety Code 41750 through 41755).

Significance after Mitigation

Less than significant

Impact 3.12-3: Construction activities associated with the project and removal of vegetation could result in vegetative materials that managers will decide to burn. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, there would be no vegetative materials that would need to be burned because the project would not be constructed.

Proposed Action and Alternative 1

Construction of the project would remove vegetation from the construction areas; the removed vegetation could be buried, piled to create wildlife habitat, chipped, or burned. Piling and burning is a quick and economical way to eliminate flammable biomass and reduce concentrations of wildland fuels. If vegetation is burned, piles would be conserved until after construction and prepared and burned by a local contractor or the BLM during wet weather conditions. Burning of material in the fall/winter period (November-April) would also eliminate effects to nesting birds. In the event that piles are burned, smoke would temporarily contribute to air pollution in the Trinity River basin.

Smoke associated with the Proposed Action would be less than under Alternative 1 because there would be no construction of the access road to the north of the activity areas and therefore less vegetation would be cleared. A reduction in vegetation removal could result in a reduction in burning activities; however, smoke associated with construction of either action alternative would still be considered significant.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

3a Piles will consist only of dried vegetative materials. Burn piles will be no larger than 10 feet in diameter. Field personnel will be on site during all hours of burning and materials necessary to extinguish fires will be available at all times.

3b In general, all requirements of a NCUAQMD "NON-Standard" burn permit will be met for burning. Burn management planning may include but not be limited to:

- Ensure that burning occurs only on approved burn days as defined by the NCUAQMD (determined via calling 1-866-BURN-DAY)
- Burning will only occur during suitable conditions to ensure control of ignited fires. For instance: Water to wet the litter and duff layer and penetrate the mineral soil layer to 1/4 inch or more will be present, wind speeds will be low (< 10 mph), and temperature will be low (< 80° F)
- Piles may be covered with a 5-foot x 5-foot sheet of 4-mil polyethylene plastic to promote drying of the slash. At least 3/4 of each pile surface would be covered and the plastic anchored to preserve a dry ignition point. Dry fuel conditions will minimize smoke emissions.
- Slash piles would not be constructed on logs, stumps, on talus slopes, within 25 feet of wildlife trees with nest structures, in roadways or in drainage ditches. Piles will not be placed within 10 feet of trees intended to be saved (reserved trees), or within 25 feet of a unit boundary.

3c Notification of the public and the NCUAQMD will occur each day. Depending on wind direction and proximity to roads, signs or personnel will notify residents and traffic on nearby access routes.

Significance after Mitigation

Less than significant

3.13 Environmental Justice

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," dated February 11, 1994, requires federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their actions on minorities and low-income populations and communities as well as the equity of the distribution of the benefits and risks of their decisions. Environmental justice addresses the fair treatment of people of all races and incomes with respect to actions affecting the environment. Fair treatment implies that no group of people should bear a disproportionate share of negative impacts from an environmental action.

To comply with the environmental justice policy established by the Secretary of the Interior, all DOI agencies are to identify and evaluate any anticipated effects, direct or indirect, from a project, action, or decision on minority and low-income populations and communities, including the equity of the distribution of the benefits and risks. Accordingly, this section examines the anticipated impacts associated with the alternatives with respect to potentially affected minority and economically disadvantaged groups. Socioeconomic issues, including population and housing, are evaluated in Section 3.9, Socioeconomics, Population, and Housing. This section does not function as part of the EIR portion of this joint EA/Draft EIR, because CEQA does not require state or local agencies to address environmental justice concerns in an EIR. In other words, environmental justice is not a CEQA issue.

3.13.1 Affected Environment/Environmental Setting

Regional Setting

Poverty Rate

The U.S. Census uses a set of income limits that vary by family size and composition to determine who is poor. If a family's total income is less than the income limit, then that family, and every individual in it, is considered poor. Poverty income level thresholds are nationwide standards set by the Census. The formula for the poverty rate is the number of persons below the poverty level divided by the number of persons for whom poverty status is determined. A comparison of the poverty rates calculated for Trinity County and California between 1989 and 1999 is depicted in Table 3.13-1.

Table 3.13-1. Poverty Rate, Trinity County and California

	1989	1999
Trinity County	18.5%	18.7%
California	12.5%	14.2%

Source: Adapted from Center for Economic Development 2004

In 1999, 18.7 percent of the population in Trinity County was living in poverty. The 1999 median household income for Trinity County was $27,711, which is 42 percent less than the average California income (Center for Economic Development 2004). For most communities in Trinity County, the poverty

rates are higher than poverty rates of the state. The community in Trinity County with the highest poverty rate is Hyampom.

Population by Race/Ethnicity

Population by race and ethnicity is estimated annually by the California Department of Finance, Demographic Research Unit. Population by race and ethnicity is compiled by what the respondents to the U.S. Census indicate as their primary ancestry. White, black, American Indian, and Asian are racial designations, while Hispanic is an ethnic designation that can be a mixture of white, black, and American Indian races. The Hispanic population is separated from the four main racial groups because many Hispanic people associate their ancestry with their ethnicity rather than their race.

According to the data compiled by the Center for Economic Development (2004), the vast majority of the population in Trinity County (approximately 90 percent), as measured in 2003, consists of white non-Hispanic individuals. The remainder of the population is predominantly Native American (5 percent) and Hispanic (4 percent).

Following state patterns, the percentage of Hispanic and American Indian people in Trinity County is steadily increasing (Center for Economic Development 2004). In 1990, the Hispanic population was 3.3 percent of the county's total population. By 2003, the percentage had increased to 4 percent of the total. The largest minority population in the county is the American Indian population. In 1990, American Indians constituted 4.6 percent of the total county population, rising to 5 percent by 2003. During the period from 1990 to 2004, California's American Indian population increased from 0.7 percent to 1 percent of the state's total population.

In 1990, Trinity County's non-Hispanic white population was 91 percent of the county's total population. By 2003, the percentage had decreased slightly to 90 percent of the total (Center for Economic Development 2004). Comparatively, California's non-Hispanic white population decreased from 57.2 percent of the total population in 1990 to 44.2 percent in 2004 (Social Science Data Analysis Network 2006; U.S. Census Bureau 2004). The percentage of black and Asian residents in the county stayed the same (each less than 1 percent).

Local Setting

The Trinity River is a valuable economic resource for Trinity County. Its popularity as a recreation destination, particularly for fishing, white-water recreation, gold panning, and as an access point to the Salmon-Trinity Alps, directly benefits communities such as Lewiston through increased business patronage. Campgrounds and river access points occur in close proximity to the site. These businesses benefit during peak recreation-use periods (e.g., rafting, kayaking, and fishing). Other economic opportunities such as agriculture are severely limited by the surrounding topography, thereby minimizing the attraction for a transitional labor pool.

The Lewiston City community is predominantly white (89.9%) (U.S. Census Bureau 2000). The proportion of people living below the poverty level is higher (20.2 percent) for this area than for the

balance of the U.S (12.4 percent) (U.S. Census Bureau 2000). The Lewiston Community Plan area has few multiple family units (Trinity County 1987); however, numerous single family homes are located adjacent to the site boundary. Several businesses are also located in the immediate vicinity of the project.

The Lewiston Elementary School, which includes grades kindergarten through eight (approximately 92 students), is located at 685 Lewiston Road. This school is composed of 79.3 percent white (not Hispanic), 5.4 percent Hispanic or Latino, 8.7 percent American Indian or Alaska Native, 3.3 percent Pacific Islander, and 3.3 percent African American (California Department of Education 2006). State averages for ethnic composition of public schools are 30.3 percent white (not Hispanic), 47.6 percent Hispanic or Latino, less than 1 percent Native American or Alaska Native, less than 1 percent Pacific Islander, 7.8 percent African American, and 2.6 percent Filipino (California Department of Education 2006). The ethnicity of the children attending the Lewiston Elementary School corresponds to the general ethnic composition of the Lewiston community and its environs. At the Lewiston Elementary School, 76 percent of the children participate in the free/reduced-fee lunch program (California Department of Education 2006).

3.13.2 Environmental Consequences/Impacts and Mitigation Measures

Methodology

The EPA compares three factors—minority representation, low-income representation, and environmental burden—for a community of concern and one or more reference areas—for example, an entire county—to analyze potential environmental justice impacts. A community of concern can be defined in a number of ways, including as a municipality, a census block group, a user-defined radius around a source of pollution, or a boundary drawn along physical features such as streets, streams, or railroad tracks. The demographic data for the community of concern can then be analyzed to determine whether there would be a potential environmental justice concern in the area.

As part of this analysis, poverty levels and minority population levels were examined for Trinity County as well as the community of Lewiston. Detailed information on the residential areas located near the project sites was unavailable.

Significance Criteria

Because environmental justice is not a CEQA issue, specific significance criteria were not applied in evaluating potential environmental justice consequences. However, any modification or change in environmental justice factors in response to the Proposed Action is evaluated.

Impacts and Mitigation Measures

Table 3.13-2 summarizes the potential environmental justice impacts that would result from implementation of the project.

Table 3.13-2. Summary of Environmental Justice Impacts for the No-Action Alternative, Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.13-1.	Implementation of the project could adversely affect a minority or low-income population and/or community.			
NI	LS	LS	N/A[1]	N/A[1]

Notes:
LS = Less than Significant S = Significant SU = Significant Unavoidable
NI = No Impact B = Beneficial N/A = Not Applicable
[1]Because this potential impact is less than significant, no mitigation is required.

Impact 3.13-1: Implementation of the project could adversely affect a minority or low-income population and/or community. *No Impact for No-Action Alternative; Less-than-Significant Impact for the Proposed Action and Alternative 1*

No-Action Alternative

Under the No-Action Alternative, no impact to a minority or low-income population or community would take place because the project would not be constructed.

Proposed Action and Alternative 1

Although minority and low-income residents live in the general vicinity of the project, the impacts would generally be experienced by residents in relationship to their proximity to the project sites, regardless of their racial or income characteristics. There is no evidence to suggest that the project would cause a disproportionately high adverse human health or environmental effect on minority and low-income populations compared to other residents of the area. The known health risks to residents that could be associated with the project are evaluated in Section 3.5, Water Quality; Section 3.12, Air Quality; Section 3.15, Hazardous Materials; and Section 3.16, Noise. For the most part, these health risks are associated with the construction aspects of the project, in that residents and construction workers could be exposed to hazardous materials that may be associated with the project. Possible health risks also include construction-related accidents. Reclamation will manage the project to minimize these risks, as required by applicable federal and state safety regulations. Therefore, no specific or disproportionate health risks or other impacts to low-income groups would be associated with the project.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

Since no significant impact was identified for any of the alternatives, no mitigation measures are required.

Significance after Mitigation

N/A

3.14 Aesthetics

The aesthetic value of an area is a measure of its visual character and quality, combined with the viewer's response to the area (Federal Highway Administration 1983). The purpose of this section is to address aesthetic values and assess potential impacts of the Proposed Action on aesthetic resources. The consistency of the Proposed Action and the alternatives with the federal and state Wild and Scenic Rivers Act (WSRA) is discussed. A review of local land use plans and policies regarding aesthetics and field reconnaissance conducted for the purpose of identifying those areas of aesthetic value that would potentially be affected by project implementation provide the basis for this assessment.

3.14.1 Visual Assessment Process

Visual Environment

The visual environment or character is a function of both the natural and artificial landscape features that make up a view. Geologic, hydrologic, botanical, wildlife, recreational, and urban features, such as roads, homes, and earthworks, directly influence the character of an area. The perception of the visual character of an area can vary significantly by season and even by hour as light, shadow, weather, and the elements composing the view change. Form, line, color, and texture are the basic components used to describe visual character and quality for most visual assessments (Federal Highway Administration 1983). The dominance of each of these components on the landscape serves to form the viewer's impression of the area. A viewer's impression directly corresponds to the aesthetic value of the landscape. The aesthetic value of an area is a measure of its visual character and scenic quality combined with the viewer response.

Visual Sensitivity and Viewer Response

The overall response of a viewer to the quality of a view is based on a combination of viewer exposure and viewer sensitivity. Viewer exposure refers to the visibility of resources in the landscape, the proximity of the vantage point to the view, the elevation of the viewer relative to the view, the frequency and duration of the viewing, the number of observers, and pre-conceived expectations of individual viewers or groups. Viewer sensitivity relates to the extent of the public's concern for particular landscapes. Judgments of visual quality and viewer response should be based on the regional frame of reference (U.S. Soil Conservation Service 1978). The geographical setting and nature of the visual resource will significantly influence the degree of visual quality and sensitivity experienced by the viewer. For example, the presence of a small hill within an otherwise flat landscape may be viewed as a significant visual element, but the hill may have very little significance when located in mountainous terrain.

Within the project area, the Trinity River corridor is the dominant component of the visual environment. Gravel bars, riparian vegetation, and various buildings along the corridor contribute to the visual character of the existing landscape.

Viewshed

The Federal Highway Administration (1983) defines a viewshed as all of the surface area visible from a particular location (e.g., a highway pull-out) or sequence of locations (e.g., a highway or trail). This document defines 74 individual view locations composing 10 distinct viewsheds (composed of 45 view locations and seven viewsheds within the Lewiston site, and 29 view locations and three viewsheds within the Dark Gulch site). These viewsheds are referred to as visual assessment units (VAU) throughout this section of the EA/Draft EIR. The VAUs have been defined based on visibility from surrounding homes or public access areas along Trinity Dam Boulevard, Hatchery Road, Rush Creek Road, Lewiston Road, Cemetery Road, Goose Ranch Road, and Brown's Ranch Road, and the Bucktail Hole River Access; these VAUs are representative of visually sensitive resources within the project area.

Light and Glare

Because of the rural nature of the project area, potential sources of artificial light are limited to vehicles passing through the area on the various county and private roads, and homes within and near the project boundary. Glare may occur during the daylight hours as the sun is reflected off the river or light-colored sand and rocks that make up the floodplain.

Viewer Groups

The perceptions of viewers are influenced by their location, specific activities in which they engage, personal degree of awareness, and individual values and goals. Three distinct viewer groups would potentially be affected by the activities described in Chapter 2: motorists, residents, and recreationists.

Motorists

Motorists are persons who would view a given rehabilitation area from a moving vehicle. Motorists may be drivers or passengers. This user group typically consists of commuters, local residents, business travelers, and tourists. Tourists are often acutely aware of viewshed opportunities and aesthetics associated with an area when viewed from roadways. Business travelers, commuters, and local residents who travel the same routes frequently may be acclimated to the general view, but are more likely to be aware of visual changes than the occasional passersby. In general, views of the river and the project area from local roadways are somewhat limited and of short-duration for motorists that use this travel corridor along the Trinity River.

Residents

Residents are people whose homes and/or property are in close proximity to, and have a view of, a portion of the project area. The existing landscape features associated with the project area offer a variety of visual experiences that reflect various land use practices and natural processes. The individual sensitivity of residents to aesthetics and changes within the viewshed is highly variable. Sensitivity of residents to changes in the viewshed should also be considered in the context of view point location and the length of time that their view may be altered (e.g., temporary or permanent changes to topography or vegetation as a result of construction activities and future adjustments to the morphology of the river).

Recreationists

Recreationists are members of the community or the general public who access and use the recreational resources available within or adjacent to the project area. Like residents, recreational users are highly sensitive to the visual character of the river corridor since most are drawn to the area by an appreciation of its scenic nature.

Historically (since the TRD was constructed), the primary recreational activities in the project area have been those associated with warm summer temperatures (Memorial Day to Labor Day) and fishing for anadromous salmonids throughout the year. Modifications to the flow regime described in Section 3.4, Water Resources, have resulted in a substantial increase in use by whitewater enthusiasts during the spring and early summer (April–July). The Trinity River, including the project area, provides a myriad of recreational opportunities that are discussed in Section 3.8, Recreation.

3.14.2 Affected Environment/Environmental Setting

Regional Setting

The Trinity River provides an important visual resource for residents and visitors to Trinity County. The scenic nature of the river is vital to the communities, residential areas, and recreational allure of the county. The Trinity River below Lewiston Dam to its confluence with the Klamath River has been designated as "recreational" under the federal Wild and Scenic Rivers System.

Two scenic byways cross Trinity County: the Trinity Heritage Scenic Byway (SR 3) (recently renamed the Siskiyou-Trinity Scenic Byway) and the Trinity Scenic Byway (SR 299). These byways provide a scenic travel route through Trinity County for residents and visitors. The Trinity Heritage Scenic Byway includes 120 miles of road beginning south of Hayfork and continuing north past Trinity Lake to Edgewood at I-5. The Trinity Scenic Byway follows SR 299 between Redding and Arcata, California. This byway is approximately 140 miles long and bisects Trinity County as it parallels the Trinity River.

Since the construction of the TRD, the flow regime of the Trinity River has been significantly changed (U.S. Fish and Wildlife Service and Hoopa Valley Tribe 1999). Water flows are maintained at a relatively constant level year around, with controls placed on the amounts of water flowing through the channel during spring run-off and storm events. The alterations of natural flow patterns have resulted in substantial changes in the ecology and landscape features within the channel and floodplain downstream of the TRD.

Local Context

The project includes two discrete sites, Lewiston and Dark Gulch. These sites, which are separated by several miles, are integral to the rehabilitation efforts of the TRRP.. The visual character of the Lewiston–Dark Gulch sites as a whole is typified by the river channel, bordered by bands of riparian vegetation interspersed between homes, businesses, and deposits of dredge tailings. The riparian vegetation transitions to upland vegetation (e.g., annual grassland, Klamath mixed conifer) as one moves away from

the river. Views of the river within the project boundaries are limited by vegetation stringers, residential and commercial development, river meanders, and distance of most area roads from the floodplain.

The road to the TRSSH, including the Lewiston Bridge, leads upstream from Trinity Dam Boulevard to the TRSSH, parallel to the Trinity River and activity areas SO and DC. This road provides extensive unobstructed views of the Trinity River below the TRD. The Lewiston Weir and Gage River Access located on the right bank of the river at the Lewiston Bridge offers a parking area from which scenic views of the old weir are available. Hatchery Road, which parallels the left side of the river from the Lewiston Bridge upstream to the TRSSH also offers scenic views of this bridge, the Trinity River, the weir, and wildlife from pullouts along the roadway. The Sven Olberston Watchable Wildlife and Picnic Area adjacent to Hatchery Road provides a convenient parking area from which to view the surrounding scenery.

Downstream of Trinity Dam Boulevard (CW and HG activity areas), residential and commercial development occurs with increasing frequency toward the Old Lewiston Bridge located in the "center" of historic Lewiston. Many of these developed parcels offer only glimpses of the river, but the river can usually be reached via a short walk. From the bank, views are governed by the density of vegetation, bends in the river channel, and upland topography. The Old Lewiston Bridge offers a vantage from which one can view a relatively long reach of the river both upstream and downstream. While cars passing over the bridge have relatively short viewing times as they move across, pedestrians can linger as long as they like, thus allowing each viewer an individualized viewing experience. Recreationists and others accessing the river from the right bank at the Old Lewiston Bridge would not have as wide a view of the river as that observed from the bridge itself, but the aesthetic quality of the historic bridge passing over the river is an important community attribute.

Downstream of the Old Lewiston Bridge, views of the river became restricted primarily to residents living adjacent to the floodplain or whose homes are situated at an elevation from which they can see the channel, or to rafters/boaters and fishermen who often walk in some distance to the channel. County road alignments such as Lewiston Road and Goose Ranch Road offer no more than occasional glimpses of small portions of the river channel.

A majority of the Dark Gulch site is not readily visible to the general public. An absence of county roads from which the river can be observed combined with private parcel ownership in this area results in public views of the river corridor being available only to those who are rafting or boating on the river. Large private parcels (some with homes) along both sides of the river and homes situated in adjacent uplands have varying degrees of river views. A significant accumulation of dredge tailings located on the right bank of the river stretches about half the length of the Dark Gulch site. Activity Area U-I DG includes a portion of these tailings near the upstream boundary of the site.

The BLM's Bucktail Hole River Access is characterized by a significantly disturbed upland area (the result of such activities as historic dredging, recent gravel mining, periodic flooding, and use of off-highway vehicles). In general, views of the Trinity River from most of the Bucktail Hole uplands, including the primary parking area (adjacent to the bathroom and the boat launch), are obscured by dense

riparian vegetation and topography. The river bends sharply at this location and portions of the channel can be viewed only from the bank or within the channel itself. Several homes within the rural residential community of Bucktail have limited views from the right side of the river.

Visual Assessment Units and Key Observation Points

Areas of distinct visual character within the viewshed, VAUs provide a framework for comparing the visual effects of a proposed project. Within each VAU, key observation points[1] (KOPs) were established along commonly traveled routes or other likely observation points from which a representative group (residents, recreationists, or motorists) could view the Proposed Action. Locations of VAUs and KOPs are shown in Figures 3.14-1a-c. Table 3.14-1 provides a summary of the KOPs, and photographs taken from each KOP are included as Appendix N.

Table 3.14-1. Key Observation Points

VAU #	KOP #	Photo #	Description of Key Observation Points
			Lewiston Site (L)
L1	1	1a	View looking downstream from turnout on Hatchery Road near Trinity Hatchery entrance.
L1	2	1b	View looking upstream from turnout on Hatchery Road near Trinity Hatchery entrance.
L1	3	2a	View looking downstream from turnout on Hatchery Road downstream of previous photos (photos 1a and 1b), but upstream of the Sven Olberston Watchable Wildlife and Picnic area.
L1	4	2b	View looking upstream from turnout on Hatchery Road downstream of previous photos (photos 1a and 1b), but upstream of the Sven Olberston Watchable Wildlife and Picnic Area.
L1	5	3	View looking perpendicular to the river from Mary Smith Campground boat launch (right bank of Trinity River).
L2	1	4a	View looking downstream from Sven Olbertson Watchable Wildlife and Picnic Area.
L2	2	4b	View looking upstream from Sven Olbertson Watchable Wildlife and Picnic Area.
L2	3	5a	Trinity Dam Boulevard, north of Lewiston Bridge; view looking downstream.
L2	4	5b	Trinity Dam Boulevard, north of Lewiston Bridge; view looking upstream.
L2	5	6a	Pullout on Trinity Dam Boulevard, north of previous (photos 5a and 5b); view looking downstream.
L2	6	6b	Pullout on Trinity Dam Boulevard, north of previous photos (photos 5a and 5b); view looking upstream.
L3	1	7a	Pullout on Hatchery Road between Lewiston Bridge and the Old Lewiston Weir; view looking downstream.
L3	2	7b	Pullout on Hatchery Road between Lewiston Bridge and the Old Lewiston Weir; view looking upstream.
L3	3	8a	Old Lewiston Weir and Gage parking area; view looking downstream.

[1] Points from which the project boundary or portions thereof are visible from sensitive receptor areas such as major travel routes and/or surrounding homes

Table 3.14-1. Key Observation Points

VAU #	KOP #	Photo #	Description of Key Observation Points
L3	4	8b	Old Lewiston Weir and Gage parking area; view looking upstream.
L3	5	8c	Old Lewiston Weir and Gage parking area; view looking across parking area toward Lewiston Bridge.
L3	6	9	View of Old Lewiston Weir and Gage parking area from northbound Trinity Dam Boulevard near the Rush Creek Road/Trinity Dam Boulevard intersection.
L4	1	10a	View from Lewiston Bridge looking downstream.
L4	2	10b	View from Lewiston Bridge looking upstream.
L4	3	11a	Flat southwest of the Lewiston Bridge, near the Deadwood pump house; view looking downstream.
L4	4	11b	Flat southwest of the Lewiston Bridge, near the Deadwood pump house; view looking upstream.
L4	5	12a	View looking downstream from Rush Creek Road across Trinity River from River Oaks Resort.
L4	6	12b	View looking upstream from Rush Creek Road across Trinity River from River Oaks Resort.
L4	7	13	View looking perpendicular to Trinity River from Deadwood Road east of River Oaks Resort.
L4	8	14a	River Oaks Resort river access; view looking perpendicular to river.
L4	9	14b	River Oaks Resort river access; view looking upstream.
L4	10	15a	View looking downstream from backyard of home immediately downstream of the previous photos (photos 14a and 14b).
L4	11	15b	View looking upstream from backyard of home immediately downstream of the previous photos (photos 14a and 14b).
L5	1	16a	View looking downstream from Lewiston Cableway fishing access.
L5	2	16b	View looking upstream from Lewiston Cableway fishing access.
L5	3	17	View perpendicular to the Trinity River from Deadwood Road, between the Lewiston Cableway road entrance and the Lewiston Hotel.
L5	4	18a	View looking downstream from Old Lewiston Bridge.
L5	5	18b	View looking upstream from Old Lewiston Bridge.
L5	6	19a	View looking upstream toward Old Lewiston Bridge from parking area at southwest corner of bridge.
L5	7	19b	View looking upstream toward Old Lewiston Bridge from parking area at southwest corner of bridge.
L5	8	20	View looking upstream from the Moose Lodge river access; northeast side of Old Lewiston Bridge.
L5	9	21	View looking downstream of Old Lewiston Bridge River Access at northwest corner of Lewiston Bridge.
L6	1	22a	Upstream view of Trinity River from west end of Lewiston project area, right bank of river.

Table 3.14-1. Key Observation Points

VAU #	KOP #	Photo #	Description of Key Observation Points
L6	2	22b	Downstream view of Trinity River from west end of Lewiston project area, right bank of river.
L6	3	23a	View looking perpendicular to river from home on hilltop overlooking river and historic Lewiston.
L6	4	23b	View looking northeast toward Trinity River from home on hilltop overlooking river and historic Lewiston.
L7	1	24a	View looking perpendicular to river from the Old Sawmill site on Cemetery Road.
L7	2	24b	View looking downstream from the Old Sawmill site on Cemetery Road.
L7	3	25	View of Old Sawmill site looking northeast.
L7	4	26	Cemetery Road looking south from Fish and Game compound driveway.
			Dark Gulch Site (DG)
DG Other	1	1a	View looking south from home adjacent to Dark Gulch, River Right.
DG Other	2	1b	View looking southeast from home adjacent to Dark Gulch, River Right.
DG1	--	--	The absence of homes or other stationary sensitive receptors within this unit precluded the establishment of any KOPs.
DG2	1	2a	View looking downstream from right bank Trinity River, downstream of Ward property dredge tailings.
DG2	2	2b	View looking upstream from right bank Trinity River, downstream of Ward property dredge tailings.
DG2	3	3a	View looking downstream near Ward property dredge tailings.
DG2	4	3b	View looking northwest from river.
DG2	5	3c	View looking northeast from river.
DG2	6	4	View to east of tailings piles on the Ward property.
DG2	7	5a	View looking east from river bank.
DG2	8	5b	View looking downstream from river bank.
DG2	9	6a	View looking northeast toward ponds and dredge tailings on the Ward property.
DG2	10	6b	View looking east toward ponds and dredge tailings on the Ward property.
DG3	1	7a	View of river perpendicular from berm, north of Frog Pond, east of the Bucktail Hole River Access.
DG3	2	7b	View of uplands south of berm, north of Frog Pond, east of the Bucktail Hole River Access.
DG3	3	7c	View of river looking downstream from berm, north of Frog Pond, east of the Bucktail Hole River Access.
DG3	4	8a	View of open area east of the Bucktail Hole River Access looking northeast toward Trinity River.
DG3	5	8b	View of open area east of the Bucktail Hole River Access looking west toward Trinity River.

Table 3.14-1. Key Observation Points

VAU #	KOP #	Photo #	Description of Key Observation Points
DG3	6	8c	View of open area east of the Bucktail Hole River Access looking north toward Trinity River.
DG3	7	9	View of Bucktail Hole River Access parking area.
DG3	8	10a	View looking downstream from point upstream of Bucktail Hole boat launch.
DG3	9	10b	View looking downstream from point upstream of Bucktail Hole boat launch.
DG3	10	11	View looking upstream from Bucktail Bridge.
DG3	11	12	Upstream view from access at Bucktail Bridge, right bank of river.
DG3	12	13a	Upstream view from access at Bucktail Bridge. View from gravel bar east of homes on right bank of river.
DG3	13	13b	Downstream view from access at Bucktail Bridge. View from gravel bar east of homes on right bank of river.
DG3	14	14	View of Trinity River from backyard of home on right bank of river between the Bucktail Hole boat launch and Bucktail Bridge.
DG3	15	15a	Downstream view of river from Ward property access road.
DG3	16	15b	View looking perpendicular to river from Ward property access road.
DG3	17	15c	Upstream view of river from Ward property access road.

Following is a discussion of the VAUs and associated KOPs that have been identified for the Lewiston and Dark Gulch sites.

Lewiston Site

VAU #1 (Hatchery Unit)

VAU #1, located at the extreme upstream end of the Lewiston site, extends from the gated entrance to the TRSSH approximately 0.25 mile downstream (Figure 3.14-1). This VAU focuses on the visibility of in-channel activities (R-1 SO) that would be visible from either side of the Trinity River. A contractor staging area (C-1 SO) would be located adjacent to the Hatchery Road near the hatchery gate. This activity area would be highly visible to hatchery visitors and recreationists. Views from KOPs located on either side of the river from the upstream end of the gravel bar and side channel on which vegetation removal, excavation, and recontouring activities are proposed (R-1 SO) are obstructed by topography and upland and riparian vegetation.

VAU #2 (Sven Olberston Unit)

VAU #2 includes a portion of the Trinity River visible from the Sven Olbertson Watchable Wildlife and Picnic Area as well as points along Trinity Dam Boulevard that offer glimpses of the river (Figure 3.14-1). Direct views of the river are obscured by a sharp bend, coupled with pockets of dense riparian vegetation. From the picnic area (KOPs L2-1 and L2-2), portions of activity area R-1 SO would be

Site Boundary

River Mile (RM)

Visual Assessment Unit

- VAU 1
- VAU 2
- VAU 3
- VAU 4
- VAU 5
- VAU 6
- VAU 7

1:5,400

450 0 450

Feet

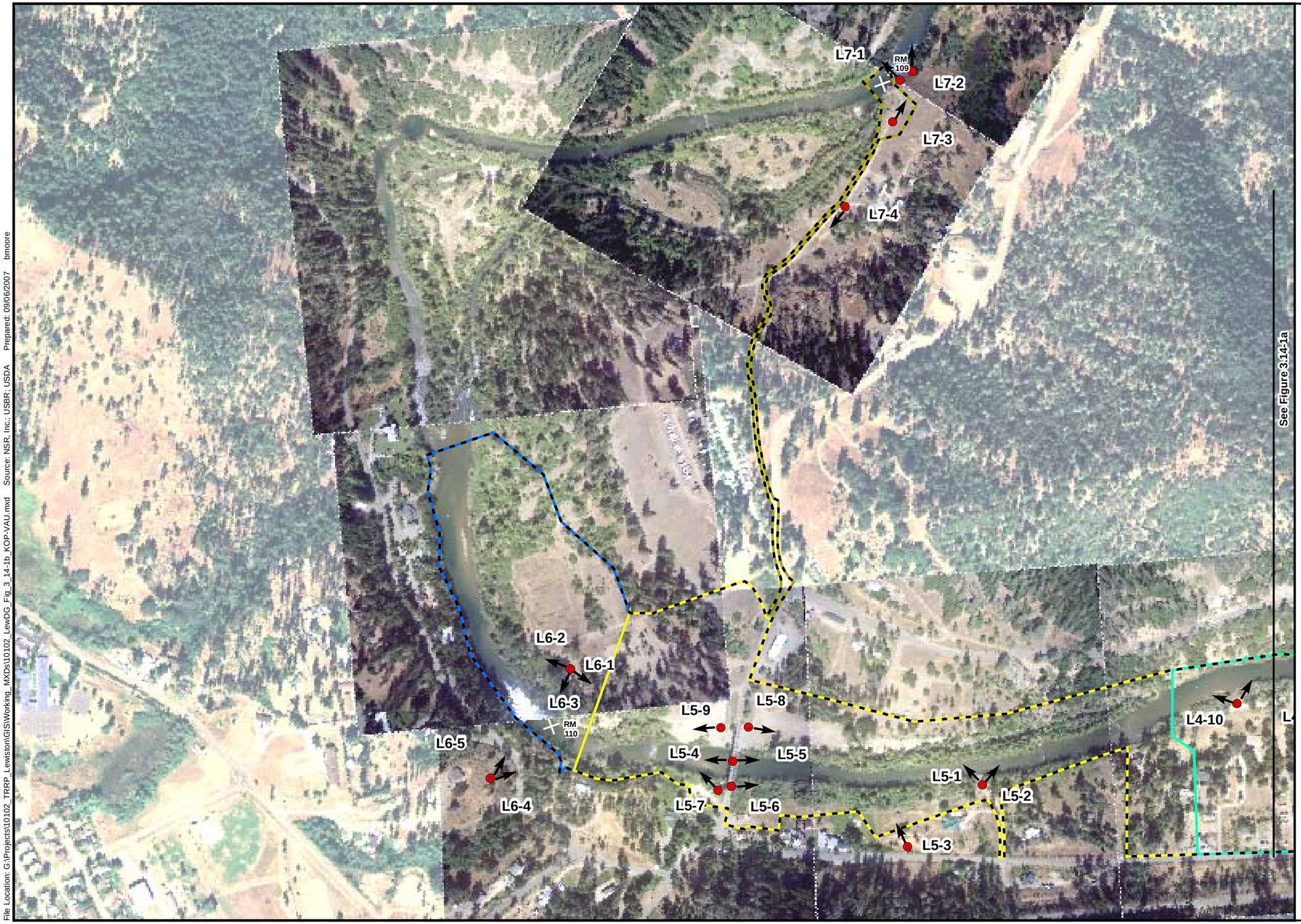
Aerial photography:
July 2005
July 2006

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_14-1a_KOP-VAU.mxd Source: NSR, Inc.; USBR; USDA Prepared: 09/06/2007 bmoore

North State Resources, Inc.

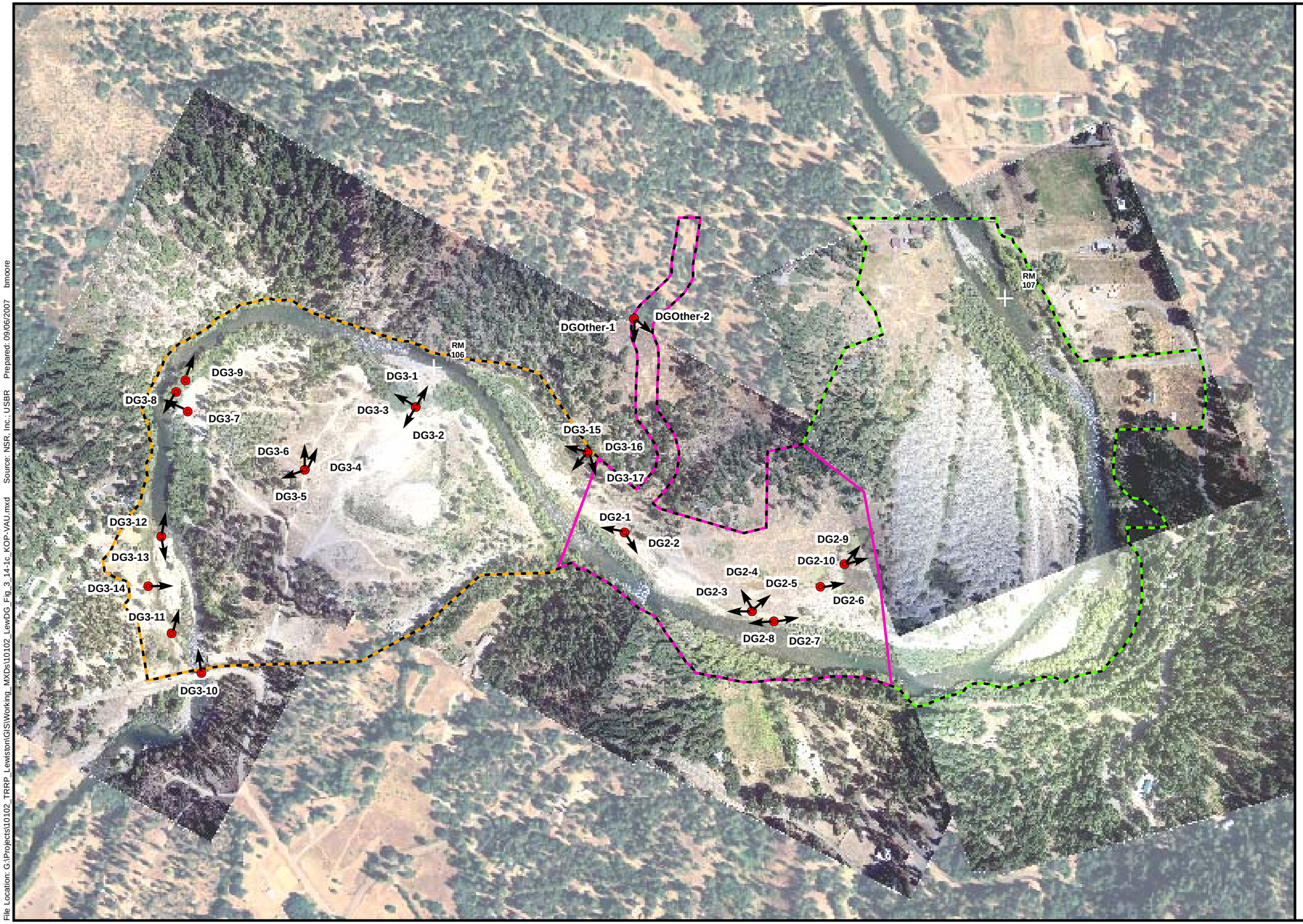
Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7

Figure 3.14-1a
Visual Assessment Units and Key Observation Points



File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_14-1b_KOP-VAU.mxd Source: NSR, Inc.; USBR; USDA Prepared: 09/06/2007 bmoore

Figure 3.14-1b
Visual Assessment Units and Key Observation Points



Site Boundary

River Mile (RM)

Visual Assessment Unit

VAU 1

VAU 2

VAU 3

N

1:5,400

400 0 400

Feet

Aerial photography:
2005
2006

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_14-1c_KOP-VAU.mxd Source: NSR, Inc.; USBR Prepared: 09/06/2007 bmoore

North State Resources, Inc.

Figure 3.14-1c
Visual Assessment Units and Key Observation Points

highly visible. Other parts of the activity area are obscured from view by pockets of upland and riparian vegetation that occur between the picnic area and the river.

Views from Trinity Dam Boulevard, which ascends the side slope of the mountain that parallels the right side of the river across from the Sven Olbertson site, are generally obstructed by dense, mature coniferous vegetation; however, at some pull-outs along the roadway, parts of the river may be visible.

The topography along Trinity Dam Boulevard (on the right bank of the river) is steep and heavily vegetated with conifers. KOPs L2-5 and -6 illustrate the degree to which the river is visible. From these KOPs, portions of activity areas IC-1 SO and IC-2 SO would be visible, although the duration of the view may change based on the viewers' speed and location.

A vehicle traveling along Trinity Dam Boulevard at an average speed of 50 mph would take less than 30 seconds to pass through the entire VAU. There are no homes or other stationary structural developments that would be affected by activities proposed within VAU #2.

VAU #3 (Lewiston Weir and Gage Unit)

VAU #3 is a relatively small unit that offers views from the weir and parking area (C-3 SO), as shown on Figure 3.14-1. The views from the right bank of the river are constrained by topography; views from Hatchery Road on the left bank of the river (KOPs L3-1 and -2) are much more extensive. From KOP L3-1, views extend downstream from the bridge; however, the downstream proposed activity area (IC-4 DC) is obscured by the bridge. Upstream, the weir, which is proposed for modification under IC-2 SO, is clearly visible from KOPs L3-2 and L3-4. The road alignment sits well above the river, and there is very little vegetation tall enough to block the river view from the roadway. Assuming an average speed of 35 miles per hour, vehicles traveling north on Hatchery Road through VAU #3 would have approximately 12 seconds to glimpse the river while passing though the unit.

VAU #4 (Deadwood Creek Unit)

VAU #4 extends just upstream of the Lewiston Bridge and continues downstream approximately 0.5 mile. This VAU includes scattered residential and commercial developments, including the River Oaks Resort (Figure 3.14-1). The boundaries of this unit are defined by the extent of views from several of the primary vantage points along this reach of the river and the surrounding topography.

From the Lewiston Bridge, KOP L4-2 offers a limited upstream view that excludes any proposed project activity areas. The downstream view from the bridge (KOP L4-1) encompasses a much greater reach of the river, extending to the bend of the river at the River Oaks Resort. Removal of vegetation on the left bank of the river, along with floodplain excavation and recontouring (R-2 DC) would be visible from KOP L4-1 and to varying degrees from KOPs L4-7 through -11. KOPs L4-10 and -11, the picnic area/river access for the River Oaks Resort, would have unobscured views of activity area IC-5 DC; however, vegetation obscures the picnic area/river access from the resort's RV hook-ups and permanent homes. Construction access via an existing road through the southern end of the resort would be highly visible to residents and guests of the resort.

A home immediately downstream of the resort may have limited views of the R-2 DC activity area and the C-5 DC staging area (KOP L4-13). However, a dense stand of upland vegetation between the river and the proposed activity areas upstream of this home would obscure most, if not all, of the upstream river views. Proposed activity area IC-6 CW may be minimally visible from the downstream river view at this home (KOP L4-14), but riparian vegetation along the left bank of the river obscures most of the river view from this vantage point.

KOPs L4-5 and -6 are located on Rush Creek Road, which extends across the slope of the heavily vegetated mountainside that parallels the right bank of the river. These KOPs are located across the river and slightly upstream of the River Oaks Resort. Dense, mature coniferous vegetation and the distance of Rush Creek Road (approximately 200 feet) upslope from the river prevents passing motorists from more than an extremely brief glimpse of the channel.

VAU #5 (Lewiston Unit)

VAU #5 includes several homes and commercial buildings, including the Old Lewiston Hotel. This VAU also includes the Old Lewiston Bridge (Figure 3.14-1). Homes along the left bank of the river upstream of the Old Lewiston Hotel are generally set back from the river to a point where they have only partial views (if any) of the river. Upland vegetation and stringers of riparian vegetation screen much of the river from clear views at these homes and along the adjacent Deadwood Road (KOP L5-3).

The Cableway Fishing Access is densely vegetated in both the uplands and along the river banks (KOPs L5-1 and -2). Rehabilitation activities associated with IC- 6 CW through -8 CW would open up the channel to views from the left bank. Further downstream, the view from the Old Lewiston Bridge upstream (KOP L5-5) would allow for the greatest unobstructed view of any proposed activity areas within the entire project area (Lewiston and Dark Gulch sites). Upstream of the Old Lewiston Bridge, the river is essentially straight for approximately 0.3 mile before gradually bending out of view. This stretch of river coincides with several proposed activity areas including IC-7 through -10 CW and R-3 and -4 CW. Two proposed contractor staging areas (C-6 and -7 CW) would also be visible from KOP L5-5.

From the Old Lewiston Bridge, the downstream view (KOP L5-4) would encompass uninterrupted views of proposed activity area IC-11 HG and the contractor staging area C-8 HG. The upstream portion of activity area R-5 HG would also be visible from this vantage point.

From the right bank of the river at the Old Lewiston Bridge, contractor's staging areas proposed on both the upstream and downstream sides of the bridge (C-7 CW and C-8 HG, respectively) would occupy much of the river access areas and, thus, the views at these locations (L5-8 and -9). Views from the left bank of the river, downstream of the bridge (KOPs L5-6 and -7), are partially obscured by dense accumulations of blackberries and a few stringers of alders. The bridge itself obscures any upstream views from this vantage point.

VAU #6 (Hoadley Gulch Unit)

VAU #6 encompasses the downstream portion of the Lewiston site, beginning downstream of the Old Lewiston Bridge where the river makes a significant bend to the west (Figure 3.14-1). Views of this unit from C-8 HG, River Right, and homes on the left bank are for the most part obscured by dense upland and riparian vegetation that occurs on both sides of the river. While some limited views of the river may be possible, particularly to recreationists who venture into the channel, upland views from KOPs L6-1 through -4, illustrate the degree to which upland vegetation obscures the views in this unit. Homes on the left bank of the river are generally above the river and views are buffered by topography and vegetation.. Views from these homes are anticipated to be limited to small portions of proposed activity areas IC-11 and -12 HG, and R-5 HG.

VAU #7 (Old Sawmill Unit)

VAU #7 is composed of an old sawmill site adjacent to a CDFG compound located off Cemetery Road (Figure 3.14-1). This VAU is among the most isolated of the units from the general public, but would be clearly visible to the residents of the CDFG compound, and, to a lesser degree, residents upslope along Rush Creek Road. This site is below a large bluff on river right and views are limited from the river. The unit is predominately vegetated by annual grasses with little upland or riparian vegetation. Much of the roadway approach into this unit is also open and allows for extended views of areas adjacent to the road corridor. KOPs L7-1 through -4 illustrate the visible environment of this unit.

Dark Gulch Rehabilitation Project Site

VAU #1 (Tailings Unit)

Located in the uppermost portion of the Dark Gulch site, this VAU encompasses a large accumulation of dredge tailings deposited during the bucket-line dredge era. The right bank of the river within this unit is privately owned and largely undeveloped, with the exception of a few homes located at the extreme northern end. Access roads into the unit on both sides of the river would pass in close proximity to some homes along the route; however, views of proposed activity area R-1 DG from homes on either side of the river would be partially obstructed by distance, topography, and vegetation. Recreationists accessing this reach of the river (e.g., via raft/boat) would have extended views of this activity area while passing through the unit.

VAU #2 (Ward Unit)

VAU #2 includes a number of private parcels, but is obscured from homes in the area by topography, vegetation, and distance. Proposed rehabilitation activities in this unit would not be visible to anyone other than the occasional rafters/boaters passing by via the channel or by a single landowner who may occasionally access this portion of his property. KOPs established within this unit illustrate the environmental conditions (i.e., topography, vegetation) of this unit.

VAU #3 (Bucktail Unit)

VAU #3 encompasses the BLM's Bucktail Hole River Access recreation site. Although the unit supports dense stringers of riparian vegetation along both sides of the river, which obscures much of the river when

viewed from the uplands, the frequent use of this river access by fishermen and rafters/boaters would result in proposed project activities being visible to a number of individuals. Further, gravel extraction and floodplain restoration activities such as R-3 DG and contractor staging area C-2 DG would be highly visible to individuals visiting the river access. The lack of vegetation in this upland area makes this particular proposed activity area highly visible from a number of vantage points (e.g., KOPs DG3-1 through -6).

Several homes front the river at the downstream end of this unit, downstream of the Bucktail Hole boat launch and upstream of the Bucktail Bridge on Brown's Ranch Road. KOPs DG3-10 through 12 illustrate the views of activity areas R-6 DG and IC-9 DG from the Bucktail Bridge and the backyards of these homes. Proposed activity area U-4 DG would be visible from the bridge (westbound) and a few of the homes in the vicinity. Recreationists, such as fishermen, would also have unobstructed views of these proposed projects activity areas.

3.14.3 Regulatory Framework

Federal

National Wild and Scenic Rivers Act of 1968

Congress enacted the National WSRA in 1968 to protect free-flowing rivers with "outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values." The entire mainstem of the Trinity River was designated a National Wild and Scenic River by the Secretary of the Interior in 1981, primarily because of the river's anadromous fishery. In addition, the reach of the river downstream from Lewiston Dam was classified as having distinctive scenic quality and high viewer sensitivity during peak flows, when the scenic qualities of the river are enhanced. Approximately 97.5 miles of the river are classified as recreational under the federal WSRA.

Except for a short reach within the NRA that is managed by the STNF, the BLM is responsible for ensuring that the scenic values of public lands upstream of Helena on the Trinity River are considered before allowing uses that may have negative visual impacts. The BLM accomplishes this through its Visual Resource Management (VRM) system, a system for minimizing the visual impacts of surface-disturbing activities to scenic public lands and maintaining scenic values for the future. The VRM system consists of two stages, inventory and analysis. The inventory stage involves identifying the visual resources of an area and assigning them to inventory classes using the BLM's visual resource inventory process. The analysis stage involves determining whether the potential visual impacts from proposed surface-disturbing activities or developments will meet the management objectives established for the area, or whether design adjustments will be required (U.S. Bureau of Land Management 2003ba).

The VRM system uses four inventory classes, each having distinct management objectives:

- Class I Objective: To preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.
- Class II Objective: To retain the existing character of the landscape. The level of change to the characteristic landscape should be low.

- Class III Objective: To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.
- Class IV Objective: To provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high.

The Trinity River corridor is classified as VRM Class II. Therefore, management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape (U.S. Bureau of Land Management 2003ab).

While there are no separate reporting requirements to address Wild and Scenic Rivers, environmental documentation should include a discussion of project-related issues, summarize coordination among participating agencies, evaluate impacts to qualities that support the river's designation, and propose suitable mitigation measures as warranted. Appendix C provides the analysis and determination necessary for the Proposed Action to comply with Section 7 of the federal WSRA. Compliance may require preparation of one or more of the following:

- U.S. Army Corps of Engineers Clean Water Act Section 404 Permit;
- California Regional Water Quality Control Board Section 401 Water Quality Certification;
- California State Water Quality Control Board Section 402–Notice of Intent to comply with the General Permit (and development of a Storm Water Pollution Prevention Plan); and
- ESA Section 7 consultation for listed species potentially affected by the project.

State

California Wild and Scenic Rivers Act of 1972

Patterned after the federal WSRA, the California WSRA was enacted in 1972 to preserve those rivers within the state designated as having extraordinary scenic, recreation, fishery, or wildlife values. Under this act, the Klamath River and its tributaries, including the mainstem Trinity River, are subject to similar criteria and definitions of purpose defined by the federal WSRA. However, while the federal act applies to public lands located within approximately 0.25 mile on either side of a river's channel and requires development and implementation of a river protection management plan, the state act provides protection only to the first line of permanent riparian vegetation and does not require development of a management plan.

Under the California WSRA, the segment of the Trinity River that passes through the Lewiston and Dark Gulch sites is designated as "scenic" and "recreational." The California Public Resources Code (5093.53[b]) defines "scenic rivers" as being "those rivers or segments of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads." "Recreational rivers" are defined in the California Public Resources Code (5093.53[c]) as being "those rivers or segments of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past." While the California WSRA does not specifically require that

water quality, streambed alteration, or other project-related permits be obtained, other permits or agreements may be required to comply with other laws in accordance with the federal WSRA.

Local

Trinity County General Plan Goals and Objectives

The Trinity County General Plan contains goals and policies designed to guide the future physical development of the county, based on current conditions. The Trinity County General Plan does not specifically address visual resources. However, certain goals identified within the context of other plan elements are relevant to visual resources. The following goals and objectives related to aesthetic issues associated with the project were taken from the applicable elements of the County's General Plan (Trinity County 2001) and the Lewiston Community Plan (Trinity County 1986).

County-Wide Goals and Objectives

Cultural

Goal: To retain the rural character of Trinity County.

- By encouraging uses that fit with the land.

Natural Resource Lands

Goal: To protect the scenic natural resources of Trinity County and preserve areas that are important as commercial natural resources for future generations.

- Preserve areas of established natural scenic beauty as areas of active and passive enjoyment.

Scenic Lands

Goal: To conserve, preserve, and maintain the scenic beauty of Trinity County.

- Encourage private developers to use conservation methods when using or developing the land. Discourage development on steep slopes unless special construction techniques are used.
- Acquire scenic easements for conservation of Trinity County's scenic beauty.
- Adopt stringent regulations requiring the landscaping and maintenance of vegetation on cut and fill slopes as required by the appropriate agency.
- Control encroachment of cut and fill slopes into scenic easement areas or corridors along scenic highways, whether these highways are State or County.

Lewiston Community Plan Goals and Objectives

Natural Resources

Goal: To protect areas of special habitat considerations within the Plan area.

- Encourage retention of riparian habitat areas.
- Work with property owners adjacent to the Trinity River to retain existing riparian vegetation.

Goal: To protect and improve fish habitat within the Plan area.

- Encourage the development of stream restoration projects within the Plan area.

Goal: To retain the quiet unobtrusive nature of development in the Plan area.

Community Design

Goal: To retain and enhance the overall high visual quality of the Plan area.

- Designating portions of Trinity Dam Blvd., Buckeye Creek Road, and Rush Creek Road as Scenic Roadways.
- Review future development for impact on the visual qualities on the Trinity River.

Project Consistency with the Trinity County General Plan and Community Plans

A comparison of the goals and objectives of the Proposed Action to the relevant local planning policies (i.e., Trinity County General Plan, Lewiston Community Plan) has been conducted to determine if there are any inconsistencies between the relevant plans.

The goals and objectives described in Chapter 1 are generally compatible with the applicable General Plan goals and policies summarized above. The overall goal of the project is to rehabilitate the Lewiston and Dark Gulch sites so that they function in a manner that is closer to historic conditions (i.e., pre-Lewiston Dam).

3.14.4 Environmental Consequences/Impacts and Mitigation Measures

Methodology

A field assessment of the proposed rehabilitation sites was conducted for the purpose of identifying areas of visual sensitivity and scenic resources, and to assess the existing character and quality of the aesthetic resources associated with the Proposed Action and project alternatives. This assessment emphasized the potential relationship between the Proposed Action and project alternatives, and viewers associated with the Trinity River, county roads in the project vicinity, and surrounding homes and businesses. VAUs were mapped based on the distinct visual character of the landscape, KOPs were identified within each VAU, and photo points were established.

Analysis of potential impacts to aesthetic resources is based on the significance criteria described in Appendix G of the CEQA Guidelines. The TCRCD, acting as the CEQA lead agency, has used these criteria to develop significance thresholds. Significance thresholds are used to evaluate the proposed project's potential impact on the visual character of the project area, particularly the visual character of those areas identified as KOPs. All assessments are qualitative, evaluating potential impacts of the Proposed Action and alternatives on the viewshed in relation to the local aesthetic context. A review of the consistency of the Proposed Action and alternatives with federal and state Wild and Scenic River designations is also presented in Appendix D.

Significance Criteria

The proposed project would have a significant impact if it would:

- obstruct a scenic view from public viewing areas;
- have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- substantially degrade the existing visual character or quality of the project site and its surroundings;
- introduce physical features that are substantially out of character with adjacent residential areas;
- alter the site so that the scale or degree of change appears as a substantial, obvious, and disharmonious modification of the overall scene (to the extent that it clearly dominates the view);
- create substantial daytime glare associated with new construction;
- disrupt adjacent residential areas from new night-time lighting;
- create a new source of substantial light or glare that would adversely affect day or nighttime views of the site;
- be inconsistent with the policies of the Trinity County General Plan relating to aesthetics; or
- be inconsistent with the goals and objectives of both the federal and state WSRAs with regards to the Trinity River.

Impacts and Mitigation Measures

Table 3.14-2 summarizes the potential aesthetic impacts resulting from construction and operation of the No-Action Alternative, the Proposed Action, and Alternative 1.

Table 3.14-2. Summary of Aesthetic Impacts for the No-Action Alternative, Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.14-1.	Implementation of the project could result in the degradation and/or obstruction of a scenic view from key observation areas.			
NI	S	S	LS	LS
Impact 3.14-2.	Implementation of the project could substantially change the character of, or be disharmonious with, existing land uses and aesthetic features.			
NI	LS	LS	N/A[1]	N/A[1]
Impact 3.14-3.	The project may be inconsistent with federal and state Wild and Scenic River Act or Scenic Byway requirements.			
NI	LS	LS	N/A[1]	N/A[1]

Table 3.14-2. Summary of Aesthetic Impacts for the No-Action Alternative, Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.14-4.	The project could generate increased daytime glare and/or nighttime lighting.			
NI	LS	LS	N/A[1]	N/A[1]

Notes:
LS = Less than Significant S = Significant
NI = No Impact N/A = Not Applicable
[1]Because this potential impact is less than significant, no mitigation is required.

Impact 3.14-1: Implementation of the project could result in the degradation and/or obstruction of a scenic view from key observation areas. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, the degradation and/or obstruction of a scenic view from key observation areas would not occur as a result of construction activities.

Proposed Action

As previously discussed, the Lewiston–Dark Gulch sites include ten distinct VAUs (seven within the Lewiston site and three within the Dark Gulch site). The potential impacts of the Proposed Action and Alternative 1 on KOPs are discussed below by VAU.

Lewiston Rehabilitation Sites

VAU #1 (Hatchery Unit)

KOPs L1-1 through -5 (views of C-1 SO, IC-1 SO, IC-2 SO, and the upstream end of R-1 SO). Topography and vegetation obscure the views of in-channel activity areas from the downstream-looking KOPs (L1-1, -3, and -5). No project activities are proposed upstream of this unit. KOPs L1-1 through -4 are within the area proposed for use as contractor staging area, C-1 SO. This staging area would also be clearly visible from KOP L1-5. While potentially significant, the impact to aesthetics resulting from the presence of C-1 SO would be temporary. There would be no other significant impacts to the visual environment within this unit.

VAU #2 (Sven Olbertson Unit)

KOPs L2-1 and -2 (views of R-1 SO, U-1 SO, C-2 SO, and new and existing access roads); KOPs L2-3 and -4 (views of R-1 SO and IC-2 SO). Portions of the gravel bar included within activity area R-1 SO would be highly visible from the Sven Olbertson Watchable Wildlife and Picnic Area. Large woody debris would be placed at points along the channel and large seed trees such as cottonwoods and willows would be retained. The proposed activity areas R-01 SO and IC-2 SO would be visible from portions of

Trinity Dam Boulevard (KOPs L2-3 and -4). As illustrated by KOPs L2-3 and -4, the river is visible from the roadway, particularly when traveling southbound. However, views from passing vehicles would be of short duration (anticipated to be less than 30 seconds to pass through the entire VAU when traveling at 50 mph). Views from L2-5 and L2-6 would not be affected.

Access roads (new and existing) proposed at the Sven Olbertson site would be visible from the northern end of the picnic area. Topography would obscure the view from downstream.

Impacts to aesthetics within this unit would be potentially significant, particularly when viewed from KOPs L2-1 and -2. Proposed activities within the channel would have a significant impact on the visual environment. However, because proposed project activities are intended to restore the form and function of an alluvial river, potentially adverse visual impacts occurring during construction would be temporary, lasting only until natural processes take over.

VAU #3 (Lewiston Weir and Gage Unit)

KOPs L3-1 through -6 (views of IC-2 SO, IC-3 SO, and C-3 SO). The reach of the Trinity River through this unit is highly visible and picturesque. KOPs L3-1 and 2 established on Hatchery Road provide unobstructed views of the old weir, which is proposed for modification under IC-2 SO. Also visible from this vantage is IC-3 SO, which involves the construction of a point bar extending from the left bank into the channel. The weir (IC-2 SO) and the downstream proposed activity area (IC-3 SO) are also visible from KOPs L3-3 through 5.

Modification of the weir and creation of a side channel would have a significant visual impact on existing views of the river available in this unit. However, impacts such as these would be temporary. In fact, the modification of the weir would not be apparent to viewers unfamiliar with current conditions in which the weir extends out into the channel.

The Lewiston Weir and Gage parking area is proposed for use as a contractor staging area (C-3 SO). The parking area is not highly visible from Trinity Dam Boulevard (KOP L3-6) or Hatchery Road (on the opposite side of the river) (see KOP L3-1), but contractor staging activities would be readily apparent to individuals accessing the river from this location. This impact to aesthetics would be temporary, lasting only as long as the contractor operates in the area.

VAU #4 (Deadwood Creek Unit)

KOPs L4-1, 3, 4, and 7 (views of IC-4 DC, R-2 DC, and a downstream access road); KOP L4-8 and 9 (views of IC-5 DC, R-2 DC, C-5 DC, and an access road). KOPs L4-1 and 2 show the views downstream and upstream (respectively) from the Lewiston Bridge. No proposed project activities would be visible upstream (KOP L4-2) as a result of topography and vegetation; however, the view downstream (KOP L4-1) encompasses nearly 0.25 mile of river reach. From this vantage, two proposed activity areas are visible including IC-4 DC and portions of R-2 DC. A proposed access road on the left bank between these two activity areas would also be visible. Arguably the most significant impact to the view from KOP L4-1 would be the removal of a majority of the existing riparian vegetation from the left bank of the river.

However, some large riparian vegetation would be retained to provide a future source of LWD to the river ecosystem.

KOPs L4-3 and 4 are located within the left bank floodplain immediately downstream of the Lewiston Bridge. From both of these KOPs, IC-4 DC would be highly visible as would the access road into this activity area when looking downstream (KOP L4-3), R-2 DC. KOP L4-7 established on Deadwood Road upslope of KOPs L4-3 and 4 allows for limited views of the floodplain in which R-2 DC and the access road would be implemented. However, views from this vantage are partially obscured by a dense accumulation of blackberry brambles along the road shoulder and surrounding topography.

Views from KOPs L4-5 and 6 show that the proposed activity areas within this unit would not be visible from Rush Creek Road and therefore, visual impacts would be less than significant. Dense conifers and the distance of the road upslope from the river (approximately 200 feet) prevents passing motorists from getting any more than a brief glimpse of the river from the roadway.

Among the amenities offered at the River Oaks Resort is a picnic area adjacent to a river access. The RV/camping sites and permanent homes within the resort are located upslope of the picnic area and views of the river are buffered by both topography and a stand of oaks. A portion of R-2 DC and all of IC-5 DC and C-5 DC occur in the picnic area/river access. As illustrated by KOPs L4-8 and 9, vegetation removal and construction of a point bar from the left bank would be highly visible to users of this area and thus would have a significant impact on the visual environment. The home immediately downstream and adjacent to the resort would also have some limited upstream views of these activity areas and the proposed access road (which already exists) (KOP L4-11); however, vegetation that would be retained between the picnic area and this home would act to buffer the impact of the activities in this vicinity.

The downstream view from the backyard of this home (KOP L4-10) would allow for glimpses of proposed activity area IC-6 CW and the existing and proposed access roads to the south of the home. Once again, vegetation would obscure most of the in-channel activities from view, but the proposed new access road would be clearly visible from the home's backyard. While the impact on river views from this home would be less than significant, the high visibility of the new access road would be a significant, although temporary, visual impact.

VAU #5 (Lewiston Unit)

KOPs L5-1 and -2 (views of R-3 CW, R-4 CW, IC-7 through IC-9 CW, and C-6 CW); KOP L5-3 (views of R-3 CW, R-4 CW, IC-8 through 10); KOPs L5-4, 7, and 9 (views of IC-11 HG, R-5 HG, C-8 HG, C-8 HG, and access roads on right bank of river); and KOPs L5-5, -6, and -8 (views of R-3 CW, R-4 CW, IC-8 CW, IC-9 CW, IC-10 CW, and C-7 CW). KOPs L5-1 and 2 were established at the Cableway Fishing Access site. The site is heavily vegetated by both upland and riparian vegetation. Rehabilitation activities associated with IC-6 through IC-8 CW including vegetation removal would open up the channel to view from the left bank and would thus be a significant visual impact.

Views upstream of the Old Lewiston Bridge (KOPs L5-5 and 8) extend approximately 0.3 mile before gradually bending out of view. Several proposed activity areas would be visible when looking upstream

from these upstream viewing vantage points. These activity areas include R-3 CW, R-4 CW, IC-8 CW, IC-9 CW, IC-10 CW, and C-7 CW. A new access road proposed to extend along the right bank of the river would also be visible to varying degrees from KOPs L5-5 and 8. Impacts to the visual environment from these vantages would be significant, but temporary, becoming less noticeable as natural processes progress over time.

KOPS established to demonstrate views downstream of the bridge (KOPs L5-4, 6, 7, and 9 CW) would allow for views of proposed activity areas IC-11 HG, R-5 HG, C-8 HG, C-8 HG, and access roads on right bank of river adjacent to the Old Lewiston Bridge River Access. Vegetation stringers along the left bank of the river partially obscure some of these views from L5-6 and 7. Vegetation removal and in-channel activities would have a significant, but temporary impact on the visual environment. The visual impact of contractor staging areas would also be temporary, lasting only as long as construction occurs within the unit.

VAU #6 (Hoadley Gulch Unit)

KOPs L6-1 and -2 (views of U-3 HG); KOPs LG-3 and -4 (views IC-11 HG, -12 HG, and R-5 HG.). Dense upland and riparian vegetation on both sides of the river obscures most of the channel from view at any of the vantage points within this unit. Recreationists who venture into the uplands south of the open area adjacent to the right bank of the Old Lewiston Bridge would likely be able to view the proposed upland debris storage area, U-3 HG (as illustrated by KOPs L6-1 and 2). Views from homes on the left bank of the river are buffered by vegetation between the homes and the river. KOPs LG-3 and 4 are representative of river views from homes situated on hilltops overlooking the old town portion of Lewiston, which includes the Old Lewiston Bridge. As these KOPs show, other than for transitory views by recreationists, only glimpses of the river are possible from nearby homes and from passing cars, due to dense, mature coniferous vegetation and the topography; therefore, visual impacts are anticipated to be less than significant.

VAU #7 (Old Sawmill Unit)

KOPs L7-1 through -3 (views of IC-13 FG); and KOP L7-4 (view of Cemetery Road); KOP L7-4 (view of road approach to the Old Sawmill site). This unit is somewhat isolated from the general public. Although portions of the proposed activity area (IC-13 FG) may be partially visible to residents of the CDFG compound, KOPs L7-1 through 3 illustrate the topography (i.e., height of the uplands above the river channel) and distance that would obstruct river views from buildings within the compound. KOP L7-4 shows the openness of the road leading into the unit. While residents and visitors staying at the Old Lewiston Bridge RV Park may experience temporary increases in visible vehicle traffic passing by the park enroute to the Old Sawmill site, increased road use would be temporary and gravel augmentation into the river channel would have a less than significant impact on the visual environment given the absence of any stationary sensitive receptors. Overtime, any observable changes to the channel initially apparent to transitory users of the area (e.g., rafters/boaters, fishermen) would become naturalized.

Dark Gulch Rehabilitation Site

VAU #1 (Tailings Unit)

The absence of homes or other stationary sensitive receptors within this unit precluded the establishment of any KOPs. The unit supports a significant accumulation of dredge tailings. Although new and existing access roads into the unit would initially pass by homes on both sides of the river, proposed activity area R-1 DG would have little or no visual impact on homes in the vicinity of the unit due to the distance of these homes from the river, the topography, and the presence of stands of vegetation. Transitory users of this reach of the river (i.e., rafters/boaters) would have the opportunity to view activity areas R-1 DG, U-1 DG and IC-1 DG, and thus visual impacts from their perspective would be initially significant until natural processes become established.

VAU #2 (Ward Unit)

Similar to VAU #1 (Tailings Unit), VAU #2 is not visible from any stationary receptor. Those having the potential to view this unit include transitory recreationists (i.e., rafters/boaters, fishermen) and occasionally the property owners. KOPs DG2-1 through 10 illustrate views of proposed activity areas (R-2 DG, IC-2 through -5 DG, or C-1 DG) in this unit. Neither the river nor the proposed activity areas are visible from the Ward home. However, an alternative access road through the Ward property would pass in close proximity to the Ward home and would be highly visible, as illustrated by KOPs DG Other-1 and -2. While visual impacts relevant to recreationists passing through this unit may initially be significant, impacts on the aesthetics of the unit when viewed from the Ward home would be less than significant with the exception of the potential road access. Use of this potential access road is unlikely since an alternative route is available to the east.

VAU #3 (Bucktail Unit)

KOPs DG3-1 through -6 (views of the R-3 DG, IC-7 DG, U-2 and -3 DG, and C-2 DG); KOP DG3-7 through -9 (views of IC-8 DG and R-5 DG); KOPs DG3-10 through 14 (views of R-6 DG, IC-9 DG, U-4 DG, and existing and new access roads); and KOPs DG3-15 through 17 (views of R-2 DG, R-3 DG, R-4 DG, IC-5 DG, X-2 DG, and C-1 DG). This unit encompasses the BLMs Bucktail Hole River Access. Upland areas beyond the river bank are generally open with little or no vegetation to obstruct views. Immediately along the river, however, dense stringers of riparian vegetation obscure views of the river from the parking area and other vehicle-accessible areas. KOPs DG3-1 through 6 illustrate the existing absence of river views throughout most of the unit; however, the removal of riparian vegetation proposed to occur in activity area R-3 DG, would remove these obstructions and thus, would initially have a significant impact on the visual environment. With riparian vegetation removed, other proposed activity areas such as IC-6 and -7 DG would become visible from these vantages. The spoils pile (U-2 DG) and the contractor staging area (C-2 DG) would be highly visible from vantage points such as KOPs DG3-2 and DG3-4, which would be a significant impact.

As illustrated by KOPs DG3-7 and -8, users of the Bucktail Hole boat launch and fishermen accessing the river in this vicinity would have a view of proposed activity area IC-8 DG. Immediately around the boat launch, proposed activity area R-5 DG would result in a significant change in the appearance of this area.

Downstream of the boat launch, several homes located on the right bank of the river and vehicles traveling over Bucktail Bridge via Brown's Mountain Road would have unobstructed views of proposed activity areas R-6 DG, IC-9 DG and U-4 DG, as well as portions of proposed access roads. KOPs DG3-10 illustrate views of these proposed activity areas from the Bucktail Bridge (KOP DG3-10), the backyards of adjacent homes (KOPs DG3-11 and 14) and from an in-channel recreationist's perspective (KOPs DG3-12 and -13). Topography would obscure a majority of the proposed activity area R-5 DG and IC-9 DG from these downstream vantage points. Impacts to visual resources at this location would be significant, although temporary.

Also included in this unit are three KOPs established upstream at the interface of the Ward Unit's access road with the floodplain (KOPs DG3-15 through -17). These KOPs illustrate the view of proposed activity areas R-2 DG, R-3 DG, R-4 DG, IC-5 DG, X-2 DG, and C-1 DG that may be observed by the Ward's when accessing the river from their home. Because the Wards' home is some distance from these proposed activity areas, none of which would be visible from the home, visual impacts occurring in this unit would be less than significant.

As previously described, the intent of the proposed rehabilitation activities is to restore the natural conditions of the Trinity River; therefore, construction activities, while initially altering the existing visual environment, would take on the qualities of the natural environment through rehabilitation and the occurrence of natural processes.

Mitigation Measures

No-Action Alternative

No significant impacts have been identified; therefore, no mitigation is required.

Proposed Action and Alternative 1

- In order to minimize impacts to visual resources resulting from the removal of vegetation within the project area, mitigation measures 1a through 1c (e.g., revegetation), as described in Section 3.7 (Vegetation, Wildlife, and Wetlands), will be implemented where applicable for either alternative.

- Visual impacts related to water quality (i.e., the potential for increased turbidity to adversely impact the aesthetic quality of the river) will be mitigated through the implementation of mitigation measures 3a through 3c, as described in Section 3.8 (Recreation). These measures will be implemented where applicable for either alternative.

Significance after Mitigation

Less than significant

Impact 3.14-2: Implementation of the project could substantially change the character of, or be disharmonious with, existing land uses and aesthetic features. ***No Impact for the***

No-Action Alternative; Less-than-Significant Impact for the Proposed Action and Alternative 1

No-Action Alternative

Under the No-Action Alternative, no changes would occur to the character or harmony of aesthetic features and existing land uses because the project would not be constructed.

Proposed Action and Alternative 1 (All VAUs)

The Proposed Action and Alternative 1 have been designed to be not only functional (e.g., enhance fisheries, restore sinuosity), but to also complement the visual resources associated with the project sites. Both alternatives incorporate the diversity of landscapes and vegetation types into the character of the activity areas. For example, materials excavated from riverine areas would be removed to upland areas, or used as a source of coarse sediment to enhance the alluvial function of the river. Material transported to upland activity areas would be placed in a manner that blends the material into the contours of the existing mine tailing piles while not changing the nominal heights of the piles. Retention of existing topographic features would significantly lessen the degree of visual impact.

The activities described in Chapter 2 provide a basis for flow-dependent adjustments to the river channel and floodplain over time. Although the alternatives vary in the degree to which the channel and floodplain would be affected, either action alternative would produce gradual, ever-improving changes in the aesthetic quality of this reach of the river, while retaining the character of surrounding land uses and features. Because changes associated with both the Proposed Action and Alternative 1 would retain these characteristics, either alternative would result in a less-than-significant impact on aesthetic resources.

Mitigation Measures

No-Action Alternative, Proposed Action and Alternative 1

Since no significant impacts have been identified, no mitigation is required.

Significance after Mitigation

N/A

Impact 3.14-3: The project could be inconsistent with the federal or state Wild and Scenic River Acts or Scenic Byway requirements. ***No Impact for the No-Action Alternative; Less-than-Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, no changes would occur that would be inconsistent with the federal or state WSRA or Scenic Byway requirements because the project would not be constructed.

Proposed Action and Alternative 1 (All VAUs)

Under Section 7 of the WSRA, direct and adverse effects to the values for which the Trinity River was recognized as a Wild and Scenic River are prohibited. Implementation of the Proposed Action or

Alternative 1 would not be inconsistent with these values because the activities would not be considered substantially out of character with the current aesthetic conditions. Implementation of either of the alternatives would result in a less-than-significant impact to WSRA and Scenic Byway requirements. The WSRA Section 7 Determination for the Proposed Action is included as Appendix D.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

No significant impacts have been identified; therefore, no mitigation is required.

Significance after Mitigation

N/A

Impact 3.14-4: The project could generate increased daytime glare and/or nighttime lighting. *No Impact for the No-Action Alternative; Less-than-Significant Impact for the Proposed Action and Alternative 1*

No-Action Alternative

Under the No-Action Alternative, no changes in daytime glare or nighttime lighting would occur because the project would not be constructed.

Proposed Action and Alternative 1 (All VAUs)

Under the Proposed Action and Alternative 1, significant increases in daytime glare and/or nighttime lighting are not anticipated. Construction activities would not take place at night; therefore, nearby homes and motorists traveling on roads adjacent to the river would not be subjected to the headlights of construction equipment or stationary spotlights. Material that would be removed from the floodplain and deposited into activity areas is generally not reflective and would have a less-than-significant impact on daytime glare. Some changes may occur in the locations and amounts of glare produced by the widened river channel, but these changes would be short-lived as the sun passes over; the impacts of these changes would therefore be less than significant. The most likely viewer group to be affected by daytime glare would be residents, but only a few homes near the project boundary have views of various portions of the rehabilitation areas and these views are generally somewhat limited. Furthermore, any occurrences of daytime glare produced by the sun reflecting off the water would be of short duration, which would be considered less than significant.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

No significant impacts have been identified; therefore, no mitigation is required.

Significance after Mitigation

N/A

3.15 Hazards and Hazardous Materials

This section evaluates hazards and hazardous materials that may currently be present within the project boundaries. Hazardous materials that could be introduced as a result of project implementation, as well as possible health hazards associated with the Proposed Action, are also assessed.

3.15.1 Affected Environment/Environmental Setting

Regional Setting

Hazardous materials and hazardous waste are regulated by federal, state, and local agencies, and are required to be recycled or disposed of properly. Nonetheless, illegal storage and disposal and unintentional releases of hazardous materials or waste from leaks and accidents can occur. In Trinity County and within the general vicinity of the project area, hazardous materials and hazardous waste are transported primarily via roadways, such as SR 299, SR 3, Lewiston Road, Rush Creek Road, Trinity Dam Boulevard, Brown's Mountain Road, and Goose Ranch Road. Under CCR, Title 13, Section 1150-1194, and CFR, Title 49, the California Highway Patrol (CHP) regulates the transport of hazardous materials. When a spill of a hazardous materials or waste occurs on a highway, the CHP is responsible for directing cleanup and enforcement (CCR Section 2450-2453b).

When a spill involving a hazardous material or waste occurs on public land, it is the land management agency's responsibility to initiate and direct cleanup, to initiate investigations and direct enforcement, and to contact the necessary personnel for performing these functions. When a hazardous material or waste spill occurs on private lands, the property owner is responsible for cleanup. For spills on private lands, Trinity County Environmental Health contacts the proper personnel and ensures that cleanup is completed according to federal, state, and local regulations.

Title 27 of the California Health and Safety Code (Article 1, Section 15100) established a unified program to deal with hazardous waste and materials in California (California Environmental Protection Agency 2003). The program consolidated six state environmental programs into one program under the authority of a Certified Unified Program Agency (CUPA). These programs are the Hazardous Materials Business Plan/Emergency Response Plan, Hazardous Waste, Tiered Permitting, Underground Storage Tanks, Aboveground Storage Tanks (Spill Prevention Control and Countermeasure only), and the Uniform Fire Code Hazardous Materials Management Plan. The CUPA is typically a local agency that has been certified by the California Environmental Protection Agency (CalEPA) to implement the six state environmental programs within the local agency's jurisdiction.

While larger, more urban areas often benefit greatly from the formation of a CUPA, rural areas such as Trinity County are often overwhelmed by the costs and training required for implementing these programs at the local level. Trinity County has not formed a CUPA for the following reasons (Trinity County 2001):

1. No significant public or environmental health benefit has been identified for implementing these programs in rural areas that do not have an industrial base.

2. The CalEPA incentive funding, allotted in 2001, to the non-CUPA authority was not guaranteed and was dependent on the annual California budget. However, eligibility for such funding required a full commitment from the County to participate as a CUPA.
3. The program requires annual reporting and periodic state audits that would require approximately 100 hours of staff time annually, without any direct benefit to public health.
4. There would be substantial increased County liability from accepting responsibility for enforcing hazardous materials laws.
5. Inspector proficiency would be extremely challenging due to the complexity of the hazardous material laws and the lack of local inspector opportunities. Establishing and maintaining staff proficiency would be a problem and would increase County liability.

Currently, the CalEPA is responsible for administering CUPA programs in Trinity County, since the County has declined to apply for CUPA status itself. The one exception is the County's Underground Tank Program, which has been administered by Trinity County Environmental Health for more than a decade. The County adopted this program as a proactive measure directed at stemming the occurrence of groundwater contamination caused by leaky underground fuel storage tanks. Under this program, fuel tanks must be permitted and inspected annually to ensure operator compliance and to protect the county's groundwater and drinking water supplies.

Uncontrolled or abandoned places throughout the nation where hazardous waste poses a possible threat to local ecosystems or people are referred to as "Superfund" hazardous waste sites by the EPA, and are included in the EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database. A search for occurrences of Superfund sites in Trinity County yielded three sites within 30 miles of the project location. Table 3.15-1 lists these sites and their locations and shows their distance from the Proposed Action. Although they are Superfund sites, none of these sites is included on the National Priorities List, which consists of those sites known or likely to release hazardous substances, pollutants, or contaminants.

Table 3.15-1. Hazardous Waste Sites Recorded in Trinity County, California

Site Name	Status	Location	Approximate Distance from Proposed Action
Cheek Skyline Logging	Active	South of Highway 3 Douglas City, CA	15 miles
Kingsbury Creek Mine Lab	Active	Shasta Trinity NF Hayfork, CA	22 miles
USFS Drinkwater Gulch Mine	Active	T31N, R12W, Section 6 Hayfork, CA	24 miles

Source: U.S. Environmental Protection Agency 2007 (http://www.epa.gov/superfund/sites/cursites/index.htm)

Toxins

Toxicity concerns in the Trinity River focus on polluted run-off from abandoned mines and mining activities, sediment released from subdivision development, land uses (e.g., road use and timber management) in areas susceptible to surface erosion and mass wasting, septic tank use, aboveground and underground tanks, and lumber mills. The accumulation of mercury in aquatic biota is well documented throughout the Trinity River basin. Consequently, regulatory guidelines default to numeric criteria promulgated by the EPA for priority toxic pollutants (see Section 3.15.2) or the narrative threshold, which states that toxic substances should not occur in concentration levels such that detrimental physiological responses in humans or aquatic life may result. Under the California Toxics Rule, the total allowable concentration of measured mercury in unfiltered water should not exceed 0.050 parts per billion (ppb).

Flooding

Water level fluctuations, particularly those that occur rapidly, pose a distinct hazard to residents and visitors along the waterways in Trinity County. The flood season in the Trinity River basin typically occurs between October and April, when over 90 percent of the annual precipitation falls. Floods on the mainstem Trinity River are controlled to some extent by the TRD, but substantial flood events have occurred as recently as 1997. Section 3.4 provides a detailed discussion of water resources, including the types and variability of flood flows with respect to the TRD.

Seismic Events

Infrequently, seismic events occur in the region, generally in the form of low to moderate levels of ground shaking associated with nearby or distant earthquakes. The potential for landslides triggered by seismic events is not considered significant within the project boundaries or upstream in the vicinity of the TRD, due to the low historical seismicity of the region. However, the steep topography and shallow, erosive soils found in much of the region increase the potential for landslides and rockfalls triggered by seismic events, precipitation, or a combination of these two factors. Although landslides are a common occurrence along roads in Trinity County, such events typically are intercepted by the road prism and rarely contribute material to the river. There is a greater potential for areas downstream of the project boundaries to incur slope failures during seismic events due to steeper topography and unstable geologic materials. Possible effects of large downstream landslides associated with seismic events could include temporary landslide damming of the mainstem Trinity River, depending on the volume of failed material and the flow regime at the time of the event. A detailed discussion of geologic hazards is presented in Section 3.3.

Roadways

Due to topography and population density and distribution, there are relatively few roads in Trinity County; therefore, equestrians, pedestrians, bicyclists and motor vehicles commonly use the same roadways. Generally well maintained, the county's roads often follow riparian corridors and are typically winding and narrow. The four primary access routes—Lewiston Road, Trinity Dam Boulevard, Rush Creek Road and Goose Ranch Road—are two-lane roadways with minimal shoulders. One notable characteristic of Trinity County's roadway system is the lack of any traffic signals (LSC Transportation

Consultants 2005). Between 1995 and 2002, there were 151 traffic-related accidents on roadways in Trinity County, five of which involved fatalities (LSC Transportation Consultants 2005). The CHP provides patrols on state highways, while the Trinity County Sheriff's Department (TCSD) patrols both state highways and county roads.

Wildland Fire

The steep topography and a mosaic of mixed-conifer, hardwood, and chaparral woodlands, coupled with typically hot, dry summers, create extreme fire danger throughout most of Trinity County. Human-caused fires, particularly along roadways and other developed areas, are relatively common, although the county is also frequently subject to lightning-caused fires. Wildland fire, regardless of the cause, is detrimental to watershed function, killing vegetation, burning the organic matter in litter and soil, and forming impervious soil layers, factors that contribute directly to accelerated runoff from the watershed during and immediately after a storm event. Concentrated runoff discharged over a shorter period of time can result in increased flood hazards. Bare soils and increased runoff can also increase the risk of landslides.

Trinity County fire protection needs are currently met by 16 volunteer fire departments dispersed throughout the county, Cal Fire, and the USFS. By law, Cal Fire is responsible for wildland fire protection on all private lands in Trinity County, and the USFS is responsible for wildland fire protection on all federal National Forest lands. Both Cal Fire and USFS fire stations are staffed only during the summer fire season, which normally lasts from May to November. Cal Fire also contracts with BLM to provide wildland fire protection on public lands.

The Trinity County volunteer fire departments are responsible for structural fire protection and rescue services in Trinity County throughout the year. The Lewiston Volunteer Fire Department provides services within the general area of the Lewiston Community Plan; however, the department routinely responds to calls outside of its legal boundaries if it is dispatched by the 911 Center, which is maintained by the TCSD (Trinity County Planning Department 2002ab).

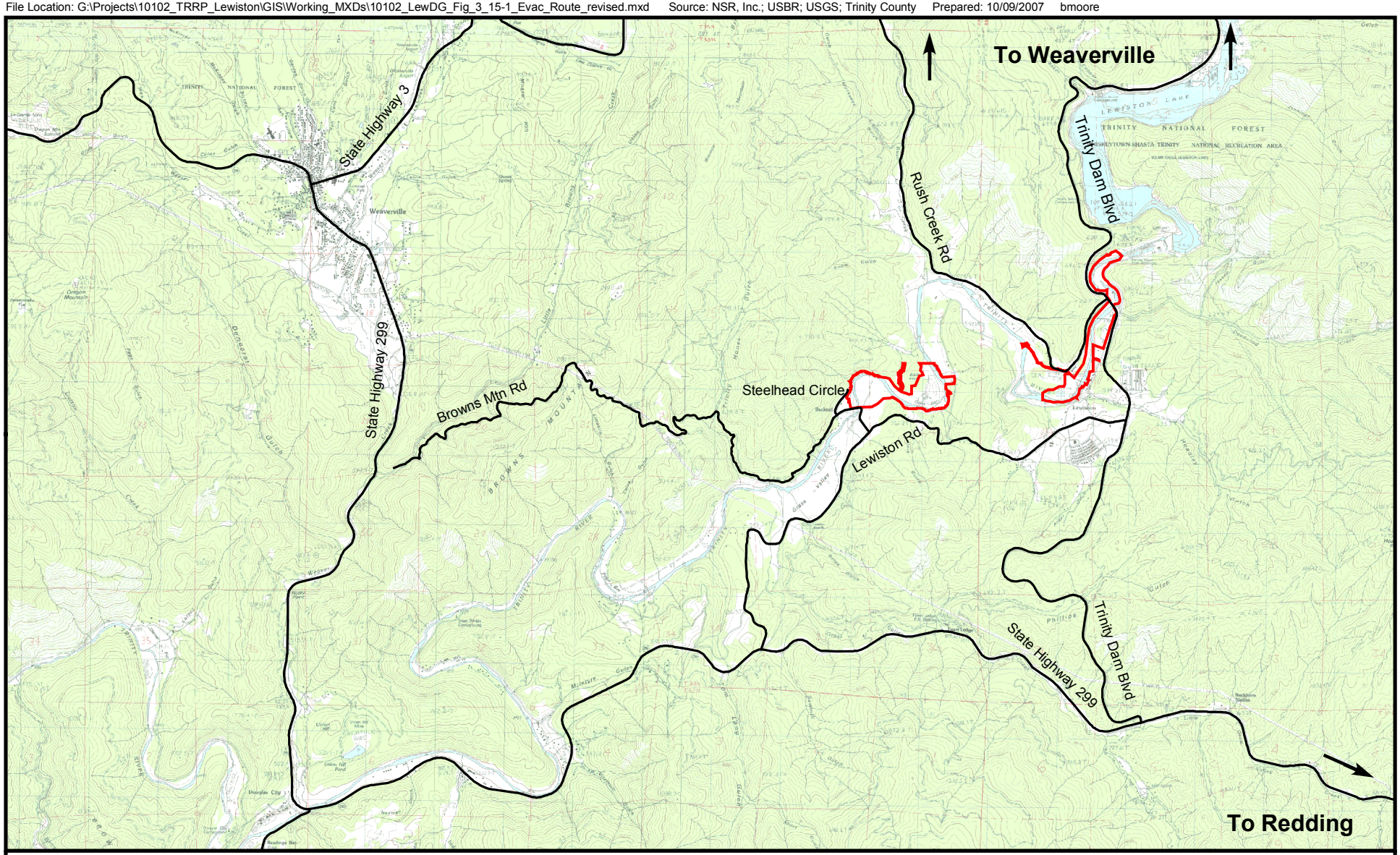
Evacuation Routes

The Safety Element of the Trinity County General Plan identifies specific major evacuation routes in the event of an emergency. Steep topography, the Trinity River, and the sizable Salmon–Trinity Alps substantially restrict evacuation options in the area of Trinity County in which the Proposed Action would be located. In general, Trinity Dam Boulevard, Rush Creek Road, and Lewiston Road are the primary evacuation routes for the region (Figure 3.15-1).

Local Setting

A number of structures, homes, commercial buildings, and recreational facilities occur within the boundaries of the two sites. The Lewiston site includes the majority of these structures, concentrated between the bridges across the Trinity River. The Dark Gulch site includes several residences and a BLM recreation site. There are other homes, businesses, and utility features in close proximity to the two sites, including the rural residential areas known as Salt Flat and Bucktail.

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_15-1_Evac_Route_revised.mxd Source: NSR, Inc.; USBR; USGS; Trinity County Prepared: 10/09/2007 bmoore



North State Resources, Inc.

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

Figure 3.15-1
Major Evacuation Routes

The reach of the Trinity River between the TRSSH and Bucktail is popular for recreational uses such as rafting, swimming, and angling. In the past 10 years, no hazardous material spills have been recorded in the vicinity of Lewiston (Peter Hedtke, Trinity County Health Department, pers. comm. 2007).

Toxins

The potential hazard posed by latent mercury in the reach of the Trinity River that passes through the two project sites is addressed in Section 3.5, Water Quality. Elevated levels of mercury may occur in placer tailings piles, alluvial deposits of fine sediments (bed and bank), and wetland features associated with dredge tailings and gravel mining pits (e.g., ponds), but the availability of mercury to the environment is not likely to be affected by this project.

Wildland Fire

Since 1911, when fire start locations and causes (human versus natural) began to be documented, a pattern of human-caused fires has emerged along the SR 299 corridor (Trinity County Planning Department 2002a). Concentrated development in the Lewiston area compared to much of the rest of Trinity County contributes to human-caused fire starts. While the surrounding forested uplands are at risk of damage from wildfire, the majority of the land included in the boundaries of the project sites is alluvial in nature with some riparian vegetation. These types of alluvial landscapes are not prone to wildland fires.

Evacuation Routes

The primary evacuation route for the project sites is Trinity Dam Boulevard to SR 299 and Rush Creek Road to SR 3. Access to SR 299 from homes located on the left bank of the river in the vicinity of the project sites is via Trinity Dam Boulevard or Lewiston Road. Access to SR 3 is provided via Rush Creek Road. Residents along Lewiston Road can also access SR 3 via Brown's Mountain Road.

3.15.2 Regulatory Framework

Pertinent federal, state, and local environmental laws and regulations pertaining to hazards and the storage, handling, and disposal of hazardous wastes are summarized below.

Federal Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 is the primary federal statute focusing on past hazardous waste activities. The scope of CERCLA is broader than that of other federal statutes. CERCLA initiated development of the National Priorities List, which lists sites that are eligible for remedial action. Section 101(14)(a) of CERCLA states "a hazardous substance is any substance [the] EPA has designated for special consideration under the Clean Air Act (CAA), Clean Water Act, or Toxic Substances Control Act and any hazardous waste under Resource Conservation and Recovery Act (RCRA)." The EPA maintains and updates a list of all such hazardous substances (40 CFR 302).

Federal Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is a federal regulatory statute designed to provide "cradle to grave" control of hazardous waste by imposing management requirements on generators and transporters of hazardous wastes and on owners and operators of treatment, storage, and disposal facilities.

U.S. Environmental Protection Agency

The EPA, in addition to having several other responsibilities, regulates disposal of hazardous wastes through the RCRA. Under the RCRA, the EPA regulates the activities of waste generators, transporters, and handlers (any individual who treats, stores, and/or disposes of a designated hazardous waste). The EPA is also responsible for tracking hazardous waste from its generation to its final disposal (i.e., cradle to grave) to assure proper accountability.

Occupational Safety and Health Administration

Under the Occupational Safety and Health Act, the Occupational Safety and Health Administration (OSHA) is obligated to prepare and enforce occupational health and safety regulations with the goal of providing employees a safe working environment. OSHA regulations apply to the work place and cover activities ranging from confined space entry to toxic chemical exposure. OSHA regulates workplace exposure to hazardous chemicals and activities through promulgating regulations specifying work place procedures and equipment.

U.S. Department of Transportation

The U.S. Department of Transportation (DOT) regulates the interstate transport of hazardous materials and wastes through implementation of the Hazardous Materials Transportation Act. This act specifies driver-training requirements, load labeling procedures, and container design and safety specifications. Transporters of hazardous wastes must also meet the requirements of additional statutes such as the RCRA.

State Superfund Program

In 1981, the California State Legislature enacted the Hazardous Substances Account Act to establish state authority to clean up hazardous substances releases, compensate persons injured from exposure to hazardous substances, and provide funds for payment of the state's mandatory 10 percent share of cleanup cost under the federal Superfund Law. The California Department of Health Services administers the state Superfund program.

California Environmental Protection Agency Department of Toxic Substances Control

The California Environmental Protection Agency (CalEPA), Department of Toxic Substances Control (DTSC), regulates the generation, transportation, treatment, storage, and disposal of hazardous waste under the RCRA and the State Hazardous Waste Control Law. Both laws impose "cradle to grave" regulatory systems for handling hazardous wastes in a manner that protects human health and the environment.

California Emergency Response to Hazardous Materials Incidents

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government and private agencies. Response to hazardous materials incidents is one part of this plan. The plan is administered by the state Office of Emergency Services, which coordinates the responses of other agencies, including the CalEPA, CHP, Cal Fire, the Regional Water Board, local fire departments, and other emergency service providers.

Hazardous Materials Transport

State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the CHP and Caltrans. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads.

Trinity County General Plan Goals and Objectives

The Trinity County General Plan contains goals and policies designed to guide the future physical development of the county, based on current conditions. The General Plan contains all the state-required elements, including community development and design, transportation, natural resources, health and safety, noise, housing, recreation, economic development, public facilities and services, and air quality. The following goals and policies related to hazards and hazardous waste issues associated with the proposed project were taken from the applicable elements of the General Plan (Trinity County 2001), including the Lewiston Community Plan (Trinity County 1986).

County-Wide and Community Goals and Objectives – Safety Element

The following goals, objectives, and policies are applicable to hazards and hazardous materials.

Flooding

- Maintain or return to open space lands subject to flooding.
- Protect public and private developments from flood hazards.

Hazardous Material/Waste Safety Goal

- Reduce threats to the public health and the environment caused by the use, storage and transportation of hazardous material and hazardous waste.

Proper Regulation of Transportation and Storage

- Transport of hazardous materials shall be regulated by the CHP under CCR Title 13: 1150-13:1194 and CFR Title 49.

Accessibility

Roads shall be constructed to provide adequate width, grade and turn-around space for emergency vehicles by complying with appropriate federal, state and local adopted standards. Construction of roads shall protect water quality, slope stability and threat to natural and cultural resources.

Encourage owners of existing private roads to provide identification signage for emergency access purposes.

Water Quality

Trinity County shall implement and maintain a water quality monitoring program, including the monitoring of swimming holes, failing sewage treatment systems, herbicides, mine runoff, and baseline monitoring.

Seismic Safety

The county shall confirm that all construction and grading activities done will not adversely affect the stability of any slope.

Lewiston Community Plan Goals and Objectives

The Lewiston Community Plan (Trinity County 1986) includes the area centered on the Trinity River from Lewiston Lake to downstream of the confluence of Grass Valley Creek and the Trinity River.

Hazards

Goal: To protect public and private developments from flood hazards

Goal: To provide an adequate level of fire protection services to resource lands

Goal: To discourage development on unstable slopes or soils

Project Consistency with the Trinity County General Plan and Community Plans

The goals and objectives described in Chapter 1 are generally compatible with the applicable General Plan goals and policies summarized above. The overall goal of the Proposed Action is to rehabilitate the sites so that they function in a manner that is closer to historic conditions (i.e., pre-Lewiston Dam).

Flood attenuation associated with the Proposed Action would contribute to the County's objectives related to flood protection and public safety by rehabilitating the floodplain. Grading of existing artificially created dredge tailing slopes within the project boundaries to a lesser angle may decrease the risk of small-scale landslides and possible flooding, both of which are goals identified in the county and community plans.

3.15.3 Environmental Consequences/Impacts and Mitigation Measures

Methodology

Field reconnaissance of the project sites was conducted by TRRP staff to identify and characterize any hazards or potentially hazardous materials. In addition, Trinity County Planning Department and Environmental Health staff were consulted regarding the potential for hazardous substances to occur in the general vicinity of the project boundaries.

Significance Criteria

An impact related to hazards and hazardous materials would be considered significant if the project would

- involve the use, production, or disposal of materials that pose a hazard to people or to animal or plant populations in the area affected;
- create a substantial potential public health or safety hazard due to risk of upset (accidents);
- create a substantial potential public health or safety hazard due to a reasonably foreseeable release of hazardous materials and/or hazardous waste (i.e., from contaminated soil);
- violate applicable laws intended to protect human health and safety or expose employees to working situations that do not meet health standards;
- physically interfere with, or impair implementation of, emergency response plans or emergency evacuation plans;
- substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- be located on a site that is included on a list of hazardous materials sites compiled pursuant to *California Government Code* Section 65962.5 and, as a result, create a significant hazard to the public or the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; or
- expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

Impacts and Mitigation Measures

Table 3.15-2 summarizes the potential hazards and hazardous waste impacts that could result from construction of the project.

Table 3.15-2. Summary of Hazards and Hazardous Waste Impacts for the No-Action Alternative, Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.15-1.	Implementation of the project could increase the potential for release of, or exposure to, potentially hazardous materials that could pose a public health or safety hazard.			
NI	LS	LS	N/A[1]	N/A[1]
Impact 3.15-2.	Construction activities associated with the project may interfere with emergency response and evacuation plans by temporarily slowing traffic flow.			
NI	LS	LS	N/A[1]	N/A[1]
Impact 3.15-3.	Implementation of the project may contribute to wildland fire potential and catastrophic fire behavior in the project area.			
NI	LS	LS	N/A[1]	N/A[1]

Table 3.15-2. Summary of Hazards and Hazardous Waste Impacts for the No-Action Alternative, Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.15-4.	Implementation of the project may contribute to an increased risk of landslides and flooding.			
NI	LS	LS	N/A[1]	N/A[1]

Notes:
LS = Less than Significant S = Significant SU = Significant Unavoidable
NI = No Impact B = Beneficial N/A = Not Applicable
[1]Because this potential impact is less than significant, no mitigation is required.

Impact 3.15-1: Implementation of the project may increase the potential for release of, or exposure to, potentially hazardous materials that could pose a public health or safety hazard. ***No Impact for No-Action Alternative; Less-than-Significant Impact for Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, construction activities that could potentially release hazardous substances (e.g., oil, gas, diesel, mercury) in a manner that could pose a health or safety hazard to the general public would not occur because the project would not be constructed.

Proposed Action and Alternative 1

The potentially hazardous materials (e.g., oil, fuels) that would be needed to operate vehicles and construction equipment are similar to those routinely transported along the highways and county roads that traverse Trinity County. The temporary nature of the construction aspects of the Proposed Action, combined with the implementation of BMPs and the distance from residences and frequently used recreation areas, would minimize the potential for any hazardous materials used by the project to become a public hazard.

Recent studies have determined that toxins such as mercury and methylmercury do not pose a significant hazard to the environment or the public in their current latent form. These toxins are addressed in Chapter 3.5, Water Quality. Further, it has been determined that any disturbance during project implementation of gravels or sediments that may contain toxins would not result in a significant increase in current background levels of toxins in the environment.

The potential for construction activities under the Proposed Action to result in the significant exposure of the public and the environment to the adverse effects of hazardous substances (e.g., oil, gas, diesel) would be less than those of Alternative 1 due to the decrease in magnitude and duration of the construction activities. This impact is considered to be less than significant.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

Since no impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Impact 3.15.2: Construction activities associated with the project may interfere with emergency response and evacuation plans by temporarily slowing traffic flow. ***No Impact for No-Action Alternative; Less-than-Significant Impact for Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, construction activities that could interfere with emergency response and evacuation plans would not occur because the project would not be constructed.

Proposed Action and Alternative 1

Under the Proposed Action and Alternative 1, construction traffic would include the mobilization and demobilization of construction equipment (e.g., scrapers, excavators, bulldozers) to the project sites. Once the equipment is on the site, construction traffic would be limited to daily trips for personnel and routine service and supply vehicles. Construction activities would be managed to ensure that emergency response and evacuation plans are not impeded.

Under the Proposed Action, the potential to interfere with emergency response and evacuation plans would be lower than under Alternative 1 due to the additional grading activities required under Alternative 1, primarily at activity area R-3 DG. However, the impacts of either alternative would be less than significant.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

Since no significant impacts were identified, no mitigation is required.

Significance after Mitigation

N/A

Impact 3.15.3: Implementation of the project may contribute to wildland fire potential and catastrophic fire behavior in the project area. ***No Impact for No-Action Alternative; Less-than-Significant Impact for Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, implementation of the project would have no impact on wildland fire potential or catastrophic fire behavior because the project would not be constructed.

Proposed Action and Alternative 1

Project activities are proposed to occur in the riparian corridor of the Trinity River. Potential fuels within the boundaries of the sites (e.g., grasses, herbaceous weeds) are generally non-contiguous, and the river serves as a substantial natural fire break. The types and amounts of fuels and their continuity may be decreased temporarily by implementation of either action alternative, particularly in areas subject to vegetation removal, but any such changes would not be significant with respect to fire potential and behavior. In the long-term, potential fire conditions would be similar to those that currently exist (e.g., potential fuels would be limited to riparian vegetation, sporadic grasses, and herbaceous weeds). The Proposed Action or Alternative 1 would have a less-than-significant impact on wildland fire potential and behavior.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

Since no significant impacts were identified, no mitigation is required.

Significance after Mitigation

N/A

Impact 3.15.4: Implementation of the project may contribute to an increased risk of landslide or flooding. ***No Impact for No-Action Alternative; Less than Significant Impact for Proposed Action and Alternative 1***

No-Action Alternative

The No-Action Alternative would have no impact on the potential for landslides or flooding because the project would not be constructed.

Proposed Action and Alternative 1

The risk of landslides would remain less than significant under either action alternative because most of the activity is proposed to take place in the river channel or floodplain, both of which have relatively flat topography. Furthermore, neither action alternative involves alteration of toe-slopes adjacent to any geologically unstable areas with the potential to slide.

If any of the action alternatives are implemented, the placement of excavated material outside of the BFE would result in no change to or a reduction of the BFE. This would have a less-than-significant impact.

The potential for flooding would be decreased under both the Proposed Action and Alternative 1. Although Alternative 1 would require more constructed floodplain, the risk of flooding would be similar to that of the Proposed Action. This impact would be less than significant.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

Since no significant impacts were identified, no mitigation is required.

Significance after Mitigation

N/A