

## Stream Gaging and Sediment Monitoring

### *Searsville Lake, San Mateo County, California*



Searsville Lake

#### **Monitoring Components:**

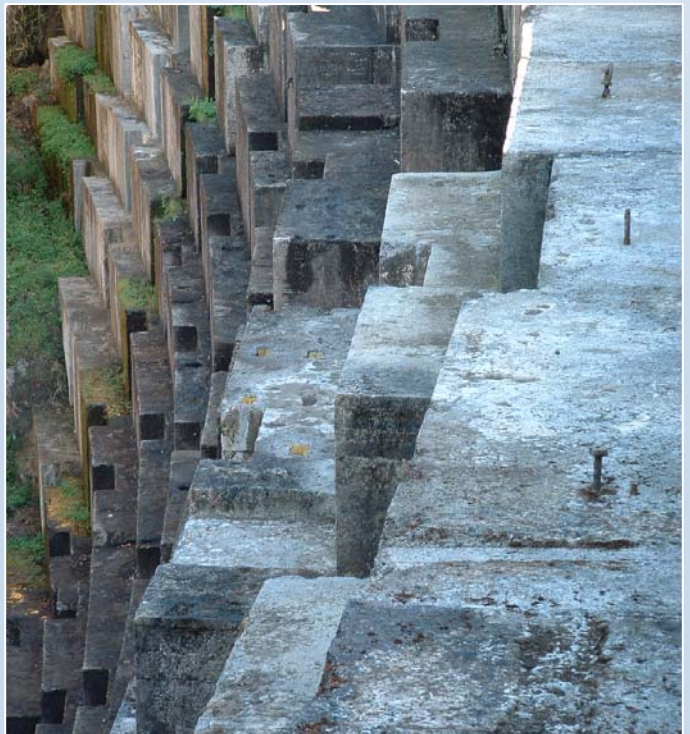
- Monitor stream flow and measure sediment on upstream tributaries to calculate sediment inflow to the lake.
- Perform topographic and bathymetric surveys to calculate sediment deposition.
- Monitor flow and measure sediment at Searsville dam to calculate sediment outflow from the lake.



Sediment-laden water flows over spillway of Searsville Dam

#### **Background**

Searsville Lake is part of Stanford University's Jasper Ridge Biological Preserve. Searsville Dam was built from 1890 to 1892 and has been accumulating sediment ever since. High-rainfall years from 1995 to 2000 increased concern about how rapidly Searsville Lake was filling with sediment. Starting in water year 1995, Balance Hydrologics has performed various studies to monitor flow and sediment at Searsville Lake, to help the university staff understand the future of the lake.



Searsville Dam, during dry conditions

#### **Project Team Accomplishments:**

- Calculating a sediment budget for Searsville Lake over various time scales.
- Explaining episodic sediment pulses and relationship to wet vs. dry years.