

# Lake Washington sockeye hit record low, another signature Seattle fish at brink of extinction

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They are as Seattle as the Space Needle. But Lake Washington sockeye, once the largest run of sockeye in the Lower 48, are failing.

The smallest run on record returned to the Cedar River in 2020, a bottoming out after years of declines. There hasn't been a fishery on Lake Washington [sockeye](#) since 2006—and now extinction looms.

What's worse is scientists are not even sure how to fix it, as a vortex of climate change, urbanization and predators endangers a beloved species.

Some 22,950 sockeye were counted at Ballard's Hiram Chittenden Locks in 2020, but only about 3,000 made it to the mouth of the Cedar. Another 40 to 50% of those fish typically die on the spawning grounds before they can reproduce.

Not even a \$31 million hatchery project by Seattle Public Utilities—built in 2011 to replace a failing interim hatchery—has delivered the rescue

expected.

It's not only Seattle's storied summer sockeye run that is at risk. Lake Sammamish kokanee are on life support, circling in a tank in a captive brood on Orcas Island. Local steelhead are goners. The watershed's chinook run is at 10% of historic levels. The sockeye are the standout example of a more worrisome decline in what once were abundant salmon runs in Seattle and beyond.

"The salmon can't speak, and they need someone to speak for them, and protect them," said Jason Elkins, chairman of the Muckleshoot Indian Tribe.

"It's not just the sockeye, all of the salmon are significant to us, we don't want them only for ourselves, we want them for everyone to enjoy. We are salmon people. It is our way of life."

Donny Stevenson, vice chairman of the council, has worked for his tribe for 25 years. He is among the last of the generations at Muckleshoot that went from growing up in a home without running water to being able to buy a new house.

But the tribe is not willing to substitute its new prosperity for its old wealth: the abundance of the salmon that feeds the rivers, the soils, the animals, the land and the spirit of the tribe.

The tribe knows coexistence is possible: Its work rebuilding chum runs at its Keta Creek Hatchery has powered a fishery for the tribe that also benefits recreational fishermen who throng the Green River every fall to catch a tasty chum for the smoker.

Chum returning to the Green River, which flows into the Duwamish, also are crucial autumn fare for southern resident orcas that appear in the urban

waters of Seattle every fall, hunting chum and other salmon. But the orcas that frequent our waters also are facing extinction, in part because they can't get enough salmon to eat.

"In a generation we have gone from times of plenty, to these fish being on the brink of extinction," Stevenson said. "Our people have been here for thousands of years, hundreds of generations. We have found a way to exist in this environment. This is about balance."

Paul Faulds, water planning and program management interim director at Seattle Public Utilities, has staked his career on Lake Washington sockeye, investing 20 years in the sockeye program at SPU.

The utility is in the middle of the Lake Washington sockeye rescue because of Seattle's Landsburg Diversion Dam built in 1901 on the Cedar, to which the sockeye return. The Cedar provides drinking water to two-thirds of SPU's 1.4 million customers in the greater Seattle area.

It is fresh mountain water, never filtered except by the forests preserved on the flanks of the Cascades, in a 90,638-acre watershed reserved and protected for public use as the city's water supply by the founders of Seattle, more than a century ago.

Only a few cities in the country are as fortunate as Seattle to have such a pure and delicious water supply.

A portion of the returning sockeye run is collected from the Cedar and taken to a hatchery each year to artificially spawn a new generation—but the fish are not allowed above the dam.

Incredible as it seems now, the utility would never allow sockeye above its dam because managers were worried the fish would spawn in such high numbers, they could pollute the drinking water supply.

"I am continually blown away, thinking that was really a concern," Faulds said.

Today the worry is that the fish can't beat the combination of climate change that is warming the water in the lake and Lake Washington Ship Canal to lethal temperatures; urbanization of the lake; and surging predator populations gobbling juvenile salmon. The threats intertwine.

But what is happening to the adult sockeye, such that so many never even make it to the Cedar River—where even more then die?

Scientists don't really know, but posit a combination of warm water, stress and disease is the cause.

Meanwhile, SPU has already run through most of its \$31 million fund to operate the sockeye hatchery. The fund was supposed to keep it going until 2050—but there is only about \$4 million left, Faulds said.

Everything turned out to be so much more expensive than anticipated, from building the hatchery to running it. "We figured it would be \$300,000 a year to operate, and it is double that," Faulds said. For a hatchery where most of the equipment sits idle, for lack of sockeye eggs as the run craters.

"We have 130 empty incubators sitting in a huge building," Faulds said.

Jim Scott, special assistant to the director of the Washington Department of Fish and Wildlife, grew up on the shores of Lake Washington, in Renton, playing around the [lake](#) as a kid, and fishing for sockeye from a rowboat. "It is part of me, I would say, and my family.

"It's beloved," he said of the sockeye run. "It's right on the doorstep of Seattle and all the communities in the area. You had the opportunity for a dad like my dad, who would come home after work, to take the family out on Lake Washington, and in the good old days, pull out a sockeye for dinner."

Lake Washington sockeye are a seasonal rite, with families watching for the flash of crimson in the Cedar River as the spawners come home in the fall. "Salmon is just part of me, of the water," Scott said—part of the salmon culture of Seattle, he

added.

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A generation of this region voted to tax themselves to clean up Lake Washington, which used to be a murky mess. Raw sewage kept swimmers on the beach.

That commitment to making things better makes it all the harder to see the present turning point toward worse. "It is this change in the landscape that is making it more and more difficult for salmon to persist," Scott said.

The tribe and the department are willing to try just about anything. A leaky pipe dispersing cold water carried from the depths of Lake Washington to the ship canal is one idea, still just on paper.

The tribe and the state are partnering on a trial run of holding sockeye longer in the hatchery, to grow a beefier smolt they hope will have a better chance at survival.

But Scott is careful not to oversell either rescue; he knows what these salmon are up against.

The cleanup of Lake Washington in the 1960s shows what can be accomplished when the public is engaged and supportive. But some wonder if that commitment is still there.

"Shouldn't we all wake up here? These fish are disappearing before our eyes, shouldn't people be concerned about this?" said Larry Phillips, a champion of salmon when he was on the Metropolitan King County Council. In deepest blue Seattle, with one of the greenest city councils and county governments in the nation, he can't believe it has come to this for the city's signature fish.

Max Prinsen is chair of the Cedar River Council, which stewards the river. He sees a problem of ownership, with multiple cities and agencies in the watershed where the sockeye need to survive. "Everyone wants to divert and point the finger somewhere else," Prinsen said. "Until we take ownership of the issue we are not going to solve the problem.

"Sockeye belong to everyone."

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