

Mining Reach - 7/11 Segment
Tuolumne River Restoration Project

Summary Report

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The Project, Mining Reach – 7\11 Segment, is the first of four large-scale salmon habitat restoration projects in the Mining Reach of the Tuolumne River that are sponsored by the Tuolumne River Technical Advisory Committee (TRTAC) as a result of commitments made under the Don Pedro Project hydropower license 1996 FERC Settlement Agreement. The Mining Reach projects are intended to demonstrate the feasibility and effectiveness of restoring fluvial processes to long reaches of the river by creating dynamic riffle-pool sequences in an active channel reduced in size for the hydrologic conditions of a regulated river yet with a wider floodway than currently found in the Mining Reach of the river.

The 7\11 Project goals were to improve habitat for salmon spawning and out-migrating fry and smolt survival within the Mining Reach of the Tuolumne River by restoring fluvial processes and floodway habitats. Prior monitoring studies by the Districts have shown that when dikes along mining pits are breached during moderate and high flows, out migrating salmon fry and smolts are trapped in the adjacent mining pit and become food for the predators in the mining pond. Restoration actions to achieve project goals involved widening the river floodway to a 500 foot channel that would be capable of conveying flows of up to 15,000 cfs, setting back dikes through portions of terrace mining pits that constricted the channel capacity of the river, filling in portions of mining pits where the dikes were moved, constructing a more sinuous riffle run channel, and revegetation of the new floodway with riparian plants suited to the micro habitats in the floodway.

The 7\11 Project consisted of acquiring 87.4 acres of riparian lands, including portions of existing mining pits and tailings sites, within a 2.2-mile long segment of the river. The total amount of material moved was 540,000 CY of aggregates and topsoil. These materials were used in constructing five new riffles, setting back dikes, filling associated mining pits adjacent to the river, and construction of a 1,600 foot long high flow bypass channel through an old mining pit. Nine floodplain surfaces were created with terrace channels to allow higher flows to drain from the surface when river flows recede without trapping fry and smolts. These floodplains inundate at flows from 3,000 cfs to 5,500 cfs were planted with a mix of native trees and shrubs appropriate for the hydrology and flooding frequency to recreate an eventual riparian forest. The restoration revegetation work involved planting 21.4 acres of new riparian floodplains and 3 acres of upland forest. Valley oak trees were planted on a separate 7 acres area to convert a pasture to an upland savanna habitat. Over 160 elderberry shrubs were planted to improve habitat for endangered species.

The overarching design elements and restoration objectives for the 52 miles of the lower Tuolumne River between La Grange Dam and the confluence with the San Joaquin River were developed in the “Habitat Restoration Plan for the Lower Tuolumne River Corridor” prepared by Mc Bain & Trush in March 2000. The development of the 7\11 Project was done in parallel with the Restoration Plan during the early years of the then new CALFED program. The 7\11 Project design and permitting costs were shared between the USFWS Anadromous Fish Restoration Program (AFRP) and the TRTAC. The initial permitting for this and the other 5 large-scale restoration projects under development at the same time required the additional step of preparing an EA/IS tiered off the EIR for the FERC Settlement Agreement. The Turlock Irrigation District, Modesto Irrigation District, and the City & County of San Francisco provide the funding source for the TRTAC cost share. The Turlock

Irrigation District is the operating manager of the Don Pedro Project and as such provides the project management for TRTAC sponsored projects.

There were four distinct phases to the project: (1) CEQA/NEPA & pre-project monitoring (2) design, permits, & CBDA funding process, (3) construction, including revegetation, and (4) vegetation maintenance. The overall project timeline is as follows.

| | |
|--------------------------|------------------------------|
| CEQA/NEPA | September 1997 to July 1999 |
| Design & Permits | July 1999 to March 2002 |
| Construction | April 2002 to March 2003 |
| Revegetation Maintenance | March 2003 to September 2004 |

The project involved several contractors providing the following services.

| | |
|-------------------------------|------------------|
| Conceptual design | McBain & Trush |
| Permits & CEQ/NEPA | EDAW |
| Construction Design | HDR Engineering |
| Construction Management | HDR Engineering |
| Prime construction contractor | 7\11 Materials |
| Revegetation design & plants | HART Restoration |
| Maintenance of plantings | HART Restoration |

The TRTAC applied to the AFRP and CALFED programs for funds to construct the 7\11 Project. The total AFRP funds committed to the project were \$4,196,600 of which \$3,410,885 were used in the construction related activities shown below. The AFRP also contributed \$785,715 towards the development of the ER/IS and establishment of the pre-project baseline monitoring used for this project. The TRTAC provided \$448,427 in funds. CALFED, now called California Bay Delta Authority (CBDA), awarded \$2,801,000 for construction and revegetation of the project. The Metropolitan Water District of Southern California provided the CBDA share of the funds for the project. The project cost breakdown is below.

| | | |
|------------------------|-------------|-------------|
| Design, Permitting, CM | | \$1,694,106 |
| AFRP share | \$1,141,679 | |
| TRTAC share | \$ 268,427 | |
| MWD share (CM) | \$ 284,000 | |
| Construction | | \$4,677,247 |
| MWD share | \$2,295,717 | |
| AFRP share | \$2,111,124 | |
| TRTC share | \$ 180,000 | |
| Revegetation | | \$ 376,459 |
| MWD share | \$ 207,797 | |
| AFRP share | \$ 158,082 | |
| Project total | | \$6,747,812 |

The attached PowerPoint slides show the project construction and revegetation.