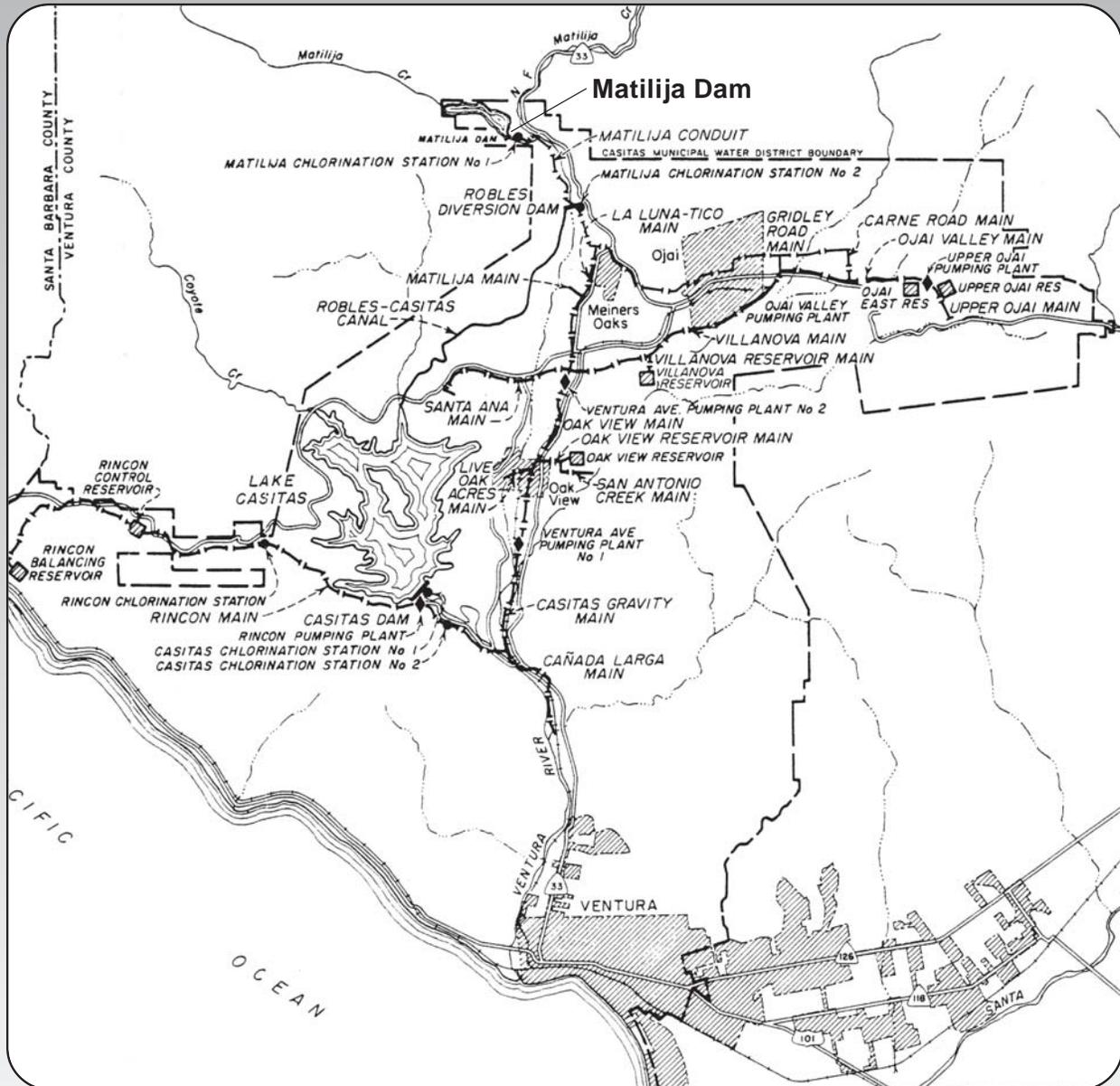


Matilija

Summer 2003
Volume 6

messenger

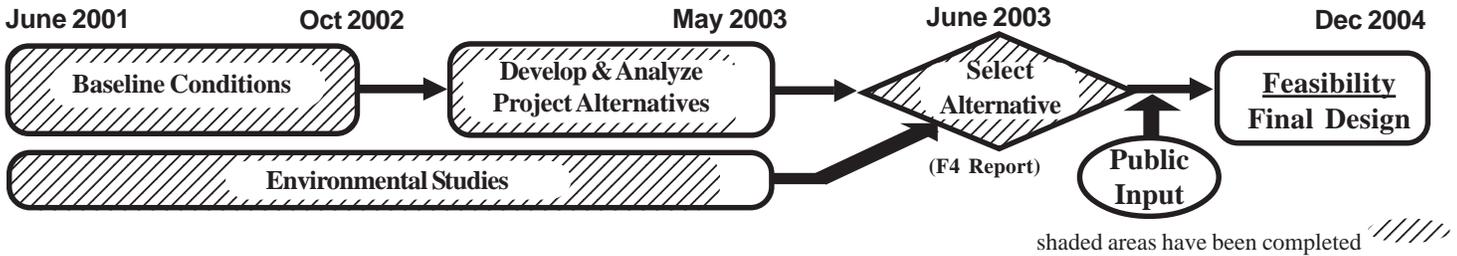
Dedicated to the Removal of Matilija Dam



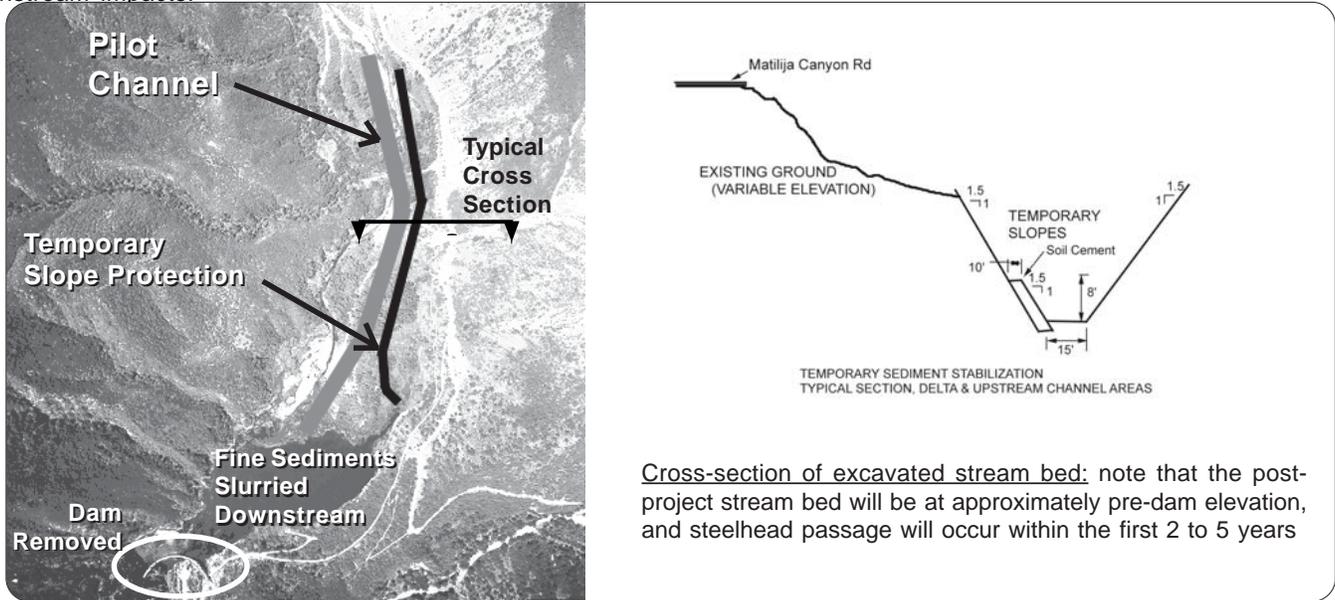
The water supply within the Ventura River Watershed is among the most reliable in Southern California. Since 1956, the Casitas Municipal Water District (CMWD) has operated a system of dams, reservoirs, and water distribution pipes for the residents, municipalities, and agriculture of the region. The primary storage facility is Lake Casitas, which has a capacity of 254,000 acre-feet and provides for 20 years supply. (An acre-foot of water is equal to 325,900 gallons, or annual usage for two to three average households.) The obsolete Matilija Dam now has a capacity of less than 400 acre feet, so its removal will not directly affect water storage. However, potential impacts to the water supply from the dam removal project are a key issue in the planning process.

Plans to Remove Matilija Dam...

The multi-agency *Matilija Dam Ecosystem Restoration Feasibility Study* continues to examine the potential benefits and impacts from the four concepts identified last October for removing the obsolete Matilija Dam. (See *Matilija Messenger* Volume 5 for conceptual project descriptions.) As indicated below, the Environmental Studies and Alternative Analysis are almost complete, and on July 10, 2003, the Plan Formulation study group narrowed in on a "Tentatively Preferred Alternative" plan.



Full Dam Removal with Temporary Sediment Stabilization on Site involves excavating a channel through the impounded sediments upstream of the dam as shown below. First a slurry pipeline will transport the fine silt and clay in the reservoir area to a downstream disposal site. A pilot channel would then be excavated through the remaining sediments, with this sand and cobble placed on the left side of the channel (looking downstream). This would allow natural transport, but at a controlled rate to minimize downstream impacts.



Cross-section of excavated stream bed: note that the post-project stream bed will be at approximately pre-dam elevation, and steelhead passage will occur within the first 2 to 5 years

This plan is based upon consensus among the broad group of stakeholder agencies, and is intended to optimize the restoration opportunities and minimize the potential impacts while providing for the complete removal of Matilija Dam within a two-year project timeline. The final "F4 Report" is due for completion in October, in time for a request for federal funding in 2004. Under the current schedule, the decommissioning project should begin in 2007. Visit www.matilijadam.org for updates and technical reports.

... Will Protect The Water Supply

Although the sediment-filled Matilija Dam no longer provides any significant water storage capacity, the Casitas Municipal Water District (CMWD) has expressed concerns about potential affects of this project on the water supply. CMWD has concerns that moving sediments down the Ventura River will plug the new Casitas fish passage facility, contaminate Lake Casitas with silt, and reduce water diversions at Robles Diversion Dam. These issues have been placed high on the list of critical issues in the plan formulation process, and several mitigation measures relating to water supply are currently being studied for their effectiveness, feasibility, and ease of implementation. These include:

- 1) **Slurry Fine Sediments:** the fine silt currently trapped behind the dam will be transported to a location downstream of Robles Diversion canal to reduce increased turbidity levels in the river.
- 2) **High Flow Bypass:** a gate constructed in the Robles Diversion dam would open during peak floods to allow natural flushing of the sediments that would otherwise become trapped behind the structure.
- 3) **Siltation Basin:** will allow suspended sediments to settle out of the water in the diversion canal before reaching Lake Casitas.
- 4) **Alternate Supplies:** water swaps would protect Lake Casitas safe yield if diversions become reduced during decommissioning.

Steelhead Will Soon Return To Matilija Creek

On August 28, 2003, construction finally began on the \$7.5 million Robles Diversion Fish Passage facility. This culminates years of planning and negotiation between NOAA Fisheries and the Casitas Municipal Water District .

The Robles Diversion Dam was constructed in 1958 as part of the Ventura River Project (see page 1.) Located on the upper Ventura River about two miles downstream of Matilija Dam, the 24 foot high, 530 foot wide dam serves to divert water from the mainstem Ventura River into Lake Casitas through a 5.35 mile long canal. This facility provides almost half of Lake Casitas water supply. But since 1958, it has also completely blocked steelhead access to the critical habitat upstream, while simultaneously diverting downstream smolts into the lake where they become prey for introduced resident bass and perch.

Establishing fish passage at Robles Diversion Dam is essential for future steelhead access to Matilija Creek. The construction of the Fish Passage Facility will take two years, and then steelhead will regain access to four miles of habitat in the North Fork of Matilija Creek along Highway 33. An additional 13 miles of prime steelhead spawning and rearing habitat lies above Matilija Dam.

The Department of Fish and Game has estimated that of the 4,000 to 5,000 adult steelhead that historically entered the Ventura River system, approximately half of these fish used Matilija Creek and its tributaries to spawn. The removal of Matilija Dam will therefore open up the most important remaining habitat in the watershed.



Looking upstream at the Robles Diversion Dam on the Ventura River. A new fish ladder will reestablish upstream passage for the first time since 1958.

How will the fish ladder work?

The Robles Fish Passage is a state of the art design that will allow fish to pass both upstream and downstream of the barrier. It includes the following:

200 ft long fishway - vertical slots create numerous "step pools" so that fish may swim up and over the diversion dam

Auxiliary water supply pipe - provides flows to attract fish to the step pools

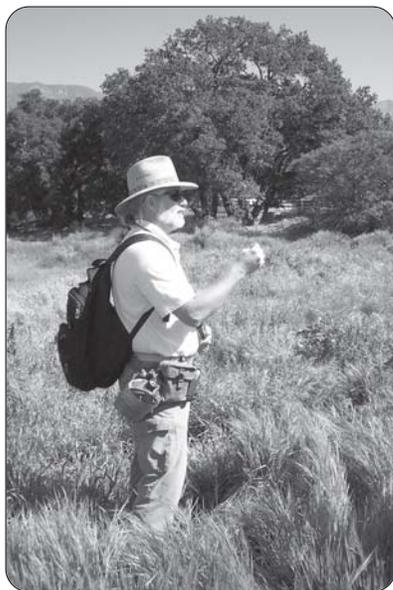
Flow control structure - directs a portion of the diverted flows to the fish ladder

Fish guidance device and upstream outlet - prevents "fallback" of fish successfully migrating upstream through the fishway

Fish screen - prevents fish from entering the diversion canal and Lake Casitas

Downstream wiers - stabilize the river gradient and ensure adequate pool depth at the entrance to the fishway

Fish counter - to monitor fish passage and determine success of the facility



David described the work he completed for the Matilija Dam Feasibility Study. Large posters showed the vegetation mapping that was used in the Baseline Conditions Report. This report stresses the significance of native plants to the ecosystem, and the degradation resulting from invasive non-natives such as giant reed (*Arundo donax*).

hike Field Trip

Native Plants and Habitat Assessment

Our spring field trip was held on Saturday March 8, 2003. David Magney led the group on a plant walk within the flood plain of the Ventura River where he provided highly detailed descriptions of the local flora, both native and non-native.

"Plants **are** the ecosystem," he said. "Every living thing depends upon the plants that provide the habitat and nutrients at the bottom of the food chain."

Events

Field Trip

Sunday November 9, 2003 - 9:30 am

Robles Diversion Fish Ladder

CMWD fish biologist Leo Lentsch will host a tour of the new fish passage facility on the Ventura River. This Sunday event is scheduled around construction activities so we can take a close look at the plans and most recent progress.

Directions: Take Hwy 150 (Baldwin Road) west from Hwy 33. Turn right on Rice Road. Bear left on Rice Road where it meets Fairview Road and continue down into the riverbed to the end of Rice Road.

Public Forum

Matilija Dam Feasibility Study

Date TBD

Watch for announcements for this upcoming public event in which the latest dam decommissioning plans will be presented and discussed with the community.

Stream Team

The Ventura River Volunteer Watershed Monitoring program continues in its third year. Baseline water quality data is an important part of watershed restoration efforts, and a great way to get involved. The Ventura River Stream Team meets the first Saturday of the month at the Surfrider office, 239 W Main St., Ventura. Dates for the rest of the year:

Oct 4, Nov 1, Dec 6

To get involved contact:

Leigh Ann Grabowsky, Program Coordinator
(805) 563-3377 lag@sbck.org
on the web at: www.sbck.org



Surfrider Foundation®

Ventura County Chapter
239 W Main St, Ventura, CA 93001



The Matilija Coalition is a program of the Ventura County Chapter of the Surfrider Foundation

committed to the environmental restoration of the Ventura River watershed

Our Vision of the future is:

- The Ventura River flowing free from mountains to the sea
- A thriving population of steelhead trout in its waters
- A healthy, native ecosystem
- A wide, sandy beach along the coast
- Opportunities for public enjoyment, education, and recreation for current and future generations

The Matilija Coalition serves as the public voice within the government Feasibility process - visit our website at:

www.matilija-coalition.org

Paul Jenkin (805) 648-4005

paul@matilija-coalition.org

The work of the Matilija Coalition is made possible through generous support from:

California Department of Fish and Game
Salmonid Restoration Fund

Looker Foundation

Patagonia Inc

Real Cheap Sports

Surfrider Foundation
Ventura County Chapter

Wallis Foundation

and many individuals
