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# Enger Park Golf Course seeks to end reliance on water from creeks

By [Peter Passi](#) on May 28, 2016 at 12:16 a.m.



The storage pond at Enger Park Golf Course is fed by Buckingham Creek and used for watering the greens and fairways. During dry periods, the needs of the golf course can consume the pond's full volume every day. Bob King / [rking@duluthnews.com](mailto:rking@duluthnews.com)

For years, the operators of the Enger Park Golf Course in Duluth have relied heavily on local creeks to water its greens and fairways.

The course drank from both Coffee Creek and Buckingham Creek, pulling water from holding ponds established on both waterways. But the flood of June 2012 blew out the Coffee Creek holding pond, leaving the course more dependent than ever on Buckingham Creek's flow.

"We're leaning really heavy on that creek," said Erik Birkeland, Duluth's property and facilities manager.

Now state regulators are urging the operators of the municipal golf course to wean their pumps from the waters of Buckingham Creek, too. Following a 2003 stream survey that documented the presence of brook trout in the stream, it has been recognized as a designated trout stream worthy of greater protection, explained Deserae Hendrickson, Duluth area fisheries supervisor for the Minnesota Department of Natural Resources.

In late summer, it's not unusual for the stream bed downstream of the holding pond to run dry.

"That's definitely not good for fish. Fish need water," Hendrickson said.

"We have been concerned for a long time about the appropriation, and we've been trying to work with the city to come up with a solution that does not result in that impairment of the stream," she said.

Hendrickson said the hardest-hit section of stream is between the holding pond at Enger Park Golf Course and Twin Ponds, which also is fed by Buckingham Creek.

Even when the stream is running steady, Hendrickson said the outflow from the retention pond is impassable for fish, which is another problem.

"Brook trout are very dependent on being able to move to different areas at different times of the year in order to gain access to spawning habitat, overwintering habitat and cooler refuge areas in the summer when it gets hot. So that's a secondary issue. But the primary issue is taking too much water out of the stream. That really isn't legal under our current appropriation rules," she said.

The city has entered into a contract with Barr Engineering Co. to help figure out a solution.

"I think the big thing is to guarantee that there is flow in the creek, especially in the late summer months when flow is pretty low in almost all Duluth streams," said Jeff Lee, an aquatic ecologist with Barr.

Barr is drawing up plans for a water bypass of the holding pond.

"The idea is to create a diversion around the existing pond, so that the stream runs through that diversion and there is always some flow in the stream, and then flow above

that minimum flow can go into the pond to be used for irrigation," Lee said.

That solution will leave the golf course with less water from Buckingham Creek than it has used in the past, however. And Birkeland said the city is looking at its alternatives.

He said the irrigation pond also is fed by a 2-inch city water line and a couple of adjacent groundwater wells.

The city water pipe already runs at full capacity in the summer. The output of the wells could likely be increased, but that could present its own problems.

"Shallow groundwater wells can reduce the stream flow if there's a lot of water drawn from them and they're linked to that same shallow groundwater system. So it's not necessarily the solution because drawing from the wells versus drawing from the creek may produce nearly the same outcome," Hendrickson said.

Exactly how interconnected the wells and the stream may be remains a bit of a mystery, and Barr has been hired to help the city gain a better understanding. For its services, the firm will receive \$73,000 during the next two years.

"We're helping the city figure out what the flow is in Buckingham Creek, and then also its interactions with groundwater and irrigation wells," Lee said.

During dry periods of the summer, Birkeland said, overnight watering at the golf course can consume the entire contents of the irrigation pond, leaving little time for it to recharge for another round of watering.

"We need all three sources of water to fill it up fast enough to be able to water the next night in the driest conditions," Birkeland said.

In a typical year, the golf course uses 15 million to 20 million gallons of water for irrigation.

But Birkeland said Billy Casper Golf, a firm that has been hired to manage Duluth's municipal golf courses, brings new expertise to the picture. By targeting watering more strategically, Birkeland said the golf course's management figures it can cut water consumption by 20 percent.

Birkeland said the golf course also may look at increasing the diameter of the city water supply pipe that feeds the irrigation pond. But that would also drive up the golf course's water bills, adding to its recent financial struggles.

"Longer term, we would probably build a new, bigger storage pond — like a five-day pond — so we don't need to fill the pond up so fast," Birkeland said.

Barring a significant change from the status quo, Hendrickson said trout populations may not survive.

"A good chunk of the stream is not habitable a lot of the time. And when you have disconnected stream reaches, and very short reaches that are actually habitable year-round, that make a fish population much more vulnerable to extirpation, just because the size of the population is less, they have fewer options for refuge if it gets hot, or if flows diminish in the upper part of the stream, they really can't go far," she said.

Birkeland said the city understands but hopes it can reach a compromise deal.

"I don't think we could ever be 100 percent weaned off of using surface water, but we could probably reduce the amount we use significantly," he said.

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