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REPORT ON RELATION TO MAINTENANCE OF FISH RESOURCES OF PROPOSED
DAMS AND DIVERSIONS IN SANTA BARBARA COUNTY, CALIFORNIA

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as requested in Comment on Santa Barbara Basin Report
of U.S.B.R. dated June 1945. 1 cc for U.S.B.R. 1 for Ed. Hyatt &
REPORT ON RELATION TO MAINTENANCE OF FISH RESOURCES
OF PROPOSED DAMS AND DIVERSIONS IN SANTA BARBARA
COUNTY, CALIFORNIA 1 for Hamm

A. Santa Ynez River

The Bureau of Reclamation, Region II, has listed for consideration the construction of three dams on Santa Ynez River and a fourth dam on a tributary, Salsipuedes Creek. (1) The water from the resulting reservoirs would be used for irrigation, domestic purposes, flood control, and groundwater replenishment. A tunnel for diversion of water to the Santa Barbara area is also proposed in connection with one of the dams.

The Santa Ynez River rises near the boundary line between Santa Barbara and Ventura counties and flows nearly due west to its entrance into the Pacific Ocean at Surf, about 8 miles northeast of Point Arguello Lighthouse. The total length of the River is approximately 92 miles. The greater part of the basin is included in the Los Padres National Forest.

From a fisheries viewpoint, the Santa Ynez River is of major importance as the spawning grounds and nursery of the largest steelhead run in Southern California, and the

(1) U. S. Bureau of Reclamation, Region II, Report on undeveloped land, water and power resources of California and their utilization in a post-war construction program. 45 pp. (mimeographed), with appendices and maps. Sacramento, Calif., April, 1944.

U. S. Bureau of Reclamation, Region II, Basin Report, Santa Barbara County, California, Water Resources and Utilization. Sacramento, Calif., June, 1945.

source of the majority of the game fish stocked in the waters of Santa Barbara, Ventura, and San Luis Obispo counties.

Proposed Development

Santa Rosa Dam is proposed for a point approximately 25 miles above the mouth of the River, for purposes of Flood control and retardation of water for percolation. No height is listed for the earth fill dam. The gross storage capacity would be 150,000 acre-feet.

Cachuma Dam is proposed for a point 47 miles above the River mouth, for irrigation. Water would be conveyed from the reservoir through the Santa Ynez Mountains by the proposed Tequepis Tunnel to the Santa Barbara area, where it would be used for irrigation. No height is listed for the earth fill dam. The gross storage capacity would be 200,000 acre-feet.

Camuesa Dam would be located on Santa Ynez River 74 miles above its mouth and about 2 miles upstream from the present Gibraltar Dam. Of earth construction, it would be 217 feet high, including a freeboard of 20 feet. Water from the reservoir would be conveyed through the Santa Ynez Mountains to the Santa Barbara area by the existing Mission Tunnel from the present Gibraltar Reservoir. It would be used for irrigation and domestic use.

No specifications nor the exact location are listed for the proposed Salsipuedes Dam on Salsipuedes Creek, a

tributary stream which enters Santa Ynez River about 16 miles above its mouth. The stored water would be used for percolation to the underground basin.

Fishery Management and Conservation Program

The spawning run of steelhead enters Santa Ynez River from the Pacific Ocean following the first heavy rains of the wet season. The largest numbers enter during the period December-March. The fish spawn in the main stream and in practically all tributaries below the present Gibraltar Dam, with the heaviest spawning taking place in the portions above the proposed Caohuma Dam. The young steelhead hatch, emerge from the gravel and, after a year or two of residence in fresh water, migrate down stream to the ocean during the spring and summer months. Fishing for adult steelhead is limited to the main stream as far upstream as the Buellton Bridge, 34 miles above the river mouth, during a season extending from November 1 through February 28. The young steelhead may be caught during a season extending from May 1 through October 31, except in the lagoon, which is closed as a nursery area.

Data from the annual creel census indicate that in 1941, the latest year for which figures are available, 4,375 anglers caught 262,000 trout in Santa Barbara County. The Santa Ynez River and its tributaries form the major trout water in the County. The streams of the Sisquoc River system are the next most important. All other streams are of relatively minor importance.

The size of the spawning run is indicated by the estimate of an experienced employee of the California Division of Fish and Game that the numbers of adults are comparable to those at Benbow Dam on South Fork of Eel River, where from 13,000 to 25,000 fish have been counted each year during the past six years. The very large size of the run is indicated by the fact that in 1944 the California Division of Fish and Game rescued 1,036,980 young steelhead from the partially dry bed of Santa Ynez River above the site of the proposed Cachuma Dam. These fish probably represented only a small fraction of the young steelhead produced, since large numbers migrated downstream prior to the start of rescue operations or remained in localities inaccessible to the rescue crews.

Similar rescue operations are carried on each summer. Approximately 62 per cent of the rescued fish are planted in live waters of Santa Ynez River and its tributaries below Gibraltar Dam, to provide the nucleus for future spawning runs into the River, 9 per cent are stocked in Gibraltar Reservoir, to maintain the summer sport fishery in the Reservoir and the spawning runs of resident steelhead from it into its tributaries, and 29 per cent are distributed into various streams of Santa Barbara, Ventura, and San Luis Obispo counties, to provide summer angling and to augment the runs of anadromous steelhead in streams less favored with spawning grounds than the Santa Ynez.

This entire management and conservation program is dependent upon the maintenance of the steelhead run and the preservation of its spawning grounds.

The present Gibraltar Dam cut off some of the spawning grounds of the sea-run steelhead (prior to its construction sea-run steelhead spawned in a number of streams above the dam site, including the upper Santa Ynez River and the streams of the Mono Creek system). Two debris dams cut off the major spawning grounds for resident steelhead in Gibraltar Reservoir.

Camuesa Dam presents an entirely different aspect. Since it would be constructed above the present Gibraltar Dam, it would not cut off any of the spawning grounds for sea-run steelhead. It would drown out the spawning grounds for the resident steelhead of the present Gibraltar Reservoir in the Santa Ynez River and in Mono Creek below Mono Debris Dam, leaving them only a limited area in small Gidney Creek. On the other hand, spawning areas in Mono Creek and its tributaries, now blocked to trout in the present Gibraltar Reservoir by Mono Debris Dam, would be opened to the trout which would populate New Gibraltar Reservoir. (Mono Debris Dam would be drowned out.) Thus, it is seen that, although Camuesa Reservoir would flood a considerable part of the spawning areas now used by the trout resident in the present Gibraltar Reservoir, this would be compensated for, perhaps fully, by the opening of a new fishing area and other good spawning grounds not now available.

B. Santa Maria River

The Bureau of Reclamation, Region II, has listed for consideration the construction of two dams on the main tributaries of Santa Maria River. ⁽¹⁾ Both of these dams would be for the purposes of flood control and groundwater replenishment.

The Santa Maria River Basin includes parts of Santa Barbara, Ventura, and San Luis Obispo counties. Santa Maria River enters the Pacific Ocean near Guadalupe, Santa Barbara County. It is formed by the junction of Cuyama River with Siquoc River at a point about 25 miles above its mouth. The length of Cuyama River is approximately 106 miles and of Siquoc River, 45 miles. A large part of the Santa Maria River drainage basin is included in the Los Padres National Forest.

Proposed Development

Vaquero Dam Site is located on Cuyama River seven miles upstream from its junction with Siquoc River. The earth fill dam would have a gross storage capacity of 172,000 acre-feet. No height for the dam is listed.

(1)

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U. S. Bureau of Reclamation, Region II, Basin Report, Santa Barbara County, California, Water Resources and Utilization. Sacramento, Calif., June, 1945.

Round Corral Dam Site is located on Siscuoo River 10 miles upstream from its junction with Cuyama River. The earth fill dam would have a gross storage capacity of 50,000 acre-feet. No height for the dam is listed.

The previously-cited Bureau of Reclamation report states that "It has been recommended that construction of the Round Corral Dam be delayed until the completion of the Vaquero Dam on the Cuyama River."

Fish Management and Conservation Program

The only fishes of sporting importance within the basin are the sea-run steelhead and the introduced interior-stock rainbow trout. The spawning run of steelhead enters Santa Maria River from the Pacific Ocean following the first heavy rains of the wet season. The largest numbers enter during the period December-March. In order to help maintain this spawning run, each year young steelhead rescued from the Santa Ynez River are stocked in various streams of the Santa Maria River basin. In 1944, 92,000 such fish were planted.

Interior-stock rainbow trout (Hot Creek and Lake Arrowhead) are planted each year in several streams of the basin, to provide summer fishing.

Probable Effects of Proposed Dams

Data regarding the locations and extent of the spawning grounds for sea-run steelhead are limited. However, it is known

that by far the largest part of the spawning takes place above the proposed Round Corral Dam, which would be located below all tributaries of Siskiyou River with the exception of Tepusquet, Foxen Canyon, and Labraa creeks. Therefore, it is evident that the dam would cut off practically all of the spawning grounds and virtually destroy the run, unless adequate provision were made for the safe passage of adult steelhead both up and down over the dams and of the young fish on their downstream migration. If the adults and young can be gotten safely past the dam some benefits to the steelhead fishery may be expected to result because of the increased minimum flows.

Properly regulated flow from the reservoirs would serve the double purpose of retardation of flow for percolation and providing flow for ascent of spawning steelhead and downstream migration of both adults and young steelhead at periods of low water.

The success of a reservoir sport fishery would be doubtful in the case of each reservoir. Inasmuch as one of the purposes of each dam would be the release of water for percolation, fluctuations of water level may be expected to be large. Because of the low elevations of the reservoirs, water temperatures may be too high for trout.

RECOMMENDATIONS FOR
PROTECTION OF FISHERY RESOURCES

A. SANTA YNEZ RIVER

Since Camuesa Dam is first in order of construction it can be considered first in its effects on fish and it is recommended that:

1. No fishway be provided over Camuesa Dam.
2. From the time when storage begins above the dam to the time of first flow over the spillway, a maximum of 5,000 acre-feet of water be made available for release during each water year as may be required for minimum stream flow maintenance.

If Cachuma Dam is constructed it is recommended that:

1. Adequate provision be made for the passage of fish upstream and downstream past the dam.
2. The outlet tunnel be adequately screened to prevent the passage of fish.
3. A minimum release of 15 c.f.s. of water be provided at the dam throughout the year.
4. Provision be made for this release both through the fishway or lowlevel outlet, as required.
5. It is not recommended that a hatchery be constructed unless there is a certainty that stream flows can be maintained which will permit adult steelhead to pass upstream as far as

Cachuma dam. In any event construction of a hatchery should not be necessary until Cachuma dam is constructed.

It is recommended that a survey be made to determine if the objectives sought by the construction of Santa Rosa Dam can be obtained by alternative methods. If Santa Rosa Dam is constructed it is recommended that:

1. Adequate provision be made for the passage of fish upstream and downstream past the dam.
2. A minimum release of 50 c.f.s. of water be provided at the dam throughout the year.

B. SANTA MARIA RIVER

It is recommended that:

1. No fishway be provided over Vaquero Dam.
2. Adequate provision be made for the passage of fish upstream and downstream past Round Corral Dam.
3. During the winter season sufficient water be released from both Vaquero and Round Corral reservoirs to permit steel-head to ascend from the ocean past Round Corral Dam.
4. Provision be made for the release of water from Round Corral Dam both through the fishway or low water level outlet, as required.
5. Summer releases of water for ground percolation be spread over as long a period as possible to maintain proper conditions in the streams.

It is further recommended for both the Santa Ynez and Santa Maria rivers that for all reservoirs in which reservoir fishing can be maintained provision be made for sport fishing and recreation by means of suitable roads, boating facilities, and recreational areas.