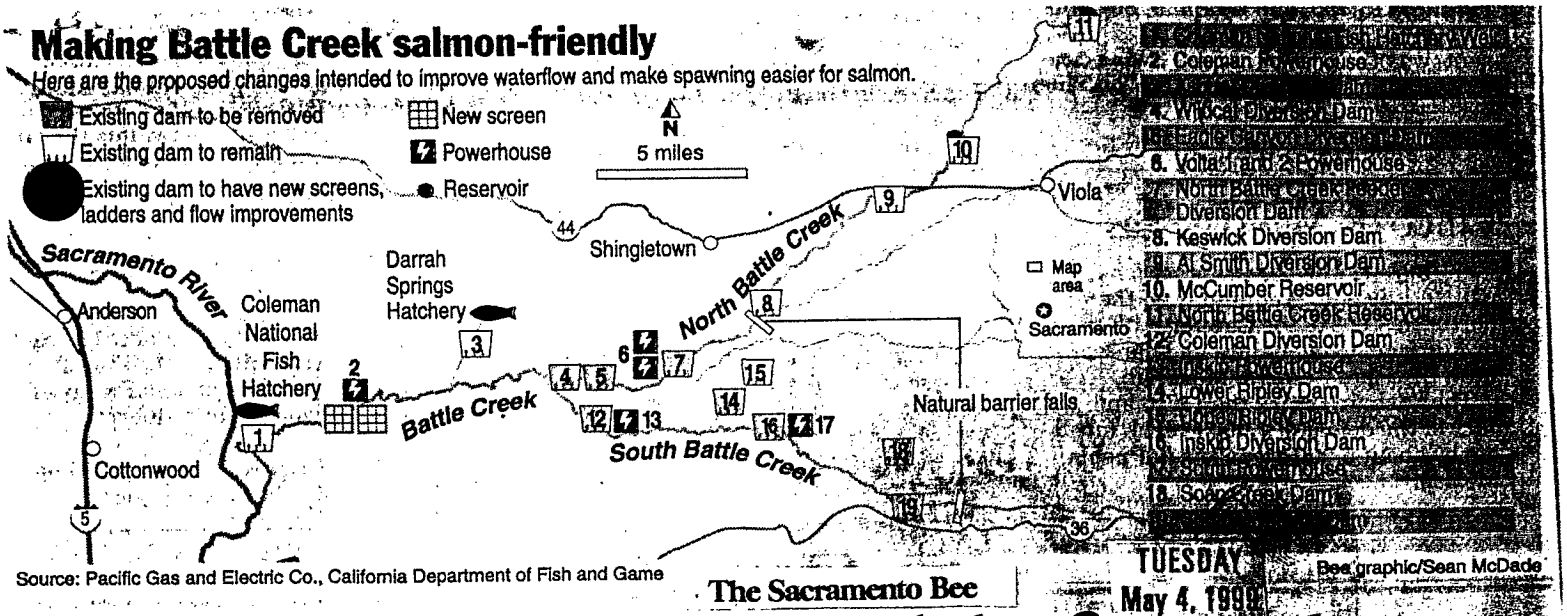


Dams may soon tumble for salmon

Battle Creek project on tap

By Nancy Vogel
Bee Staff Writer

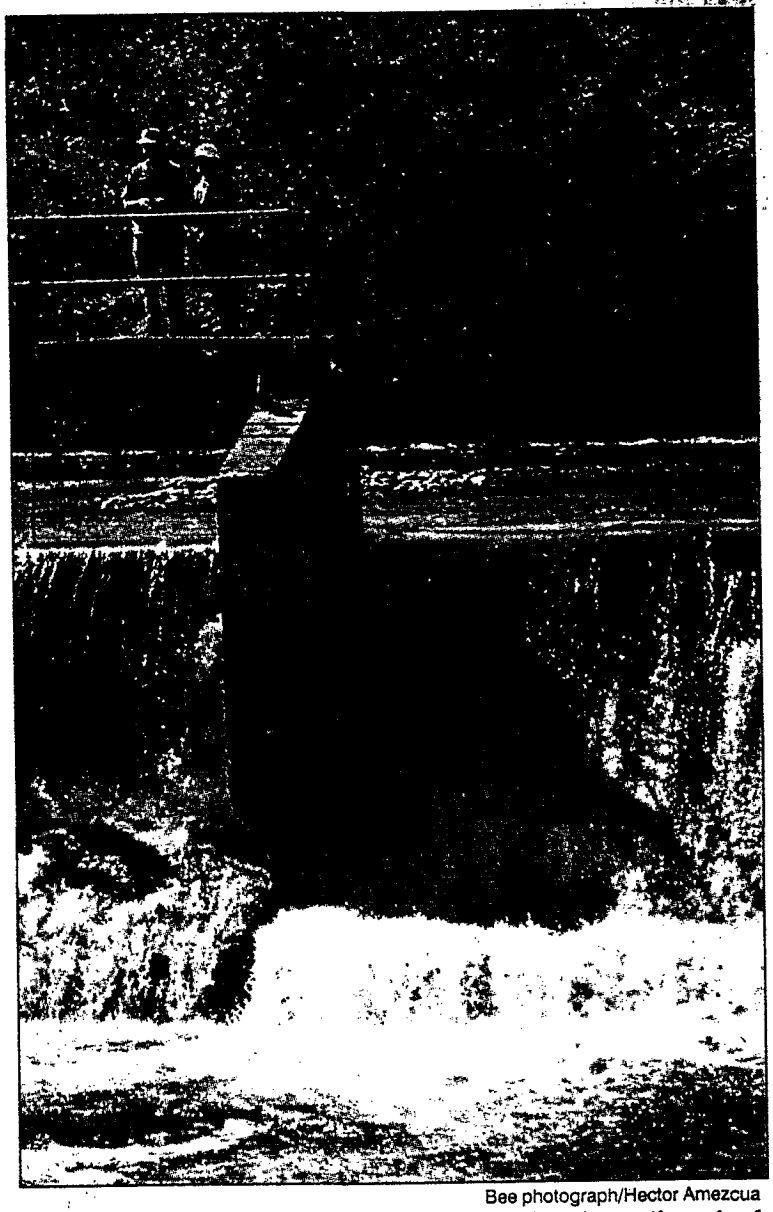
MANTON – Battle Creek may be the best insurance policy against extinction for Sacramento Valley chinook salmon.

In the hottest months of the driest years, it gurgles steadily with 52-degree springs fed by Mount Lassen snow. In its pools hunker 20-pound salmon that three weeks before may have been hunting herring 20 miles off the Pacific coast.

Three years from now, if state and federal wildlife agencies and Pacific Gas and Electric Co. have their way, the salmon hatching this year in Battle Creek will return to a more hospitable stream. Government biologists intend to drastically rework the system of dams and canals that turn Battle Creek into electricity.

The $50.7 million undoing of PG&E's Battle Creek network is the most ambitious salmon restoration effort under way in the Sacramento Valley and one of the most extensive dam removal projects in the country.

Five of 15 dams will be destroyed, including one in a canyon so deep the concrete may have to be hauled out by helicopter. A rambling network of tubes and canals that repeatedly drops water from the north fork to the south fork to spin turbines will be dismantled, no



Bee photograph/Hector Amezcua

The Coleman Diversion Dam on Battle Creek northeast of Red Bluff is to be torn down as part of a plan to give endan-

find their birth streams by scent.

Both forks of Battle Creek will run higher and cooler because PG&E will feed less water to its powerhouses. The project will cut by 25 percent to 35 percent the amount of power that can be generated on the 90-year-old system of dams.

But rewards are practically guaranteed, biologists say, because remnant populations of each of the four races of chinook salmon in the Sacramento Valley – two of them endangered and two proposed for listing – still use Battle Creek.

Sparsely settled and pocked with dependable cold springs, the rugged Battle Creek country between Red Bluff and Mount Lassen has the potential to once again become a drought-proof incubator, a reliable producer of salmon in a state desperate to bring back salmon runs.

"On Battle Creek," said California Department of Fish and Game fish biologist Harry Rectenwald, "you can always produce fish."

Biologists are heartened by their experience on Butte Creek, another Sacramento River tributary to the south, where four small dams were recently removed. Last year, 20,000 spring-run chinook salmon returned, the biggest run ever recorded on Butte Creek. Biologists cannot directly link the robust run to dam removal, but salmon hatched last year will find easier pas-

Bob Lee, with the Battle Creek Watershed Conservancy, hikes near Inskip Power House, which will be fitted with concrete stairs to allow salmon to go past the dam.

Bee photograph/ Hector Amezcua

Salmon: Project would open 42 miles of habitat

Continued from page B1

sage when they return to spawn.

Of all the streams that drain to the salmon highway that is the Sacramento River, Battle Creek most closely resembles the northeast tributaries that were sealed off by major dams, Rectenwald said.

Winter-run chinook salmon evolved to use the glacier-fed McCloud and Pit rivers north of Redding. There, icy waters kept eggs alive through summer. Today winter-run are forced to spawn 30 miles south, below Shasta Dam. In drought years their eggs have cooked in reservoir-heated water.

"Battle Creek is very much like a small McCloud River," said Rectenwald. "And since the fish can't get to McCloud anymore, in a drought it's important to have a place like Battle Creek."

Thousands of winter-run once spawned in Battle Creek, but the south fork isn't much use to them now, because 13-foot high Coleman Dam blocks the creek 17 miles upstream.

Under the plan now being negotiated between PG&E and the federal and state governments, Coleman Dam would be torn down. So would Wildcat, Soap Creek, Lower Ripley and South Diversion dams. Three other dams would be fitted with concrete stairs that allow salmon to jump the dam step by step.

Ultimately, 42 miles of ideal salmon habitat would be unlocked. Salmon would be able to spawn as far upstream on the north and south forks of Battle Creek as they did 200 years ago.

But government scientists see more than habitat on Battle Creek.

"It's a laboratory as well as a restoration project," said Dick Daniel, restoration chief for CalFed, a 5-year-old federal and state team trying to restore California's streams in order to stabilize water supplies.

Cattle ranchers own most of the land around the streams. There are no pesticide-dripping orchards, few sewage discharges and no mines trickling acid runoff.

The relatively pristine state of Battle Creek, said Daniel, will allow scientists to study how water pollution affects early survival of salmon.

CalFed would pay for more than half of the $50.7 million project. CalFed's ultimate river restoration plans could take 30 years and cost $2 billion. So far, money to fund hundreds of projects, from buying wetlands to installing fish screens, has been flowing out of the downtown Sacramento headquarters faster than progress can be made on the ground. That's why federal and state officials are anxious to showcase Battle Creek. Here they think they can get relatively quick, dramatic results.

"Most of these things take 10, 15 years," said James G. Smith, project leader for the U.S. Fish and Wildlife Service. "We've got something that theoretically could be done in less than five years, maybe even three."

Rectenwald said biologists have eyed Battle Creek for a decade but could do little more than dream of restoration until CalFed funding became available. The U.S. Bureau of Reclamation, Fish and Game, U.S. Fish and Wildlife Service and National Marine Fisheries Service – all CalFed partners – have been negotiating changes on Battle Creek with PG&E since 1995.

In January, they agreed on the basics: Which dams will come down, minimum levels of water flow, who pays for what.

A final deal could be struck within a month. It must then be approved by the Federal Energy Regulatory Commission.

In 2026, the license FERC gave PG&E to run its hydropower plants on Battle Creek comes up for renewal. But it could be opened sooner if wildlife agencies argue that the project harms salmon runs. Rather than square off against the agencies before FERC and risk stringent restrictions on water diversions, PG&E chose to negotiate a deal and share the burden of restoration with taxpayers.

"The pots of money allowed us to come into a partnership that will allow us to do more than would be done under FERC," said PG&E supervising engineer Jean Oscamou. "This is much quicker, too."

"It all comes together in a way that's better than an adversarial process," he said, "and meets the needs of the fish."

For its part, PG&E has agreed to forgo an estimated $20.5 million worth of electricity that could be produced until 2026. Built between 1900 and 1910 to provide power to mines and copper smelters, the Battle Creek system makes up only about 2 percent of the annual electricity PG&E generates on California rivers. It equates to enough electricity for 160,000 people for a year.

Negotiators hope to finish their work in May. Then an environmental assessment of the plan must be written. Ideally, say those involved, flows will be higher and dams could come down next year.

Few other streams in California could support both PG&E's powerhouses and resurging salmon streams. But dependable flow, pulsing through streambeds buried long ago by Mount Lassen's eruptions, make Battle Creek a rare, resilient place.

"This is a stream where all you have to do is put the water back," Rectenwald said. "The habitat is in perfect condition. And the hydrology is remarkable."