

## Greyter Gets Even Better

### Bringing Water Management Solutions to New Homes

Water has always been important to Dana Morgoch. Growing up near the Credit River in Mississauga, he picked up sprint canoeing (doing 1,000-metre races!) and competed for Canada at the world championships.



Michael Caldeira (left) and Dana Morgoch assemble a Greyter HOME system.

PHOTO: COURTNEY MORGUCH / GREYTER WATER SYSTEMS INC.

After completing his undergraduate studies in mechanical engineering in 2016, Morgoch earned his master's degree by conducting a major research project on computer modelling to simulate how canoe paddles move through water. That computer modelling would later prove helpful for his work as a manager of technical sales at Greyter Water Systems.

At Greyter, Morgoch joined Michael Caldeira, another young mechanical engineer with a passion for sustainability and energy conservation. Caldeira says he's "always been sensibly green," but he didn't really think about water very much before joining the Ontario-based greywater recycling company: "I thought I'd work on the energy

side, but once you get involved on the water side, the more you realize just how precious this resource is. Look at California's water pressures. And here in Canada, we take our easy access to clean water for granted. There's a sense of pride in working for a company working on water conservation." He's now the manager of technical services.

Neither one has looked back, as they've watched the company grow from working out of a basement to a much larger production facility. Greyter had its beginnings in commercial greywater technology, but the company set out to develop a product for residential homes because its founders noticed an enormous market developing as a result of builders and municipalities striving to create water-efficient communities.

Greyter faced a considerable learning curve. "We had to meet strict residential standards, or risk losing market share," Caldeira says. With a push to develop more sophisticated residential-use technology than was available in commercial at the time, "we had to get our heads around the efforts to miniaturize that technology," he says. One requirement was to obtain NSF 350 certification, a stringent water certification standard enforced primarily in California but also in other water-stressed regions.

The company spent considerable time, effort and money on creating prototypes, Caldeira says. "We're trying to adapt the technology and develop it further for the residential side of things. It needed to meet several important characteristics demanded by [co-founders] Mark

Sales and John Bell so that it would be embraced by municipalities, builders and the home owner."

There's a reason why Greyter's primary target market isn't just individual home owners, but builders too. "It came down to money savings," Caldeira says. "Municipalities charge connection fees, which home builders pay when developing a new tract. That can get pretty pricy – in certain counties in Colorado and California, water tap fees are in the tens of thousands of dollars per house."

Morgoch says that, in some regions of the U.S., water shortages are so severe that his friend from San Diego confessed he would plug the bathtub during showers so they could use that water to flush the toilet. And California isn't the only place experiencing severe water pressures – Arizona, Colorado, Texas, Florida and other states are also grappling with various pressures on their water resources.

To address these water shortages, Greyter, Tucson Water and Lennar (America's largest home builder) are several months into their pilot project showcasing the impact of the Greyter HOME within two of Lennar's developments in Tucson, Arizona.

"The Tucson pilot allows us to demonstrate what the Greyter HOME can do, and is allowing us to move the technology forward," Morgoch says. "In Tucson, the building code requires that houses need to be plumbed in to allow for greywater conservation, as well as rainwater capture." Even so, you're not finding whole tracts being outfitted with greywater systems. These rough-ins allow houses to

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be future proofed to ensure water conservation down the road.

The first step is to "Greyter water-ready" the home (a phrase coined by Sales). This is where the home's plumbing is installed to accept greywater recycling, to capture shower and bath water, and to deliver treated, near-potable water to the toilets. It requires piping to be installed in a certain way. Morgoch says plumbers need to be involved from the beginning to make sure everything is done correctly. "Then we inspect after the install, commission the system,

Greyter HOME be user friendly and provide reliable performance." To that end, "it was designed to require as little maintenance as possible. The system merely requires the filling of the disinfection tank and exchanging of absorption media, typically once per year."

Caldeira says, "It was designed realizing that some people won't really care how it works; only that it does work. We had to make it easy enough so that home owners could service the system themselves or rely on an annual service visit from a qualified

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and go through an orientation with the home owner, so they know how the system works."

Greywater recycling is definitely "starting to garner more interest," Caldeira says. "We have had a lot of conversations with builders. John Bell is a key liaison with builders. He ensures the equipment development meets their needs for a compact footprint, noise reduction and serviceability." He adds that "one of the biggest requirements was that the

professional." Morgoch and Caldeira are optimistic that the pilot results will show that Greyter HOME is a reliable water reduction appliance that saves water and minimizes servicing requirements for the residential market. ■■



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