

## ABSTRACT

### ENGINEERING GEOLOGY, FLUVIAL GEOMORPHOLOGY, AND GEOLOGY OF LA HONDA CREEK IN SAN MATEO COUNTY, CALIFORNIA

This project develops geologic, fluvial geomorphic and engineering geologic data for the California Department of Transportation (CalTrans) and the California Department of Fish and Game (CDFG) for planning maintenance to Highway 84, San Mateo County, California.

Urbanization and stream straightening impact the creek's riparian habitat causing erosion that is threatening Highway 84 and private property. Landslides destabilize Highway 84 and deliver sediment to the creek.

The project mapped materials along the channel, and generated hydrologic information. Information on the engineering characteristics of materials was compiled. Locations where the relationship between the creek and highway is critical were identified.

Reasons for the decline in the local salmonid population – a CDFG concern – include fine-sediment contamination, loss of gravel bars, and migration barriers. The main contributor of fine sediment is the breakdown of mudstone. The creek has incised rendering high-flow gravel bars inaccessible for spawning. Fallen riprap causes potential migration barriers.

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