

Salmon project faces funding cut

Work to safeguard vulnerable species is threatened

By CHELA ZABIN
STAFF WRITER

Monterey Bay Salmon and Trout Project, which has as its goal the restoration of native salmon and trout species in local waterways, would seem to have achieved every nonprofit organization's dream.

Since its inception in 1976, the project has raised and released more than 1 million young coho salmon and steelhead into local rivers and streams. It has 340 active volunteers and support from businesses, research institutions, local schools, recreational organizations and various government agencies.

But the project is in trouble. About 80 percent of its \$85,000 budget comes from the California Department of Fish and Game, and with state cuts, that money is being virtually eliminated.

Dave Streig, the fisheries biologist-hatchery manager for the project, and the only paid staff, said the project has been funded only through April. After that, he doesn't know what's going to happen.

"We're out hustling and fund raising now," he said. "The government funding for these programs is drying up."

Steelhead and coho, which used to live in just about every stream in the Monterey Bay area, now survive naturally in only a few creeks. Streig attributed much of the decline to development, dams and flood-control projects, which have dramatically affected the flow of water in local streams.

Development affects the water level in two ways: because of the greater amount of impermeable surfaces, there's a greater amount of run-off following storms, which dramatically raises creeks in the short term. But because there's less water percolating down into groundwater reserves — which ultimately reach creeks and streams — the general water level is lower.

Water flows can make a huge

difference in whether the fish will be able to successfully get into the rivers from the ocean and make it upstream to spawn, and whether their eggs, which need clean, flowing water, will survive.

The various droughts that have occurred over the last decade or two have also taken their toll on native fish popula-

the gene pool. Once the spawning has occurred, the adult fish are returned to their streams.

The fertilized eggs are then placed into an incubator, which consists of a series of trays with cool water from Berry Creek flowing over them. The little fish stay in the trays until they have hatched and "buttoned up," or fully absorbed their yolk sacks.

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— Dave Streig, project manager

tions, Streig said. But the effects of those droughts might not have been so severe if the streams hadn't already been altered.

In an interview this week at the project's hatchery at Big Creek in the Davenport area, Streig explained how the project works.

In line with the latest thinking about how best to re-populate streams with dwindling populations, the project is careful to keep stock from different streams separate and to return fish to the river that they, or their parents, came from. The idea is that fish in a particular stream have developed characteristics uniquely adapted to life in it.

The project captures adult fish from local streams and keeps them in the hatchery until the females show signs of "ripening," or readiness to spawn. The female fish are temporarily put to sleep and "milked" of their eggs, which are, in turn, hand-fertilized with sperm from the male fish.

Streig said the workers are careful to select a variety of sizes and ages of fish, in a mimic of what would occur in the wild, to maintain variety in

They are then moved to a series of long troughs and later placed in large, outdoor pools until they are ready to be returned to the wild.

The fish are tagged by the project before they are released, Streig said, and the project is careful not to bring those fish back for spawning. The idea is to interfere as little as possible with the natural selection that keeps a particular group of fish healthy, he said.

Streig and others working in his field were faced with an unusual challenge in the rearing of the coho salmon. Few of the coho eggs were surviving in either the wild or in hatcheries. Streig said eventually scientists realized that a bacterial kidney disease was the culprit, spreading from the female fish to her eggs in nearly every population of coho. The disease was "basically a stress disease" that would strike the fish as they made their transition to the fresh water creeks from the ocean to spawn, Streig said.

Now, Streig and others are experimenting with treating the females and their eggs with an anti-bacterial drug. Fertility rates have increased from about 40 percent or less to 80 percent,

he said.

The project has also begun a "Chinook enhancement program," which entails the raising of Chinook salmon and releasing them into the waters around Moss Landing. These salmon come from surplus eggs in another hatchery and are placed in the harbor to take some of the fishing pressure off of the native stock to help it come back.

The project also has an education component, much of which was developed by San Lorenzo Valley schoolteacher Barry Burt and Streig's wife, Janice, a teacher at MacQuiddy school.

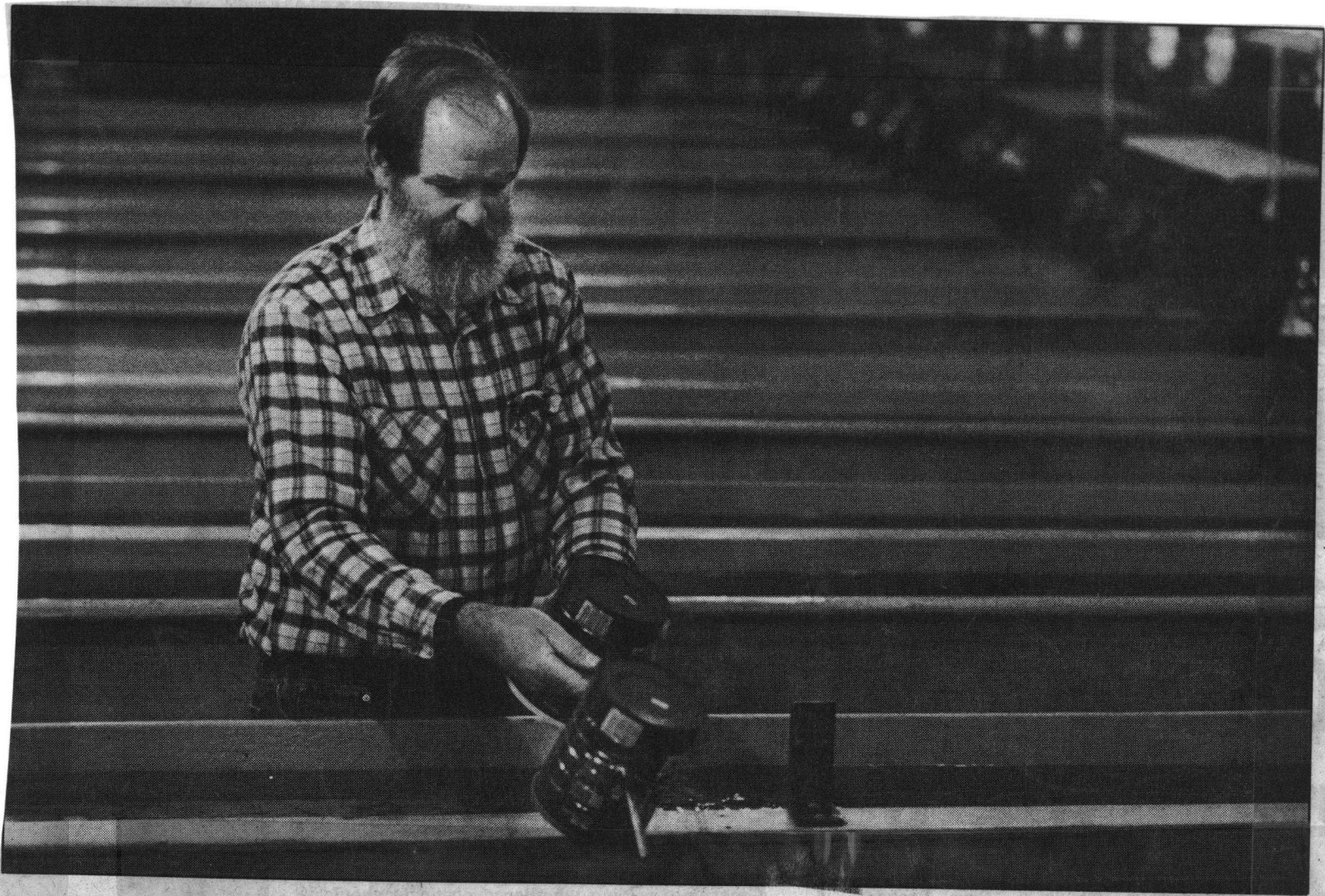
The program involves students raising, studying and releasing fish into nearby streams. There are now more than 50 schools — from the San Francisco Bay Area to San Luis Obispo and as far east as Modesto — participating in the program.

The project does some adult education, too, said Streig, such as giving talks at fishing clubs and meetings of other concerned groups.

One of the things the project pushes for with the recreational groups is catch-and-release fishing. Streig said many local fishermen, both commercial and recreational, have been strong supporters of restrictive fishing regulations because they understand the need to ease up on taking fish if the populations as a whole are to survive. In fact, these groups were among the founders of the project.

Other programs have included consultation with the county on riparian management and work on preparing a booklet for property owners about the do's and don'ts of developing around streams and creeks. There are also several demonstration sites at the hatchery that show how creeks can be made more friendly for fish and their eggs.

For more information about the project, call 458-3095.



Kurt Ellison

Dave Streig, the fisheries biologist-hatchery manager for the project, feeds some of his charges.