

**SAN PEDRO CREEK WATERSHED  
SEDIMENT SOURCE ANALYSIS**

**Volume II:  
Hillslope Sediment Source Assessment**

Stephanie Sims



San Francisco  
State University

## **Abstract**

The hillslopes and tributaries within San Pedro Creek Watershed are covered mainly by coastal scrub, chaparral, and dense riparian vegetation while the lower elevation valley is urbanized. Sediment is generated predominately from mass wasting processes as the hillslopes are highly prone to landslide activity from steep slopes with unconsolidated bedrock and are frequently subjected to heavy rainfall. Surface erosion is also significant within the watershed primarily on areas heavily influenced by land use practices resulting in little to no vegetative cover and compacted soils, both modifying flow and increasing runoff. Sediment sources were identified by examining land use change and landslide mapping from historic aerial photography combined with primary field data and GIS modeling. Most sediment produced from landslides was triggered by natural sources while surface erosion was largely generated from anthropogenic triggers. The Middle and Sanchez subwatersheds were found to produce the highest levels of sediment for which sediment abatement techniques were then proposed.

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