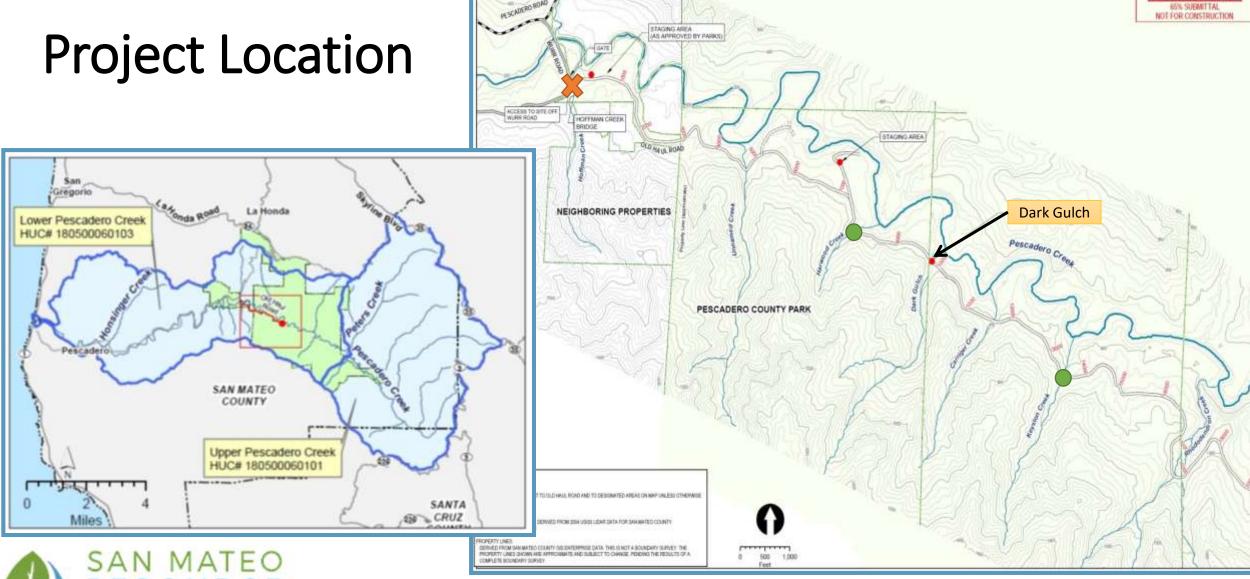
## Old Haul Road: Dark Gulch Crossing Stabilization Project

Sara Polgar, Project Manager







Example of large fill embankment at a creek crossing. Photo: Jack Gison (1947)

Crib log, or "Humboldt," creek crossing on Old Haul Road. Note men sitting on top of the crossing. Photo: Santa Cruz

Lumber Company (1943)

### History of Old Haul Road

- Constructed as part of the rail line in early 1900's used for timber harvest in Santa Cruz Mountains
- Crib logs used to buttress and fill creek crossings to create at-grade ("Humboldt") crossing
- Today, Dark Gulch is largest remaining Humboldt crossing in CA: 70' deep, >35,000 cubic yards of sediment, logs, woody debris (~1,900 dump trucks-worth of material)

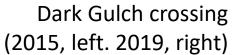




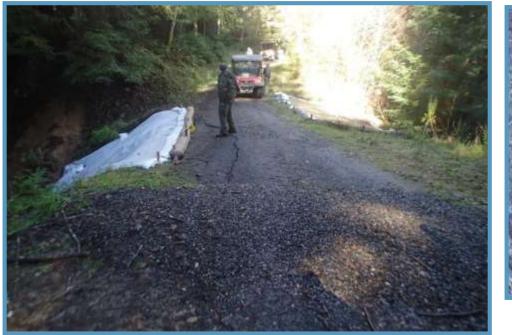


Harwood Creek crossing (2017)

Current Conditions: crossing failures (views from the road)







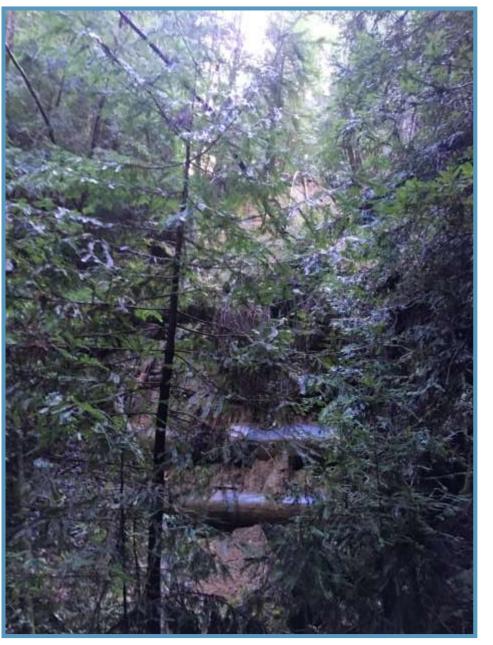




#### Dark Gulch (2015)





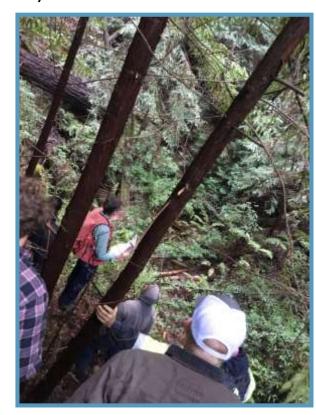


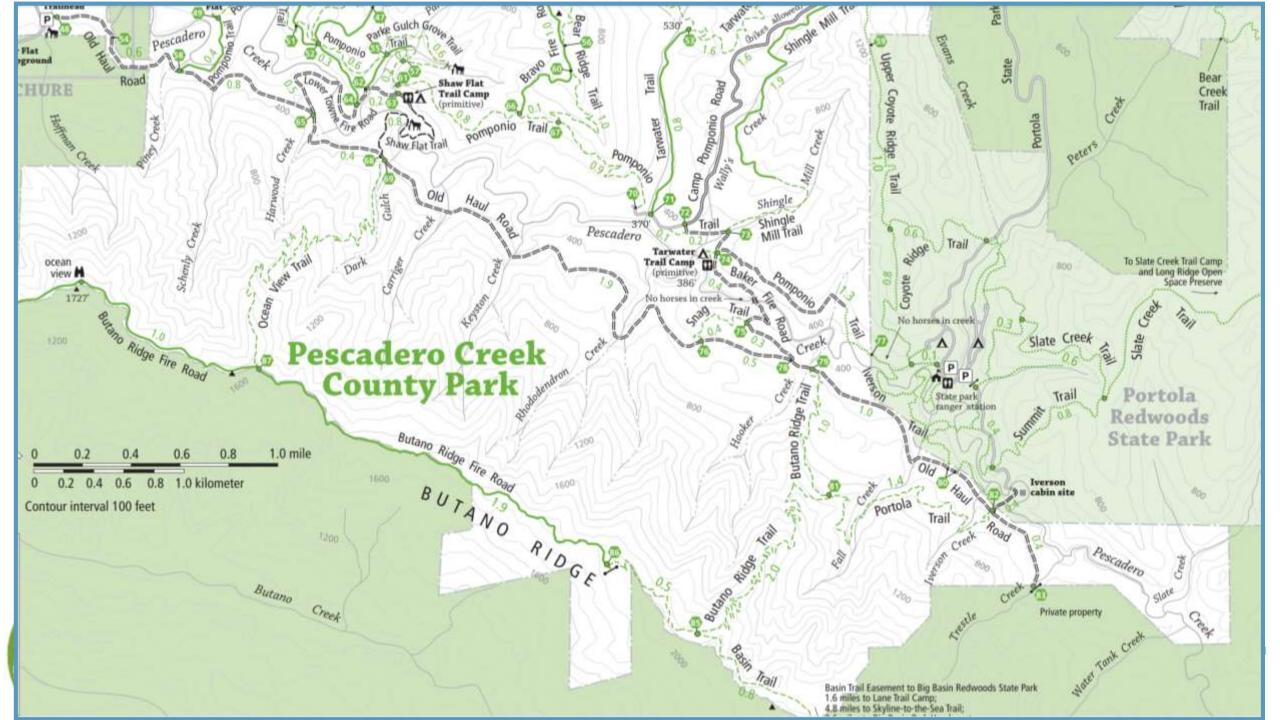
### Crossing failure (views from below)

Dark Gulch (2020)

← →
Take from same spot.
← Looking up to the road Looking → down to Dark Gulch Creek

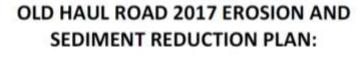
← note: Crib logs & erosion





### Road to construction:

- Road assessment to ID priorities (2015)
- Sediment reduction plan and review/selection of treatment alternatives with help of Integrated Watershed Restoration Program (IWRP) experts (2016-2017)
  - Evaluation of crossing sites (mapping, geomorphic analyses)
- Development of designs & specifications and species protection measures (2017-2018)
- Construction experience: Stabilization of Harwood & Keyston Creeks Crossings also on Old Haul Road (Fall 2018)



Pescadero Creek County Park
San Mateo County, CA



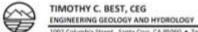
lune 2017

Prepared for

San Mateo County Resource Conservation District 625 Miramontes Street, Suite 103 Half Moon Bay, CA 94019

SMCRCD- OLDHAULROAD-SRP-688





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# Construction Approach

(Photos from Harwood & Keyston Creeks crossing stabilization projects completed in Oct 2018)

1. Remove the crossing material



3. Rebuild the crossing with engineered fill





2. Install a culvert pipe to convey storm flows

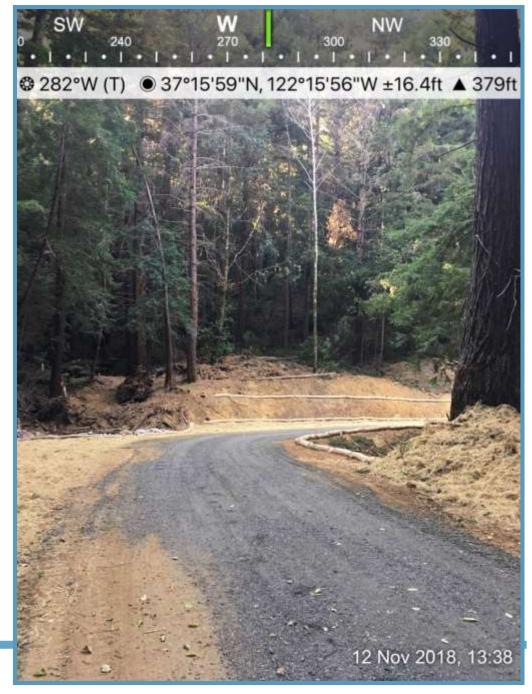


Pre construction: Harwood Creek crossing (2017)

## Construction outcomes

Post construction: Harwood Creek crossing (Nov. 2018)





### Dark Gulch Crossing Stabilization Project

- Team:
  - Sara Polgar (Project Manager)
  - Hannah Ormshaw (County Parks Lead)
  - Tim Best, CEG (Project Engineer)
  - Geotechical Engineer: Haro, Kasunich & Associates
  - Construction Contractor: Giacomini Enterprises
- Funding:
  - County Parks (\$2.15M)
  - State Water Resources Control Board Nonpoint Source Grant Program (\$800K)
- Construction: May-October 2020!

