Steelhead restoration
Big plan to restore steelhead

Rick DelVecchio, Chronicle Staff Writer
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Stream barriers that broke the Bay Area's once-thriving steelhead population may crumble in one major urban habitat, and experts believe that the ocean-venturing salmon cousin could one day return in the thousands.

The habitat is Alameda Creek and its tributaries, a 670-square-mile watershed slung between some of the biggest peaks southeast of San Francisco Bay. Advocates say the system is big enough, wet enough -- and still wild enough -- to again support steelhead in numbers while serving man's needs for drinking water and flood protection.

Ocean-traveling steelhead are long gone from the headwaters. But genetically identical rainbow trout -- also known as landlocked steelhead -- thrive behind Calaveras Dam, whose reservoir in the chaparral-studded highlands has supplied water to San Francisco since 1916.

Last weekend, volunteers began collecting rainbow in the first step of a plan to jump-start the watershed's first steelhead run in 40 to 50 years. The plan calls for building a detour for fish around dams that block their way, then seeding the stream with long-trapped rainbow.

Biologists predict that the rainbow, some of which develop the large size and silvery sides of steelhead, will breed with fish migrating up from the ocean.

Both the landlocked and saltwater fish appear to be from the same steelhead subgroup ancestral to the Central California coast from the Russian to the Soquel rivers. The link encourages scientists to predict that Alameda Creek, unlike most urban streams, could sustain a large-scale native fish nursery almost from scratch.

"When this goes down, it will be an amazing feat," said Erika Cleugh, a state fisheries biologist. She is working with the Alameda Creek Fisheries Restoration Work Group, which includes representatives from government agencies, water districts and environmental groups.

The plan is one of most ambitious efforts to restore once-thriving fisheries in Northern California, from coho salmon in Marin County to salmon and steelhead in the upper Sacramento River watershed.

Wistful sportsmen led the charge to restore native steelhead as early as the 1950s but couldn't overcome public apathy. The politics changed when environmental laws put an end to stream degradation in the 1970s.

The steelhead has become known not only for its unmatched fight on a hook but as an emblem of the lost wild.

In 1997, the steelhead subgroup ranging from Sonoma to Santa Cruz counties was listed as threatened under the federal Endangered Species Act. This pushed agencies to take their first steps toward the goal of having the species sustain itself once more.

HABITAT DESTRUCTION

The worst blow dealt the fish has been the transformation of streams from meanders rich with pools into flood-control channels. The channels are useless to steelhead, which like to nest by beating out gravel beds where pools tail into riffles.

Fifty years ago, a wide and slow Alameda Creek eased through the historic town of Niles between clay banks fringed with willows. The setting was far from pristine, haunted by hoboes and heaped with rubble left by the builders of the transcontinental railroad.

But there was enough water and freedom for people and fish alike.

Hal Janssen, who was 8 years old then, used to ride his Schwinn bike to the stream. He'd entice the big fish with flies he made with chicken feathers from his grandpa's farm and his mom's sewing thread.

The fish almost always snapped the line in short order and ran off with Janssen's tackle. Still, Janssen would thrill at their flashing white mouths and airborne streaks.

"I learned everything right there as a kid," said Janssen, who would grow up to become a world-traveling professional flycaster, "and over the years they let it go to hell."

In other major bay steelhead streams, such as Coyote and Stevens creeks in the South Bay, some salmon and steelhead have always had at least limited freedom to spawn despite crowding by man. Alameda Creek is different.

DAMS SHUT OUT FISH

A concrete door in the form of a series of dams and flood-control structures slammed shut on migrating fish in the 1950s and '60s. The blocks prevented them from passing a lower stretch of watershed that has no place for them to spawn.

The few steelhead that make it up the creek's 12-mile-long flood-control channel after two to three years at sea run smack into a concrete wall -- the weir at the foot of the elevated BART tracks in Fremont.

The animals are equipped with olfactory spawning radar and porpoiselike power, but they can't get traction in the barrier's thin water flow even after the heaviest winter rains.

"It's personally difficult for me to watch," said Gordon Becker, an environmental scientist with the Center for Ecosystem Management and Restoration. "It's the embodiment of the life force."

HAND-CARRIED SURVIVORS

The only steelhead that have made it into Fremont's Niles Canyon since the 1960s are those few hand-carried. While the rescues may have had little effect on the steelhead population, they have left a powerful impression on the people involved.

"I've never felt anything like it," said Jeff Miller, who heads a volunteer restoration campaign called the Alameda Creek Alliance. "Just the raw power of nature in your hands. That's what got me hooked."

The idea is to let the silver-sided salmonids swim around the weir and other obstacles. The trip would be long and steep. But scientists think the fish can make it upstream to mingle with one another and with identical rainbow DNA.

They see new generations growing into smolts, and many venturing to sea for two to three years to become steelhead before returning to their natal waters to spawn.

FISH HIGHWAY PROPOSED

Steelhead restoration efforts on a smaller scale are scattered from San Diego to the North Coast. In the South Bay's Guadalupe River system, for example, steelhead and chinook salmon appear to be taking to a series of fish ladders recently installed by the Santa Clara Water District. The district has ordered up a survey to measure the health of the incoming fish.

In the Alameda Creek system, plans call for the U.S. Army Corps of Engineers to create an $8 million fish highway through six stream obstacles or hazards. Engineers this month proposed a design with two fish staircases and four screens to prevent fish from being swept into drinking-water collection ponds.

In addition, the San Francisco Public Utilities Commission is proposing to take out two old dams, one of them built on top of a mill dam that operated before the Gold Rush.

Once the detours are complete, only a concrete barrier at the foot of a power line would stand between the steelhead and the rocky pools of Little Yosemite in Sunol Regional Wilderness, at the fringes of the creek's headwaters.

Much of the upper headwaters are permanently closed to steelhead by dam works that remain vital to San Francisco's water supply. But a planned seismic upgrade of Calaveras Dam may result in the removal of a secondary dam on Alameda Creek, allowing steelhead to trace that stream to its source.

Activists are also campaigning to open steelhead habitat in the Arroyo Mocho near Livermore, arguing that the fish bred there historically.

"Give the fish half a chance and they'll come back," Miller said. "They're tremendously adaptable. They just haven't had the chance yet."

TROUT REINTRODUCTION

An ambitious plan to restore steelhead trout to the Alameda Creek watershed calls for fish

ladders to let migrating trout get around a series of dams (marked in cross-hatch on Alameda Creek). At the same time, a steelhead nursery would be created by mingling steelhead with genetically identical rainbow trout from Calaveras Reservoir far upstream. (marked and located on map)

E-mail Rick DelVecchio at rdelvecchio@sfchronicle.com.

