South-Central California Coast Steelhead

Oncorhynchus mykiss

chances for survival: *poor*

2

PHOTO: MARK CAPELLI

South-central California coast steelhead are adapted to deal with highly variable rainfall and temperature conditions, but are otherwise similar to other steelhead.

These fish spend one to three years in fresh water before migrating to the ocean for two to four years, returning to natal rivers to spawn. Adults can reproduce more than once, but the rate of repeat spawning is unknown. Three life history patterns have been noted: stream anadromous, freshwater resident, and lagoon-anadromous. Anadromous steelhead may produce young which complete their life cycle entirely in freshwater, while rainbow trout which have completed their life cycle entirely in freshwater may produce progeny which emigrate to the ocean and return as anadromous steelhead. Having both resident and anadromous fish may help to ensure survival and each type is essential for recolonization (either from marine or freshwater) after local loss. Juvenile life history patterns are influenced by the need to emigrate in dry years, when streams are low or dry. Some populations may grow more during the winter and spring when temperatures are optimal while showing little growth in summer and fall when conditions are stressful. Steelhead have managed to persist in the face of rapidly expanded human populations and increased demand for water, particularly in the northern, inland, and southern portions of their range.

DISTRIBUTION: South-central coast steelhead are found from the Pajaro River south to (but excluding) the Santa Maria River. They are currently found in almost all coastal watersheds in which they were historically present. Adult steelhead are likely found in the ocean as far south as northwestern Mexico and are more solitary than other salmonids. In the Big Sur Coast and northern portion of the San Luis Obispo Terrace regions, 37 streams contain steelhead and bear more ecological resemblance to steelhead streams in northern California than to other streams in the region.

ABUNDANCE: Limited data from the larger watersheds suggest that, in the past 50 years, total steelhead numbers have declined by 90% or more. Historically, annual runs totaled more than 27,000 adults but, by 1965, total numbers had declined to around 17,000 adults. Today, it is likely that the total number of spawners throughout their range in a wet year is considerably less than 5,000 fish, and perhaps as few as 2,000 fish.

FACTOR AFFECTING STATUS: The principal threats to south-central California coast steelhead are, (1) alteration of natural stream flow patterns, (2) physical impediments to fish passage, (3) alteration of floodplains and channels, (4) sedimentation, (5) urban and rural waste discharges, (6) spread and propagation of alien species, and (7) loss of estuarine habitat. In general, steelhead populations in the northern, inland and extreme southern portion of their range have experienced the most extensive habitat degradation. The inadequacy of federal and state regulatory mechanisms has allowed aquatic habitats to be damaged repeatedly, protected ineffectively, and managed inconsistently. Although a majority of local extirpations have been associated with barriers, climate change is highly likely to have an adverse impact. Estuarine degradation and loss, particularly in the northern and southern portions of the range, has significantly reduced rearing potential.

STATUS 2: South-central California coast steelhead were listed as federally threatened in 1997, but they continue to persist in most of their historic watersheds. Nonetheless, a majority of the population is likely to be extinct within 50 years without serious intervention. South-central California coast steelhead are threatened by increasing human land and water development, as well as climate change, wildfire, and drought. Solving these problems requires both short- and long-term social and managerial changes. Best management practices for water use and agriculture need to be implemented by private landowners and industrial water users to conserve and restore instream, floodplain and riparian habitats, as well as critical lagoon habitats.

CONSERVATION RECOMMENDATIONS: Essential tasks for protecting these steelhead include sufficient provisions for habitat protection and restoration in the Los Padres National Forest Plan, coordination of governmental agencies to balance water resources with recovery of the steelhead, and completion of a Coast-Wide Anadromous Fish Monitoring Plan by the National Marine Fisheries Service and the California Department of Fish and Game. Beneficial actions which can be taken quickly include further research on their life history, continued fish barrier removal in smaller coastal streams, and providing flows in the Salinas and Pajaro river systems to support floodplain habitats.

CATEGORY	SCORE	EXPLANATION
Range	3	Multiple watersheds are occupied, though extended occupancy makes these watersheds unique compared to most coastal basins
Population size	2	Most populations probably contain less than 100 spawners
Intervention needs	2	Habitat restoration and barrier modification projects are critical for recovery; most populations will require reconnection of resident and anadromous populations in the near future to boost them to sustainable levels
Tolerance	3	Moderate physiological tolerance, rate of repeat spawning is unknown
Genetic risk	3	Limited gene flow among populations and limited hatchery hybridization
Climate change	1	Effects will be exacerbated by human population growth
Overall status	2	
Reliability	3	Relies heavily on gray literature, but some published reports available

California Trout is There for the Fish!

California Trout was instrumental in the formation of the Southern California Steelhead Coalition, whose mission is to restore Southern California rivers and streams. Some major accomplishments of the coalition have included obtaining almost $4 million for Southern California steelhead restoration projects and raising public awareness of the importance and needs of Southern California steelhead.

Arroyo de la Cruz. PHOTO: MARK CAPELLI

1 2 3 4 5

Historic Distribution Of South-Central California Coast Steelhead