## Klamath Mountains Province Summer Steelhead Oncorhynchus mykiss







PHOTO: MATT STOECKER

lamath Mountains Province summer steelhead are distinct from winter steelhead because of their springtime entry into the Klamath River, their lack of sexual maturity at entry, and the upstream location of spawning. Klamath Mountains Province summer steelhead enter the rivers during April through June and migrate upstream in early summer to mature in deep pools. Summer steelhead spawn in upstream regions that include the smaller headwater streams which are largely unavailable to winter steelhead.

Peak spawning occurs from December to March and thus summer steelhead are separated in time and spawning areas from winter steelhead. Half-pounders, sub-adults that have spent only two to four months in the Klamath estuary, are included in annual surveys of summer steelhead in the Salmon, New, and South Fork Trinity Rivers.

**DISTRIBUTION:** The Klamath Mountains Province summer steelhead range includes the Klamath and Trinity Rivers and other streams north to the Elk River near Port Orford, Oregon. Their range includes the Smith River in California and the Rogue River in Oregon. In California, these summer steelhead currently inhabit the larger tributaries to the

## California Trout is There for the Fish!

In 1972, California Trout and others led the passage of the California Wild and Scenic Rivers Act. The result of this landmark legislation was to mothball plans for almost 20 dams slated for construction on the Klamath, Trinity, Smith and Eel Rivers. Because of California Trout's leadership in establishing the Wild and Scenic Rivers Act. threatened Klamath Mountains Province summer steelhead are benefitting.

CATEGORY	SCORE	EXPLANATION
Range	2	Summer steelhead in the Klamath Mountain Province have several populations that probably vary independently of one another
Population size	2	A majority of subpopulations are very small and isolated
Intervention needs	3	No intervention is being undertaken to assist in long term survival, but it is badly needed
Tolerance	2	Adults require cold water refuges
Genetic risk	2	Hybridization risk with hatchery fish is high, which could result in loss of distinctive life history traits
Climate change	1	Highly vulnerable and temperatures and flows already marginal in many areas
Overall status	2	
Reliability	3	Well documented in literature

middle Klamath River (Bluff, Red Cap, Camp, Dillon, Clear, Elk, Indian, and Thompson Creeks), the Salmon River, and the Trinity River. In the Salmon River, they are found in the North Fork, South Fork, and Wooley Creek. In the Trinity River, populations are present in Canyon Creek, Hayfork Creek, North Fork Trinity, East Fork Trinity, South Fork Trinity, and New Rivers. In addition, the Smith River also supports a few summer steelhead.

**ABUNDANCE:** Little is known about past abundance since records of Klamath Mountains summer steelhead population numbers exist only for recent decades. Given the available habitat, it is likely that they are at only a small fraction of their original numbers and have declined precipitously in the past 30 to 40 years.

**FACTORS AFFECTING STATUS:** The major factors causing population declines include, (1) dams and water diversions, (2) logging, (3) mining, (4) poaching, and (5) human disturbance. This species is exceptionally vulnerable to human activities because adult fish are conspicuous in their summer pools. In addition, because all life stages are present at all times in the rivers, these fish can suffer acutely from habitat degradation.

**STATUS 2:** Klamath Mountains Province summer steelhead have a high likelihood of becoming extinct within the next 50 to 100 years. They are a U.S. Forest Service sensitive species and are a species of special concern of the California Department of Fish and Game. They are not federally listed as endangered because they are part of the more abundant Klamath Mountains Province steelhead DPS. There is a general lack of basin-wide management actions to protect them, increasing the likelihood of local extirpations. Present management focuses on monitoring to assess if the populations are recovering to the point where some harvest will

be possible. The Steelhead Restoration and Management Plan for California recognizes the importance of protecting healthy sub-basins, allowing natural processes to take precedence over human activities that cause degraded habitat conditions and maintaining a natural flow regime. Intense management that focuses on reducing human impacts and improving habitats is needed in the few watersheds where these summer steelhead are most abundant. In particular, maintaining cooler water temperatures in the summer is of critical importance.

**CONSERVATION RECOMMENDATIONS:** In conjunction with improved water flows in the Klamath and Trinity Rivers, management plans should address better enforcement of fishing and land use regulations, minimizing sedimentation, providing healthy water quality, and improving habitat for current populations. Restoration of extirpated populations is also needed as well as additional research on summer steelhead genetics, spawning areas, juvenile habitat requirements, the effect of poaching, gold dredging and recreation on the adult fish, and Trinity River restoration and flow increases.



Trinity River. Photo: Jeff Bright



Likely Historic Distribution Of Klamath Mountain Province Summer Steelhead, **Including Migratory Pathways** 



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