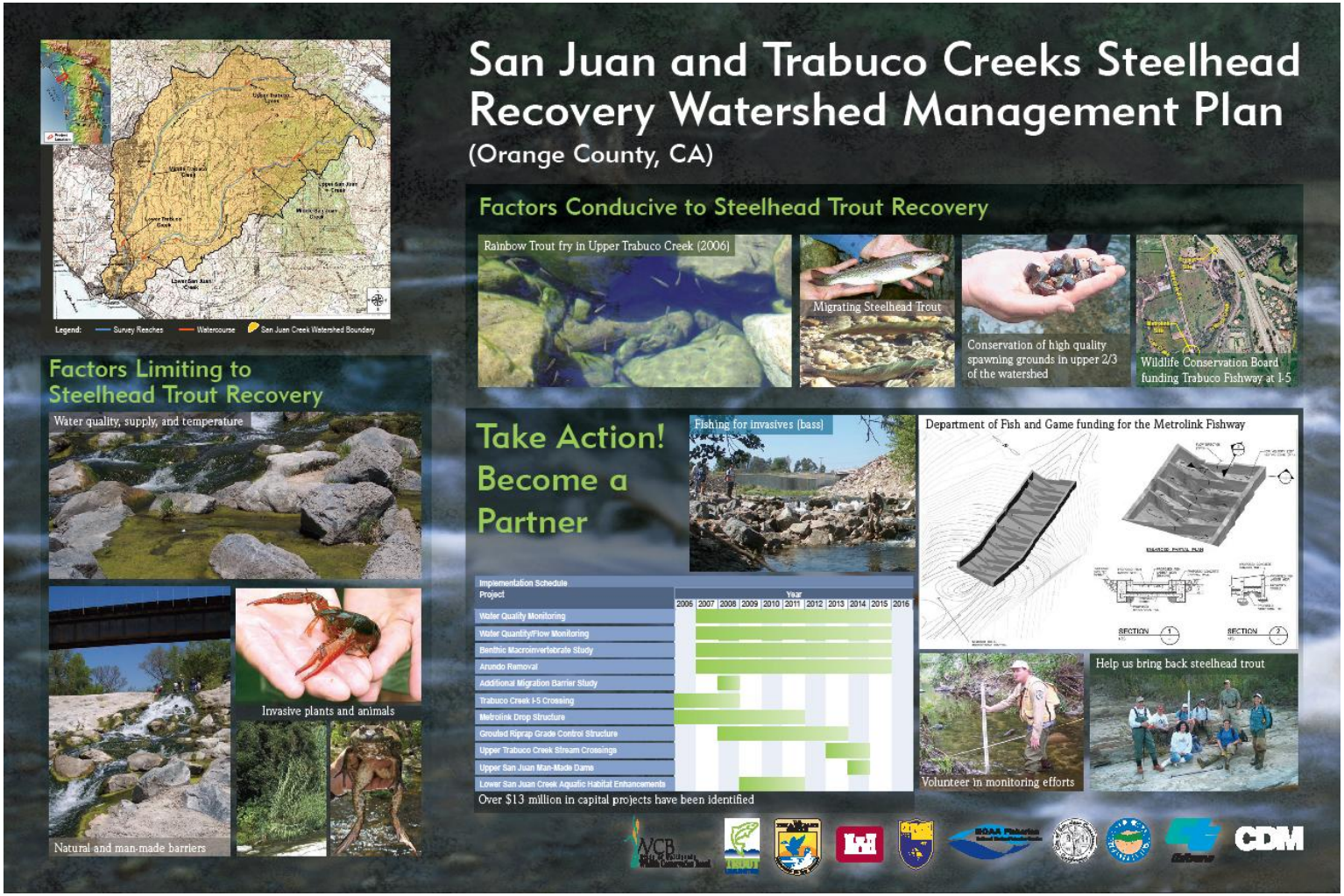
RESTORATION OPPORTUNITIES SPURRED BY STEELHEAD RECOVERY IN SOUTHERN CALIFORNIA

CDM

Wendy Katagi, C.E.P.

SAN JUAN AND TRABUCO CREEKS

Steelhead Recovery Watershed Management Plan (2007)

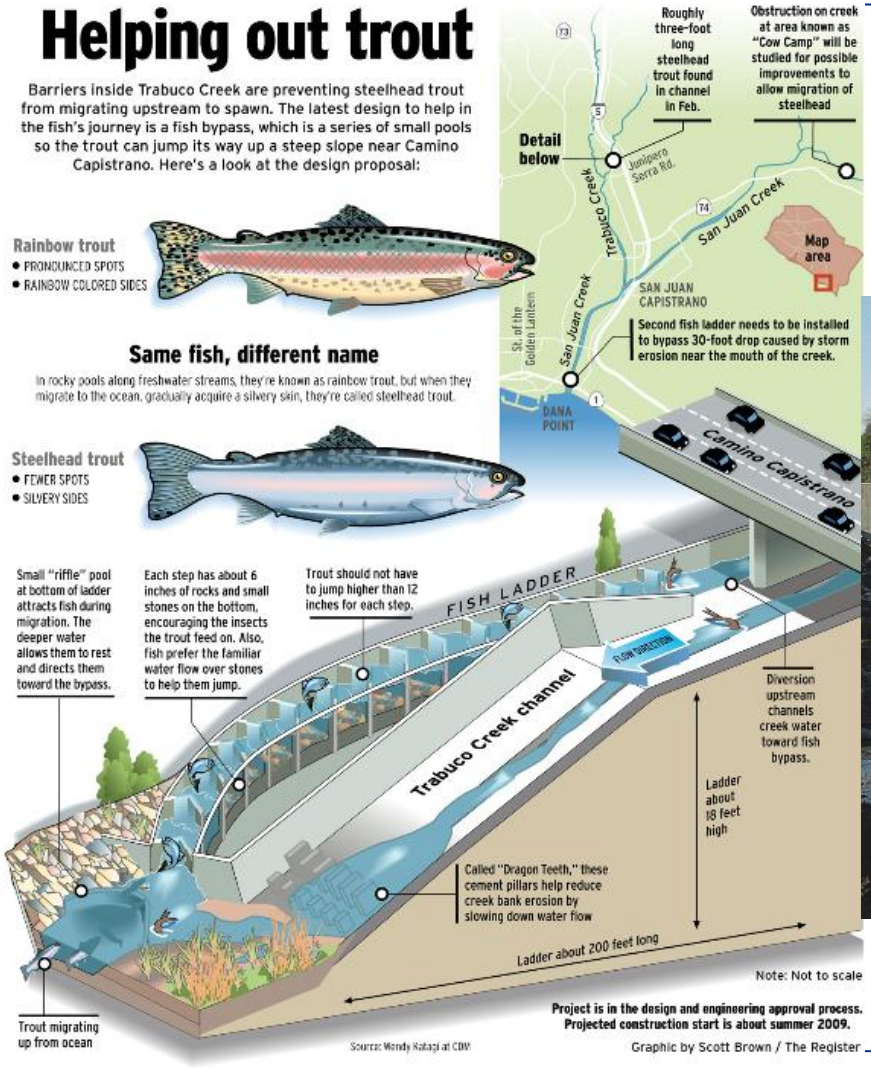


Upper Watershed Suitable for Spawning

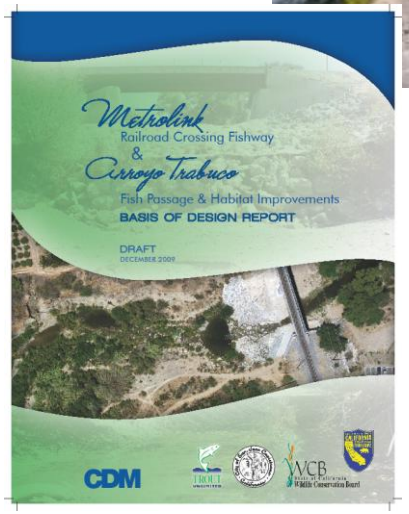
Lower Watershed Degraded

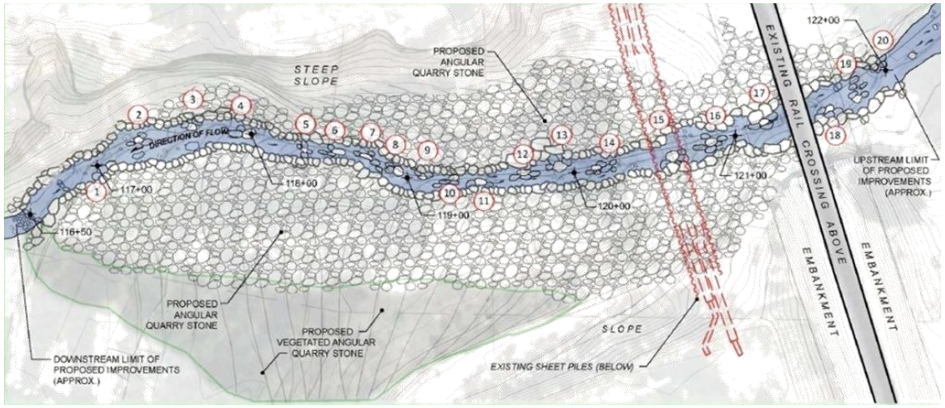
Locations of Fish Passage Barriers

Trabuco Fishway at I-5



Trabuco Creek Fishway at Metrolink





CDM

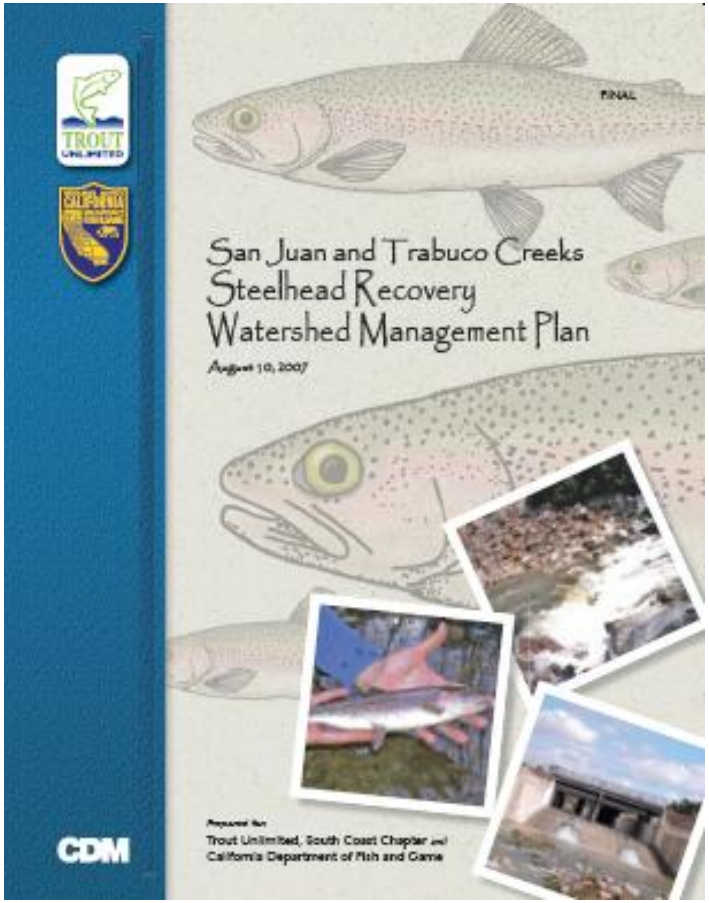
Invasive Removal Watershed-wide

- Mapped locations of invasives
- Permits secured for removal
- Seeking funding
- Integrating with other restoration projects

San Juan Estuary Assessment

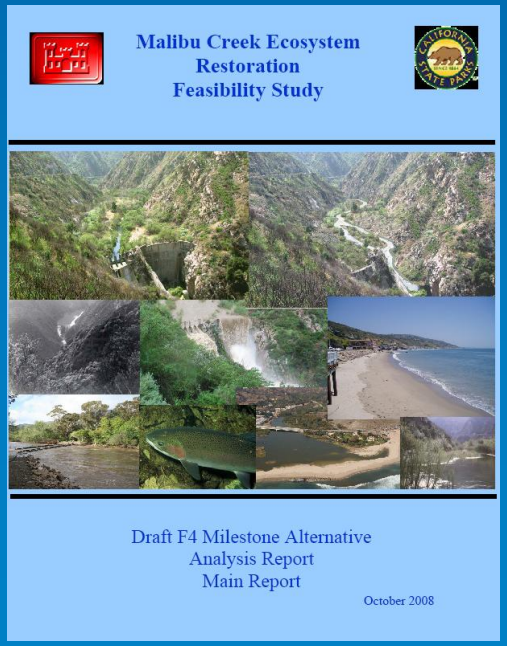
- Tidewater goby, steelhead, and other species
- Highly impacted by sediment
- Lacks vegetation and woody debris
- Altered tidal flushing
- Water quality
- NMFS and DFG working with stakeholders

Other Watershed-wide Improvements, Monitoring, and Studies



- Coordination with Corps on alternative development for San Juan Creek Feasibility Study
- Water quality monitoring targeting pollutants of concern
- Special Area Management Plan (SAMP)
- USFS road crossing projects
- Sediment Management
- Fluvial Geomorphology Studies

MALIBU CREEK




MALIBU CREEK Ecosystem
Restoration Feasibility Study
F4 Milestone
Conference
February 25, 2009

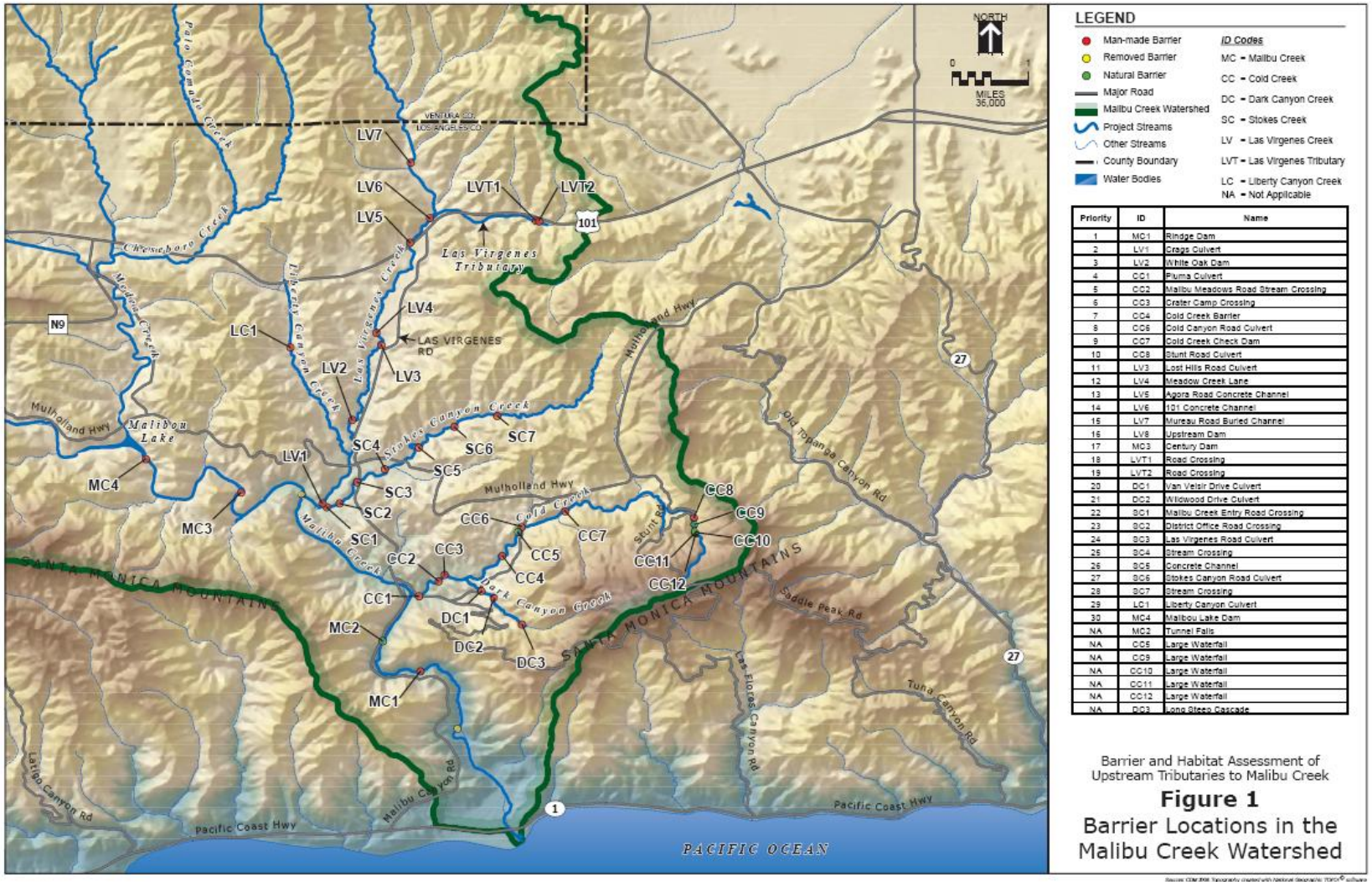
Planning Objectives

- Reconnect the Malibu Creek watershed aquatic and riparian corridor to provide access to upstream spawning and rearing habitat to aquatic and riparian species.
- Restore aquatic habitat of sufficient quality to sustain or enhance indigenous aquatic populations, particularly near migratory barriers.
- Restore a more natural sediment transport regime throughout the watershed.
- Beneficially reuse sediment for beach nourishment.
- Improve educational, recreational, and aesthetic opportunities associated with Malibu Creek.

Steelhead Recovery Opens Doors for Improved Connectivity and Habitat Improvement

- Southern Steelhead
- Tidewater Goby
- Arroyo Chub
- California Red-legged Frog
- Southwestern Pond Turtle
- Western Snowy Plover
- California Gnatcatcher
- Least Bell's Vireo
- Arroyo Toad
- California Least Tern
- Golden Eagle
- California Brown Pelican
- Braunton's Milkvetch
- Malibu baccharis

Barrier locations were surveyed and prioritized for removal



Priority	ID	Name
1	MC1	Ridge Dam
2	LV1	Crags Culvert
3	LV2	White Oak Dam
4	CC1	Pluma Culvert
5	CC2	Malibu Meadows Road Stream Crossing
6	CC3	Crater Camp Crossing
7	CC4	Cold Creek Barrier
8	CC6	Cold Canyon Road Culvert
9	CC7	Cold Creek Check Dam
10	CC8	Stunt Road Culvert
11	LV3	Lost Hills Road Culvert
12	LV4	Meadow Creek Lane
13	LV5	Agora Road Concrete Channel
14	LV6	101 Concrete Channel
15	LV7	Mureau Road Buried Channel
16	LV8	Upstream Dam
17	MC3	Century Dam
18	LVT1	Road Crossing
19	LVT2	Road Crossing
20	DC1	Van Velsir Drive Culvert
21	DC2	Wildwood Drive Culvert
22	SC1	Malibu Creek Entry Road Crossing
23	SC2	District Office Road Crossing
24	SC3	Las Virgenes Road Culvert
25	SC4	Stream Crossing
26	SC5	Concrete Channel
27	SC6	Stokes Canyon Road Culvert
28	SC7	Stream Crossing
29	LC1	Liberty Canyon Culvert
30	MC4	Malibou Lake Dam
NA	MC2	Tunnel Falls
NA	CC5	Large Waterfall
NA	CC9	Large Waterfall
NA	CC10	Large Waterfall
NA	CC11	Large Waterfall
NA	CC12	Large Waterfall
NA	DC3	Long Steep Cascade

Barrier and Habitat Assessment of Upstream Tributaries to Malibu Creek

Figure 1
Barrier Locations in the Malibu Creek Watershed

Rindge Dam (Existing Condition)

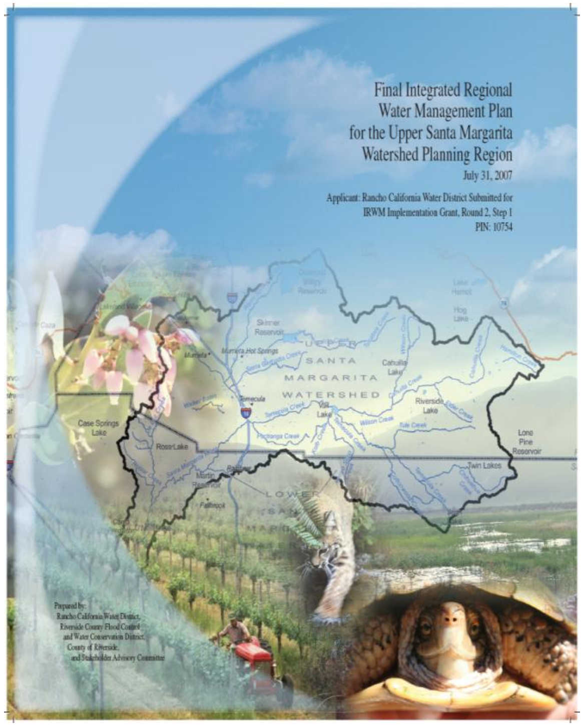
Rindge Dam – Mid-Construction

Rindge Dam – Post Construction

SANTA MARGARITA RIVER

Vision Embraces Ecosystem Restoration Opening Doors for Integration

"The IRWM Plan will take a balanced and consensus-based approach that will provide for the protection and sustainability of the Upper Santa Margarita Watershed's water resources, natural resources, and habitats."



Integrating NMFS Southern Steelhead Recovery Plan

- Stream restoration in the Santa Margarita River drainage, including assessment of limiting factors for Steelhead, habitat restoration projects to include invasive removal, in-stream and riparian restoration to provide habitat, BMPs and water quality monitoring
- Leveraging dedicated support and funding commitment from NOAA, DFG, USFWS. and others building partnership opportunities with non-profits

Restoration Projects Spurred by Steelhead Recovery

- San Mateo Creek Fish Habitat Restoration (EMARCD, $250k, implementation)
- San Mateo Creek Education of HOAs and Homeowners on Impacts of Invasive Species in Ponds (EMARCD, $11k outreach)
- San Mateo Invasive Species Removal (Trout Unlimited, $150k implementation)
- Santa Margarita Stream Restoration for Steelhead Trout (Trout Unlimited, $125k planning)
- Riverside County BMP and Hydromodification Program; promotion of Property Retrofit with Water Quality/Water Conservation Measures ($200k/$400k, match/request, planning and implementation)

Summary

Questions