

Lake

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said. "That's why we're asking for input from the community."

Why is this happening now?

Corps officials say they are legally required to undertake this type of project.

Some background:

There are 13 dams and reservoirs in the Willamette River drainage that were built in the 1950s and '60s, primarily for flood control, hydroelectric power, and water storage.

The dams cut off prime spawning habitat for wild steelhead and chinook salmon above the dams, while degrading the remaining habitat downstream. A steep decline in the number of wild fish led to their protection under the federal Endangered Species Act.

A legal agreement was reached in 2008 called the Biological Opinion. It requires the Corps to take steps to improve habitat for wild salmon and steelhead even as their numbers continue to plummet.

Winter steelhead, for example, returned about 16,000 fish each year to the Upper Willamette Basin in the 1970s, according to numbers at Willamette Falls Fish Count. That number dropped to 5,200 fish per year since 2010, and only 800 returned last winter.

This year is expected to be even worse.

"We've reached the point where, unless we take some action, we may condemn this run to extinction," said Dr. Shaun Clements, senior scientist and fish policy advisor for the Oregon Department of Fish and Wildlife in a story published last August.

Native winter steelhead are separate from hatchery-raised summer steelhead stocked in the North Santiam.

What are the problems with the dam?

Two steps Detroit Dam is required to take, under the Biological Opinion, are improving water temperature and fish passage into the North Santiam River.

Here's why:

Current releases from Detroit and Big Cliff dams are often too cold for spawning fish during the summer, and too hot in autumn, according to project documents. As a result, fish sometimes don't spawn, or their eggs die or hatch too early.

Fish passage through Detroit Dam is also inadequate, according to the Biological Opinion. Right now, biologists trap salmon and steelhead at the Minto Fish Facility, on the North Santiam below the dams. They drive the fish above the reservoir in trucks and release them into high-quality habitat in the upper river.

The problem is that during the juvenile fish's journey back to the ocean, they often cannot pass through the Detroit Dam. They can die in turbines or simply get stuck in the reservoir.

How does this project address the problems?

The first phase of the project focuses on improving water temperature by building a tower, near Detroit Dam, that will be 250 to 300 feet tall.

Known as a "temperature control tower," the structure would take in water from different levels of the reservoir pool, mix it together, and send it downstream at the desired temperature.

The Corps says the water temperature would stay uniform through Big Cliff Reservoir before being released into the North Santiam.

The second phase of the project would include attaching a floating structure, similar to a barge the size of a football field, with a floating screen to capture juvenile salmon and steelhead moving downstream.

"The floating structure out here would eventually collect fish by making it look like a waterfall," said Jeff Ament, the Detroit project manager.

"When juvenile fish come downstream they're looking for a waterfall and not a pipe in the dam 200 feet below the surface that goes through turbines."

After the fish were collected, they'd either be transported downstream in a bypass pipe or a truck.

Drying out Detroit Lake

The biggest concern over the project centers on building it, because it will likely require draining the reservoir close to empty for an extended period.

The Corps is considering five alternatives for construction, many of which require dropping the reservoir to 1,310 feet above sea level.

An elevation of 1,310 feet at Detroit Lake is extremely low — far lower than any boat ramp or even the low-water winter level of 1,450.

In the drought-stricken 2015 year, for example, Detroit Lake hit its lowest summertime level in history at 1,425 feet.

This would be more than 100 feet lower.

"There would still be some water coming down through existing channels, so fish would still come down," Conning said. "But it would be dry at all boat ramps and through most of the reservoir. Any water left will be pretty hard to get to."

Such little water being held in Detroit Lake creates a number of potential problems.

Not only would there be almost no recreation — boating, swimming, fishing. But there are also big questions about the impact to water supply in Salem and Stayton, farmland irrigation, hydroelectricity and the economic struggle in Detroit from a loss of tourism.

So, how long will it stay empty?

The biggest question is how long the Corps will keep Detroit Lake low during construction.

In planning documents, the cheapest and safest plan would keep the lake at 1,310 feet for two full years. A similar project at Cougar Reservoir took three years.

Ament, the project manager, said three years wouldn't work at Detroit Lake.

"It's easiest to draw the reservoir down and build all of this on dry ground, but recognizing the economic impacts that would happen to this area, we understand that it's probably not the way to do this one," Ament said.

The plans with shorter construction timelines center on having the reservoir at 1,310 feet for one summer or two years at reduced elevations.

In what's called "alternative 2," for example, there would be one dry summer to install the tower's foundation, while constructing the remainder under water. Another plan could include using a coffer dam to protect construction, or building in the off-season.

Only one plan calls for normal reservoir levels throughout, which would involve building the tower using underwater blasting. That alternative appears most unlikely due to "high safety and implementation risks."

All scenarios with just one season of a dry Detroit Lake carry greater risk, Ament said, and could easily last longer than expected.

"If we're working in the winter and a giant storm comes through, we'd need to evacuate all the crew and construction to stop a flood downstream," Ament said. "To a large extent, we're still at the mercy of Mother Nature."

City water supply and irrigation problems

The cities of Salem and Stayton, along with more than 800 farms, all get

water from the North Santiam and Detroit Lake.

The proposal from the Corps raises major concerns, Santiam Water Control district manager Brent Stevenson said.

Such a limited amount of water stored at Detroit Lake could mean conditions far worse than during the 2015 drought, he said.

"In reality, what they're proposing is almost an impossibility," Stevenson said. "It could create severe water shortages."

"We don't have all the information and I'm sure there would be mitigation strategies put in place. But it sets up a scenario where there's either no water in the river for fish, or no water at all for the City of Salem, schools and a district that includes 17,000 acres of farmland."

The City of Salem is taking the plan "very seriously" and is "carefully studying it," city spokesman Kenny Larson said. Larson said Salem would release its comments on the project next week.

Ament said the Corps will study the requirements of cities and agriculture in the next phase of the process, an Environmental Impact Study.

"This is one of the big challenges we're faced with," he said. "If we have this low of a pool, can we hit these downstream targets? That analysis is one of the things that comes next."

Economic disaster in Detroit

Businesses in Detroit have survived bad years, says Paul O'Donnell, owner of Mountain High Grocery.

Dependent on summer tourism from recreation at Detroit Lake, the city has endured economic hits from drought in 2015, low water in 2016 and wildfires in 2017.

The prospect of additional summers without the lake is a terrifying prospect.

"This scares the hell out of everybody," O'Donnell said. "We could lose businesses in Detroit, and this will hit the rest of the Santiam Canyon hard as well."

Business owners said they could probably survive one lost summer. That's why they've focused on trying to get the Corps to consider a plan that doesn't keep the lake dry for multiple years.

"If you lose the lake for two or three years, that's going to change people's habit of coming out here," O'Donnell said. "They'll go somewhere else, like Green Peter or Foster reservoirs, fall in love with it, and never come back. It would take a long time to rebound."

The economic hit would be wide-ranging, said Eric Page, who owns a house and vacation rental in Detroit.

"Think of the overwhelming impact: restaurants, marinas, hotels, the state park," he said. "It's a big hit, and I don't feel like the Corps has shown any real concern."

Will the project save fish?

One of the most contentious issues is whether the \$100- to \$250-million project will actually improve conditions for fish.

The Corps says it will, and pointed to Cougar Reservoir on the McKenzie River as an example of success.

"When Cougar dam was built, without temperature control, no adult fish returned to the base of the dam," Ament said.

"Once the temperatures were corrected, adult fish were spotted at the base of the dam, and a new adult collector was built that successfully collects fish."

Other examples are less promising.

Round Butte Dam, at Lake Billy Chinook, is the subject of a lawsuit that says the withdrawal tower — the same device planned for Detroit — creates worse water quality in the Deschutes River. A judge recently allowed the lawsuit to move forward.

"It mixed together water with all these different nutrients and ended up creating problems such as algae," said

Conrad Gowell, with the Native Fish Society. "It had unintended consequences we still don't really understand."

Gowell said fish passage through Lake Billy Chinook has not been successful, with passage rates as low as 30 percent for chinook and 7 percent for steelhead.

There's no reason to believe the project will be more successful at Detroit, he said.

"It's a lot of money spent on infrastructure that comes without sufficient evidence of success," he said.

Environmental groups have said the only way to return healthy runs is to allow fish to migrate upstream and downstream on their own volition.

"When fish are driven around a dam in the back of a repurposed septic truck, they are no longer self-sustaining," wrote Mark Sherwood, executive director of the Native Fish Society.

How to make your voice heard

The best way to have an impact on the project, Corps officials said, is to submit substantive public comments before the January 23 deadline.

"The number of negative comments an agency receives does not prevent an action from moving forward," said Kelly Janes, Corps Environmental Resource Specialist. "Comments that are solution oriented and provide specific examples will be more effective."

Conning, Corps spokesman, suggested impacted businesses point out details such as how much revenue they could lose per year, how many people they'd lay off and how much they pay in taxes yearly.

"The more substantive the comments are, the more weight it will carry," Conning said.

Timeline

The Corps is currently in the earliest phase of this project. In the coming year, they'll develop a range of alternatives using public comments, and in 2019 develop a preferred plan that will be subject again to public comment.

A decision and plans are expected around 2020 while construction would begin around 2021.

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Stealing

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expires in June.

According to court records, the Oregon Department of Justice began investigating Hall in 2017 and that the thefts took place over several years.

Hall's attorney Paul Ferder filed a motion for dismissal in December after Hall agreed to a civil compromise with Mt. Angel Community Foundation President Lori Pavlicek. According to the agreement, Hall reimbursed the foundation \$62,000 in damages.

Ferder said Hall "immediately acknowledged his wrongdoing" and returned the property taken from the nonprofit.

However, Partridge denied the motion for dismissal on Dec. 18 and sentenced Hall Tuesday.

As part of the terms of his bench probation, Hall is barred from working or acting in any fiduciary capacity for nonprofits and charities.

For questions, comments and news tips, email reporter Whitney Woodworth at umwoodworth@statesman-journal.com, call 503-399-6884 or follow on Twitter @umwoodworth



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