
State of California
The Resources Agency
Department of Fish and Game

**STEELHEAD RESTORATION AND
MANAGEMENT PLAN
FOR CALIFORNIA**

by

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Santa Rosa Creek. Until the early 1980s, steelhead were abundant in the Santa Rosa Creek drainage. Steelhead, along with several other aquatic vertebrates, have declined substantially since this time, mainly due to the loss of instream habitat due to increased diversion and underflow pumping (Rathbun et al. 1991). Lack of sufficient flows has also impacted the lagoon, which at one time served as an important rearing area for juvenile steelhead. Few juvenile steelhead have been observed in the lagoon for several years (Rathbun et al. 1991; Jennifer Nelson, DFG Fishery Biologist, pers. comm.). Urbanization of lower stream channels and cattle grazing have also affected the stream (CDFG 1992d).

Chorro Creek. Chorro Creek is a large system relative to other San Luis Obispo County streams. The anadromous reach of this stream terminates at an impassable dam which impounds Chorro Reservoir. The middle reach contains the majority of spawning habitat, unfortunately most of this section becomes dewatered during the summer due to numerous agricultural diversions and the impoundment at Chorro Reservoir (Snider 1974). Effluent from a sewage treatment plant provides the majority of the summer habitat in the drainage.

In addition to the problems caused by water diversion and storage, thirteen significant migration impediments on the mainstem and tributaries were identified by DFG in the early 1970s (Snider 1974), most of which still exist (Nelson n.d.). These barriers prevent adult steelhead from utilizing the upper reaches where perennial flows occur.

Recommendations

- ▶ **DFG should continue to seek necessary flows to restore steelhead populations in San Luis Obispo County streams that are degraded due to over appropriation of water.**
DFG is involved with several interagency and community organizations to restore aquatic habitat and has filed protests with the SWRCB.
- ▶ **DFG should continue to protest water right applications on healthy streams unless sufficient bypass flows are established that will maintain habitat conditions in the streams, tributaries, and lagoons.**

SANTA YNEZ RIVER

Historically, the Santa Ynez River supported the largest steelhead run in southern California (Shapovalov 1945). Gibraltar Dam, completed in 1920, blocked access to much of the spawning habitat of the river system, including the upper mainstem and the Mono Creek system (Shapovalov 1945) (Fig. 22). The construction of the Cachuma Project (which

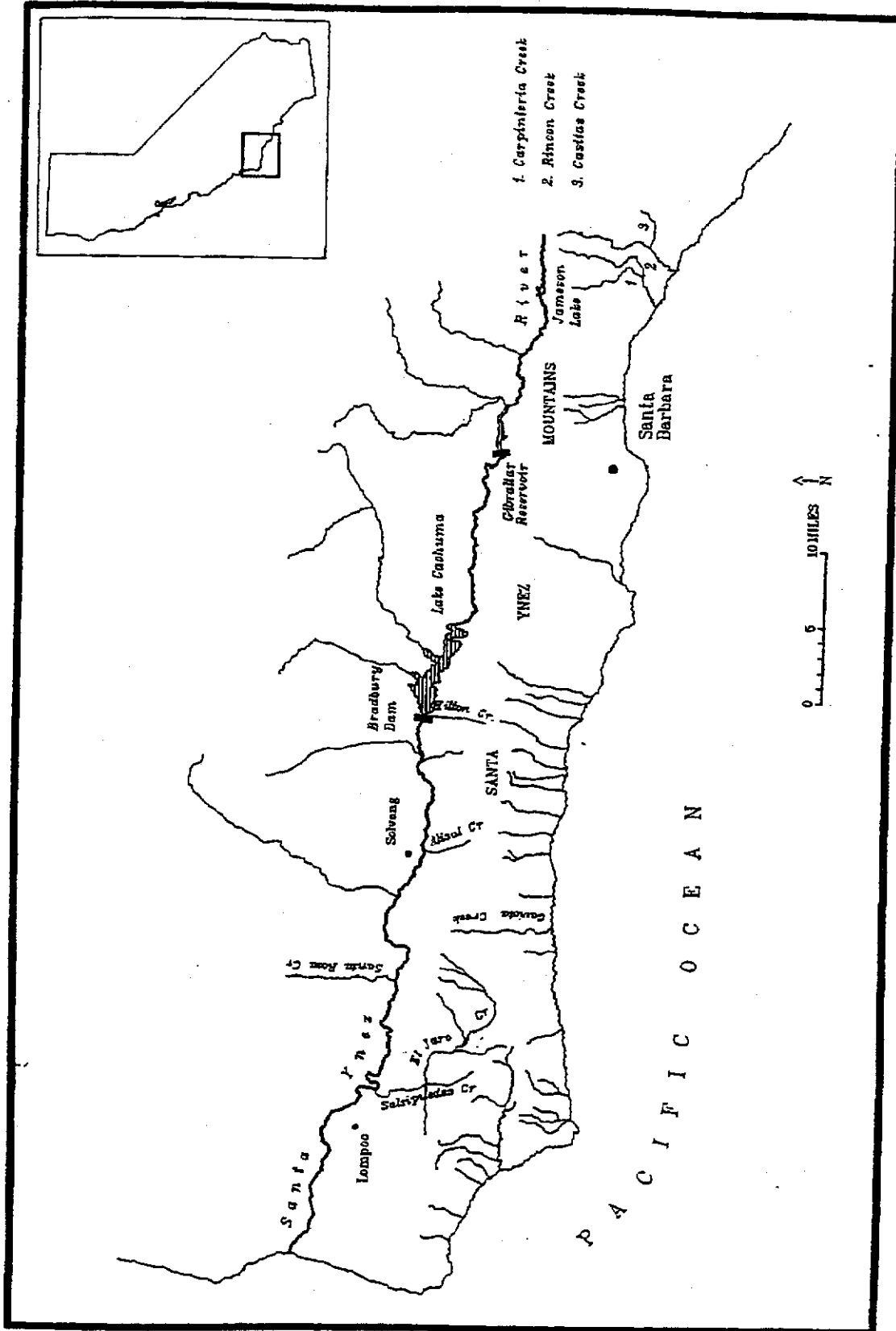


Figure 22. Santa Ynez River and coastal streams of Santa Barbara County.

includes Bradbury Dam) in the early 1950s eliminated access to nearly all historic spawning and rearing habitat. However, Shapovalov (1946) reported that excellent spawning habitat was present in the mainstem from Gibraltar Dam to the vicinity of Solvang, which is approximately 10 miles downstream of Bradbury Dam.

Bradbury Dam (Lake Cachuma) was authorized by Congress in 1948 as an emergency measure and was completed in 1953. After conducting pre-project fishery investigations, the U.S. Fish and Wildlife Service (USFWS) and DFG recommended that water be released from Bradbury Dam to provide migration, spawning, and nursery flows for steelhead. However, these releases for maintenance of the steelhead population were not authorized. Because of this, the steelhead run in the Santa Ynez River is nearly extirpated (CDFG 1975). Nehlsen et al. (1991) have categorized it as being at high risk of extinction.

Under conditions of the original water right permits issued to the U.S. Bureau of Reclamation (USBR) in 1958 for the Cachuma Project, USBR was to make releases that would maintain a "live stream" at prescribed downstream points to satisfy the needs of downstream water rights holders. In 1973, the SWRCB issued Order WR 73-37 which modified the original permits and allowed USBR to store all inflow to Lake Cachuma regardless of the persistence of the "live stream". This order was further modified in 1989 to provide greater releases to benefit downstream users and to extend the jurisdiction of the SWRCB to 1994. In 1994, the SWRCB issued Order WR 94-5 which reserved jurisdiction until 2000.

USBR is currently in the process of renewing its contract with the Santa Barbara County Water Agency to deliver water to the Cachuma Project Member Units for municipal, industrial, and agricultural purposes. Modification to project operations as a result of contract renewal may result in the need to revise USBR's water right permits, although the preferred alternative in the Final EIS/EIR for the contract renewal is to not change current project operations.

DFG has been a party to a Memorandum of Understanding (MOU) with USBR, USFWS, the Santa Barbara County Water Agency, the Member Units, and other interested groups to undertake cooperative fishery studies and to make recommendations for releases from Lake Cachuma to maintain fish and habitat. To provide water for this, a Fish Reserve Account consisting of up to 2,000 acre feet of water stored in Lake Cachuma has been established. Currently, the term of the MOU is for one year, after which it may be renegotiated or extended. The signatories to the MOU are proposing to extend the term to four years.

Above average rainfall in 1993 and 1994 created suitable migration flows and large rainbow trout/steelhead, were observed in the mainstem and tributaries. Several large rainbow trout/steelhead (16 to 18 inches) were captured and released in Hilton Creek in 1993 (CDFG 1993c). There were also anecdotal reports of anglers catching large rainbow trout in 1993. In 1994, a rainbow trout/steelhead estimated to be approximately 22 inches in length was captured in the mainstem (Trautwein 1994) and large rainbow trout were also observed in Hilton and Salsipuedes creeks (CDFG 1994a). Salsipuedes Creek tributaries and Hilton Creek still contain accessible spawning and rearing habitat. In 1995, several large rainbow trout that appeared to be steelhead were observed spawning in Hilton Creek. Several months later, swim-up fry were observed in the stream (Maurice Cardenas, DFG Fishery Biologist, pers. comm.).

There has been some question whether the rainbow trout observed in the lower Santa Ynez River are anadromous or have been introduced through catchable trout stocking in Lake Cachuma. There are examples of rainbow trout emigrating from reservoirs, establishing residence in downstream waters, and attempting to spawn in reservoir tailwaters and tributaries. However, rainbow trout used in catchable trout stocking programs typically have shorter life spans and do not grow as large as adult steelhead (Dennis P. Lee, DFG Senior Fishery Biologist, pers. comm.).

The Coastal Branch of the California Aqueduct (State Water Project) will bring approximately 45,000 acre feet of Central Valley water per year to Santa Barbara County. This project is currently under construction and is scheduled to be operational in 1996.

Portions of the river below Bradbury Dam suffer from habitat and channel degradation. Off-highway vehicles, pipeline construction, gravel mining, and riparian vegetation removal for flood control purposes has resulted in a broadening of the channel, subsurface flows, and loss of the riparian corridor.

- **DFG will seek a permanent flow regime from Bradbury Dam to restore the steelhead resource to a reasonable level and maintain it in good condition. This includes providing adequate streamflows for adult and juvenile migration, and mainstem spawning and rearing habitat.** USBR recontracting, SWRCB continued jurisdiction hearings, and additional water from the State Water Project may present good opportunities to rectify past actions which have resulted in the near extirpation of the Santa Ynez River steelhead and a diminishment of public trust resources. The question of whether rainbow trout present in the Santa Ynez River below Bradbury Dam are resident or anadromous is not pertinent to the need to mitigate for past water

development. DFG will negotiate mitigation on the basis that historic steelhead runs have been nearly eliminated by water development and actions to restore this public trust resource need to be implemented.

Recommendations

- ▶ **The feasibility of providing adult and juvenile passage around Bradbury Dam should be investigated and implemented accordingly.**
Nearly all historic spawning and rearing habitat is located upstream of Bradbury Dam, therefor blocked access is probably the most significant limiting factor for steelhead. Because of the height of Bradbury Dam, trap-and-truck and smolt capture facilities are probably the only feasible means to restore access.
- ▶ **Short-term efforts to restore Santa Ynez River steelhead should focus on the following:**
 - * **Restore and enhance spawning and rearing habitat conditions in Hilton, Alisal, and Salsipuedes creeks and other tributaries of the Santa Ynez River below Bradbury Dam.**
 - * **Provide adequate interim releases from Lake Cachuma.**
DFG should identify and seek flows needed for fisheries investigations and to maintain steelhead habitat until more permanent restoration measures are implemented. This will be done preferably through the MOU process.
 - * **Investigate status and habitat needs.**
 - * **Investigate the feasibility of modifying the release schedule of water released from Bradbury Dam to downstream users so that it provides benefits to fish and wildlife.**
Currently, the water is released on an as-needed basis as called for by the Santa Ynez River Water Conservation District, which provides relatively little benefit to aquatic species and habitat.

SANTA BARBARA COUNTY COASTAL STREAMS

The southern slope of the Santa Ynez Mountains, a transverse range that abuts the southern end of the Coast Range, contains the watersheds of most of the coastal streams of