

Steelhead Trout (*Onchorhynchus mykiss*)

Status -- Federal: Threatened; California: None



Photo: Richard T. Grost

Steelhead trout are the same species as rainbow trout, however, they migrate from fresh water into the ocean as part of their life cycle; whereas rainbow trout spend their entire life in fresh water. Steelhead spend one to six years in the Pacific ocean before returning to their natal rivers and streams to repeat the cycle. Unlike other species of Pacific salmon, steelhead do not necessarily die after spawning and are able to spawn more than once. Some steelhead spawn 3 or 4 times during their lifetime, although more than twice is rare. If they survive the following outmigration, they return to the ocean to feed for approximately 10 months between spawnings. Spawning steelhead have very distinctive dark spots on the dorsal fin, a reddish band along their sides, and a reddish operculum (gill cover). The male has a hooked lower jaw that extends just past the eye (see above photo); the female has a blunt head and short jaw



California Department of Pesticide Regulation
Endangered Species Project
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that does not extend past the eye. A spawning adult may measure about two feet and weigh approximately 10 pounds. **Reproduction:** In California, most steelhead spawn from December through April in small streams and tributaries where cool, well oxygenated water is available year round. The female selects a site with gravel substrate where there is good flow. She then digs a nest, called a redd, and deposits eggs, which in turn are fertilized by the male. The eggs are covered by gravels and cobbles. Under optimal temperature conditions the eggs hatch in 30 days. Eggs hatch sooner in warmer water, but the young fish are smaller and have lower survival rates.

If the temperature goes too high, the eggs will not hatch at all. After hatching, the developing steelhead (alevins) will remain in the gravel 4-6 weeks, obtaining their nutrients from a yolk sac attached to their body. When they emerge from the gravel they are called fry, and are able to catch their own food, continuing their development to become juveniles.

Distribution: In California, known populations occur in coastal rivers and streams from Malibu Creek in Los Angeles County up to the Smith River near the Oregon border, and in the Sacramento River system. Like other Salmonids, steelhead have been classified into several Evolutionarily Significant Units (ESUs), occupying distinct watersheds. An Evolutionarily Significant Unit is a population of fish that is substantially reproductively isolated from other populations and represents an important component in the evolutionary legacy of the species. The shaded areas in the map illustrate all the listed Evolutionarily Significant Units for Steelhead in California: Northern California (Threatened), Central Valley (Threatened), Central California Coast (Threatened), South-Central California Coast (Threatened), and Southern California (Endangered).