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## Fort Collins officials worry Glade will hurt water treatment facilities



BY [REBECCA BOYLE](#),

By now, the multitudinous concerns about Glade Reservoir have included ill effects on fish and other wildlife, water use that will turn the summer Cache la Poudre River into a trickle and impacts on the region's economy.

But two other, potentially more costly concerns have, so far, only been raised among city of Fort Collins staff.

City water managers worry that if Glade is built, exchanges between its waters and those in Horsetooth Reservoir could degrade the city's drinking water supply. And if the river's flow is substantially diminished — which the Army Corps of Engineers said in its draft environmental impact study that it indeed would be — the city could be forced to upgrade its wastewater reclamation facilities.

Both scenarios would come "at great expense to the city," according to city council documents that give a glimpse into staff concerns.

The Northern Colorado Water Conservancy District, or Northern Water, hopes to build Glade Reservoir along the Great Hogback, covering what is now U.S. 287 north of Ted's Place. With a companion reservoir in Weld County, the Northern Integrated Supply Project would provide 40,000 "firm", or guaranteed, acre-feet of water a year, enough for 80,000 homes.

A pipeline might one day be built — though not right away— that would connect Glade to Horsetooth and allow the transfer of 2,500 acre-feet of water, on average, from Glade to its older cousin.

That could complicate matters for people like Kevin Gertig, water resources and treatment operations manager, and other workers who ensure Fort Collins has one of the cleanest and tastiest water supplies in the country.

And there may be lingering effects far beyond those controlled at the city water treatment facility on West Laporte Avenue: those on the economy.

High-quality, particulate-free water is a key ingredient for microbrews and microchips, hence the region's attractiveness to companies like Anheuser-Busch, New Belgium, Intel and Hewlett-Packard.

It's not clear how those companies could be affected, but people in city government are talking about it.

"There is a potential that this could increase their pre-treatment costs," Gertig said. "They have to refine it more, a microbrewery or a microprocessor; each one is a little different. This can affect that if it changes, because more than likely, they have designed their facilities with a certain baseline."

So has the city, and therein lies the concern.

Gertig and others contacted for this story repeatedly stressed that the city's concerns deal with the draft environmental assessment, which is under public review until Sept. 13. The city as a whole has not formally taken a position on the project.

"Of course, as the city, we have to look at the worst case. You don't look at averages and you don't look at maybes. Our job is to provide the citizens of Fort Collins water that meets all applicable local, state and federal standards, 24/7," Gertig said.

The main worry for the city's drinking water surrounds the organic compounds that dissolve into the Poudre along with the snowmelt that feeds it.

Because Glade will fill with Poudre peak flow water, which comes with fast spring snowmelt, there will be more pine needles and other forest detritus going into the river's headwaters in Rocky Mountain National Park.

Depending on scarcity and a Byzantine system of water exchanges, a pipeline might one day be needed to transfer Glade water into Horsetooth. The Glade water would likely have more total organic carbon – the dissolved form of that piney debris – than Horsetooth is used to having, and therefore more than the city's water treatment facility is used to having.

Horsetooth is filled by the Colorado-Big Thompson Project, which brings water from the Colorado River back across the Continental Divide through a massive series of tunnels and pumps. (Northern Water was formed to manage the reservoirs and ditches created under the project.)

That water is usually cleaner than the water in the Poudre, at least in terms of dissolved organic material. In fact, it's so clean that it is mixed with the city's supply of Poudre water during the spring and summer runoff, to dilute those organic materials inside the city's other water supply.

Historically, total organic carbons, or TOCs, have not been a problem; the city can remove 65 percent of them at a basic water treatment facility. If it wasn't treated, drinking water would have a slight tint to it – Gertig compared it to water with a tea bag dunked in it and removed immediately.

The remaining 35 percent is cleaned up through a chemical treatment process involving chlorine. But that's where problems start. Some pretty advanced organic chemistry is involved here, but basically, chlorine plus organic compounds equals disinfection byproducts, which can be cancer-causing in large quantities.

To be clear, the quantities involved here are in the parts per billion, but the city would like to see those numbers stay as low as possible.

Brian Werner, spokesman for Northern Water, said water officials are working with Fort Collins and understand why city leaders are concerned, but he believes it may be moot.

"We don't think we're going to have to build the Glade-to-Horsetooth pipeline. It is in the EIS because it is possible," he said. "The city is worried that if we do, we're going to introduce lower quality water into Horsetooth. But it's not in our best interest to degrade the quality of water in Horsetooth Reservoir. Horsetooth is our reservoir."

What's more, a NISP participant, the Fort Collins-Loveland Water District, takes water from the reservoir right by Fort Collins' outtake pipe, so they wouldn't want a dirty Horsetooth, either, Werner said.

But he added that he understands why city officials are concerned.

"I do know it is an issue. We're not minimizing this. What we are saying is that we think this is one we can work around. There are solutions and mitigations that would take care of Fort Collins," he said.

Gertig said Fort Collins' water treatment facility can treat 87 million gallons of water per day and was designed based on years of data from Horsetooth and the Poudre. Adding in higher concentrations of TOCs could throw those systems out of whack.

"There are methods you can use to treat that water, but it's an issue because we didn't have this knowledge, and we've spent millions of dollars on our facility," Gertig said. "We are concerned from the standpoint that it would alter our process. While they can be done from an engineering point of view, they would be an additional cost to us as a utility and, eventually, to our customers."

The cost would be in the tens of millions of dollars, Gertig said. But that doesn't take into account the changes that might be necessary in the city's wastewater treatment facilities.

The city has two facilities that treat municipal wastewater, one on Mulberry Street and one off East Drake Road. The Drake facility discharges its treated water into Fossil Creek Reservoir, which ultimately connects to the Poudre, but it has the ability to go straight to the river; the Mulberry facility discharges directly into the Poudre, just east of Old Town.

If the river has substantially less water in it to mix with the discharge, the city would have to build more advanced wastewater treatment systems at great expense to taxpayers, according to city documents.

Werner said those are issues that still need to be discussed.

"With NISP, there are going to be impacts. We've said that all along. And yes, we are willing to mitigate them. We're not going to be able to solve all the problems of the region, but we've said we will be more than willing to get people sat at the table to deal with some of these bigger issues."

Gertig said that's why the city is sounding the preemptive alarm, to make sure the Army Corps of Engineers has all the data that Fort Collins has before making a decision about whether to permit Glade.

"We are using sound science and engineering and what we know about our current situation, and saying, 'Geez, we really want to take a look at this,'" he said. "We have taken a look at this, and it's fair to say that if the pipeline were built, we would still have concerns for the city of Fort Collins."

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