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Kelowna News

Okanagan drought killing fish and exposing need for major water management change

[Rob Munro](#)


Vaseux Creek in Kelowna has dried up. Others in the Okanagan have reduced flows and water so warm that fish have died.
 Image Credit: SUBMITTED/Okanagan Basin Water Board

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Being in a Stage 4 drought is not going to have much impact on humans living in the Okanagan Valley this year.

That drought ranking was declared by the province last week. It's part of a six-point scale that goes from zero to five. As the second worst level of drought. The province says that means it's extremely dry and "adverse impacts to socio-economic or ecosystem values (are) likely."

What that means, in practical terms, is that households in various parts of the Okanagan may only get to water their lawns two days a week instead of three, and fruit growers may be asked to water their crops at 80 or 90 per cent of their allowable limit.

The real impact, this year, is on fish that have been hit with the double whammy of low creek flows and record-breaking high temperatures. Many have already died in Okanagan Lake tributaries, according to Howie Wright, fisheries program manager with the Okanagan Nation Alliance.

"We're going to see this more often," he said. "I think it really points to users needing to conserve water more and to be more effective with the water we use."

He's not alone in seeing a problem that is bigger than just one hot dry summer.

"Water management is going to change," Bob Harasko, general manager of the Black Mountain Irrigation District in Kelowna, said. "The extremes are just too big right now to ignore it."

A couple of years ago the Okanagan was dealing with floods. Now, this could be the start of a multi-year drought that will severely tax the relatively flush water systems serving the valley.

Both men have a great deal of knowledge and interest in Mission Creek.

It's the largest single source of water for Okanagan Lake, providing about 25 per cent of its input, so it provides a key focal point for what changes need to be made.

Mission Creek is a major kokanee spawning stream in the fall with significant numbers of trout spawning in the spring. The fry grow in the creek during the summer before swimming down into Okanagan Lake.

This year, despite the best efforts of the Black Mountain Irrigation District, which is the biggest user of Mission Creek, the water is just too warm.

A decade ago, the irrigation district reached a voluntary agreement with the province and other users on the amount of water it discharges from its reservoirs and lets flow downstream from its water intake in Joe Rich, east of Kelowna.

Harasko is letting out more water this year than required but he can't control the extreme heat this summer has brought.

"The volume that you need to keep the creek that cool (for fish) is two to three times the volume that's going down there now, just to bring it down three or four degrees," he said. "If I was releasing three times the amount, they (reservoirs) would be dry now. You've got this decision to make between the two objectives."



As it is, he expects his upper-level storage lakes to be down to 20 per cent of their full levels by the end of the heavy summer use season. He doesn't want to go lower because he wants to make sure they fill over the winter, even if this is the start of a years-long drought.

From Wright's perspective, there needs not only to be water management plans for fish-bearing streams but fish management plans as well. Those would take into account water temperature as well as the volume of water that's needed for fish.

Black Mountain is looking to expand its reservoir system, in part because a major agriculture customer will need that water.

Harasko has no problem with the 28,000 to 29,000 residents on the system helping to pay for such an expansion but, if the province decides he needs to build more or bigger reservoirs for fish conservation, that money has to come from elsewhere.

It could mean raising lake levels by as much as 20 to 25 feet.

Currently, irrigation districts aren't eligible for provincial grants for such work. But Harasko said the province can always change those rules.

At this point, Harasko figures he has enough water to make it through to the cooler fall when usage, especially for agriculture, will decline.

But this the first time in recent history he's asked customers, including growers, to reduce their use by 10 per cent.

Other major systems are also well suited to weather this year's drought.

Kelowna gets its water from the massive Okanagan Lake. It still put in water restrictions and is threatening to fine people who water on the wrong day.

Right now, Greater Vernon Water gets about 60 per cent of its water from the Duteau Creek watershed with its upper elevation lakes that normally fill and spill over each spring.

"Our lakes, as a whole did not spill this year," Tricia Brett, water quality manager for the Regional District of North Okanagan, said. It's one of the largest water supplier in B.C. with 58,000 customers.

The City of Kelowna system is smaller because systems like Black Mountain and the Glenmore Ellison Improvement District serve large parts of that city.

Duteau Creek water is used heavily for agriculture in summer months. The domestic water, largely, come from Kalamalka Lake.

Brett has no concerns about running short from either source but water restrictions have still been put in place.

In Penticton, 90 per cent of the water is currently coming from Okanagan Lake with the rest coming from Penticton Creek for its 33,000 customers.

Greyback Lake, the main reservoir for Penticton Creek, is at 74 per cent of its capacity.

"There's water there but we still have to be careful," Micheal Firlotte, water quality supervisor with the City of Penticton said. "It's not necessarily this year that's a concern. It's years coming. If we have a multi-year drought, we have to be ready for that. If we don't get a good starting base next year, then this could compound into something a lot more serious."

He's looking for a 20 per cent reduction in water use.

"We've been doing a pretty good job of that," Firlotte said. "We just have to make sure we keep that peddle down and residents keep doing the job that they're doing."

That's the message all water suppliers, along with the region-wide Okanagan Basin Water Board, are trying to get out.

Despite the fact that the water supply is fairly secure for this year, the reality is, on average, each Okanagan residents uses 675 litres of water per day. That's more than double the Canadian average of 329 litres per person per day.

At the same time, according to the water board, the valley has the lowest per person water availability in Canada.

This summer, the fish are suffering. If more water is needed to protect them from the ever-increasing heat, a major change has to come in how water is managed.

"That means moving into water restrictions earlier than normal in the municipalities and water conservation and efficiency in the agricultural world," Wright said. "We want to promote water conservation, recognizing fish need water too."