



State Wildlife Action Plan 2015 Update

Sacramento, HUC 1802

Clear Lake Native Fish Assemblage

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Sacramento Subregion, HUC 1802

- Sacramento River watershed
- Drainage divide traverses Coastal, Cascade, Warner and Sierra Nevada mountain ranges and Modoc Plateau
- Upper Cache subbasin encompasses Clear Lake and its tributary streams
 - Isolated from Sacramento River and Russian River
 - Clear Lake drainage basin 338,500 acres; lake 43,600 acres
 - Highly productive, warm water, well mixed



Clear Lake Native Fish Assemblage

- Residents of Clear Lake and its tributaries
 - Lamprey, blackfish, hitch, pikeminnow, roach, sucker, rainbow trout, stickleback, Sacramento perch, tule perch, sculpin
- Species migrated from the Sacramento River
- Isolation has created lake-adapted species and subspecies (morphological divergence)
 - Clear Lake splittail (*Pogonichthys ciscoides*)
 - Clear Lake hitch (*Lavinia exilicauda chi*)
 - Clear Lake tule perch (*Hysterothorax traskii lagunae*)
 - prickly sculpin (?) (*Cottus asper*)

Species of Greatest Conservation Need Associated with Clear Lake

- Extinctions
 - Clear Lake splittail, Pacific lamprey, thicketail chub,
- Evidence of population declines
 - Clear Lake hitch
 - candidate for threatened listing under the CESA
 - Clear Lake tule perch
 - Sacramento perch (*Archoplites interruptus*)

Stresses and Threats

- Anthropogenic influences
 - **Threat:** Dams and water management and use
 - **Stress:** changes in runoff/river flow, water levels and seasonal patterns of flow
 - **Stress:** altered spatial distribution of habitat types
 - **Stress:** habitat fragmentation
 - **Threat:** Invasive aquatic plants and non-native fishes
 - **Stress:** changes in community structure or composition
 - **Stress:** loss or change in biotic interactions

Strategies

- **Threat:** Dams and water management/use
 - **Strategy: Establish collaborative partnerships**
 - Develop trust among other agencies and stakeholders
 - **Strategy: Best management practices development for water diversions**
 - Understand stakeholder needs and how to meet their needs while meeting BMP criteria
 - **Strategy: Provide education and outreach**
 - Need for BMPs and updates on development and status
 - Impacts associated with actions
 - **Strategy: Effective law enforcement**
 - Increase staffing levels
 - Enforce compliance with 1600 agreements and water rights
 - Reduce illegal diversions
- **Threat:** Invasive aquatic plants and non-native fishes
 - **Strategy: Provide education and outreach**
 - Impacts on native species from non-native species introductions

Thank you for coming.

We appreciate your input.