

## Gravel and water don't mix: Big Hill Springs at risk

By Jenny Yermiy and Andy Kubrin, [Calgary Herald](#)

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The icy stream at Big Hill Springs Provincial Park. Photo by Mike Drew /Postmedia Network

Nothing is more ordinary than gravel. We mix it into concrete, crunch it underfoot and add it to our gardens. Water is pretty ordinary, too. We drink it, swim in it, irrigate our crops with it and, if we're lucky, haul beautiful goldeye and trout out of it.

But as millions of Albertans may soon find out, gravel and water don't mix.

Gravel is a big industry in Alberta. Sand and gravel mining is expected to reach \$365 million in Alberta this year, with nearly 150 businesses employing more than 1,000 people. In fact, Alberta is Canada's second-largest producer of sand and gravel, after Ontario.

Mining occurs mostly in areas with river and glacial deposits, especially along rivers such as the Bow. In southern Alberta, a large operation called the Summit Project is slated to produce gravel from an open pit mine abutting Bighill Creek and Big Hill Springs Provincial Park.

And it won't end with this project — five other proponents are considering additional mines.

But gravel mining and water don't mix. Digging gravel out of river-adjacent deposits such as the Summit Project removes an important filter, which protects the underlying aquifer from fine particles, spilled fuels and hazardous chemicals. But the effects don't end there.

Add wildlife and habitat disturbance, noise and dust from mining operations. Add turbidity and mine sediment, and aquifer drawdown, which causes land subsidence. Pretty soon, you're facing a potent mix of environmental threats, which the regulatory process does not address. But more on that later.

When it comes to Bighill Creek, Albertans — and especially Calgarians — should pay close attention. Parks Canada ranks Big Hill Springs as the country's fourth top mineral spring. The spring anchors Big Hill Springs Provincial Park, which attracts some 250,000 visitors per year — enough to justify a \$1.2-million refurbishment project in 2020. The park is a gem, nationally recognized for its thermal spring and beautiful tufa formations.

Big Hill Springs contributes a substantial amount of water to the Bow River, enough to affect its quality. And as we learned last summer, the Bow River provides 60 per cent of Calgary's water, as well as that of other communities along its path.

That water is important to us. We'd better protect it.

In a perfect world, we could count on the government to protect our water, but that's not the world we live in. For most mines, local municipalities and the Alberta government both have a say, but municipalities usually lack the resources and staff expertise to address the complicated issues that sometimes arise. Instead, they often just accept the proponent's talking points. Provincial agencies have both the resources and expertise, but often lack the will to oppose these corporations.

What we end up with is a host of practises that endanger our most precious resource, through pollution and encroachment on sensitive areas.

The best way to fix these problems would be to update the Code of Practice for Pits, which is authorized by the Environmental Protection and Enhancement Act. Several changes are needed.

We need a substantial setback from environmentally sensitive areas. We need a greater separation from the water table, not the skimpy one metre that is currently allowed.

We need more data, too. Instead of having just one observation well on a mine site, there should be an array of wells, both up- and down-gradient, so we can detect fugitive emissions. These measures should be in force all across the province. We shouldn't leave it up to individual municipalities.

As for Big Hill Springs Provincial Park, we really ought to enlarge it. A quarter-million people visit every year but, at 70 acres, the park is too small to handle them.

Let's make it bigger.

*Jenny Yermiy hosts The Gravity Well podcast to share the stories of the people looking out for our home.*

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