

Low steelhead numbers cause concern

By **BRADLEY W. PARKS**
Oregon Public Broadcasting

It's an extremely tough year to be a steelhead.

Fish are returning from the Pacific Ocean back to their freshwater spawning grounds in some of the lowest numbers on record, prompting widespread fishery closures and dire warnings of a race toward extinction.

On the Columbia River, just about 54,000 steelhead have made it past Bonneville Dam as of this week. The count so far this year is less than a third of what it's been the past 10 years on average.

"It seems like the bottom has just dropped out on steelhead," said Laurie Weitkamp, a research fisheries biologist with the National Oceanic and Atmospheric Administration in Newport.

Columbia River steelhead runs have been gradually shrinking for the past decade, so a small run this year comes as little surprise in that regard. The dismal state of this year's runs have exposed a critical gap in our understanding of steelhead and how they live.

Like salmon, steelhead are anadromous. Steelhead are born in freshwater ecosystems and undertake a long migration out to sea when they're about the size of a grocery-store zucchini. They navigate waters through deserts and forests, over mountains and dams and out to sea.

After spending a few years in the ocean growing big and strong, steelhead return to freshwater to spawn, and the cycle starts again.

"There are many places in the life cycle of steelhead and salmon where things can go wrong because they use this incredible landscape and waterscape throughout their lives," said Nate Mantua, a research scientist for NOAA in Santa Cruz, California.

Steelhead are not salmon; they're trout, but the two are so similar that they're often spoken of in the same breath. Pinpointing what's going wrong for steelhead requires close examination of how the fish are different.

Thomas Buehrens is a senior research scientist with the Washington Department of Fish and Wildlife and



Oregon Department of Fish and Wildlife

Columbia River steelhead runs have plummeted.

said coho salmon, in particular, provide the best point of comparison.

"In previous years, steelhead and coho haven't been perfectly positively correlated," Buehrens said, "but good years for one have often been good years for the other."

Coho salmon and steelhead both exit river systems into the ocean around the same time of year at around the same size. They initially face the same predators and the same ocean conditions.

But then comes the key difference: Coho, as well as other salmon species, typically remain close to shore for their marine life. Steelhead, on the other hand, jet way out into the deep blue, off the con-

tinental shelf.

Coho are having a relatively good year, with returns well above the 10-year average so far.

Dams in the Columbia basin have severely disrupted salmon and steelhead habitat, which has been perhaps the single-largest contributor to the fish's long-term population decline. Overfishing hasn't helped either. But Buehrens noted it's difficult to attribute rapid swings in run size to either of those factors.

"We haven't made any major changes to those variables on the timescales that we've seen this short-term collapse of steelhead or the short-term uptick in coho," he said.

That's led many researchers, including Buehrens, to think this year's steelhead struggles started somewhere in the ocean.

"It implies the problem's not where (coho and steelhead) are found together, but it's once the steelhead are parting ways with the coho," he said.

The ocean life of steelhead is clouded in mystery.

Conducting research that far out in the ocean is hard and labor-intensive. The ocean is huge, and NOAA's Laurie Weitkamp said even finding steelhead — let alone learning the more intricate details of their marine life — is a tremendous challenge.

"The whole steelhead ocean ecology is a black box," she said. "We really do not know anything."

Steelhead could be having a bad year because of increased predation, insufficient food, marine heat waves, disease or any number of things. Weitkamp said scientists can't know for sure until they figure out where steelhead are.

Filling in the knowledge

gaps about steelhead can help us understand how the fish will respond to increasingly volatile oceans, added NOAA's Nate Mantua. Humans' relentless burning of fossil fuels has driven climate change that's contributing to turbulent ocean conditions.

"We're not going to be able to turn that around any time soon," he said. "Not in our lifetimes. We might put the brakes on it and get on a better track for what the future holds, but these fish are going to have to deal with a lot of climate change, a lot of ocean change."

Mantua added that we already have a clear picture of what steelhead — and salmon, for that matter — need to survive and adapt in a changing climate.

"They need that incredible diversity of life histories that existed in the best populations," he said. "And we know that that diversity of life histories comes from really diverse and connected habitats ... and that is sorely lacking in the Columbia basin and on the Washington side, the coast and Puget Sound."

Idaho expands health care rationing over virus

By **REBECCA BOONE**
Associated Press

BOISE — In another ominous sign about the spread of the delta variant, Idaho public health leaders on Thursday expanded health care rationing statewide and individual hospital systems in Alaska and Montana have enacted similar crisis standards amid a spike in the number of unvaccinated COVID-19 patients requiring hospitalization.

The decisions marked an escalation of the pandemic in several Western states struggling to convince skeptical people to get vaccinated.

The Idaho Department of Health and Welfare made the announcement after St. Luke's Health System, Idaho's largest hospital network, asked state health leaders to allow "crisis standards of care" because the increase in COVID-19 patients has exhausted the state's medical resources.

Idaho is one of the least vaccinated U.S. states, with only about 40% of its residents fully vaccinated against COVID-19.

Crisis care standards mean that scarce resources such as ICU beds will be allotted to the patients most likely to

survive. Other patients will be treated with less effective methods or, in dire cases, given pain relief and other palliative care.

A hospital in Helena, Montana, was also forced to implement crisis standards of care amid a surge in COVID-19 patients. Critical care resources are at maximum capacity at St. Peter's Health, officials said Thursday.

And earlier this week Providence Alaska Medical Center, Alaska's largest hospital, also started prioritizing resources.

Thursday's move in Idaho came a week after state offi-

cial started allowing health care rationing at hospitals in northern parts of the state.

"The situation is dire — we don't have enough resources to adequately treat the patients in our hospitals, whether you are there for COVID-19 or a heart attack or because of a car accident," Idaho Department of Welfare Director Dave Jeppesen said in statement.

He urged people to get vaccinated and wear masks indoors and in crowded outdoor settings.

"Our hospitals and health care systems need our help," Jeppesen said.

In Idaho's St. Luke's Health System, patients are being ventilated by hand — with a nurse or doctor squeezing a bag — for up to hours at a time while hospital officials work to find a bed with a mechanical ventilator, said chief medical officer Dr. Jim Souza.

Others are being treated with high-flow oxygen in rooms without monitoring systems, which means a doctor or nurse might not hear an alarm if the patient has a medical emergency, he said. Some patients are being treated for sepsis — a life-threatening infection — in emergency

department waiting rooms.

The normal standards of care act as a net that allows physicians to "carry out the high wire acts that we do every day, like open heart surgery and bone marrow transplants and neuro-interventional stroke care," Souza said. "The net is gone, and people will fall from the high wire."

One in every 201 Idaho residents tested positive for COVID-19 over the past week, according to a tally by Johns Hopkins University. The mostly rural state ranks 12th in the U.S. for newly confirmed cases per capita.

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