

Clean water: the unsexy alternative to bridge building

There's no other way to put it. Dr. **Graham Gagnon** deals with a lot of waste. Literally. It's his job to deal with the problems the rest of us would rather flush away. "From battery acid to fish guts to hog manure – you name it, we've seen it all," he exclaims proudly.

Dr. Gagnon is Dalhousie's Canada Research Chair in Water Quality and Treatment. He's researching new ways to provide clean drinking water to communities and to treat wastewater so it has less of a negative impact on the environment and public health.

"Sure, as an engineer it's much sexier to point to a bridge and say, 'look what I did!'" he says. "But it's a lot harder to point to the treatment plant that no one ever sees, or to show someone a lake and say 'hey, there are fewer pollutants in

there because of me'."

Supported by a group that includes a full-time research associate and about a dozen graduate students, Dr. Gagnon has two main areas of research. One involves looking at innovations to improve drinking water, such as the best way to reduce dangerous pathogens like E. coli or chemical contaminants like arsenic. The other is treating industrial effluent from small and medium-sized communities and resource-based industries, such as seafood processing plants.

Even though the results of his research may not be immediately apparent, the impact is enormous, especially on a community's health. The work isn't just about

engineering – there are political, environmental, health, economic and social consequences.

"Without clean drinking water, everything else is secondary," he says. "An unsafe water supply can cost a town substantially, not just in money but in unhealthy residents."



Dr. Gagnon