

Fish recovery depends on entire Basin

Researchers say dams, habitat restoration, other factors at play

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Removing four hydroelectric dams on the Klamath River alone will not restore salmon that call the Klamath River watershed home, says a researcher with the National Oceanic and Atmospheric Administration.

Dam removal would reopen hundreds of miles of habitat that have been closed for roughly a century. But the Klamath Basin contains a multitude of environments, from small streams to shallow lakes, that also need to be restored to keep salmon healthy.

And the dams are just one constraint people have put on the watershed. Their removal will not make other issues disappear.

“It really takes a Basin to raise a salmon,” said researcher Tommy Wells.

That statement doesn’t just apply to salmon, though. Numerous fish species — sucker, trout, sculpin, chub and other aquatic creatures — live in the Klamath River Basin and have been impacted by environmental changes over the past few decades.

More to do

Researchers and scientists at the Klamath River Basin Science Conference last week said restoration projects are under way to improve the conditions in the Basin, but still more needs to be done to protect the region’s diverse species.

Most people familiar with the Klamath Basin know of Chinook and coho salmon and the Lost River and shortnose suckers because of their value as commercial fish, their endangered status and their cultural value to tribes.

Many types of fish

But other fish also live in the river, its tributaries and lakes.

Scott Vanderkooi, fisheries biologist with the U.S. Geological Survey in Klamath Falls, said the Klamath Basin is home to the highest diversity of lamprey species in the world, from the Pacific lamprey to others living in the region’s lakes and rivers. There also are varieties of sculpin, minnow, trout and chub.

And many are under siege.

Salmon have seen increasingly smaller runs in recent years. Young suckers aren’t surviving to maturity, causing the reproductive population to age and grow smaller. And only one healthy population of bull trout remains in the Basin; the rest are considered at moderate to serious risk.

Dams

The Klamath River’s hydroelectric dams are a visible reason for some of the problems.

Salmon and other anadromous fish species haven’t been able to swim past Iron Gate Dam in Siskiyou County since it was built in 1962.

But there are other factors.

Vanderkooi said draining two-thirds of the marshes around Upper Klamath Lake for agriculture shifted the trophic, or nutritional, habitat of the lake. Nutrientrich waters were so rich that toxic algal blooms occurred, causing tissue death in young suckers.

Introduced species, such as catfish and perch, led to increased competition for resources and predation of native species.

Humans also over fished the Basin. This was especially true of salmon, which are still fished commercially, as well as suckers, which were promoted as a game fish in the 1960s and were processed by a cannery on the Lost River.

“It really shouldn’t come as a surprise to us that this led to population level changes in native fish,” Vanderkooi said.

Salmon hatcheries on the river led to a temporary boost in salmon runs for a while, researchers said, but they’re declining again and there’s evidence that introduction of hatchery fish is making the overall species unable to survive as well as before.

Restoration projects

Vanderkooi said about 400 restoration projects have taken place in the past 15 years in the upper basin. Efforts include fencing off streams to keep out cattle, removing the Chiloquin Dam and reflooding the Williamson River delta.

More needs to be done, though, and that includes altering perceptions about restoration, Wells said. Short-term improvement in fish populations isn’t going to lead to long term sustainability of a species.

“We need to move away from just focusing on abundance,” he said.

Vanderkooi called dam removal a good step, but said it would likely impact fish as well. For example, lower Klamath River salmon and upper Klamath River fish species would need to co-exist again after nearly 100 years of separation.

Josh Strange with Yurok Tribal Fisheries said it’s important that other viewpoints be taken into consideration. He said his stepfather, a Yurok tribal elder who fished the region’s fisheries for decades, is one example of the spiritual and cultural importance of Basin’s biodiversity.

“This isn’t just about the economic impacts of issues in the Basin,” Strange said.

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