Can the Russian River be Saved?

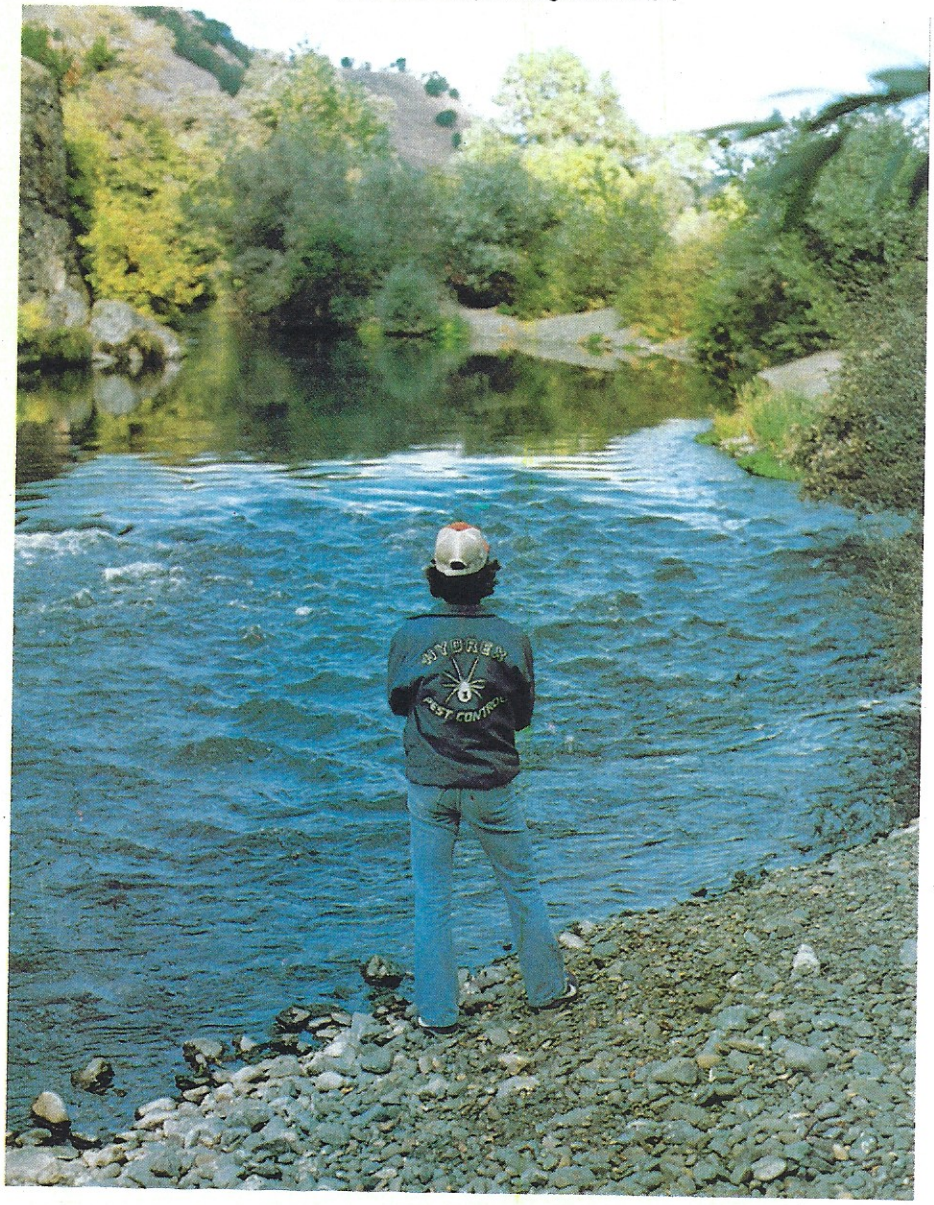
A controversial project might be the last ditch effort to save the river's diminishing anadromous fishery

By DON VACHINI

A damp mist hung low over the river, enshrouding leafless trees. The water was slightly murky, but clearer than the previous day. A long slick emptied into a large pool lined with between 15 and 20 anglers.

Wool caps, double layers of clothing and thermal underwear typified their dress as the mid-January morning temperature dipped very low. Despite the chill factor, they continuously plied their trade with roe, hardware and flies.

Besides salmon and steelhead, the river supports striped bass, shad, largemouth bass, catfish, sturgeon, bluegill, crappie and green sunfish.



There were occasional bellows and curses as lines became entangled, but also frequent shouts of "fish on" to keep all in a jovial mood. The long gravel bar was decorated with a scattering of large, mint-silver shapes. The metallic screech of a drag offering resistance to a large fish was a common sound, making it obvious that the group of fishermen had intercepted a run of steelhead.

This scene is reminiscent of many along the Russian River some 20 years ago. People from far and near came to sample its famed winter steelheading.

From my own experiences, I knew it to be an excellent producer on many occasions. It is close to my home, can be drifted fairly easily, and access is a problem in only a few areas. During its heyday, for a local water, it couldn't be beat.

Suddenly, almost without notice, things began to decline. Little by little, the steelhead fishing plummeted yearly to the point of now appearing almost non-existent. True, there are still spawners entering the river, but the runs are considered minimal, especially when compared to yesteryears. For at least seven years the river has lived with the "dying river" nickname.

In addition to steelhead and salmon (the river supports minimal runs of coho and possibly king salmon), there are striped bass and shad migrations. Joining these anadromous species are resident gamefish, including largemouth and smallmouth bass, catfish, sturgeon, bluegill, crappie and green sunfish.

The Russian River originates in the low mountains north of Redwood Valley and flows in a southwesterly direction for approximately 100 miles to enter the Pacific Ocean at Jenner-by-the-Sea. Flowing over a rock and gravel bed, it is protected by streamside vegetation including both evergreen and deciduous growth as it traverses both forestland and vineyards. Its width varies from 50 to 200 feet.

For the most part, it is a typical coastal stream – heavily dependent on rainfall for much of its flow. A heavy winter (one with plentiful rainfall) usually means good flow over the summer, whereas a dry winter usually results in low summer-fall flow.

The heavily-forested areas, predominant over much of its course, provide cool summer sanctuary for both resident trout and juvenile steelhead (although not all areas are well suited for trout habitat). The river's upper courses, up until the early 1960s, provided excel-

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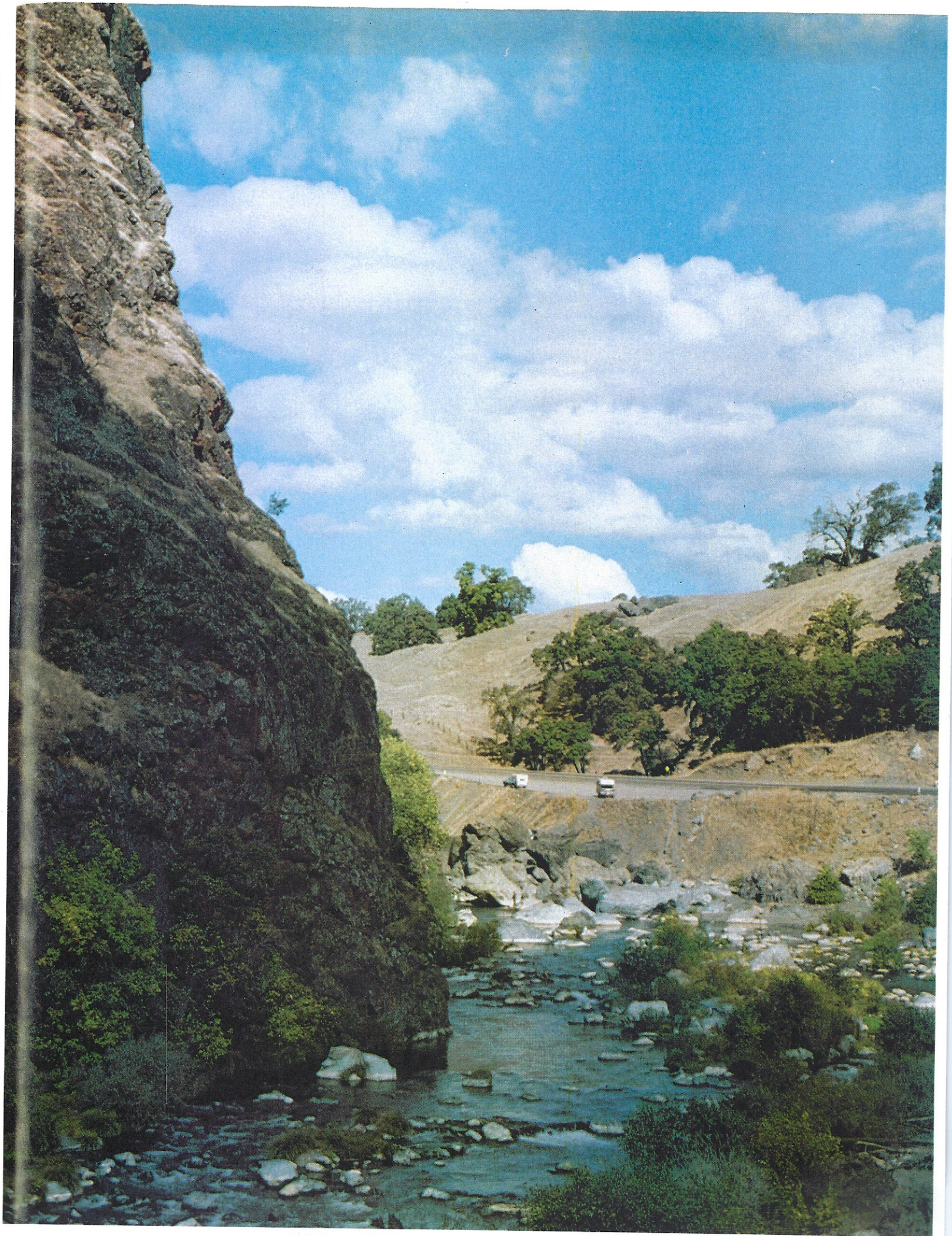

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lent spawning and incubating conditions. Even when floods devastated much of the river, they provided a cleansing effect and were a blessing in disguise.

Several factors contributed to the demise of the anadromous fishery. In 1959, Coyote Dam was completed on one of the Russian River's major tributaries, the East Fork. Located near Ukiah, the dam (which created Lake Mendocino) had two major purposes: 1) to control the devastating floods along the river, and 2) to serve as a water source for Sonoma and parts of Marin counties. However, this structure caused some problems for fishermen and fish. The main river's flow was cut back substantially, especially during summer months, and with that its cleansing effect too.

Since water released from the lake is drawn directly off the bottom, much silt is deposited directly into the river. To make matters worse, releases stop abruptly and in doing so allow the silt to settle directly on the gravel bottom, instead of being washed seaward. The result over the years has been the gradual siltation of prime trout habitat.

The county was rapidly growing in population during this time, resulting in the need for more water. A sewage treatment plant had problems with raw sewage accumulating in the river near the plant in summer months because there wasn't enough available water in the river to remove the effluent. Increased diversion for irrigation purposes below Coyote Dam further reduced flow, contributing heavily to a rise in water temperature. This was probably one of the biggest enemies of juvenile steelhead – heat.

Thus, far less than ideal conditions were thrust upon this water for a consistent period of around 20 years.

Another blow came in the form of back-to-back drought years (1976-77), reducing the river to a mere trickle for two seasons. The worst part of this was that most of the incubating tributary streams dried up totally or in part, thus destroying many immature steelhead as well as preventing spawning in them for two years.

Along with the drought plague came reports of illegal snagging, netting and collecting of what few fish made it upriver, further hindering future generations.

For years, locals had been noticing a progressive decline in the overall fishery (shad runs, once a budding fishery in the river, were on the rapid decline too). While the river certainly wasn't dead, it was very probably dying. Some other factors probably influenced the decline.

Summer dams, constructed during vacation time for over 40 years by the resorts, created obstacles for both spawners and returning fish.

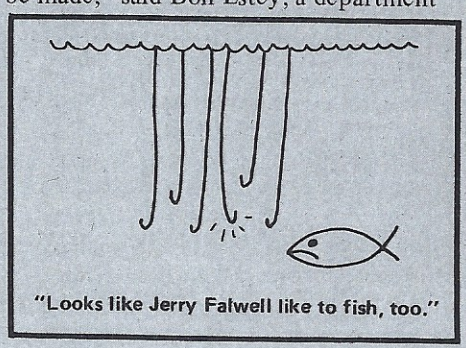
A catchable trout program (in the Squaw Rock area near Cloverdale) drew many people to the area, and in the process of catching planters also caught many "summer trout" (which were actually juvenile steelhead returning to sea).

Nature stacks the odds high enough against fish in a wild state. When man interferes to ruin habitat and other conditions, the odds against the fish soar even higher. While many factors combined to bring the fishery to its knees, there now appears to be a ray of hope on the horizon. At about the time locals were noting a reduction in fish (the early to mid-1970s), another proposed dam surfaced. It was to be built on Dry Creek, another main tributary to the Russian. It too was to be a water supply and flood control project, but, probably as a result of the Coyote Dam boondoggle, skepticism was high. Local fishermen, at the time of the proposal, felt that this would be the crowning blow to finish the river.

It soon became evident, however, that this project was quite different than many of those in the past. More thought and advance planning had been invested in the venture before any ground was broken. From a preliminary Environmental Impact Report (EIR), it was noted that salmon and steelhead spawning habitat would be destroyed on Dry and Warm Springs creeks.

Initially conceived in 1937 to combat flooding in Dry Creek Valley, Warm Springs Dam was authorized by Congress in 1962. Actual work began in 1967 and, after lengthy court battles and delays between 1974-78, it continues toward its 1983 completion date.

The dam is located at the confluence of Warm Springs and Dry creeks, about 12 miles from the main river. Obviously, the dam would eliminate steelhead migration past that point so a fish hatchery was included in the project to meet EIR requirements. "According to Federal law, anytime salmon or steelhead habitat or access is impaired, compensation must be made," said Don Estey, a department of fish and game staff member in charge of the hatchery. "This is usually in the form of a hatchery."



"Looks like Jerry Falwell like to fish, too."

Though a variety of groups initially opposed the whole project, it became evident to sportsmen that the dam and hatchery were necessary for future improvement of the now poor fishery. In 1978, a Sonoma County vote gave the final go-ahead to complete the project.

Warm Springs Fish Hatchery was completed by the Army Corps of Engineers in the fall of 1980 and turned over to the department of fish and game for management. The newest fish hatchery in California is also one of the more modern and unique. The facility is equipped with an ultra-violet light treatment system for its water to prevent and control disease in the fish at the hatchery. The hatchery is completely under one roof, the first of this kind in the state. "The roof eliminates a significant loss from bird predation," Estey stated, "as well as helping to keep the water temperature cooler during the summer months."

Warm Springs, which is equipped with holding tanks, fingerling tanks and raceways, has the capacity to raise 300,000 steelhead in addition to 200,000 king salmon and 110,000 coho (silver) salmon. The primary purpose of the facility is to maintain and increase the runs of steelhead and salmon that would be lost as a result of the dam.

"Steelhead are the main concern at this time. We are interested in obtaining a native wild strain to initially stock the hatchery," said Estey. The department of fish and game believes that to increase a particular watershed's fish population, fish native to that drainage best serve the purpose.

If this is the case, Warm Springs Fish Hatchery is well on its way to accomplishing this objective, as in January of 1981 hatchery personnel obtained a healthy take of eggs from 24 steelhead, the initial arrivals at the egg collecting stations. The eggs taken from these early arrivals alone can provide about 50,000 steelhead. "Although we expect more (fish), this show of fish is rewarding because we are just in the startup stage," beamed Estey.

"The hatchery will create a vast surplus of steelhead when fully established," according to Jack White, DFG information officer at the regional office in Yountville, "more than it can ever use."

Estey, speaking more conservatively, figures it will take at least five years to establish any significant runs back to the hatchery, but when this is accomplished it ". . . will hopefully rejuvenate bigger and better runs in the lower river."

To raise anadromous fish at this, or any other facility, requires plenty of water at the correct temperature. Although the hatchery is in operation and fully completed, work on the dam is still in progress. This is of some concern to both Estey and White. "We are dependent on a small amount of stored water behind the incomplete dam. Until it is finished, we are taking a gamble that there will be enough water to get us through until the rains come," said White. "When the dam is full there will be no need to worry," added Estey.

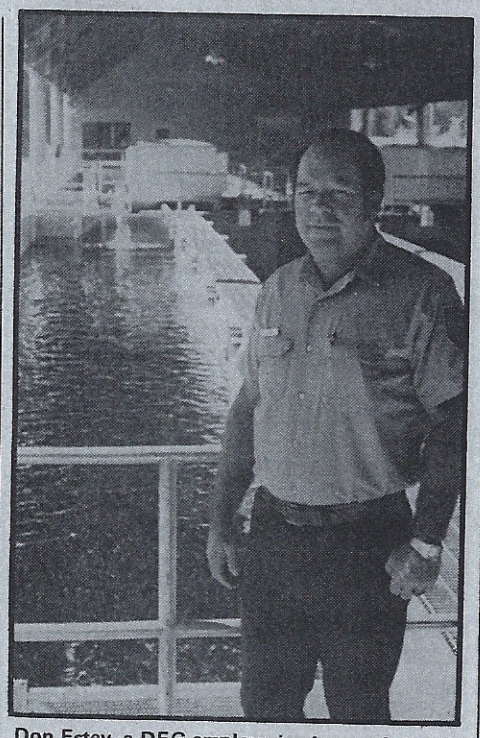
When full, the dam will solve two previous problems with its well thought out system. There is a multi-level tunnel setup that will enable water to be drawn from four different levels of the lake, providing the following benefits: 1) water temperature can be controlled before it enters the hatchery, as it can be mixed together in a central shaft to attain the desired degree, and 2) since no water is drawn off the bottom of the lake, no silt or mud will be deposited downstream. Thus the water for the hatchery, Dry Creek and eventually the Russian River will not only be cold but silt-free.

Here another plus for the Russian becomes evident. The releases from the dam will increase flows in Dry Creek and in the main river below its confluence. While minimum flow in Dry Creek has been established at 25 cubic feet per second (cfs), Estey figures an average flow of 50-75 cfs most of the time (after dam completion). A maximum flow would be 150 cfs, probably in winter.

The lake formed behind the dam (Lake Sonoma) is designed to hold enough water for recreational use, drinking purposes and hatchery management. No doubt the clean, cold water from the lake will aid the Russian River in terms of temperature, flow and probably ridding it of some sewage problems. "During late summer, water conditions in the river are questionable at best," according to Estey. "Increased flow at a cold temperature could conceivably improve the situation."

The ideal water temperature for hatchery use will be 55-58 degrees, and will be 60-63 degrees by the time it enters the main river near Healdsburg. "This will help somewhat," maintains Estey, "since the summer water temperature approaches 70 degrees at places in the lower river." Hopefully the river will benefit by providing juvenile steelhead with improved water conditions to survive as well as to journey to the ocean.

Some other steps besides the addition of fish and stable, cold water flows are being taken.



Don Estey, a DFG employe in charge of the hatchery, overlooks on of the indoor raceways. He estimates it will be between five and ten to ten years before significant runs can be established.

The summer catchable trout program has ceased and anglers are being encouraged not to keep "summer trout."

Fish ladders are being installed at various sites where summer dams impede progress. These ladders are expected to improve shad runs too.

Local sportsmen's groups are negotiating to have the hatchery plant surplus salmon and steelhead smolts throughout the upper courses as well as several suitable tributaries. The Ukiah Rod and Gun Club is working on this angle and Warm Springs has expressed an interest too. This would help re-establish stronger runs to the feeder creeks in the upper courses of the drainage.

Though the hatchery has established steelhead as a first priority, it also handles coho and king salmon. The river has maintained a small run of coho but king salmon are to be re-introduced. In the mid-1930s, kings were planted in the river for a period of several years. However, they failed to establish themselves and after planting ceased, they virtually died out in the early '40s. "The problem was," according to Estey, "that they were summer-run salmon, and most likely the unsuitable water conditions in the river at that time of the year did them in."

This time, the kings will be winter-run fish (the hatchery at this time has a token 10,000 kings imported from the Smith River). The kings would be established mainly for commercial and sport fishery purposes.

When asked about the long-range effects of the hatchery and dam on the Russian River, Estey was quoted as saying, "Now is not the time to make comparisons. At least five years, and possibly ten years, should pass before we look at the results."

Jack White states that ". . . while the dam and hatchery weren't established to renovate the Russian River, it now looks as though they will have an improving effect on the lower river. No doubt the stability of the flows will be helpful to the river."

In my opinion, it certainly bears watching in the near future, not only from the standpoint of producing surplus steelhead and salmon (White estimates the steelhead population will eventually triple as a result of the hatchery) but also from the habitat improvements. The river should be headed in the right direction.

In some not-so-distant future years, lines of happy anglers working a drift, amid screeching reels and shouts of "fish on" may again become a common scene on the Russian River. For this we can lend our thanks to the inclusion of Warm Springs Fish Hatchery into the Warm Springs Dam Project.

Warm Springs Fish Hatchery Update

Several days after the foregoing article was written for *STS* magazine, a tragic accident caused the hatchery to lose virtually all of its first year's efforts. A power failure lasting two and a half hours caused the loss of 155,000 baby steelhead and salmon. An emergency generator failed to function and since there was no power to circulate the water to provide sufficient oxygen, the fish suffocated. Approximately 95,000 steelhead, 50,000 coho and 10,000 king salmon were destroyed, with an estimated dollar value loss of $140,000. Only about 400 fish survived and were released into Dry Creek.

According to Jack White, "the stock can be replaced during the upcoming season, but the whole program is set back for at least three years." It is hoped that sufficient runs to replenish the facility will materialize this season to rebuild lost stock. When operating at full capacity, the hatchery will have three times the number of fish lost in the power failure incident. As Jim Monical, a department of fish and game employee stated, "I suppose it's better that it happened now than when we had a full complement."