

Kern River Rainbow Trout

Oncorhynchus mykiss gilberti

chances for survival:
poor

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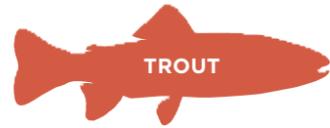


PHOTO: CALIFORNIA DEPT. OF FISH AND GAME HERITAGE TROUT PROGRAM (ROGER BLOOM)

California Trout is There for the Fish!

California Trout has worked with the California Department of Fish and Game to reintroduce Kern River rainbow trout into its historic waters by providing expert input on scoping documents and actively participating in public meetings. Most recently California Trout worked with the Department to complete genetic research that was used to develop a Kern River Rainbow Trout Management Plan and for future production of Kern River rainbow trout in the Kernville Hatchery.

The Kern River rainbow trout is one of three trout endemic to the Kern Basin; the others are the Little Kern and California golden trout. The Kern River rainbow inhabits the lower portions of the Kern River and grows to larger sizes than its golden trout relatives. It is more brightly colored than a typical rainbow trout and its spots are more irregular in shape than the two golden trout species.

The Kern River rainbow trout has a complex evolutionary history and has been the subject of much debate over its origins since it was first described in 1894 as a subspecies of rainbow trout. It was later thought to be a population of golden trout, but subsequent genetics work indicates a distinct evolutionary heritage intermediate between coastal rainbow trout and Little Kern golden trout. Hybridization with both hatchery rainbow trout and planted populations of the two golden trout threaten the genetic integrity of Kern River rainbow trout.

DISTRIBUTION: The Kern River rainbow trout were once widely distributed in the Kern River and its tributaries. Today, remnant populations live in the Kern River above Durrwood Creek, in Upper Ninemile, Rattlesnake and Osa Creeks, and possibly in upper Peppermint Creek. Additionally, there are introduced populations of Kern River rainbows in the Kaweah-Kern River and Chagoopa Creek, which appear to have maintained their genetic integrity.

ABUNDANCE: In the Kern River in Sequoia National Park during 1992, there were about 600 to 1,400 trout per mile

of all sizes. If it is assumed the trout currently persist in 12 miles of small streams, then the total estimated number of fish would be between 7,000 and 17,000, with a spawning population likely less than 1,000 individuals. These estimates suggest that absolute numbers of Kern River rainbow trout in the wild are low and the species vulnerable to reduction by natural and human-caused events.

FACTORS AFFECTING STATUS: The construction of Isabella Dam eliminated much of the Kern River rainbow's historic habitat. This barrier resulted in massive introductions of hatchery trout into the river and heavy fishing pressure which led to the elimination of most of the native population. The primary threats to remaining populations of Kern River rainbow trout involve interactions with non-native trout and include, (1) hybridization with hatchery rainbow trout which are still planted in the upper Kern Basin, (2) hybridization with golden trout planted or moving into their waters, and (3) competition from brown, brook, and hatchery rainbow trout. Further introductions by anglers of hatchery rainbow, brown or brook trout into the remaining small isolated streams are possible. In addition, continued grazing in riparian areas and heavy recreational use of the basin, including angling, can degrade the trout's fragile habitat. Random natural events, such as floods, drought, and fire, can also exacerbate these problems.

STATUS 2: The Kern River rainbow trout has a high probability of extinction in the next 50 to 100 years if present trends continue. It is listed as a species of special concern by both the U.S. Fish and Wildlife Service and the California Department of Fish and Game. A multi-agency management plan for the upper Kern River basin lists as its goals to "restore, protect, and enhance the native Kern River rainbow trout populations so that threatened or endangered listing does

not become necessary." The Edison Trust Fund, established as mitigation for a hydropower generating station, provides at least \$200,000 each year to implement the management plan and improve fish populations in the upper Kern Basin. Funding has been provided for developing a conservation hatchery for Kern River rainbow trout, for increasing patrols of wardens in areas where the trout are fished, and for funding genetics studies.

CONSERVATION RECOMMENDATIONS: Issues that need to be addressed for conserving Kern River rainbow trout include stopping the planting of non-native trout, curbing grazing in riparian areas, and decreasing heavy recreational activities in the Kern River basin that adversely impact the fish's habitat.



Upper Kern River above Johnsondale Bridge. PHOTO: ANDREW HARRIS



Kern River Rainbow Trout Were Native To The Upper Kern River Watershed, Mainly In The Main River And Some Small Tributaries

