

## **Matilija Dam Removal**

### **Background**

Matilija Dam was constructed in 1947 on Matilija Creek, a tributary of the Ventura River, by the Ventura County Flood Control District for water supply and flood control purposes. The dam is a concrete arched structure approximately 200 feet high and 600 feet across the spillway. As a result of heavy siltation, and deteriorating concrete which has necessitated the removal of a 30 foot deep notch in the spillway, the original storage capacity has been reduced from 7,000 acre feet to 500 acre feet. Consequently, the dam provides no flood control protection, and only limited, and diminishing water supply benefits. The dam does not provide any hydroelectric power, and the small reservoir provides no recreational opportunities.

### **Removal Proposal**

Matilija Dam is being proposed for removal by the dam's owner, the Ventura County Flood Control District. Currently, the U.S. Bureau of Reclamation is preparing an Appraisal Study of the dam's removal (to be completed May 1, 2000). The U.S. Army Corps of Engineers is contributing to the Bureau's Appraisal Study, as well as conducting its own Reconnaissance Study. The Bureau of Reclamation, in conjunction with the Ventura County Flood Control District and a technical advisory committee composed of state and federal agencies, and public interest groups, have identified three broad project objectives for the removal of Matilija Dam:

- (1) to improve aquatic and terrestrial habitat along Matilija Creek and the Ventura River to benefit fish and wildlife species including endangered steelhead, (2) to restore the hydrologic and sediment transport regime to support downstream coastal beach and sand replenishment to pre-dam conditions; and (3) to enhance recreational opportunities along Matilija Creek (including U.S. Forest Service Land) and the downstream Ventura River System.

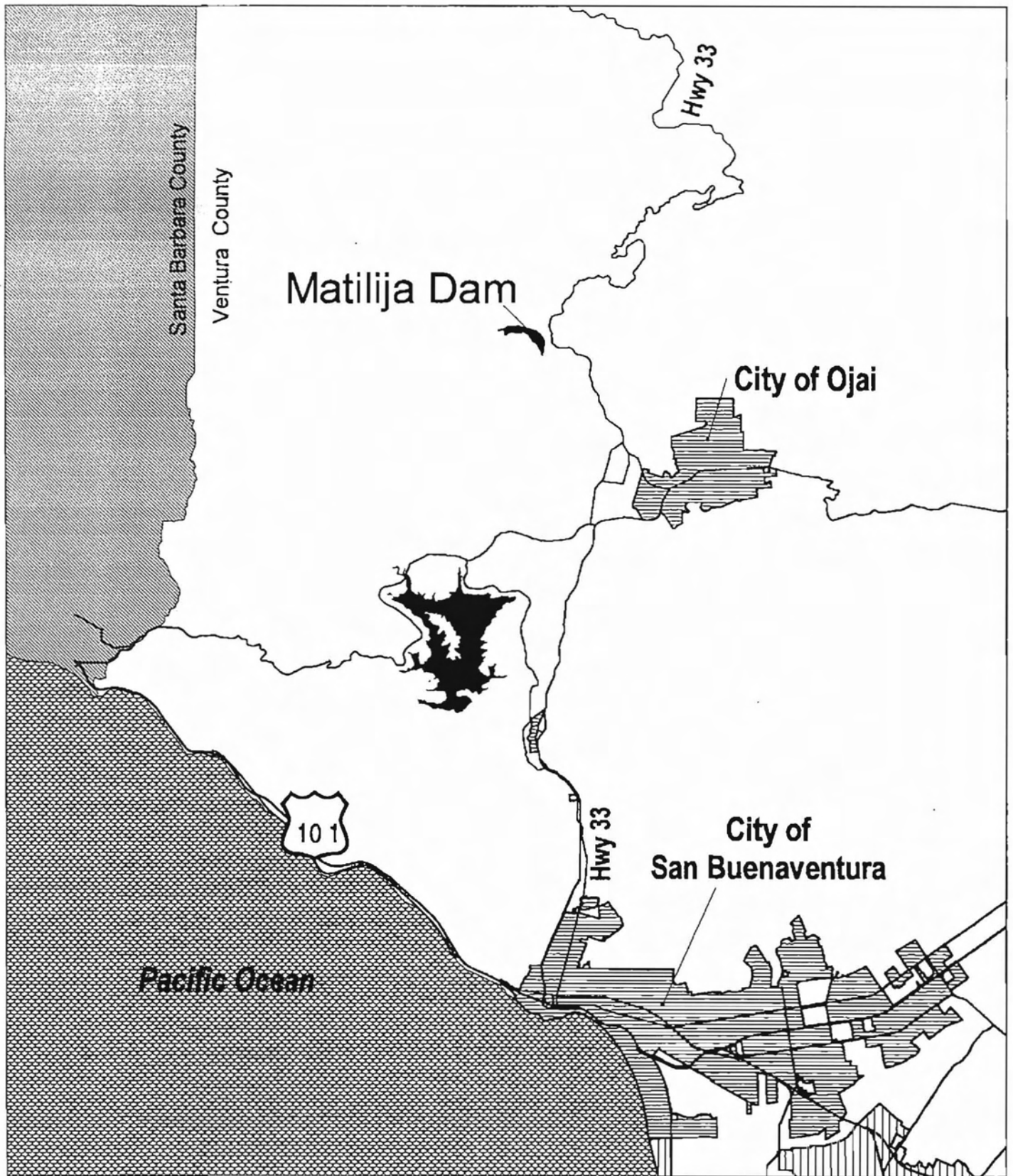
The Bureau of Reclamation's Appraisal Study is examining a number of methods for the removal of the dam and the approximately 6.0 million cubic yards of sediment which has accumulated in the reservoir. Sediment removal techniques fall into three basic categories: (1) incremental notching of the dam and natural flushing of the sediments; (2) mechanical removal of the sediments via truck; and (3) removal of sediments through a conveyor and/or sluicing pipe system. Each of these alternatives will be examined in greater detail in further studies, some of which may be undertaken by the U.S. Geological Survey.

In addition to the removal of the dam and stored sediments, the project will entail other components such as restoration of riparian habitats of the dam and reservoir site; transfer of the 450 acre County owned dam and reservoir site to a federal agency (e.g., U.S. Forest Service); acquisition of a small 9 acre privately held parcel immediate below the dam site; and the provision of outdoor educational and recreational facilities such as trailhead and interpretive facilities below the dam site, and an extension of the Ojai/Ventura River bicycle trail. to these facilities.

The preliminary cost estimates for the dam and sediment removal range from \$21,600,000 to \$163,200,000. These figures may be adjusted significantly upon completion of further studies, and the techniques, or combination of techniques, ultimately chosen to remove Matilija Dam.

### **Demonstration/Evaluation Project**

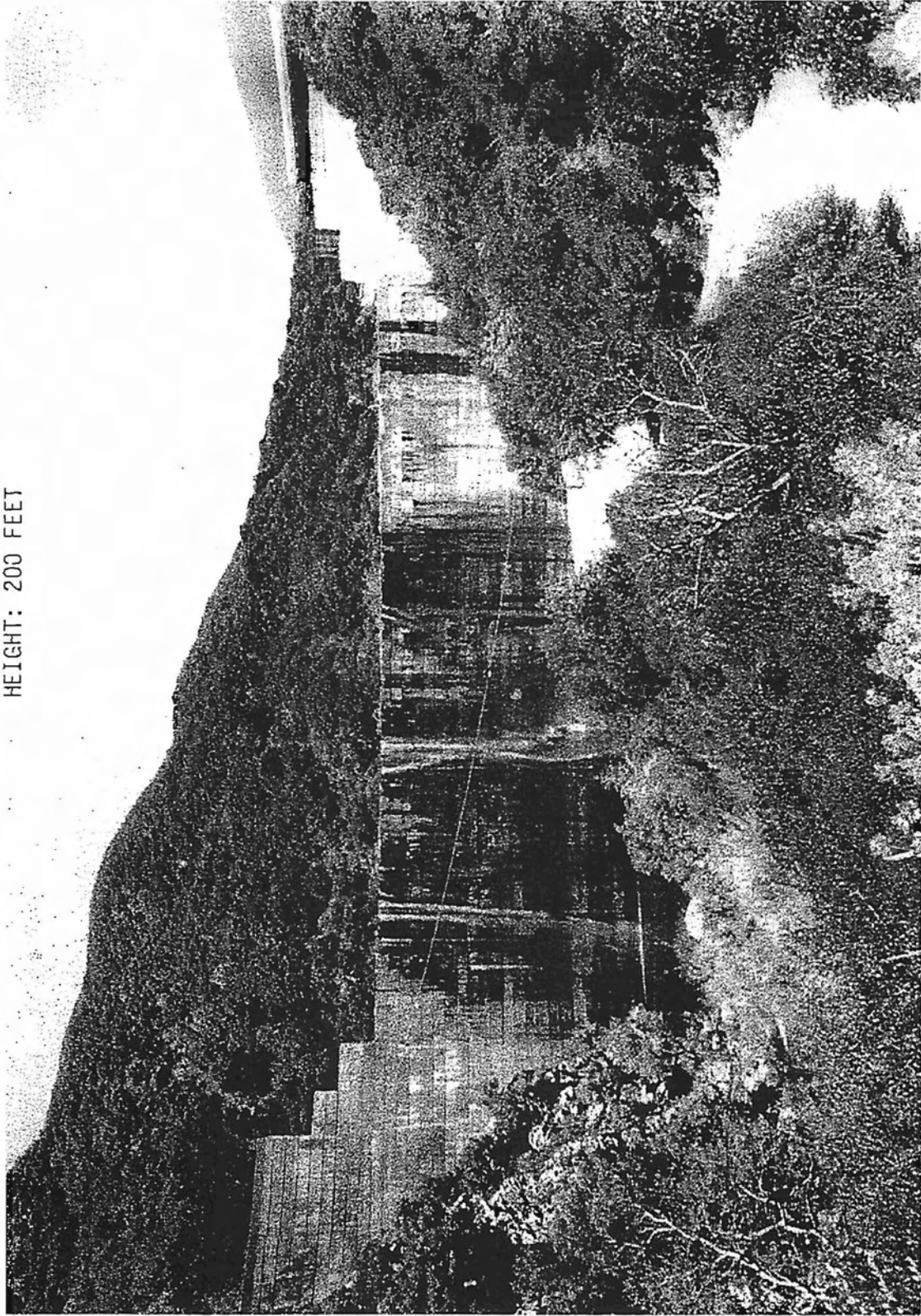
As a preliminary step in the removal of Matilija Dam the Ventura County Flood Control District is planning to conduct a demonstration/evaluation project in the Fall of 2000. This project will entail the removal of the first 5 or 10 feet along a 100 section of the dam spillway. This project will not effect either the existing water storage capacity of the reservoir, or result in any sediment discharge to Matilija Creek and the Ventura River. It will, however, allow the County to test a variety of techniques for removing the concrete dam structure and mobilizing large equipment within the highly constrained dam site. The project is being funded in part from funds from the California Coastal Conservancy, the County and the Cities of Ventura, Oxnard, and Port Hueneme.



**General Vicinity Map**

MATILIJAS DAM, VENTURA COUNTY

HEIGHT: 200 FEET



Portion to be removed.

