# Abstract

The construction of the Trinity River Diversion (TRD) on the Trinity River and the export of approximately 74 percent of the Trinity's water above Lewiston dramatically reduced instream flows in the mainstem of the Trinity River. This reduction has resulted in substantial detrimental changes to the river, with associated declines in anadromous fish production. In its authorization for the construction and operation of the TRD, Congress also directed the Secretary of the Interior (Secretary) to ensure the preservation and propagation of Trinity fish and wildlife resources. In 1981, the Secretary, citing statutory requirements and Federal Tribal Trust obligations, directed the U.S. Fish and Wildlife Service (Service) to conduct the Trinity River Flow Evaluation Study (TRFES). The TRFES was initiated to determine the effectiveness of restoration of flows and other measures for the purpose of restoring salmon and steelhead populations to the river. In 1992, Congress enacted the Central Valley Project Improvement Act (CVPIA) (Public Law 102-575) which, in part, directed the Secretary to complete the TRFES, and with the concurrence of the Hoopa Valley Tribe, implement its recommendations for restoring and maintaining the Trinity River fishery.

In 1994, the Secretary, in accordance with the National Environmental Policy Act (NEPA) and Trinity County, in accordance with the California Environmental Quality Act (CEQA), initiated the Trinity River Environmental Impact Statement/Report (EIS/EIR) to evaluate a range of alternatives to restore the natural production of anadromous fish on the mainstem of the Trinity River. The Service was designated as the lead agency and the Hoopa Valley Tribe, Trinity County, and the U.S. Bureau of Reclamation (Reclamation) agreed to function as co-leads. On October 12, 1994, the Service published in the Federal Register a Notice of Intent (NOI) to prepare the Trinity River Mainstem Fishery Restoration EIS/EIR. Trinity County filed a Notice of Preparation (NOP) of an EIR on November 15, 1994. The Draft EIS/EIR (DEIS/EIR) was released for public comment in October 1999.

This Final EIS/EIR (FEIS/EIR) amends the DEIS/EIR in response to public comment and incorporates additional information, corrections, and changes. As such, this FEIS/EIR hereby incorporates the DEIS/EIR by reference. The FEIS/EIR represents the environmental analysis to be used by the Secretary in making subsequent federal decisions necessary to restore and maintain the Trinity River fishery. Further, under CEQA, the FEIS/EIR will provide Trinity County with an environmental reference for basing its decision on the issuance of permits for potential Trinity River channel modification projects that occur within the County's jurisdictional boundaries. In accordance with NEPA and CEQA, this FEIS/EIR has identified a number of alternatives that, based on public input, scientific information, and professional judgment, are considered feasible and satisfy the stated purpose and need and goal and objectives of the proposed action. The FEIS/EIR examines the affected environment and the environmental consequences for six alternatives: (1) No Action Alternative, (2) Maximum Flow Alternative, (3) Flow Evaluation (Preferred Alternative), (4) Percent Inflow Alternative, (5) Mechanical Restoration Alternative, and (6) State Permit Alternative (this alternative was determined not to meet the stated purpose and need of the action, but is included to account for Reclamation's existing diversion permit). In

addition, all alternatives were compared to the No Action and Existing Conditions scenarios, as is required by NEPA and CEQA, respectively. A brief summary of each alternative, along with a description of associated environmental impacts, follows.

The No Action Alternative represents ongoing activities and operations and the anticipated future condition of the affected environment in the year 2020 in the absence of project implementation. The No Action Alternative performed poorly in meeting the healthy river system attributes and habitat requirements necessary for restoring the natural production of anadromous salmonids in the mainstem Trinity River. Compared to 1995 existing conditions, the No Action Alternative showed adverse temperature-related impacts to Sacramento River salmon, caused by increased water demands in 2020. Modeling results indicated that fishery habitat in the mainstem Trinity River in the year 2020 would not provide the conditions necessary to restore and maintain salmonid populations, including the threatened (federal ESA) coho salmon population.

The Maximum Flow Alternative would use all of the Trinity River inflows above the Trinity Dam to restore the river ecosystem through managed flows. The Maximum Flow Alternative would enhance recreation, result in very substantial improvements to habitat for native anadromous salmonids in the Trinity River, and benefit anadromous fish in the lower Klamath River and coastal areas relative to the No Action Alternative. While this alternative would meet the purpose and need of the proposed action, the Maximum Flow Alternative would eliminate all water exports to the Central Valley, and was the only alternative that substantially increased temperature violations in the Sacramento River above the No Action levels. Further, the Maximum Flow Alternative shows significant adverse impacts related to TRD and CVP system power generation, Trinity River flooding, Sacramento River winter and spring chinook salmon and delta smelt, Central Valley water supply and associated impacts to Central Valley agricultural and municipal and industrial (M&I) uses, and Delta water quality.

The Flow Evaluation Alternative is based on the recommendations in the TRFES and includes increased releases from Lewiston Dam, mechanical restoration, and implementation of an adaptive environmental assessment and management (AEAM) program. Projected significant adverse impacts include impacts to Sacramento River winter chinook and delta smelt, a reduction in water deliveries to the Central Valley and associated impacts to Central Valley agricultural land use, power generation, and modeled impacts to Delta water quality above the No Action Alternative. The lead agencies chose the Flow Evaluation Alternative as the Preferred Alternative because it best met the purpose and need of restoring and maintaining the Trinity River fishery, in accordance with the statutory and federal trust obligations, while allowing for the continued operation of the TRD, including continuing to export the majority of Trinity Reservoir inflow and limiting flooding impacts on the Trinity River.

The Percent Inflow Alternative would approximate natural flow patterns, at a reduced scale, by releasing water into the Trinity River at a proportion of the rate it flows into the Trinity Reservoir. The Percent Inflow Alternative would meet the purpose and need of the proposed action and benefit the Trinity River fishery, albeit at a much lower percentage than the Maximum Flow and Flow Evaluation Alternatives. However, the Percent Inflow Alternative would include significant adverse impacts to the Trinity and Sacramento River

temperature objectives, the Sacramento River fishery, TRD power generation, Central Valley agricultural land use, and Delta water quality.

The Mechanical Restoration Alternative would use the same water management as the No Action Alternative, but would build upon No Action by constructing 47 new channel projects, mechanically maintaining both new and existing projects, dredging 10 pools in the Trinity River mainstem, and initiating an ambitious watershed protection program. Mechanical Restoration would result in some benefits to native anadromous species relative to the No Action Alternative. While this alternative would minimally meet the purpose and need of the proposed action, the benefits would be largely limited to restoration sites and would be substantially less than those seen under the Maximum Flow and Flow Evaluation Alternatives. Other anticipated impacts would be similar to the No Action Alternative.

The State Permit Alternative was evaluated because it identifies the minimum flow levels identified by Congress in 1955 and specified in Reclamation's seven California water permits issued in 1959. Under the State Permit Alternative, Trinity River instream flows would be reduced from the No Action levels of approximately 340 thousand acre feet (taf) of water per year to 120 taf. The State Permit Alternative would not meet the purpose and need of the proposed action, but could slightly benefit Sacramento River water quality and fisheries and Sacramento and Central Valley water resources and supply.