

Northern California Coast Summer Steelhead *Oncorhynchus mykiss*

chances for survival:
poor

2

- 1
- 2
- 3
- 4
- 5



PHOTO: MATT STOECKER

Northern California coast summer steelhead are managed with winter steelhead as a single DPS. Summer steelhead, however, differ from winter steelhead in time of migration, state of sexual maturity at migration, and location of spawning. Little is known about the genetic relationships among summer steelhead populations, but they are likely more similar to winter steelhead in the same basin than to other regional summer steelhead. Northern California coast summer steelhead migrate upstream from mid-April through June into headwaters to over-summer in deep, cool pools.

During this time, they mature and spawn in late fall and winter. This life history has reinforced reproductive isolation between summer and winter steelhead. As for all steelhead, there is a great deal of variation in behavior, such as age at ocean entry, age upon return, and number of repeat spawners. **DISTRIBUTION:** Populations remain in the upper reaches of Redwood Creek and in the Mad, Van Duzen, Middle Fork

Eel, and Mattole Rivers. Other populations exist, or formerly existed, in the North Fork Eel, Upper Mainstem Eel, and South Fork Eel Rivers.

ABUNDANCE: Little historical abundance information exists for Northern California coast summer steelhead. It appears that a majority of these summer steelhead populations have declined precipitously since the initial

recognition of their presence 30 to 40 years ago. Extirpation of most remaining populations is a serious threat with a majority of populations declining to extremely low populations since the 1980s. The number of summer steelhead in the Middle Fork Eel River has ranged from 198 to 1,601 adults during annual summer surveys.

FACTORS AFFECTING STATUS: The primary factors affecting the status of Northern California coast summer steelhead include, (1) logging and other land use activities, (2) water diversions, (3) human disturbance, (4) hatcheries, and (5) poaching. In the Middle Fork Eel River, steelhead numbers were lowest following the 1964 flood. This flood likely caused the loss of deep, complex pools necessary for over-summering habitat. The cumulative effect of this flood, compounded by continued sedimentation from logging and road building in the latter part of the 20th century, has been a major factor in the low numbers of steelhead. At the present time, numbers are so low that each population is extremely vulnerable to poaching and any local disturbances that may cause declines in water quality.

STATUS 2: The entire Northern California coast steelhead DPS is listed as federally threatened, but the likelihood of extinction of the summer steelhead portion is particularly high. Only the Middle Fork Eel population seems likely to remain viable beyond the next 25 years. However, adequate water flows and reduced hatchery releases in the Mad River may protect summer steelhead in this watershed. Meeting the objectives of a joint National Marine Fisheries Service and State of California Memorandum of Agreement are critical to the recovery of both Northern California coast summer (and winter) steelhead. It has been almost a decade since the Memorandum was issued and many of its objectives have yet to be enacted. Very little management effort

is directed specifically at summer steelhead and, as a result, their populations have continued to decline. Recent changes in sport fishing regulations and hatchery operations have reduced some of the threats. The problem with poaching continues to plague summer steelhead due to the absence of adequate law enforcement. Although fishing is prohibited in many areas and fines for violations are high, protection of summer steelhead populations requires special enforcement efforts.

CONSERVATION RECOMMENDATIONS: Several critical conservation actions are needed to protect this imperiled species including increased protection of summering areas from poachers, improved watershed management for adequate summer flows and temperatures, and better management of downstream waters to favor out-migrating smolts. Additional projects benefitting the species include habitat improvements, restoration of populations which have become extirpated, and protection of adults and juveniles from predation.



Mad River. PHOTO: TOM WESELOH

Likely Historic Distribution Of Northern California Coast Summer Steelhead, Including Migratory Pathways



Present



California Trout is There for the Fish!

California Trout has organized river dives to assess summer steelhead populations and provide recommendations for their long term protection by altering hatchery practices, developing protective angling regulations, and advocating for increased habitat protection and restoration.

| CATEGORY | SCORE | EXPLANATION |
|--------------------|-------|--|
| Range | 2 | The Middle Fork Eel, Van Duzen, Mattole, and Mad Rivers and Redwood Creek all have summer steelhead runs |
| Population size | 2 | Among all populations, there are likely about 1,000 spawners, but only the Middle Fork Eel River has enough fish to persist for more than 25 to 50 years |
| Intervention needs | 3 | No intervention currently being undertaken but it is needed to maintain populations |
| Tolerance | 2 | Northern California coast summer steelhead require cold water refugia |
| Genetic risk | 2 | The genetic difference between winter and summer steelhead is unknown |
| Climate change | 1 | Climate change is likely to impact all populations |
| Overall status | 2 | |
| Reliability | 3 | Populations have been well studied |