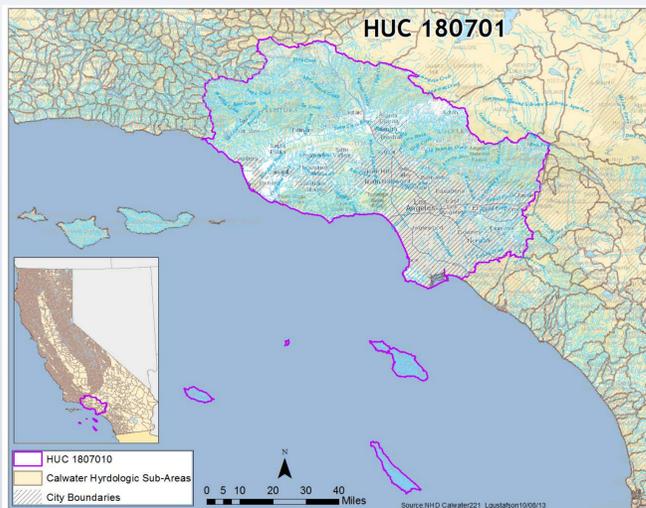


### GOALS

1. Extent of Community. By 2025, at least 5% more streams contain their historic native fish composition.
2. Community structure and composition. By 2025, increase the ratio of native fish to non-native fish in Big Tujunga Creek, Haines Creek, and the Santa Clara River mainstem.
3. Community structure and composition. By 2025, all species and their life stages are present and commonly encountered during summer fish surveys within their currently known range.
4. Connectivity among communities and ecosystems. By 2025, at least two more streams will have improved connectivity.
5. Surface water flow regime. By 2025, flows are released to maintain target populations below Big Tujunga and Cogswell dams.
6. Water level fluctuations. By 2025, maintain a natural hydrologic regime in coastal lagoons that support target species.

### MAPS



The State Wildlife Action Plan examines the health of wildlife and prescribes actions to conserve wildlife and vital habitat before they become more rare and more costly to protect. The plan also promotes wildlife conservation while furthering responsible development and addressing the needs of a growing human population.

### SENSITIVE SPECIES

Unarmored threespine stickleback



Unarmored threespine stickleback. CDFW

Tidewater goby



Tidewater goby. CDFW

Santa Ana sucker



Santa Ana sucker. CDFW

Santa Ana speckled dace



Santa Ana speckled dace. CDFW

Arroyo chub



Arroyo chub. CDFW

### ENVIRONMENTAL STRESSES

Change in groundwater (Habitat loss)

Change in successional processes (Habitat degradation)

Change in water nutrients (Altered water quality)

Habitat fragmentation (Altered connectivity)

Change in spatial extent (Altered distribution/extent of the populations)

Change in biotic interactions (Predation, competition and disease)

Change in runoff (Altered surface water flow/hydrology)

Change in water level (Artificial water level fluctuations)

Change in community structure and composition (Altered population structure)



### THREATS

Agricultural development

Climate change (decreased snow pack)

Dams and Water Management/Use

Fish passage barriers

Groundwater extraction

Housing and Urban development

Invasive species

Mining

Pollution

Recreational activities

### STRATEGIES, OBJECTIVES AND ACTIVITIES

1. Translocate species to increase current distribution
  - a. Objective
    - i. Increase viability of native fish populations
  - b. Activities
    - i. Identify source populations and develop a prioritized translocation plan
    - ii. Work w/ federal and local agencies and landowners to create partnerships and identify opportunities
    - iii. Obtain funding for plan implementation
    - iv. Remove invasive species
    - v. Conduct translocations
    - vi. Monitor populations
2. Protect and restore essential native fish habitat
  - a. Objective
    - i. Protect and enhance Unarmored Threespine Stickleback (UTS) habitat
  - b. Activities
    - i. Identify partners
    - ii. Survey and map extent of UTS populations and map all suitable habitat
    - iii. Develop and implement restoration and acquisition projects and identify funding opportunities
3. Education and Outreach
  - a. Objectives
    - i. Raise public awareness and support for native fish restoration projects
    - ii. Educate public on impacts from invasive species introductions
  - b. Activities
    - i. Coordinate with federal, state, and local agencies, and agricultural and NGO organizations
    - ii. Obtain funding for implementation
    - iii. Develop and implement outreach plan
    - iv. Identify target audience
    - v. Develop outreach message
    - vi. Give talks at K-12 schools and staff kiosks and install signs along sensitive areas that receive high recreational use
4. Data gathering and analysis
  - a. Objectives
    - i. Establish baseline inventory of all target species populations
    - ii. Identify gaps in knowledge of target species life history
  - b. Activities
    - i. Gather existing information
    - ii. Identify partners
    - iii. Establish prioritization
    - iv. Coordinate with landowners
    - v. Obtain funding for plan implementation
    - vi. Identify inventory protocol
    - vii. Conduct surveys
    - viii. Analyze spatial distribution

### TEAM



Name	Organization	Roles
John O'Brien	CDFW-RS	Team Member
Tim Hovey	CDFW-RS	Team Member
Dwayne Maxwell	CDFW-RS	Team Member

