CHAPTER 1.0

Introduction and Purpose and Need

1.1 Introduction

This Draft Trinity River Mainstem Fishery Restoration Environmental Impact Statement/Environmental Impact Report (DEIS/EIR)[1] addresses the environmental issues, alternatives, and impacts associated with restoration of the ***natural production*** of ***anadromous*** fish on the Trinity River ***mainstem*** downstream of Lewiston Dam.

This DEIS/EIR was prepared by the U.S. Fish and Wildlife Service (Service), Hoopa Valley Tribe, Trinity County, and the U.S. Bureau of Reclamation (Reclamation) (see Section 5.1 for agency involvement and a list of the agency approvals for the project to proceed). It meets the legal requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). This document discloses relevant information to all interested parties and invites such parties to play a role in both the decision-making process and the implementation of that decision. This DEIS/EIR also provides federal, state, and local decision-makers with detailed information concerning the significant environmental, social, economic, cultural, and other impacts associated with the alternative courses of action.

Prior to European settlement, the Trinity River produced an abundance of anadromous fish, especially chinook and coho salmon and steelhead.

Prior to European settlement, the Trinity River produced an abundance of anadromous fish, especially chinook and coho salmon and steelhead. Generations of Hupa[2], Yurok, and Karuk Indians resided along the Trinity and Klamath Rivers and depended on the salmon and steelhead for cultural, ceremonial, subsistence, and commercial purposes. Historically, the tribal fishery provided the mainstay of the Indian community, and to this day it continues as the staff of life for the Indian culture and constitutes a primary economic base.

The first non-Indians to settle the Trinity and Klamath River Basins also used the bountiful fishery for subsistence, commercial, and sport fishing. As recently as the 1950s, the annual ***inriver*** run of chinook salmon (excluding ocean harvest) for the Klamath River was estimated at 168,000 fish, half of which were believed to enter the Trinity River (Coots, 1957).

---

1 Terms italicized and bolded are defined in the glossary (Attachment A).

2 Any reference to the people of the Hoopa Valley Indian Tribe is properly made with the word "Hupa."

Go To TOC

In 1955 Congress authorized construction of the ***Trinity River Division*** (TRD), a component of the ***Central Valley Project*** (CVP). The TRD consists of two large dams on the upper Trinity River, along with associated structures used to divert water out of the Trinity River Basin[3]. Although Congress stated that the principal purpose of the TRD was to increase water supplies for irrigation and other ***beneficial uses*** in the Central Valley of California, Congress also directed the Secretary of the U.S. Department of the Interior (Secretary) (DOI) to "adopt appropriate measures to insure the preservation and propagation of fish and wildlife in the Trinity River Basin" (P.L. 84-386).

Both the construction and operation of the TRD has had severe effects on fish and wildlife habitats.

Both the construction and operation of the TRD have had severe effects on fish and wildlife ***habitats*** below Lewiston Dam. For example, prior to the TRD, large winter floods moved gravels and cobbles (i.e., coarse sediment) through the river ***channel***. These floods maintained the broad floodplain and gravel bars of the ***alluvial river*** that provided the necessary habitats for fish and wildlife. Construction and operation of the TRD eliminated these large ***flows*** and blocked all downstream movement of gravels and cobbles; both elements are essential to maintaining fish and wildlife habitats below the dams. Concurrently, fine sediments have increased because of the loss of winter flushing flows and the high rates of ***watershed*** erosion in the middle twentieth century (caused by gold mining, logging, and other land use practices [U.S. Bureau of Land Management, 1995a]). Fine sediment accumulation reduces the quality of ***spawning*** gravels, food-producing riffles, and over-winter habitat, which is detrimental to anadromous fish production.

Operation of the TRD has also affected the timing, duration, and magnitude of flows throughout the rest of the year. The altered flow regime has been accompanied by altered water temperatures, changes in the river's features and shape, and the encroachment of ***riparian*** vegetation onto the gravel bars. Elimination of winter flushing flows and relatively constant base flows allowed riparian vegetation to establish in the low-flow channel, which eventually led to undesirable changes in the channel shape. The pre-dam river (i.e., a broad channel with gently sloping gravel bars) changed to a narrow channel confined between steep banks. These changes have greatly reduced the diversity of the available habitats necessary to maintain all the riverine life stages of ***salmonids*** and other riverine species. The habitat ***degradation*** has been especially acute in the 40 miles of river between Lewiston Dam and the North Fork of the Trinity River (North Fork), because the ***tributary*** inflow above the

[3] The Trinity River Division presently consists of: Trinity Reservoir, Dam, and Powerplant; Lewiston Reservoir, Dam, and Powerplant; Clear Creek Tunnel; Judge Francis Carr Powerhouse (J.F. Carr Powerhouse); Whiskeytown Reservoir and Dam; Spring Creek Tunnel, Debris Dam, and Powerplant; Hamilton Ponds; and Buckhorn Pond and Dam.

Go To TOC

North Fork is not enough to approach the flushing flows that maintained the pre-dam river. As a result, the production of fish and wildlife that are dependent on the pre-dam riverine habitats has declined. For example, the best available data suggest that current naturally produced fall chinook spawner ***escapements*** are at only 27 percent of pre-dam levels (see Section 3.5 for elaboration on ***fish population*** trends).

Although the Trinity River Salmon and Steelhead Hatchery (TRSSH) was constructed to mitigate for lost fish production upstream of the dams (which block access to approximately 109 miles of spawning and rearing habitat), it does not mitigate for the degradation of habitats and resulting lost fish production downstream of Lewiston Dam. This DEIS/EIR assesses a variety of ways to restore the natural production of anadromous fish downstream of the dams.

Go To TOC

1.2 Purpose and Need for the Action

NEPA regulations require that each EIS briefly specify the purpose and need to which the agency is responding in proposing the various alternatives, including the preferred alternative. Similarly, CEQA requires that each EIR include a statement of the objectives sought by the proposed project. The objectives are intended to help the implementing agency develop a reasonable range of alternatives and aid decision-makers in preparing findings or a statement of overriding considerations, if necessary.

The purpose of the proposed action is to restore and maintain the natural production of anadromous fish on the Trinity River mainstem downstream of Lewiston Dam.

1.2.1 Purpose and Need Statement

The purpose of the proposed action is to restore and maintain the natural production of anadromous fish on the Trinity River mainstem downstream of Lewiston Dam[4].

The need for this action results from Congress' (1) mandate that diversions of water from the Trinity River to the CVP not be detrimental to Trinity River fish and wildlife resources; (2) finding that construction and operation of the TRD has contributed to detrimental effects to habitat and has resulted in drastic reductions in anadromous fish populations; (3) finding that restoration of depleted stocks of naturally produced anadromous fish is critical to the dependent tribal, commercial, and sport fisheries; and (4) confirmation of the federal trust responsibility to protect tribal fishery resources affected by the TRD (see Section 1.4 for Congressional actions).

1.2.2 Goals and Objectives

The following goal established a framework for this DEIS/EIR and was the primary CEQA driver in the development of alternatives:

(A goal is to) restore and maintain a "healthy" Trinity River mainstem downstream of Lewiston Dam.

- Restore and maintain a "healthy" Trinity River mainstem downstream of Lewiston Dam (see Section 3.2 for discussion of the "healthy river" concept).

The goal was clarified by establishing qualitative "healthy river" objectives. These objectives relied heavily on the known and presumed attributes of the pre-dam Trinity River. These pre-dam attributes provided the diverse habitats that once supported the bountiful fish and wildlife populations. The "healthy river" objectives are to:

- Re-establish and maintain pre-dam habitats, especially ***alternate bar*** features.
- Mobilize and transport a wide variety of sediment sizes.

[4] For purposes of this document "restore" is defined as reviving the well-being, vitality, and use thereof, but not necessarily to an original or other pre-established condition.

- Restore dynamic riparian plant communities in the river channel and its floodplain.

Objectives specific to salmonid population restoration are to:

- Provide suitable habitats below Lewiston Dam for all inriver salmonid life stages.
- Provide appropriate temperature regimes for salmonids below the dams.

The following project objectives apply only to Trinity County as the lead agency for CEQA purposes:

- Minimize high Trinity River water levels that would displace large numbers of existing Trinity County residents from their homes.
- Maximize the potential for the Trinity River to attract additional recreationalists into Trinity County, such as anglers and boaters.
- Minimize avoidable impacts to recreational activities on Lewiston and Trinity ***Reservoirs***.
- Protect County of Origin and Area of Origin Water Rights.
- Comply with requirements and water quality objectives under the California ***Porter-Cologne Act*** and the federal Clean Water Act.
- Comply with Trinity County General Plan.

The following are project objectives for CEQA compliance that apply to state ***responsible*** and ***trustee agencies*** such as the North Coast Regional Water Quality Control Board (NCRWQCB), the State Lands Commission (SLC), the California Department of Fish and Game (CDFG) and (possibly) the State Water Resources Control Board (SWRCB):a

- Comply with the Water Code to ensure the highest reasonable quality of waters of the state, while allocating those waters to achieve the optimum balance of beneficial uses.
- Protect the public trust assets of the Trinity River watershed.
- Conserve, restore, and manage fish, wildlife, and native plant resources.
- Double populations of salmon, steelhead, and anadromous fish in the waters of California, including the Trinity and Sacramento Rivers and the Delta, pursuant to the Fish and Game Code Section 6900-6924 , the Salmon, Steelhead Trout, and Anadromous Fisheries Program Act.

Trinity River Restoration Program Goals. Congressional directives identified the goals as the restoration and maintenance of fish populations in the Trinity River in order to meet the federal government's trust responsibility to area Indian tribes and to provide a meaningful tribal, commercial, and sport fishery. Although quantifiable project objectives for fish numbers and habitat area were considered for this DEIS/EIR, they were ultimately not adopted because of the complexity, uncertainty, and other confounding factors involved in establishing and monitoring such targets. However, the Trinity River Basin Fish and Wildlife Task Force (Task Force) adopted the Trinity River ***inriver spawner escapement*** goals and TRSSH production goals developed by CDFG (Table 1-1). These goals were subsequently documented in the 1983 EIS on the Trinity River Basin Fish and Wildlife Management Program (U.S. Fish and Wildlife Service, 1983). Because the Task Force now operates under the guidance of the Trinity River Restoration Program (TRRP), the goals are sometimes referred to as TRRP goals. They are provided here for reference purposes only.

TABLE 1-1
Trinity River Restoration Program Goals

Species	Inriver Spawning Goals	Hatchery Goals	Total
Fall chinook salmon	62,000	9,000	71,000
Spring chinook salmon	6,000	3,000	9,000
Coho salmon	1,400	2,100	3,500
Steelhead	40,000	10,000	50,000

Current spawner escapement levels are extremely low compared to historic estimates (see Section 3.5) and the TRRP inriver spawner escapement goals. The post-dam average of naturally produced fall chinook salmon represents only 20 percent of the 62,000 goal; whereas, the averages for naturally produced spring chinook salmon, coho salmon, and steelhead (winter only) represent 40, 14, and 5 percent, respectively, of their inriver escapement goals. Although the fall chinook spawner escapement has occasionally exceeded the inriver goals, many of those fish were hatchery produced. These infrequent large escapements are not indicative of healthy, naturally producing populations, but of hatchery surplus (see Section 3.5 for additional information on historic and current fish populations).

Restoration and maintenance of natural production requires that a sufficient number of the fish that spawn inriver begin their lives not in the hatchery, but as eggs in the river. Unfortunately, a very small proportion of inriver eggs survive to return as spawning adults;

whereas, a large proportion of hatchery-produced fish do return to spawn (even though greater numbers of spawners occur inriver than at the hatchery). Assuming that naturally produced and hatchery-produced fish are subject to the same environmental conditions and mortality factors (e.g., harvest) after the hatchery releases them (typically as ***smolts)***, the comparatively low returns of naturally produced fish indicate poor survival rates of young freshwater life stages (eggs, ***fry,*** and/or ***juvenile*** fish). These low inriver survival and recruitment rates are compelling evidence that spawning and rearing habitat is a substantial limiting factor in the restoration and maintenance of anadromous fish populations (see Section 3.5).

In the future, quantitative population objectives for Trinity River salmonids may be established by the National Marine Fisheries Service (NMFS) as part of the recovery planning process under the Endangered Species Act (ESA). Currently, Trinity River coho salmon are listed as threatened, and both the chinook and steelhead are candidates for listing.

1.3 General Setting and Location

The Trinity River originates in the rugged Salmon-Trinity Mountains of northwest California, at a point approximately 10 miles southwest of the town of Weed, California. The river flows generally southward until it is impounded by Trinity and Lewiston Dams. From Lewiston Dam the river flows generally westward for 112 miles until entering the Klamath River near the town of Weitchpec on the Yurok Reservation. The Trinity River passes through Trinity and Humboldt Counties and the Hoopa Valley and Yurok Reservations, and it drains approximately 2,965 square miles. The Klamath River flows northwesterly from its confluence with the Trinity River for approximately 40 miles before entering the Pacific Ocean. (For a map of the general setting and location refer to Figure 1-1.)

In general, the proposed alternatives focus on the 40 miles of Trinity River mainstem below Lewiston Dam (i.e., the portion of the river upstream of the confluence with the North Fork). The detrimental impacts of the dams are particularly severe in this stretch because tributary inflows are relatively minor (whereas tributary inflow downstream of the North Fork–in combination with the minor inflows above the confluence–is significant enough to maintain a semblance of the pre-dam channel). The direct and indirect impacts of the alternatives occur within and outside the Trinity River Basin. Anticipated impacts and benefits are generally discussed in the context of three geographic areas: the Trinity River Basin, the Lower Klamath River Basin / Coastal Area, and the Central Valley (see Chapter 3). The amount of analysis for each geographic area varies depending on the resource issue.

Go To TOC

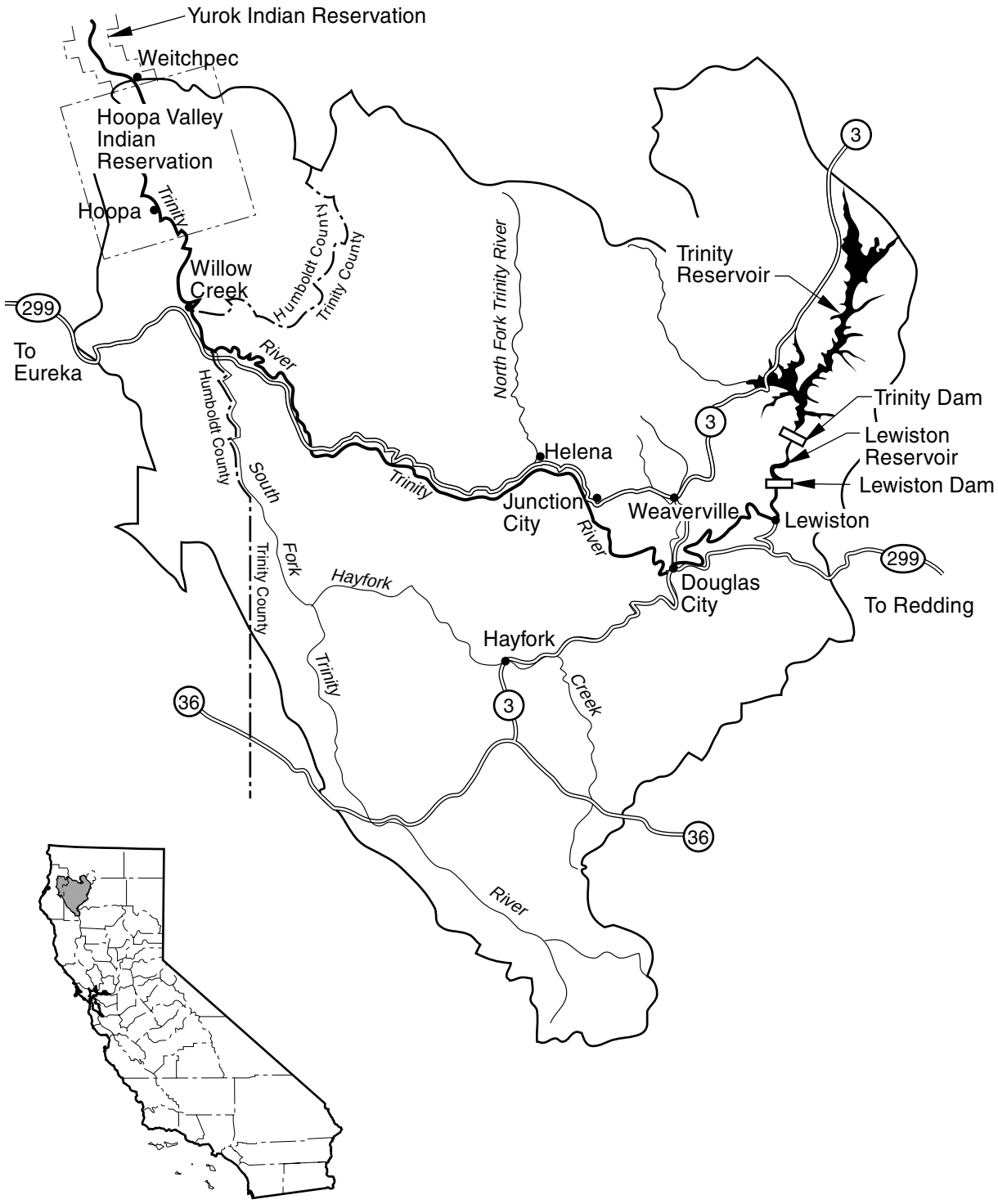


FIGURE 1-1
TRINITY RIVER BASIN
(EXCLUDING PORTION UPSTREAM OF TRINITY RESERVOIR)

Go To TOC

1.4 Legislative and Management History

The following is a brief chronology of the most pertinent legislation, authorities, and management actions.

In 1855 President Pierce established the Klamath River Reservation, 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 20 miles. On August 21, 1864, the federal government established the Hoopa Valley Reservation on the Trinity River, 12 miles square and bisected by 5 miles of the Trinity River. In 1891 an executive order 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. 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 the Hoopa Valley Reservation (the Reservation as proclaimed in 1864). Several court rulings in the 1970s established that an important "Indian purpose" for the reservations was to reserve the tribes' rights to take fish from the Klamath and Trinity Rivers, rights that were confirmed as part of the Hoopa-Yurok Settlement Act. Courts have also recognized that sufficient water is reserved to achieve the purposes of Indian reservations.

The Rivers and Harbors Act of 1938 authorized construction of the CVP and stipulated the use of dams and ***reservoirs*** for improvement of river navigation and flood control, irrigation and domestic water use, and power generation. The Act also provided for wildlife conservation to be given "due regard" in planning federal water projects.

Congress authorized the construction and operation of the TRD by statute in 1955 (P.L. 84-386). Although the 1955 Act provided for the diversion of water from the Trinity Basin to the Central Valley, Congress specifically directed the Secretary "to adopt appropriate measures to insure the preservation and propagation of fish and wildlife(.)" Legislative history for the 1955 Act further elaborated on the expected diversions, stating that only water deemed "surplus"—those waters "wasting away to the Pacific Ocean," the diversion of which would not have a "detrimental effect to the Fishery Resources" of the Trinity and Klamath Rivers—be exported to the Central Valley. The TRD was completed in 1963, and full operation began in 1964.

The 1995 act…specifically directed the Secretary "to adopt appropriate measures to insure the preservation and propagation of fish and wildlife."

The Task Force, comprised of federal, state, and local agencies and tribes, was initially established in 1971 in response to concerns and observed negative effects of the TRD on fish and wildlife in the Trinity River Basin. The Task Force developed the Trinity River

Go To TOC

Basin Comprehensive Action Program to restore anadromous fish populations and to formulate a long-term management program.

In 1976 the Magnuson Fishery Conservation and Management Act was passed to better manage salmon, partially in response to decreased Trinity runs. The act established the Pacific Fishery Management Council (PFMC), which established fishery management plans based on input from federal, state, tribal, and other entities.

An EIS prepared by the Service and released in November 1980 determined that an 80-percent decline in chinook salmon and 60-percent decline in steelhead populations had occurred since commencement of TRD operations. The EIS further estimated total habitat losses in the Trinity River Basin to be 80-90 percent.

(The 1984 act formalized a program) "to restore natural fish and wildlife populations to levels approximating those which existed immediately prior to the construction of the Trinity Division."

In January 1981 continued concerns about the fishery led to the Secretary signing a Secretarial Decision directing the Service to conduct a 12-year Trinity River Flow Evaluation Study (TRFES) "summarizing the effectiveness of restoration of flows and other measures including intensive ***stream*** and watershed management programs." The Secretary's action was based on statutory requirements as well as tribal trust responsibilities that compelled the "restoration of the river's salmon and steelhead resources to pre-project levels."

In 1983 an EIS on the Trinity River Basin Fish and Wildlife Management Program was prepared by the Service (U.S. Fish and Wildlife Service, 1983). The environmental document analyzed habitat restoration actions, watershed rehabilitation, and improvements to the TRSSH. The EIS clarified that the hatchery's purpose was to mitigate for the loss of the 109 miles of habitat upstream of Lewiston Dam; whereas, the restoration and rehabilitation projects were explicitly designed to increase natural fish production below the dam.

In 1984 the Trinity River Basin Fish and Wildlife Management Act (P.L. 98-541) was enacted. It formalized the TRRP, reaffirmed the restoration goals established by the Task Force, and directed the Secretary to implement measures to restore fish and ***wildlife habitat*** in the Trinity River. The TRRP was aimed at implementing a fish and wildlife management program "to restore natural fish and wildlife populations to levels approximating those which existed immediately prior to the construction of the Trinity Division."

In October 1992 the Central Valley Project Improvement Act (CVPIA) (P.L. 102-575) was enacted by Congress. One purpose of the CVPIA was to protect, restore, and enhance fish, wildlife, and associated habitats in the Trinity River Basin. The act also directed the Secretary to finish the TRFES and to develop recommendations "based on the

Go To TOC

best available scientific data, regarding permanent ***instream fishery flow requirements*** and Trinity River Division operating criteria and procedures for the restoration and maintenance of the Trinity River fishery." The act also recognized the importance of protecting and restoring the Trinity River fishery in order to meet the federal government's trust responsibility, and specifically provided for the Secretary to consult with the Hoopa Valley Tribe on the TRFES and, upon concurrence, to implement the recommendations accordingly.

(The 1992 act) also recognized the importance of protecting and restoring the Trinity River fishery in order to meet the federal government's trust responsibility (to the Hoopa Valley Tribe).

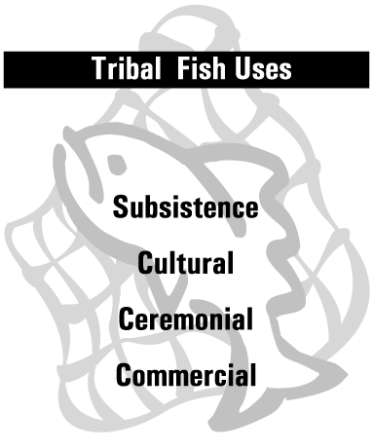
In 1993 the Service and Trinity County initiated an Environmental Assessment/Environmental Impact Report (EA/EIR) evaluating the Trinity River channel rehabilitation projects being promoted by the TRRP. However, ongoing construction work on several pilot projects generated numerous citizen complaints about the resulting turbidity of the river. In July 1994, the office of the Secretary mandated that an EIS be prepared prior to construction of any new channel rehabilitation projects. In addition, the Secretary's office determined that the EIS must also evaluate the permanent commitment of water as recommended in the TRFES. Therefore, this EIS/EIR was initiated to evaluate the mechanical restoration activities and TRFES recommendations along with a range of reasonable alternatives. The Notice of Intent (NOI) to prepare the EIS/EIR was published on October 12, 1994.

The 1996 amendments clarified that "restoration is to be measured (in part)…by the ability of dependent tribal, commercial, and sport fisheries to participate fully…in the benefits of restoration."

In 1996 Congress reauthorized and amended the 1984 Trinity River Basin Fish and Wildlife Management Act (P.L. 104-143). The 1996 amendments clarified that "restoration is to be measured not only by returning adult anadromous fish spawners, but by the ability of dependent tribal, commercial, and sport fisheries to participate fully … in the benefits of restoration." The amendments also confirmed that the purpose of the hatchery was to mitigate for the loss of habitat above the dams, and that the hatchery should not impair "efforts to restore and maintain naturally reproducing anadromous fish stocks within the basin."

Go To TOC

1.5 Indian Tribes



2655_04

Secretarial Order No. 3175 states that the DOI, "when engaged in the planning of any proposed project or action, will ensure that any anticipated effects on Indian trust resources are explicitly addressed in the planning, decision and operational documents; i.e.,... Environmental Impact Statements...that are prepared for the project" (U.S. Department of the Interior, Office of the Secretary, 1993: although expired, the order was incorporated into the Department of the Interior Manual, 512 DM Part 2). This mandate was affirmed in a Presidential directive reaffirming the sovereign rights of Indian tribes and the government-to-government status of relations between the United States and recognized tribes. Accordingly, this DEIS/EIR provides a detailed assessment of potential effects on Indian trust resources and how these effects may impact Indian tribes. Consistent with DOI policy, the analysis addresses only those tribes of the Klamath/Trinity Region that are officially recognized by the United States (Pevar, 1992)—the Hoopa Valley[5], Karuk, Klamath, and Yurok. Local unrecognized tribes include the Nor Elmuk Band of Wintu Indians (Hayfork) and the Tsnungwe Tribe (Salyer/Burnt Ranch).

The river is central to Hupa culture, society, economy, and language; its physical condition is a major determinant of the tribe's material, psychological, sociological, economic, and spiritual well-being.

The traditional and current homeland of the Hoopa Valley Tribe lies along the banks of the Trinity River in the Hoopa Valley. The river is central to Hupa culture, society, economy, and language; its physical condition is a major determinant of the tribe's material, psychological, sociological, economic, and spiritual well-being. The condition of the Trinity River also has important implications for the Yurok Tribe. The traditional homeland of the Yurok Tribe extends from the Pacific Ocean along the lower Klamath River and into the Trinity River Basin. The Yurok Tribe has always depended upon the fish, water, and other resources of the Trinity and Klamath Rivers. The traditional and present territories of the Karuk and Klamath (Oregon) Tribes are located along the upper Klamath River, above the river's confluence with the Trinity. Both of these tribes also depend on the resources of the Trinity River, primarily as it influences the Klamath River ecosystem.

The tribal trust discussion focuses principally on the Hoopa Valley and Yurok Tribes, since, of the Indian tribes of the Klamath/Trinity Region, they would be the most directly affected by the project. It should be understood, however, that the impacts are pertinent to the Karuk and Klamath people since they share a common regional heritage with the Hupa and Yurok and may be impacted by the project, particularly as it affects the hydrology of the Klamath River.

[5] In this discussion, the terms Hoopa Valley and Hupa refer to separate designations for the *Natinixwe*, or Indian people of the Hoopa Valley. Hoopa Valley is used when referring to the tribal designation; Hupa refers to the people that share a language and culture.

Go To TOC

Tribal Trust Responsibility. From their earliest contact with the Indians of North America, the European powers and the United States have dealt with Indians on a government-to-government basis. In principle, all treaties, statutes, and executive orders implementing federal Indian policy are premised upon this long-standing relationship.

Numerous court cases have found that the U.S. has a duty of protection toward Indians. In U.S. v. Mitchell (463 U.S. 206, 225 [1983]), the Supreme Court reaffirmed the principle of "the undisputed existence of a general trust relationship between the United States and the Indian people." The federal government's obligation to honor the trust relationship and to fulfill its treaty commitments is the trust responsibility. The federal government has extended the trust responsibility through federal statutes, agreements, and executive orders. These documents can create trust obligations in the same way that a treaty does. The trust responsibility imposes an independent obligation upon the federal government to remain loyal to Indians and to advance their interests, including their interest in self-government. The American Indian Policy Review Commission's Final Report stated:

The trust doctrine… includes an obligation to provide those services required to protect and enhance Indian lands, resources, and self-governance.

> "The purpose behind the trust doctrine is and always has been to ensure the survival and welfare of Indian tribes and people. This includes an obligation to provide those services required to protect and enhance Indian lands, resources, and self-governance, and also includes those economic and social programs which are necessary to raise the standard of living and social well-being of the Indian people to a level comparable to the non-Indian society" (United States American Indian Policy Review Commission, 1997).

Go To TOC

1.6 Project Facilities

The TRD is integrated and coordinated with operations of the CVP. CVP operations are directed in part by the Coordinated Operating Agreement (COA) between Reclamation and the State of California Department of Water Resources (DWR), the CVP Long-Term Operations Criteria and Plan (CVP-OCAP), various water quality standards, and ***Biological Opinions*** for winter chinook salmon and Delta smelt. These operational prescriptions are used by Reclamation and the DWR to manage both the CVP and the California State Water Project (SWP). For a thorough description of water operations and management of the CVP and the SWP, refer to Section 3.3.

1.6.1 Trinity River Division

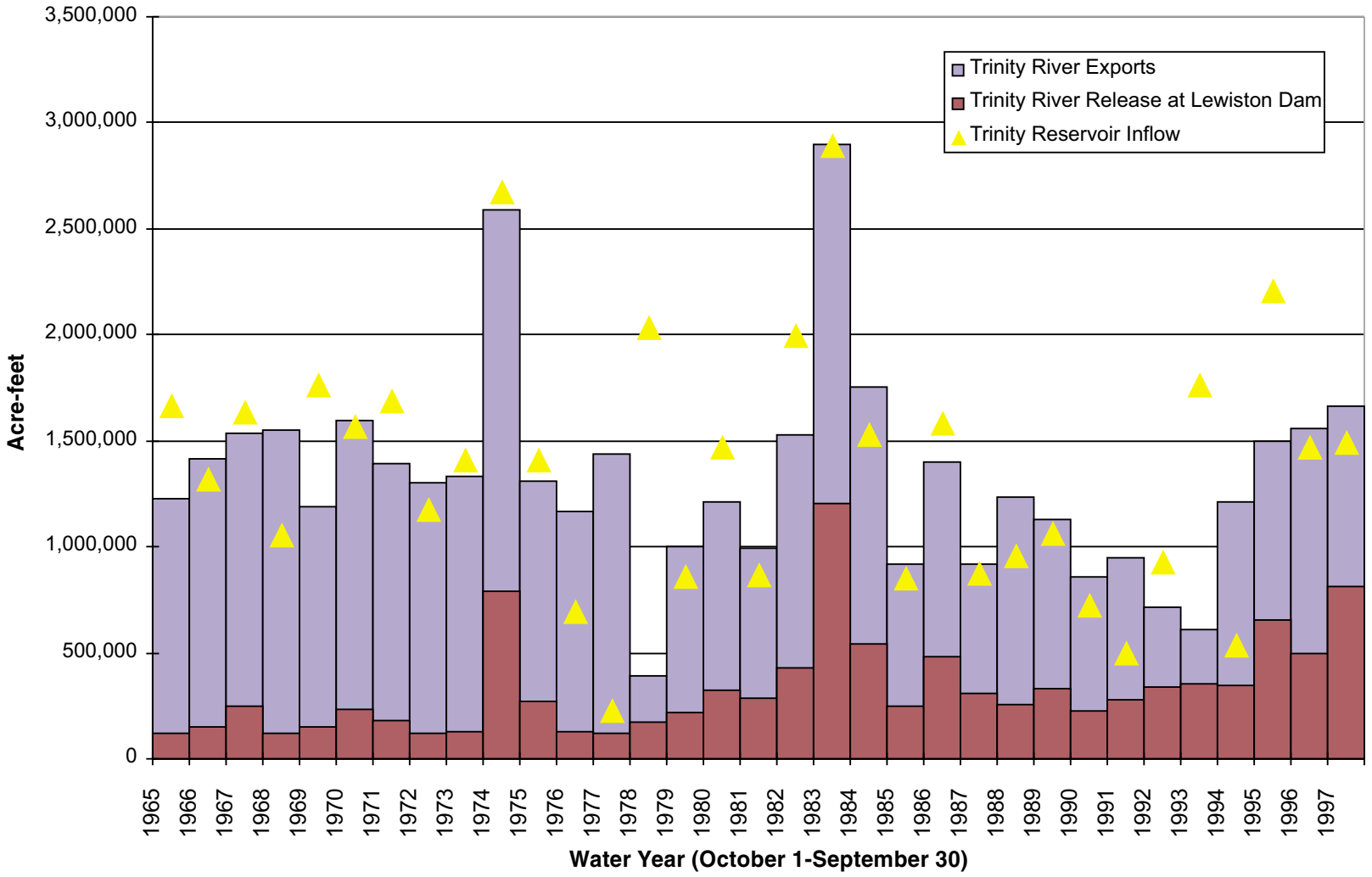
From 1964-1997, approximately 988,000 af have been diverted annually to the Central Valley, representing about 74 percent of the inflow above Trinity Dam.

The TRD, constructed as part of the CVP, is operated and maintained by Reclamation in conjunction with eight other CVP divisions. Congressional committee reports on the authorizing act of the TRD stated that an average supply of 704,000 ***acre-feet*** (af), considered "surplus" to the present and future needs of the Trinity River Basin, could be exported from the Trinity River Basin to the Central Valley without detrimental effects on fishery resources. From 1964-1997, approximately 988,000 af have been diverted annually to the Central Valley (range 218,000-1,799,000), representing about 74 percent of the inflow above Trinity Dam (see Figure 1-2 and Water Resources [Section 3.3] for additional information). Diversions during the first 21 years of operation were substantially greater–an average of 1,146,800 af annually, or 79 percent of inflow–than were diversions during the most recent 13 years, which averaged 732,400 af annually, or 64 percent of inflow (however, a portion of the recent increase in instream releases is due to winter storm events, which provide limited benefits to salmon).

The TRD stores and regulates the entire runoff of the Trinity River upstream of Lewiston Dam. Diverted water is transported via the Clear Creek Tunnel to Whiskeytown Reservoir. From there, Trinity River water can either be transported via a second tunnel (Spring Creek Conduit) to Keswick Reservoir or released down Clear Creek to enter the Sacramento River.

The TRD has the capacity to generate substantial amounts of hydropower. Releases from Trinity and Lewiston Reservoirs can generate up to 139,650 and 350 kilowatts (kW), respectively. Water diverted from Lewiston Reservoir can generate 146,000 kW at the Judge Francis Carr Powerhouse (J.F. Carr Powerhouse) (at the end of the Clear Creek Tunnel) and 200,000 kW at the Spring Creek Powerplant.

Go To TOC



Differences between Trinity River inflow and sum of releases and exports (e.g., 1978-1979 and 1994-1995) are primarily attributable to carryover storage operations from previous water year.

Source: U.S. Bureau of Reclamation, Central Valley Operations

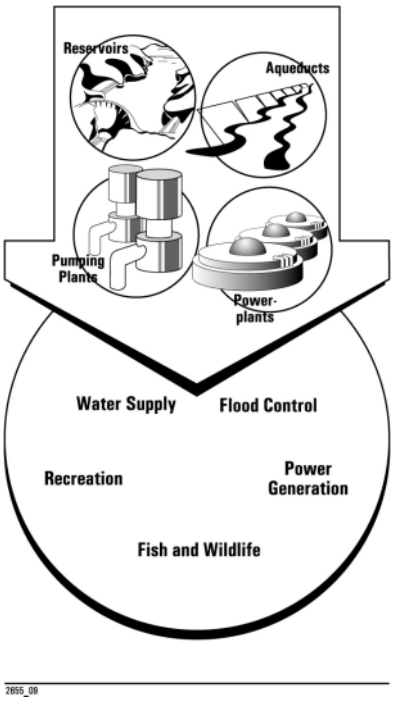
FIGURE 1-2
TRINITY RIVER INFLOWS, INSTREAM RELEASES, AND EXPORTS
TRINITY RIVER MAINSTEM FISHERY RESTORATION EIS/EIR

2865_07 (9/29/99)

All total, the TRD represents approximately 30 percent of the total power generation capability of the CVP.

1.6.2 Central Valley Project

The CVP provides water for irrigation, municipal and industrial (M&I), hydropower, and fish and wildlife purposes in and outside of the Central Valley of California. The CVP supplies ***irrigation water*** to approximately 200 water districts, individuals, and companies pursuant to annual contracts for approximately 4.5 million acre-feet (maf) of developed contract water. These supplies are provided to entities with pre-1914 water rights, as well as through contracts to water service, water rights settlement, and exchange water contract holders. M&I water is supplied to about 40 districts and utilities under contracts of about 0.5 maf. Except in times of water shortage, Reclamation operates the CVP to deliver the amounts of water specified in its water service contracts and other water rights agreements. Major structures of the CVP include 20 reservoirs, with combined storage capacity of 11 maf; 9 powerplants and 2 pumping-generating plants with a maximum capacity of about 2.0 million kW; and approximately 500 miles of major canals and aqueducts (see Figure 3-11 for a graphic depicting the major facilities in the CVP).



Although Reclamation is responsible for hydropower generation within Reclamation's water operating constraints; power dispatch functions and the marketing of the hydropower are the responsibility of Western Area Power Administration (Western). The power function is subordinate to the following higher priority, legislatively defined functions of the CVP: river regulation, flood control, domestic uses, improvement of navigation, irrigation, and fish and wildlife. ***Reclamation law*** states that surplus hydroelectric power and energy (net of project use) must be transmitted and disposed of "in a manner as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles."

1.6.3 State Water Project

The SWP—a water storage and ***delivery*** system of reservoirs, aqueducts, powerplants, and pumping plants—extends for more than 600 miles, two-thirds the length of California. Project functions include water supply, flood control, power generation, recreation, and fish and wildlife enhancement.

The DWR, the operator of the SWP, has contracted to supply 4.16 maf annually to 30 public agencies in the San Joaquin Valley, south coast, and Southern California. Current annual deliveries are approximately 3.5 maf.

Go To TOC

1.7 Similarities and Differences between NEPA and CEQA

This document is designed to comply with both NEPA and CEQA.

This document is designed to comply with both NEPA and CEQA. NEPA and CEQA are laws that require governmental agencies to evaluate the environmental impacts of their proposed decisions before making formal commitments to carry them out, and that such evaluation be done in detail, and with ***public involvement***. NEPA is a federal law and applies to federal agencies, whereas CEQA is a California law and applies to state and local agencies. For this project, NEPA requires preparation of an EIS, and CEQA requires preparation of an EIR. By preparing a single document that complies with both statutes, the involved agencies have been able to avoid unnecessary duplication of effort.

Despite the similarities between the two laws, important differences remain. NEPA is a procedural law requiring agencies to evaluate a range of reasonable alternatives, disclose potential impacts, and identify feasible ***mitigation***. Reasonable alternatives must be rigorously and objectively evaluated under NEPA (as opposed to CEQA's requirement that they be discussed in "meaningful detail"). Under NEPA, the evaluation of potential impacts must include economic impacts, whereas under CEQA, such analysis is not required. Although mitigation is identified in NEPA documents, it is not required to be implemented. In contrast, CEQA requires agencies to implement feasible mitigation measures or feasible alternatives as a means of reducing the severity of significant environmental effects identified in EIRs.

The CEQA requirement to determine a "significance threshold" for expected impacts presents an important or critical feature of the document. Impacts to be covered include those to ***endangered, threatened***, and rare ***species*** and their habitat (*CEQA Guidelines*, § 15065, subd. [a]). Thus, when an EIR shows that a project has the potential to harm a species officially listed under either the federal ESA or the California Endangered Species Act (CESA), the lead agency has a mandatory legal obligation to treat that impact as significant, and to mitigate if feasible. Thresholds of significance for other issue areas / resources are developed using applicable regulations where they exist, or best professional judgement.

CEQA requires that this DEIS / EIR propose mitigation measures for each significant effect of the project subject to the approval of an agency governed by California law, even where the mitigation measure cannot be adopted by the "lead agency" (Trinity County for this project), but can only be imposed by another responsible agency. At present, it is unclear whether the SWRCB will function as a responsible agency. As the CEQA lead agency, however, Trinity

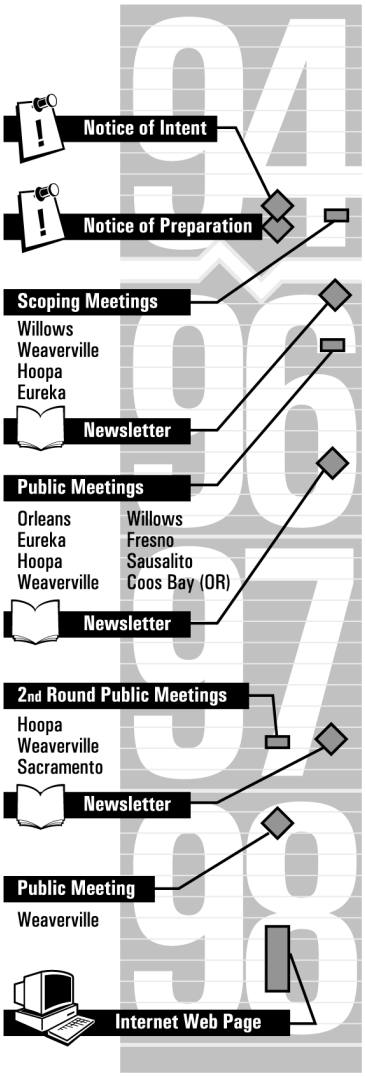
Go To TOC

County has decided that the EIR portion of the EIS/EIR must be sufficient for any future action taken by SWRCB, should it get involved in some fashion. For this reason, the DEIS/EIR must contemplate action by the SWRCB. Many of the proposed mitigation measures could ultimately by within the jurisdiction of the SWRCB.

SWRCB involvement remains a possibility because, following completion of a Record of Decision (ROD), Trinity County may re-initiate a 1990 petition to the SWRCB related to Water Right Orders 90-05 and 91-01 (see Section 3.4 ,Water Quality). The petition may request amendment of Reclamation's seven Trinity River water permits for protection of Trinity River basin public trust resources through increased minimum instream and implementation of Trinity River water quality objectives, as well as implementation of feasible mitigation measures identified in this DEIS/EIR.

Go To TOC

1.8 Scoping and Public Involvement



2655_02

The Service began the public process by preparing an NOI to prepare an EIS, which was published in the Federal Register on October 12, 1994. Trinity County forwarded a Notice of Preparation (NOP) of an EIR to the State Clearinghouse on November 16, 1994.

Joint NEPA / CEQA scoping meetings were held from October 27, 1994, through November 3, 1994, in Willows, Weaverville, Hoopa, and Eureka, California. During those meetings, members of the public were asked what issues they felt should be addressed. As this environmental process continued, the lead agencies also received letters that helped to identify areas of concern. Issues identified included:

- Fishery resources
- Tribal trust obligations
- Impacts to CVP agriculture and / or M&I water contractors
- Vegetation and wildlife resources
- Water quality, including inriver temperature concerns
- Water management
- CVP power generation
- Recreation, including recreation economics
- Socioeconomics
- Land use
- Flooding along the Trinity River
- Aesthetics, as it relates to drawdown of reservoirs
- Ocean sport and commercial fishing
- Upland watershed rehabilitation

These issues were used to develop the resource areas described in Chapter 3.

Public meetings were held March 25 through April 4, 1996, in the following locations: Orleans, Eureka, Hoopa, Weaverville, Willows, Fresno, Sausalito, and Coos Bay (Oregon). These meetings included a legislative update, the preliminary TRFES recommendations, range of EIS / EIR alternatives, potential impact areas, analytical tool description, and schedule. Public input was accepted in each of these areas, as well as others.

A second round of public information meetings was held October 28, 29, and 30, 1997, at Hoopa, Weaverville, and Sacramento, respectively. These meetings provided an update on the alternatives and preliminary analysis results. Additionally, a public meeting was held February 17, 1998, in Weaverville to present some of the proposed significance criteria that had been developed to help in identifying the significance of various impacts.

Go To TOC

In addition to the public meetings, a series of newsletters (January 1996, September 1996, and October 1997) were mailed out to a large number of interested parties. In the fall of 1998, the Service posted an Internet web page about the EIS/EIR (http://www.ccfwo.r1.fws.gov/ccfwo/treis.htm). Trinity County also maintained a public list server concerning Trinity River activities[6].

Future Actions. This environmental process includes a public comment period, during which the public is asked to supply the lead agencies with comments on this DEIS/EIR. (See cover sheet for public comment timetable and addresses.) During the public comment period, public meetings or hearings will be held so that the lead agencies can receive the public's oral and written comments.

Once the public comment period closes, the lead agencies (see Sections 1.10 and 5.1) will consider and respond to the comments and produce a final EIS/EIR (FEIS/EIR). No less than 30 days after the availability of the FEIS/EIR, the lead NEPA agencies will produce an ROD. The Trinity River EIS/EIR is a ***non-delegated NEPA action*** because both the Assistant Secretary for Water and Science and the Assistant Secretary for Fish, Wildlife, and Parks have signatory authority. The lead CEQA agency will certify the EIR no less than 10 days after providing state responsible and other commenting agencies a written response to their comments.

This EIS/EIR is intended to function as a project-level EIS/EIR for some purposes, and as a programmatic EIS or program EIR (i.e., a first-tier EIS/EIR) for other actions. In other words, this EIS/EIR serves as the one and only environmental review document for some aspects of the proposed project, whereas site-specific environmental reviews may be required prior to implementation of other aspects. Generally, this EIS/EIR is intended to constitute the full environmental review for the policy decisions associated with changing Trinity River flows, how the TRD could be managed to meet such flows, and how such flows could impact dependent uses of Trinity River water. In contrast, this EIS/EIR is intended to provide only the first-tier review for the mechanical rehabilitation projects, dam modifications, spawning gravel placement, modifications to structures in the floodplain, and other site-specific activities.

[6] To subscribe to the "env-trinity" list server, send an e-mail message to majordomo@igc.apc.org. In the message block, write "subscribe env-trinity".

1.9 Other Related Environmental Processes

Implementation of the selected alternative could require, as appropriate, permits from the Army Corps of Engineers (Corps), Trinity County, CDFG, the California North Coast Regional Water Quality Control Board (NCRWQCB), SLC, and others. Implementation of the selected alternative would also require consultation with the Service and NMFS on impacts to endangered, threatened, and proposed species.

The CVPIA Draft Programmatic EIS (DPEIS), prepared by Reclamation, addresses the operation and impacts of the CVP, including the TRD. Conversely, this Trinity River DEIS/EIR addresses many Central Valley issues. However, the Trinity River DEIS/EIR is not tiered to the Central Valley DPEIS, nor should it be construed in such a way.

The ***CALFED*** San Francisco Bay/Sacramento-San Joaquin Delta (Bay-Delta) program is attempting to develop long-term solutions for resolving water use, ecosystem restoration, water quality, and levee stability issues in the Sacramento-San Joaquin River Delta (***Delta***). CALFED is analyzing a variety of storage, conveyance, and other activities. Trinity River ***exports*** affect water quality and quantity in the Sacramento River and Delta. A Draft Programmatic EIS/EIR has been prepared

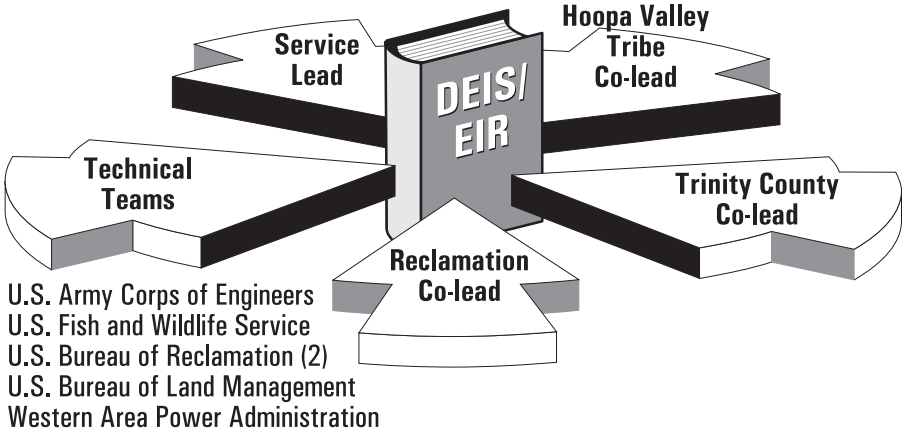
An EIS is being prepared by Reclamation on long-term operations of the Klamath Project. Changes in present project management could impact both Klamath River and Trinity River resources. For example, Trinity River anadromous fish must pass through the lower Klamath River during both juvenile outmigration and adult migration. Furthermore, juvenile fish from the Trinity River may spend an extended time rearing in the Klamath River ***estuary***. The Klamath Project Operations EIS is in the early states of preparation.

The Sacramento Area Water Forum EIR, prepared by the City and County of Sacramento, is a program to provide a safe and reliable water supply for the Sacramento region's economic health and planned development through the year 2030, and to preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River. The Water Forum Preferred Alternative will result in a 320,000 af/year increase in diversions from the American River by the year 2020.

Accordingly, since these environmental reviews are occurring simultaneously, Service, Reclamation, and other involved parties are making every effort to assure that the analyses, ***models***, data, and assumptions are fully coordinated.

1.10 Preparers of the DEIS/EIR

In 1994 the Secretary initiated the Trinity River EIS/EIR. The Secretary directed the Service to be the lead agency on the project. On October 12, 1994, the Service published an NOI to prepare an EIS in the Federal Register. It was determined that the Hoopa Valley Tribe, Trinity County, and Reclamation would be co-leads. Six technical teams were established to collect, analyze, and present technical information. The teams were lead by representatives of Western, Corps, the U.S. Bureau of Land Management (BLM), Service, and Reclamation (two teams: see Section 5.2 for a list of individuals). Thirteen agencies (either ***cooperating***, responsible, or trustee ***agencies***) provided input on this DEIS/EIR (see Section 5.2 for a list of the agencies and individuals). In addition, the Karuk and Yurok Tribes were actively involved in preparation of the EIS/EIR.



2655_01

Go To TOC

1.11 Areas of Controversy

The following issues associated with the proposed Trinity River Mainstem Fishery Restoration action are anticipated to be controversial: water supply impacts on various CVP contractors; impacts on Central Valley fisheries, including the winter run salmon and Delta smelt; flooding issues in the Trinity River Basin; and water quality impacts in the Trinity River Basin due to channel modification projects.