

# Ventura River and Steelhead Recovery Planning Under the ESA

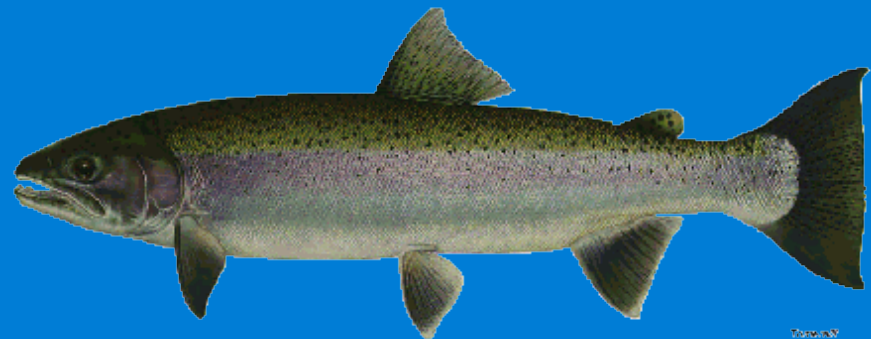
**National Marine Fisheries Service**



## **Ventura River Watershed Council**

**April 14, 2015 Ojai, California**

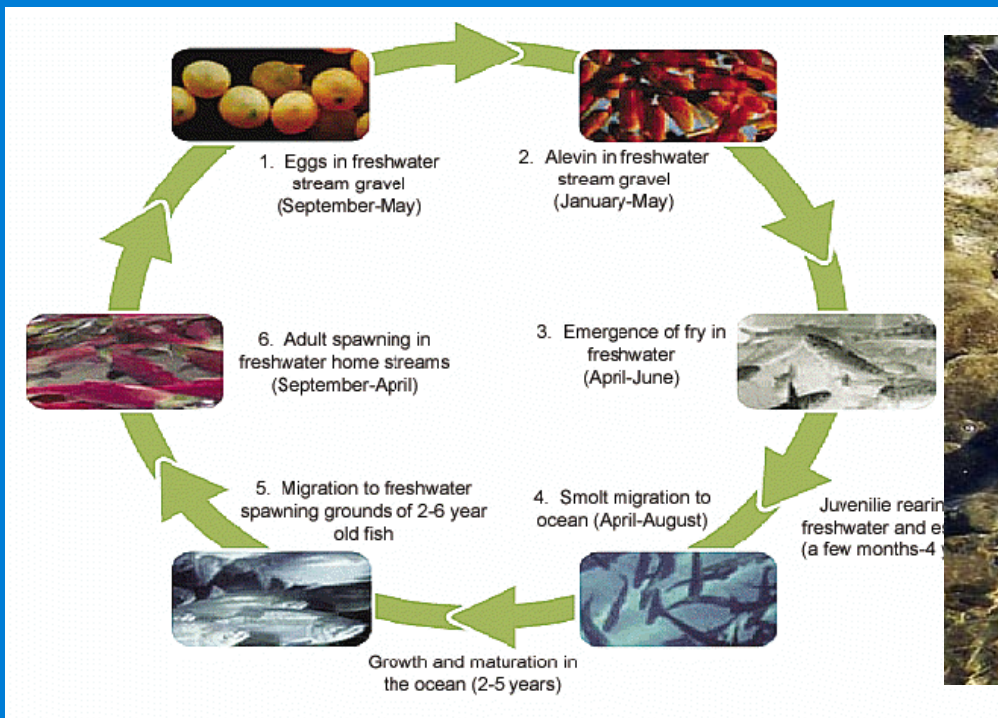
**Mark H. Capelli**  
Recovery Coordinator





# National Marine Fisheries Service

## Southern California Steelhead Recovery Planning



Southern Steelhead





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## Southern California Steelhead Recovery Planning



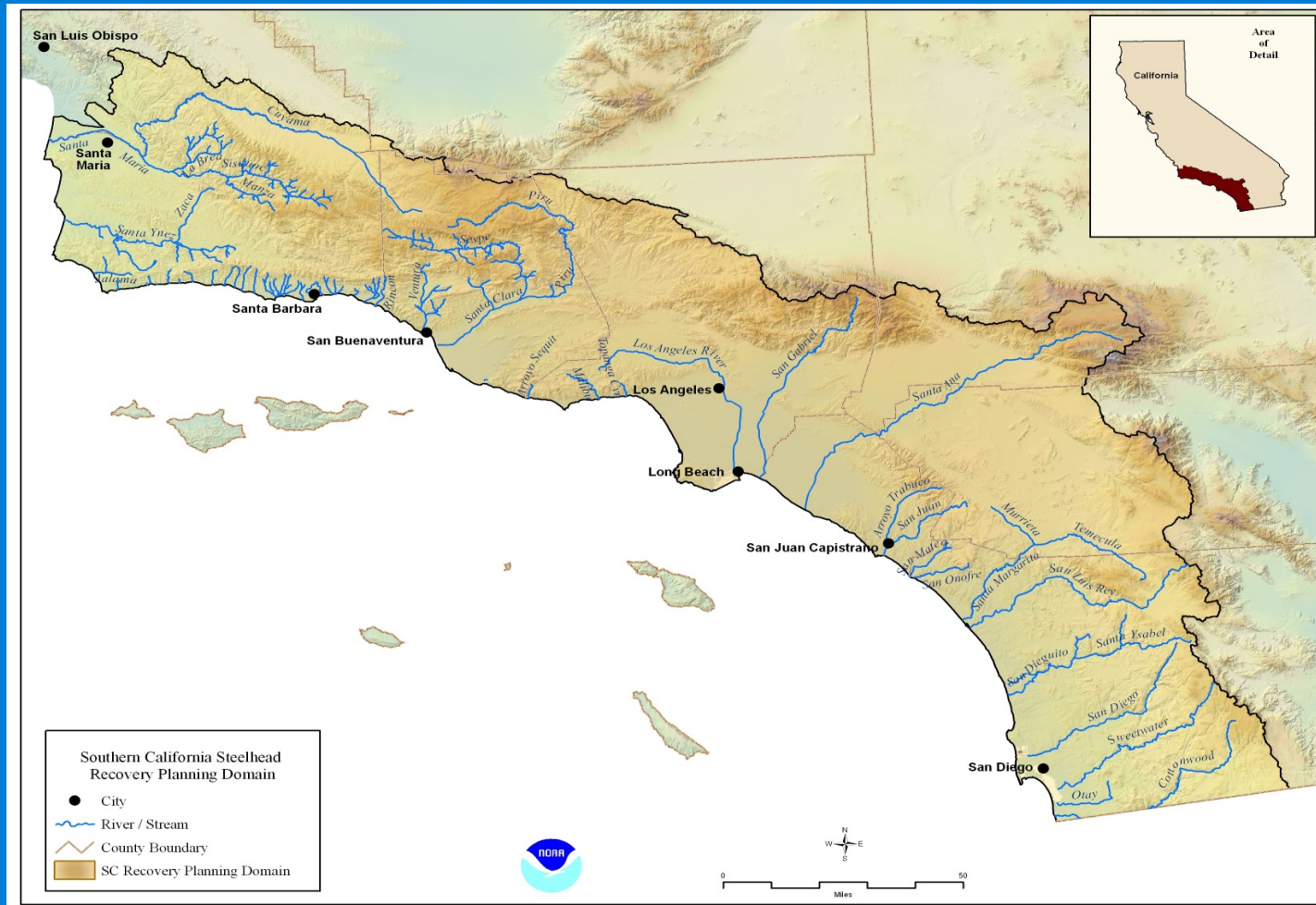
Oncorhynchus Distribution – North Pacific Rim



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# Southern California Steelhead Recovery Planning

Southern California Steelhead DPS







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## Southern California Steelhead Recovery Planning

### Recovery Planning in two phases:

#### I. Develop Scientific Framework

- \* Technical Steelhead Recovery Team Products

#### II. Develop Recovery Plan

- \* Threats Assessment, Recovery Strategy, Recommended Recovery Actions



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# Southern California Steelhead Recovery Planning

## Phase I: Scientific Framework

1. **Technical Recovery Team appointed by Regional Administrator and chaired by Dr. David Boughton,  
NOAA Fisheries Santa Cruz Laboratory**

Dr. David A. Boughton	Dr. Peter A. Adams
Dr. Eric Anderson	Dr. Craig Fusaro
Dr. Edward Keller	Dr. Elise Kelley
Leo Lentsch	Dr. Jennifer Nielsen
Katie Perry (DFG)	Dr. Helen Regan
Dr. Jerry Smith	Dr. Camm Swift
Dr. Lisa Thompson	Dr. Fred Watson



2. **TRT consists of 12 scientists and a representative from the Department of Fish and Game**





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### Phase I : Principal Findings:

\* *Historic* distribution of *O. mykiss* widespread throughout coastal watersheds



Santa Ynez River - 1912



Ventura River - 1920

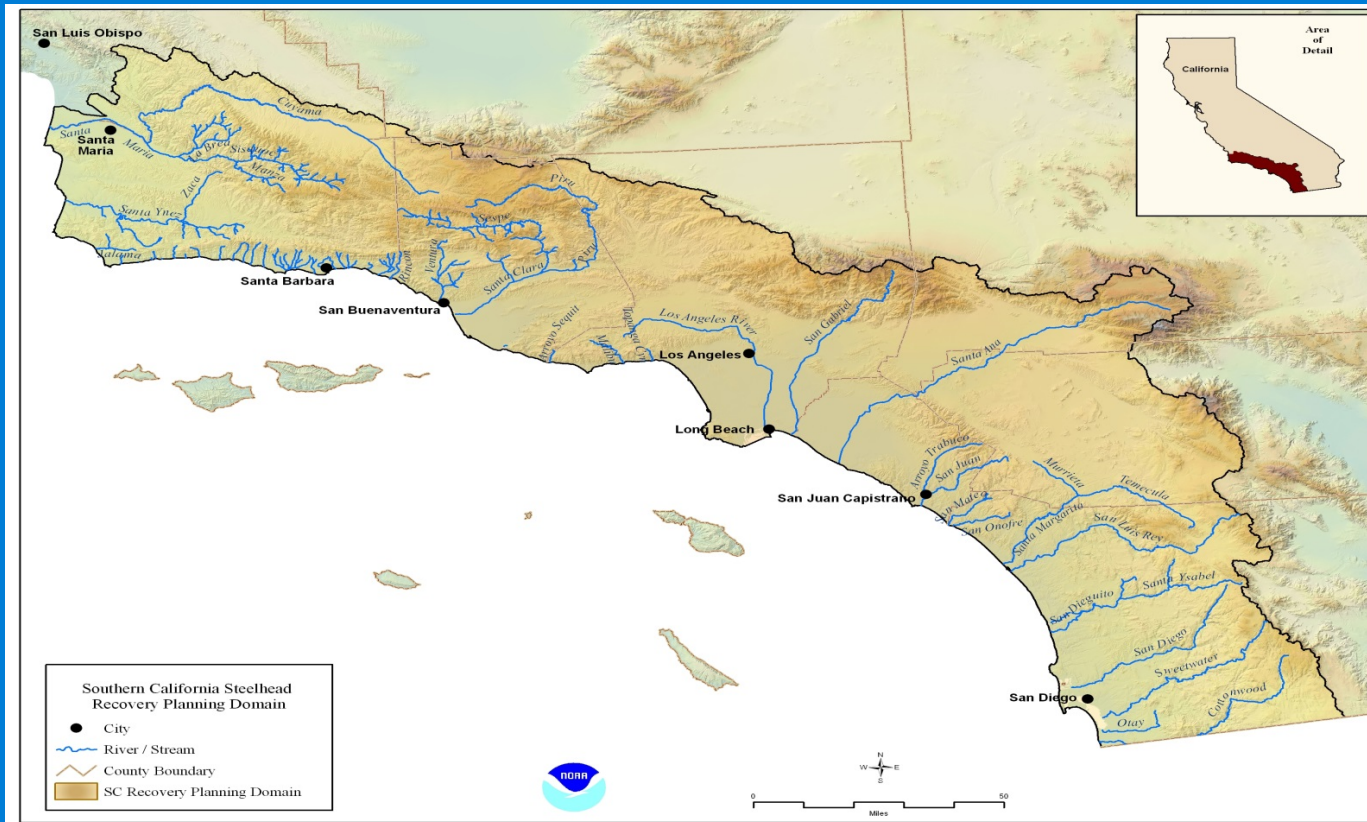


Santa Clara River - 1917



## Phase I : Principal Findings:

\* Steelhead (anadromous form of *O. mykiss*) have been *eliminated* from about one- third of the watersheds

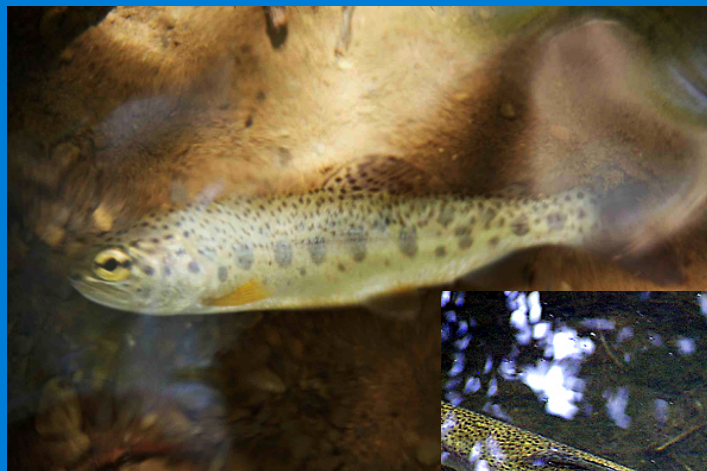




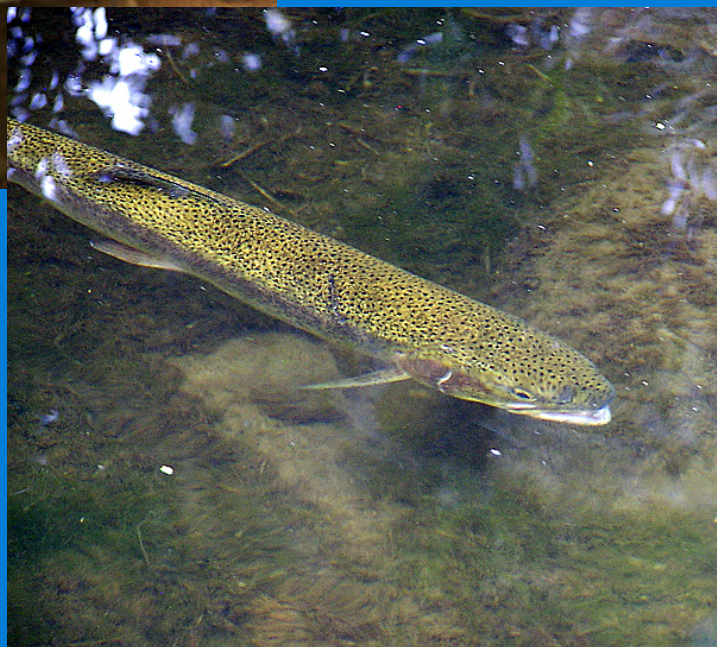


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## Phase I : Principal Findings:



Santa Ana Creek



Ventura River



San Antonio Creek

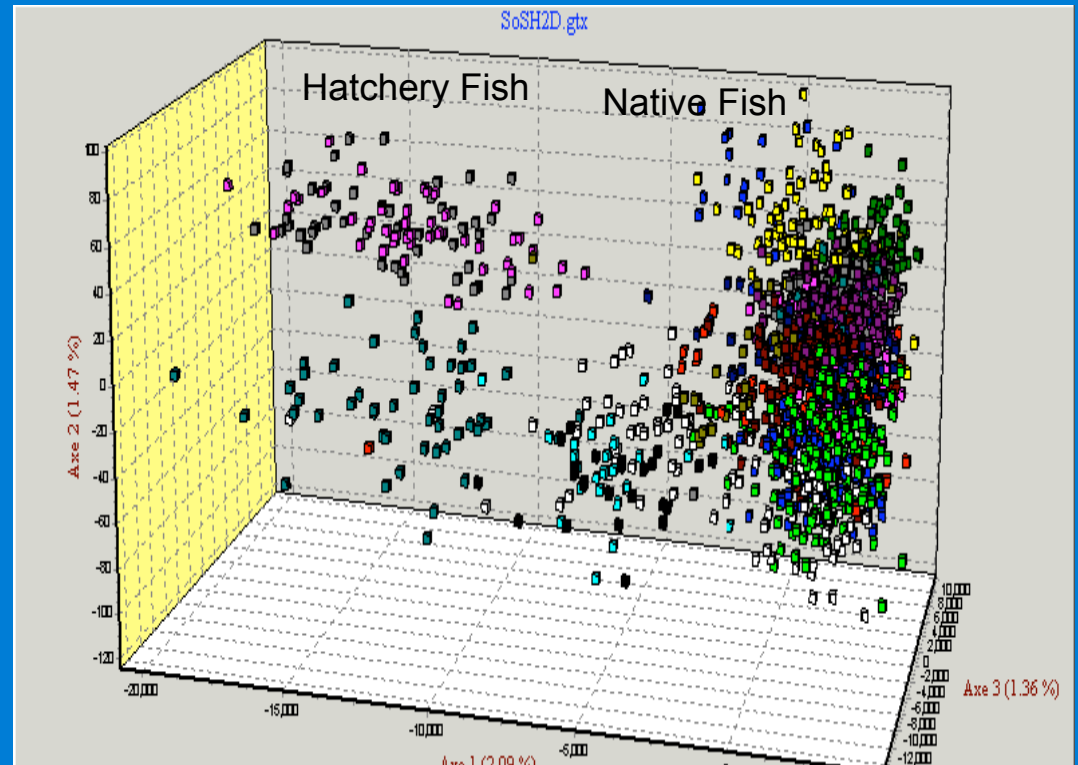


Coyote Creek



## Phase I : Principal Findings:

- Above barrier *O. mykiss* populations most *closely related* to below barrier populations
- Above barrier *O. mykiss* populations *not descendent* from planted hatchery rainbow trout







## Phase I : Principal Findings:

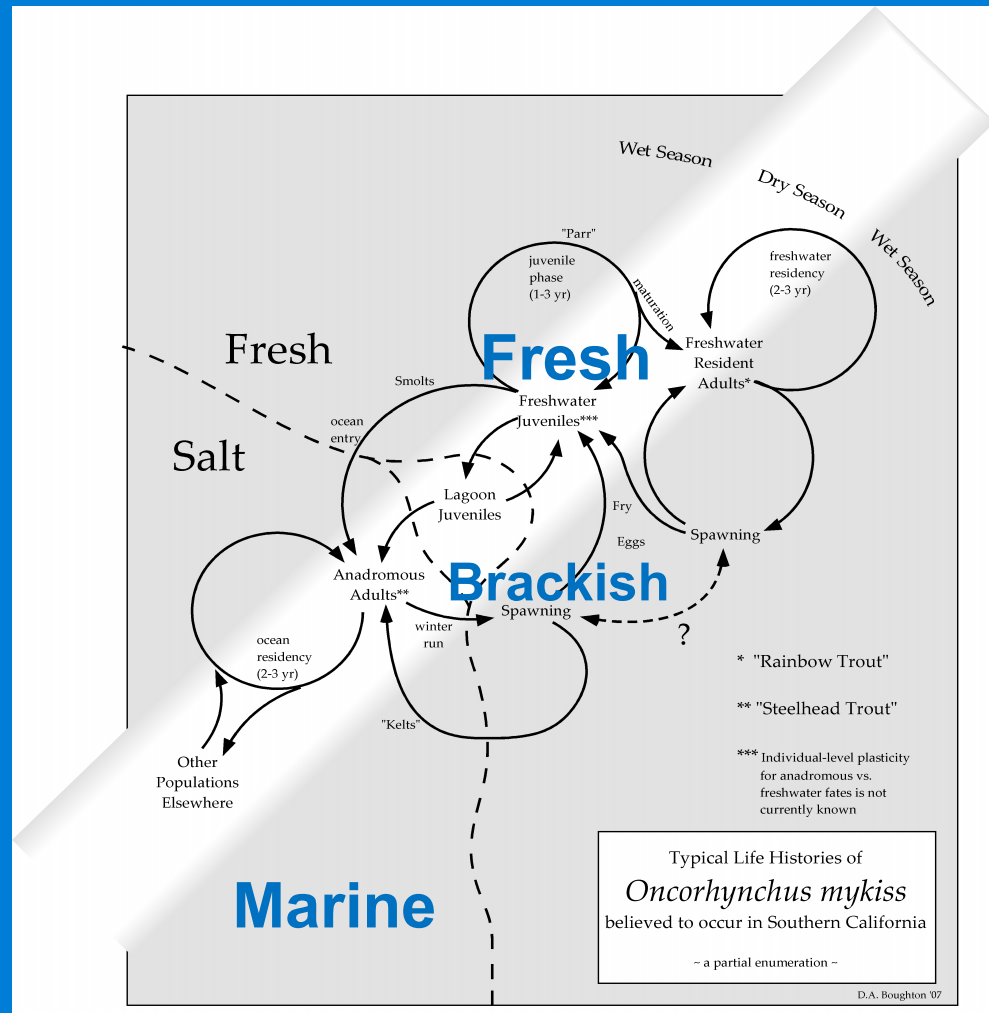
### Variable Life-Histories:

Anadromous

Fresh-Water

Lagoon-Anadromous

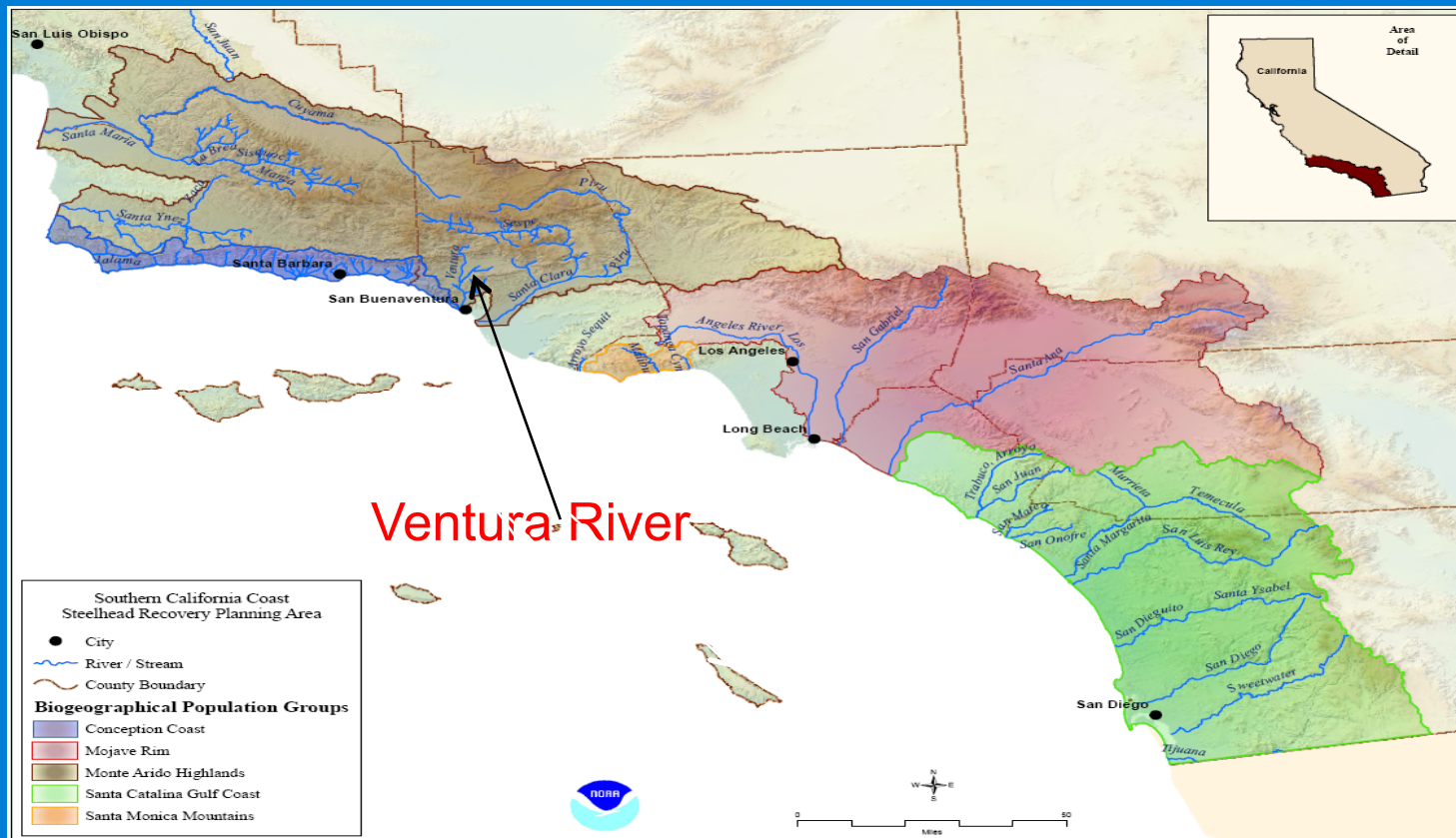
Variations





## Principal TRT Recommendations:

- *Identify and commit to a core set of populations in five biogeographic regions on which to focus recovery efforts.*



Biogeographic Population Groups





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## Principal TRT Recommendations:

- *Secure the extant parts of the inland populations.*



Monte Arido Highlands



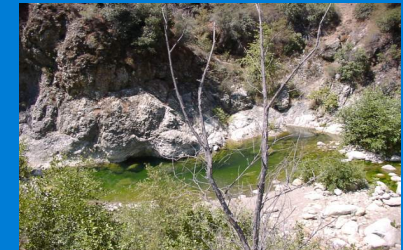
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### Principal TRT Recommendations:

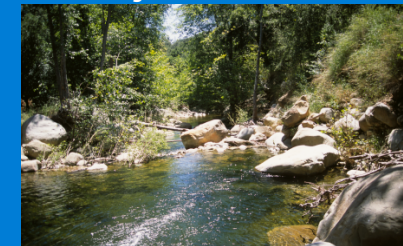
- *Identify and maintain sustainable refugia against severe droughts and heat waves.*



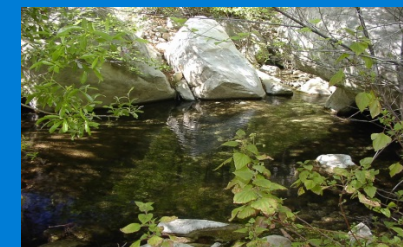
Ventura River Mainstem



Matilija Creek



Santa Ana Creek



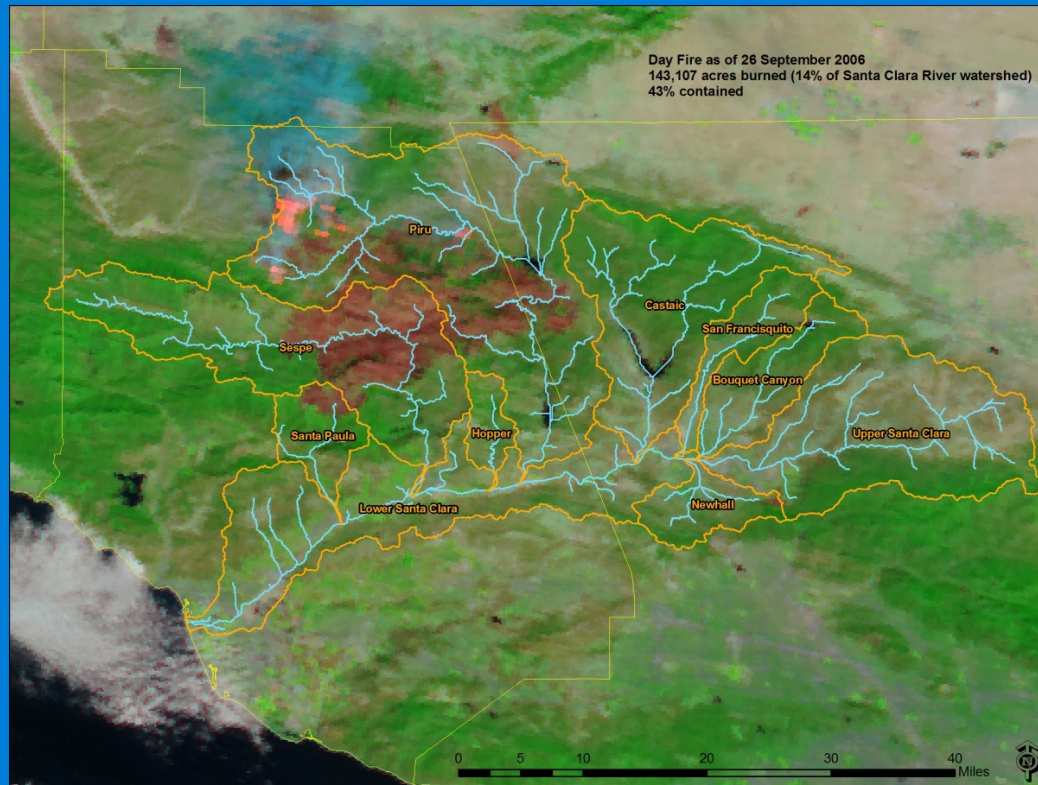
Coyote Creek





## Principal TRT Recommendations:

- *Ecosystem-based management of sediment regimes and hydrographic regimes.*



Wildfire Mapping



Erosion and Sedimentation







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## Principal TRT Recommendations:

- *Secure and improve estuarine/lagoon habitat.*



Ventura River Estuary



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# Principal TRT Recommendations:

- *Begin collecting population data.*



Population Surveys – Mainstem Ventura River



Genetic Sampling – Santa Ana Creek





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## Phase II: Prescriptive/Performance Viability Criteria

### DPS Level – Delisting Criteria

- Minimum number of viable populations in each biogeographic region
- Populations occupy watersheds with drought refugia
- Populations have minimum geographic separation (Wildland fire analysis)
- Populations exhibit life history diversity



Southern California Wildfires





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# Southern California Steelhead Recovery Planning

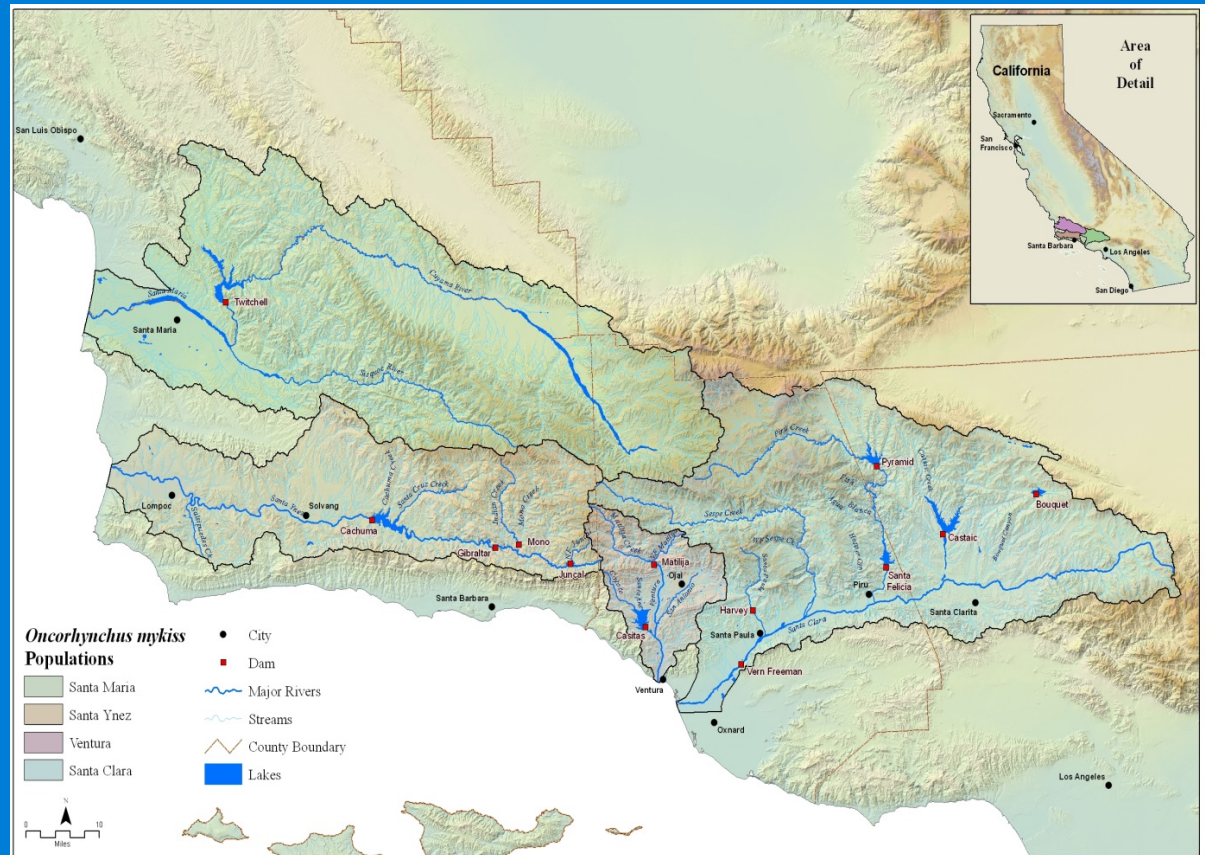
Monte Arido

BPG:

4 Core

Populations:

- Santa Maria
- Santa Ynez
- Ventura
- Santa Clara





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## Phase II: Performance Based Viability Criteria

### Population Level –Delisting Criteria

- Mean Annual Run Size is sufficient to result in <5% extinction risk in 100 years.
- Run size is met during periods of “poor ocean conditions.”
- Minimum spawner density in individual watersheds
- One hundred percent of mean annual run size is anadromous fish.



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## Monte Arido BPG: Ventura River

### Priority Actions:

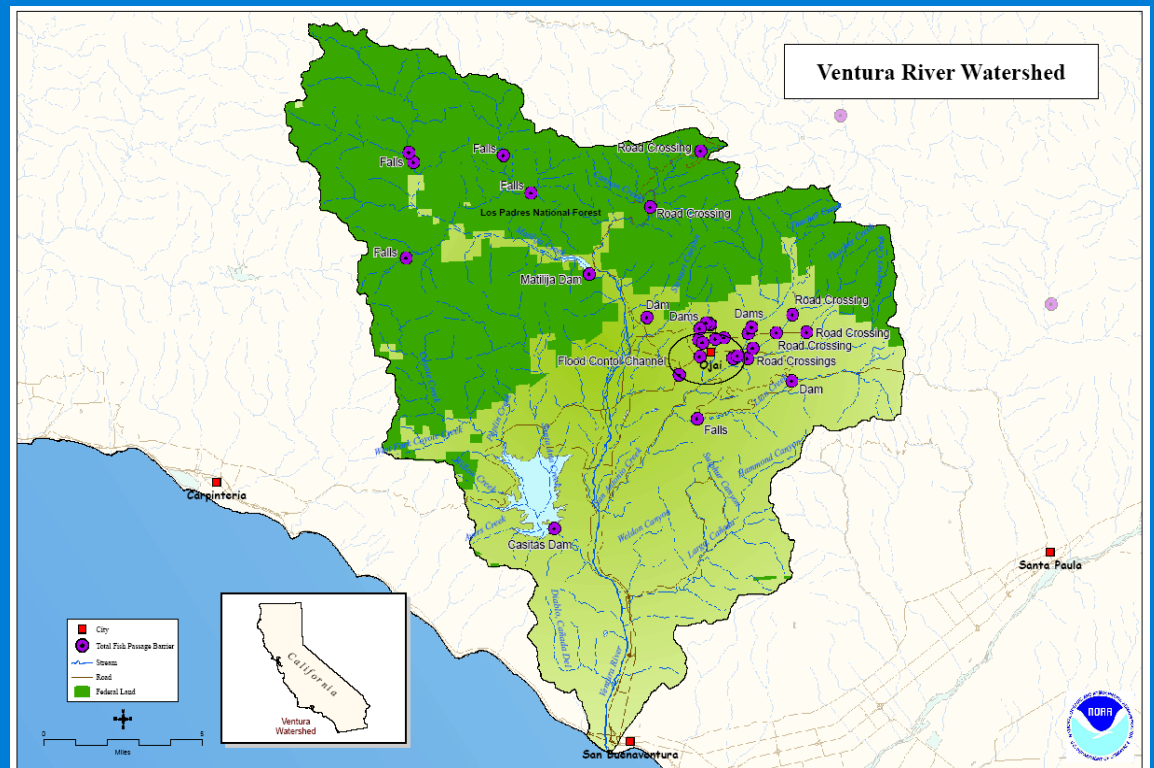
Fish passage

Flow management

Riparian restoration

Sediment  
management

Estuary restoration







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## Monte Arido BPG: Ventura River

Priority Actions:

Fish Passage



Coyote Creek above Casitas Dam 1916



Coyote Creek above Casitas Dam



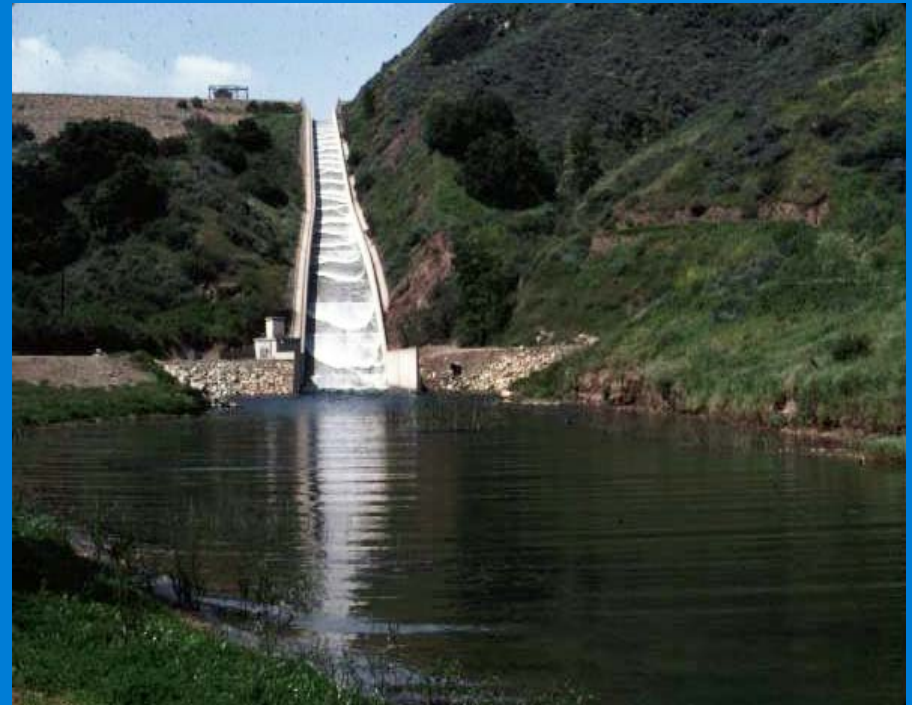
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## Monte Arido BPG: Ventura River

### Priority Actions:

Fish passage

Coyote Creek/Santa Ana  
Creeks provided > 50% of  
the historical steelhead  
spawning  
and rearing habitat in the  
Ventura River



Casitas Dam and Spillway



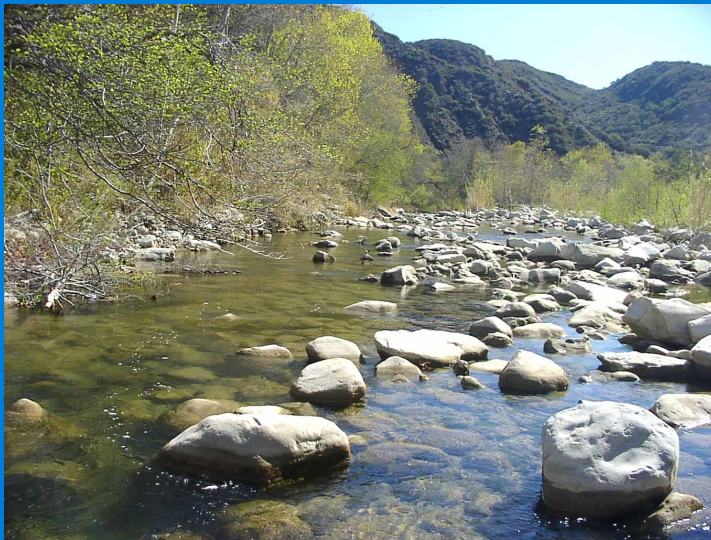


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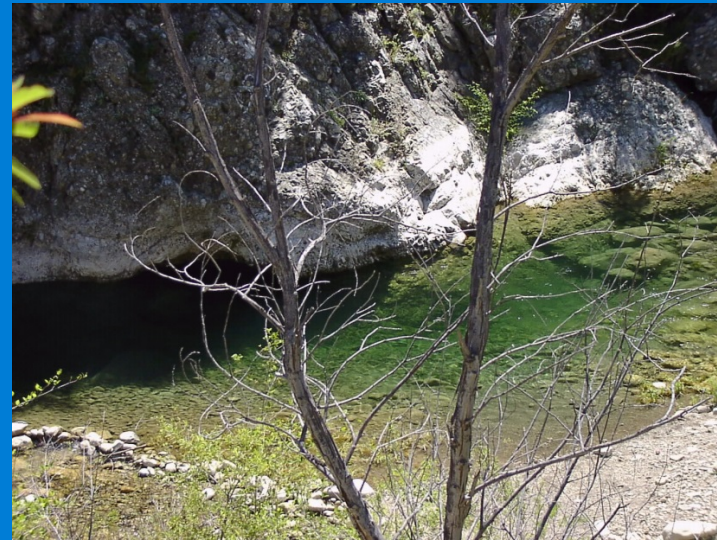
## Monte Arido BPG: Ventura River

### Priority Actions:

Fish passage



Matilija Creek below Matilija Dam



Matilija Creek above Matilija Dam





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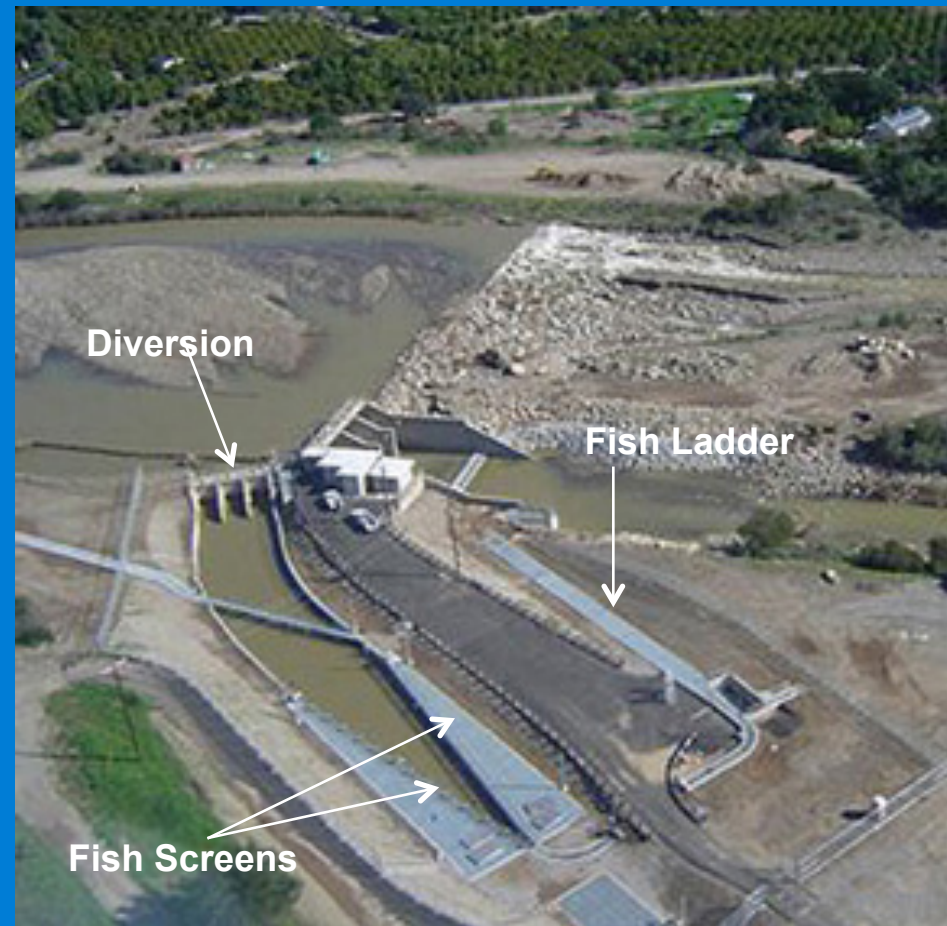
## Monte Arido BPG: Ventura River

### Priority Actions:

Fish passage

Robles Diversion

Controls c. 50% of the watershed



Robles Diversion



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## Monte Arido BPG: Ventura River

### Priority Actions:

Fish passage

Matilija Dam

Blocks c. 40% of the spawning and rearing habitat in the watershed



Matilija Dam





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## Monte Arido BPG: Ventura River

Priority Actions:

Fish passage



Ventura River Bike Path – Ventura River Confluence



Boardman Road – San Antonio Creek



Fraser Lane – San Antonio Creek





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## Monte Arido BPG: Ventura River

### Priority Actions:

Flow management



Casitas Springs

Foster Park





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## Monte Arido BPG: Ventura River

Priority Actions:  
Riparian Restoration



Ventura River Channel Modification



San Antonio Creek Channel Modification







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## Monte Arido BPG: Ventura River

Priority Actions:

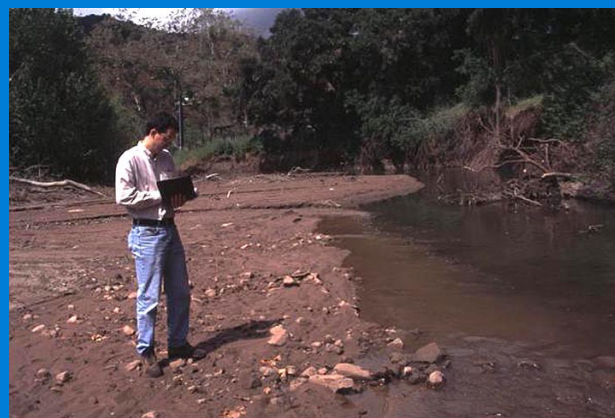
Sediment management



North Fork Matilija Creek



Upper Ventura River



Lower Coyote Creek





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## Monte Arido BPG: Ventura River

Priority Actions:

Estuary restoration



Ventura River Estuary



Estuary Fish Survey

Up-Grade Waste Discharges

Removal of Non-Native Vegetation

Removal of Fill

Control of Artificial Breaching



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## Monte Arido BPG: Ventura River

### Priority Actions:

Other . . .



Unauthorized Angling



Non-point pollution



Non-Native Plants



Seasonal Dams



Non-Native Fish





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## Southern California Steelhead Recovery Planning



Pacific Lamprey

### Other Federally Listed Species Species of Special Concern



Tidewater Goby



Snowy Plover



California Red-legged Frog



Arroyo Toad



# Ventura River and Southern California Steelhead Recovery Planning Under the ESA



**For More information:**

**NOAA Salmon/Steelhead Recovery Website:**

- **<http://www.westcoast.fisheries.noaa.gov/>**

