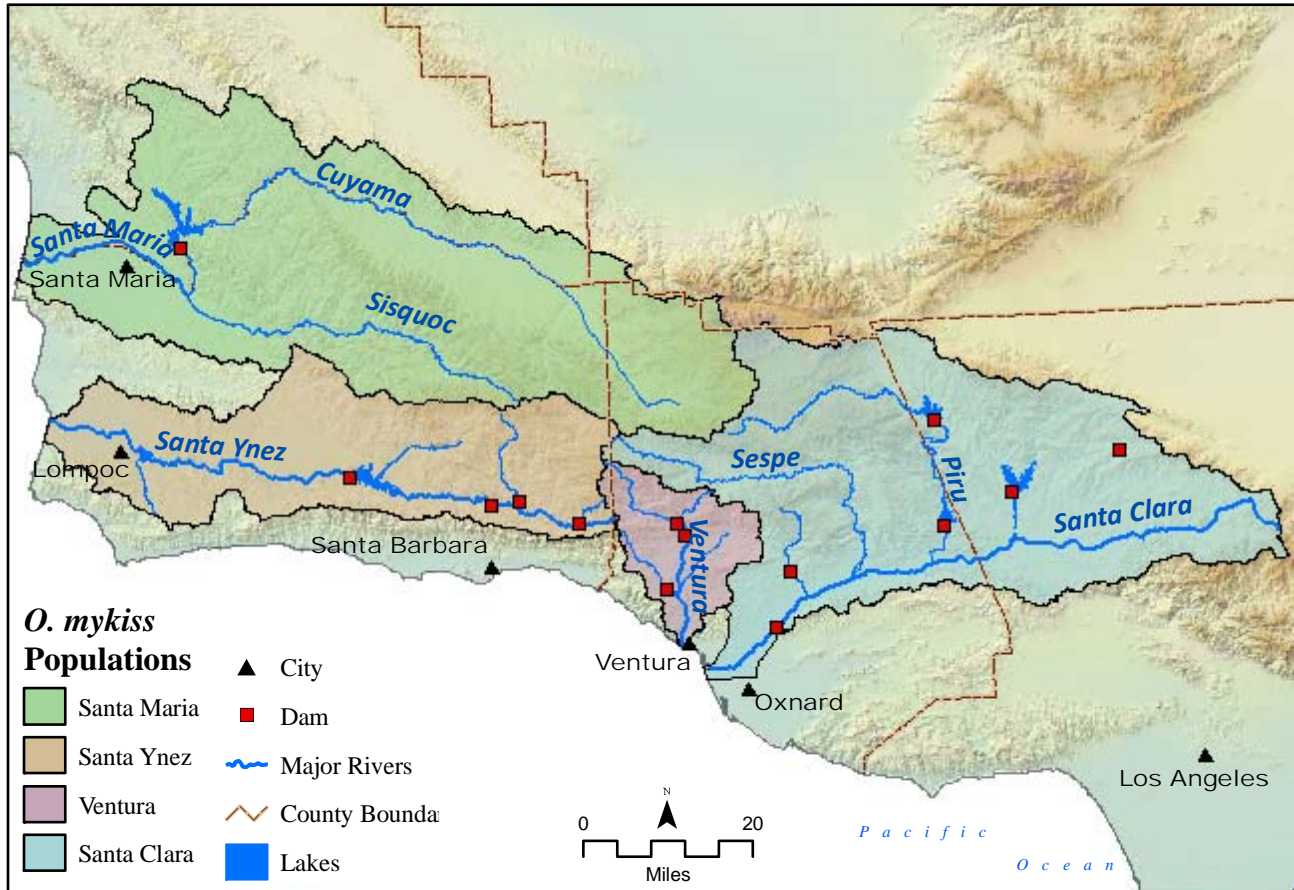




# Monte Arido Highlands Biogeographic Population Group



## Recovery Foundation Populations (Core 1 Populations)

- Santa Maria River
- Santa Ynez River
- Ventura River
- Santa Clara River

## Threats

- Dams and surface water diversions (including groundwater extraction) driven by agricultural and urban development on the major rivers of the Monte Arido Highlands BPG region (Santa Maria River, Santa Ynez River, Ventura River, and Santa Clara River).
- Agricultural and urban development has severely constrained floodplain connectivity on sections of the floodplains of the Santa Maria River, lower Sisquoc River, Santa Ynez River, Ventura River, Coyote Creek, San Antonio Creek, Santa Clara River, and lower Sespe Creek.
- The Santa Ynez River, Sespe Creek, and Piru Creek watersheds are threatened by mass wasting of slopes and loss of riparian canopy cover due to fires that occurred in 2006 and 2007.



Santa Maria River



Santa Clara River Steelhead – 28 inches



Matilija Dam

### Critical Recovery Actions

- Implement operating criteria to ensure the pattern and magnitude of water releases from Bradbury, Gibraltar, Juncal, Twitchell, Casitas, Matilija, Robles Diversion, Vern Freeman Diversion, Santa Felicia, Pyramid, and Castaic dams comport with the natural or pre-dam pattern and magnitude of stream flow in downstream reaches. Physically modify these dams to allow unimpeded volitional migration of steelhead to upstream spawning and rearing habitats.
- Identify, protect, and where necessary restore estuarine and freshwater rearing habitats.
- Conduct hydrological analysis as well as develop and implement a groundwater monitoring program to ensure adequate stream flows, particularly summer base flows.
- Develop and implement a plan to assess and control non-native aquatic animal and plant species.
- Develop and implement an integrated wildland fire and hazardous fuels management plan, including monitoring, remediation and adaptive management.
- Develop and implement a plan to minimize runoff from agricultural activities and minimize herbicide use near levees.
- Develop and implement a flood control maintenance programs to minimize disruption of instream habitats.
- Develop and implement a plan to restore natural channel features degraded by flood control activities or encroaching development.



# Conception Coast Biogeographic Population Group



## Recovery Foundation Populations (Core 1 and Core 2 Populations)

### Core 1 Populations

- Mission Creek
- Carpinteria Creek
- Rincon Creek

### Core 2 Populations

- Gaviota Creek
- Goleta Slough Complex (Maria Ygnacio, Atascadero, Los Carneros, San Pedro, and Vegas Creek)

## Threats

- Road crossing, such as Highway 101 and the Union Pacific Railroad tracks, and debris basins cut-off or severely impede access to upstream habitats and damage estuarine habitat (estuarine habitats have been reduced in size by 70-95%).
- Increased road density has led to increased non-point pollution, sedimentation, substrate embeddedness, floodplain encroachment and constriction, channel incision, and loss of channel structural complexity.
- Groundwater extraction for agriculture has significantly altered flow regimes, particularly in the lower stream reaches, and thus adversely affected both upstream and downstream fish passage as well as spawning and rearing opportunities.

- Levees and channelization associated with urban encroachment have restricted or eliminated riparian habitat, and urban and agricultural development (particularly on steep slopes) has altered run-off patterns and increased erosion and sedimentation, particularly in lower stream reaches.



Maria Ygnacio Creek



Steelhead – Carpinteria Creek



Rincon Creek Estuary

### **Critical Recovery Actions**

- Physically modify road crossings, highways, and railways to allow unimpeded volitional migration of steelhead to upstream spawning and rearing habitats.
- Halt the unnatural dry-season reduction in the amount and extent of surface water to restore natural or pre-impact over-summering habitat characteristics and conditions for steelhead.
- Identify, protect, and where necessary restore estuarine and freshwater rearing habitats.
- Develop and implement an integrated wildland fire and hazardous fuels management plan, including monitoring, remediation, and adaptive management.
- Develop, adopt, and implement urban land-use planning policies and standards to reduce impacts to freshwater, riparian, and estuarine habitats.