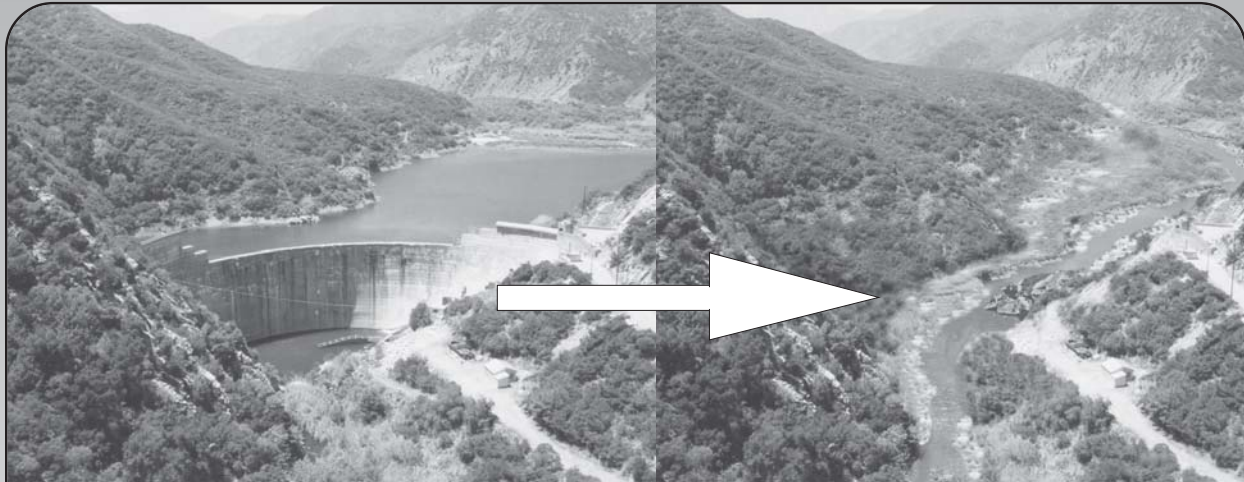


# Matilija

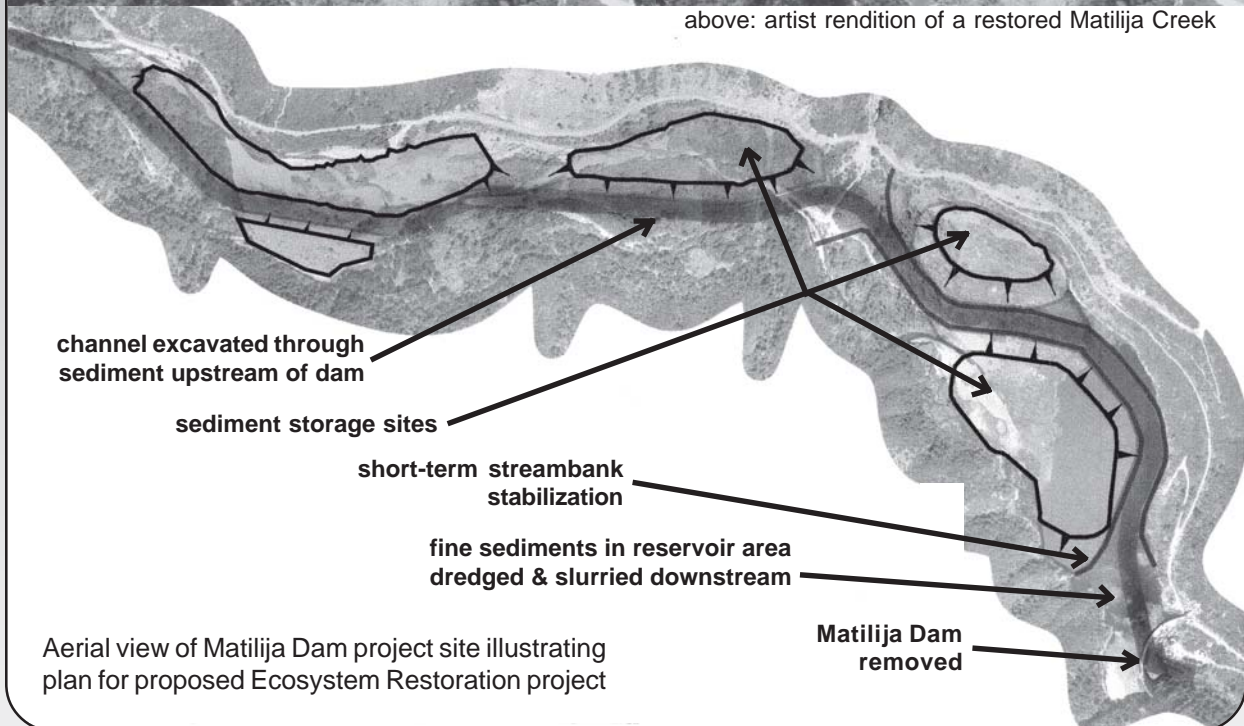
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Summer 2004  
Volume 7

Dedicated to the Removal of Matilija Dam



above: artist rendition of a restored Matilija Creek



Aerial view of Matilija Dam project site illustrating plan for proposed Ecosystem Restoration project

**Removing Matilija Dam** is no small task in a watershed that has seen significant changes since dam construction was completed in 1948. But after three years of study, a plan has been developed to restore the imperiled Ventura River ecosystem by removing the largest dam to date. ***“Full Dam Removal with Short-Term Sediment Stabilization on Site”*** evolved as the best way to deal with the sediment issue that vexes every large dam being considered for removal. Under this plan, immediate passage will be restored for the native steelhead trout, and controlled releases of sediment will gradually restore the natural riverine processes that nourish coastal beaches. Studies show that this approach, along with additional engineering features and a long-term adaptive management plan, will fully mitigate the potential downstream impacts from the project.

# *Stakeholders Agree on Plan to Remove Matilija Dam*

In January 2004, the Feasibility Study "Plan Formulation" workgroup agreed upon a plan for the removal of Matilija Dam. 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 completely removing Matilija Dam within a two-year project timeline.

**Full Dam Removal with Short-Term Sediment Stabilization on Site** involves excavating a mile-long channel through the sediments that have accumulated upstream of the dam. First, a slurry pipeline will transport two million cubic yards of fine silt and clay from the remaining reservoir behind the dam to downstream sites near the Highway 150 Bridge. A 100-foot wide stream channel would then be constructed through the remaining 4 million cubic yards of sediment by moving the excavated sand and cobble into storage sites adjacent to the channel (as illustrated on the cover.) Temporary structures will stabilize the base of the larger storage sites and allow a controlled rate of erosion. This will minimize downstream sedimentation impacts gradually restore the sediment-starved river.

The consensus for this plan was based upon the following eight strategies and outcomes:

1. Immediate fish passage upon project completion
2. Full (single-phase) dam removal
3. Immediate natural resupply of sediment
4. Sinuous alignment of channel excavated through the sediments trapped upstream of dam
5. Excavated sediment to be stored at several sites within historic reservoir area
6. Short-term stabilization of stored sediments - stream bank structures designed for 10-year flood event
7. Slurry fines - 2 million cubic yards to be deposited downstream of Robles Diversion dam
8. High-flow sediment bypass - modification of Robles diversion dam to allow for restored sediment transport

## *Studies Yield Best Solution for Managing Sediment*

In 1998, the Ventura County Board of Supervisors determined that it was **necessary and beneficial** to remove the obsolete Matilija Dam. The board determined that removing the dam would eliminate any future liability posed by the decaying structure and provide significant ecosystem benefits, including providing critical habitat for the endangered native steelhead trout and restored sediment supply to the river and beaches downstream.

Following initial investigations, a three-year federal Feasibility Study began in June 2001. A critical component of the study was the lengthy project selection process undertaken by a multi-agency Plan Formulation committee. A broad range of potential alternatives was screened based upon engineering feasibility, environmental benefits and impacts, and cost.

The project alternatives that were studied in detail differ in their approach to sediment management, the major technical hurdle associated with almost all dam removals. The primary design constraint is floodplain development downstream of the dam. Residences, roads and bridges, and water supply facilities all need to be protected under any project alternative.

**"No Project"** – The studies revealed the impacts of leaving the dam in place. Over the next 30 years, an additional three million cubic yards of sediment will be deposited behind the dam, for a total of 9 million cubic yards. The current environmental problems caused by the dam will worsen, and the risks associated with structural failure will increase. County government does not want or need the obsolete dam, and citizens desire the return of the public trust natural resources that have been lost.

**"Natural Transport"** – Removing the dam all at once and allowing nature to do the rest of the work would achieve the long-term project goals, but the near-term impacts from large sediment releases would be great. This could be the least costly alternative, but existing floodplain development would necessitate construction of huge new levees and other expensive measures. Most significantly, impacts to the water supply would be unacceptable.

**"Notching"** – A two-phase scenario was modeled, removing half of the dam each time. This approach would result in two sediment releases, each smaller than the "natural transport" alternative. Although the short-term downstream impacts would be reduced, project scheduling would be dependent upon unpredictable future weather patterns, possibly resulting in a delayed or unfinished project. Also, the longer project time frame would result in significant impacts to the fishery and water supply.

**"Trucking"** – Mechanical transport of the coarse sediment was combined with construction of an upstream "pilot channel." Although water supply impacts would be reduced, the benefits releasing the sand and cobble trapped behind the dam would not be realized. Most importantly, the estimated 14 million truck miles were considered to be an unacceptable environmental impact.

**"Stabilization on Site"** – Under this scenario, a pilot channel provides a stable starting point once the dam is removed, reducing the risks associated with uncontrolled releases of sediment.

**"Long-Term Stabilization"** would require permanent levees in Matilija Canyon to keep sediment on-site indefinitely. This would preclude public access over the structures, and eliminate the benefit from releasing this sediment to feed the sediment-starved river and beaches, two of the primary objectives of the project.

**"Short-Term Stabilization"** was determined to be the best overall concept, given the watershed hydrology and constraints. This approach will allow for full dam removal with controlled sediment release over a 20-year period. Environmental benefits are maximized, including renewed public access to Matilija Canyon, while the potential downstream impacts are minimized.

The Draft Feasibility Report includes a complete description of this Plan Formulation process along with all of the technical studies and the Environmental Impact Report. These documents are available at local libraries or on the internet at [www.matilijadam.org](http://www.matilijadam.org).

# Ecosystem Restoration Will Benefit Everyone

The greatest challenge in the planning process is ensuring that all downstream interests are protected while still providing the benefits of a fully restored Ventura River ecosystem. Of particular concern are the water diversion and fish passage facilities at the Robles Diversion Dam, less than 2 miles downstream of Matilija Dam, as well as potential flooding of low-lying residential areas. In the proposed dam removal plan, the majority of the over \$100-million project cost pays for engineering solutions to potential downstream impacts. These include:

- 1) *Dredge & Slurry*: Two million cubic yards of fine sediments in the reservoir area will be transported downstream of Robles Diversion. This effectively eliminates short-term impacts to water supply and fish from "muddy water."
- 2) *High-Flow Bypass*: A new radial gate in the Robles Diversion Dam will allow natural flushing of the sand and cobble that normally builds up and reduces diversions during floods. This solves an existing problem, and one that will continue to worsen even if Matilija Dam were to remain in place.
- 3) *Desilting Basin*: Will separate suspended sediments out of water diverted to Lake Casitas. This will also greatly enhance the current operational efficiency of the Robles Diversion facility.
- 4) *Foster Park Wells*: Two groundwater wells constructed at Foster Park will enhance the City of Ventura's water diversion capability.
- 5) *Flooding*: Levees (approximately 5 feet high) at Meiners Oaks, Live Oak, and Casitas Springs, and bridges modified at Camino Cielo and Santa Ana Road will increase flood protection.
- 6) *Arundo donax (giant reed)*: Eradication of 250 acres of this invasive plant (from the mouth of Ventura River to upstream of Matilija Dam) will restore riparian habitat (and also save water.)
- 7) *Recreation*: Over 8 miles of new trails along the river will connect Matilija Creek with the Ventura-Ojai Valley Trail near Highway 150.

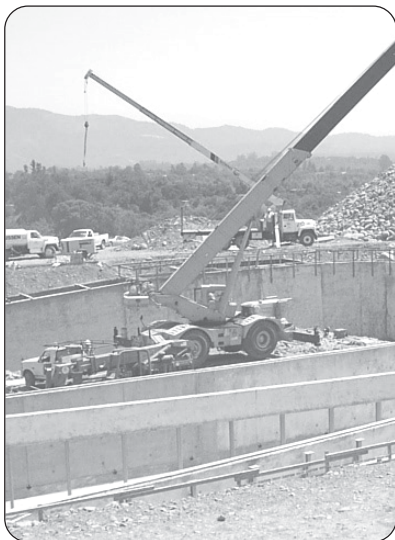
Aside from the primary fisheries and beach restoration benefits from removing Matilija Dam, these additional features of the project will also enhance local water supplies, riparian habitat, and recreational opportunities in the Ojai Valley.

**The Matilija Coalition** played a significant role in the three-year planning process that led to the draft feasibility report. Working alongside government agency representatives, our intent has been to ensure that the engineering approach to removing Matilija Dam will provide the anticipated environmental benefits while minimizing potentially adverse impacts to the community. During the planning process we suggested and advocated for design features such as a meandering upstream channel with short-term sediment stabilization, levee heights and streambank stabilization appropriate for flooding risk, slurry disposal away from popular recreation and access areas, and trails and trailheads for public use. We also encouraged full mitigation for water supply impacts and consideration of coastal benefits.

We will be reviewing and commenting on the public Draft EIS/EIR. Some of the details we will be looking for include:

1. Mitigation measures appropriate to the project objectives
2. Assurances that long-term project management will be fully completed
3. Overall cost effectiveness
4. Satisfactory beach nourishment benefits

We encourage you to participate in the public review process - your comments will be critical to ensuring the project accommodates all local concerns.



A recent look at the soon-to-be completed Robles Diversion fish ladder

## TOUR *Field Trip* Robles Diversion Fish Ladder

**November 9, 2003** - On an overcast Sunday morning last November, Casitas MWD hosted our group of over twenty at the new fish passage facility on the Ventura River. The event was scheduled around construction activities so we could take a close look at the plans and most recent progress.

At the time of the tour, most of the site excavation and demolition of the diversion canal was complete, and concrete was already being poured. As of July 2004, the project is ahead of schedule, and expected to be up and running during the first rainfall this winter! We'll be eagerly awaiting the return of steelhead to the fabulous spawning waters of the North Fork Matilija Creek!

### Removing Matilija Dam will:

- \* restore a free-flowing river
- \* provide immediate fish passage
- \* replenish starved beaches
- \* maintain a reliable water supply
- \* increase recreational opportunities

## Events

### PUBLIC MEETING

#### Matilija Dam Feasibility Study

**Wednesday July 28, 6:30 pm**

Ventura County Watershed Protection District will host a presentation of the Army Corps of Engineers **Feasibility Study and Draft Environmental Impact Report**. The plans to decommission Matilija Dam will be presented and discussed with the community. This is your opportunity to voice your opinions and concerns about the project!

**Where:** Ventura County Administration Building  
800 South Victoria Ave, Ventura, CA

### FIELD TRIP - Matilija Dam

**Sat Aug 14, 2004 - 9:30 am**

Join us at Matilija Dam to learn more about the decommissioning plans. This is a chance to visit the dam site and ask questions about the project.

**Directions:** Take Highway 33 North from Ojai, turn Left on Matilija Road to the dam site.

### Stream Team

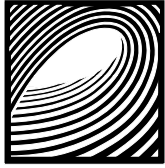
The Ventura River volunteer watershed monitoring program is now in its fourth year, thanks to all our dedicated volunteers! Our water quality data is an important part of watershed restoration efforts, and a great way to get involved. The Ventura River Stream Team meets the first Saturday of the month at 9am at the Surfrider office, 239 W Main St., Ventura. Dates for the rest of 2004:

**Aug 7, Sept 11, Oct 2, Nov 6, Dec 4**

To get involved contact:

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





# Surfrider Foundation®

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



## Draft Feasibility Study and Environmental Impact Report available NOW! Your Input is Important!

**PUBLIC REVIEW PERIOD: July 16-Aug 30, 2004**

A public meeting will be held Wednesday, July 28, 2004, at 6:30 p.m.  
in the Board of Supervisors' Hearing Room at the Ventura Government Center.

Public comment and participation at this meeting is encouraged.

Direct written comments to: Jon Vivanti, U.S. Army Corps of Engineers, Los Angeles  
District, 915 Wilshire Blvd., Los Angeles, CA 90017-3401.

Copies of the report are available at local libraries or from [www.matilijadam.org](http://www.matilijadam.org)

### 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](http://www.matilija-coalition.org)**

Paul Jenkin (805) 648-4005

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

Looker Foundation

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Real Cheap Sports

Surfrider Foundation  
Ventura County Chapter

Wallis Foundation

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