

# EDMONTON JOURNAL

## Plumber's piping transforms wastewater into potable water

Colorado golf course using Edmonton-made system on greens

David Finlayson, The Edmonton Journal

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EDMONTON - One man's poop is another man's bottle of water.

It may sound distasteful, but Seair Inc.'s portable wastewater treatment systems transform effluent into something you can drink, all in a few metres of piping and machinery.

The key is ozone gas, a powerful natural sterilant which eliminates harmful contaminants and bacteria as the effluent passes through Seair's proprietary process and helps decompose, er, unwanted organic materials.

Seair has 100 portable sea-container-sized units working in the oilsands and drilling camps which eliminate the need to haul away sewage in trucks.

Now the company has designed a new system with a much smaller footprint that improves the quality of pond and irrigation water on golf courses.

The first one was shipped recently to Castle Pines Golf and Country Club in Colorado, and with 16,000 golf clubs and more than three million golfers in the U.S., CEO Harold Kinasewich likes his odds of a good score.

"With legislation forcing golf courses to use reclaimed wastewater as their source, the need for enriched bacteria-free water is becoming more important for the health and well-being of golf courses and golfers alike," says Kinasewich, a plumber by trade who moved into wastewater treatment from fish farms and agriculture applications when he saw which way environmental regulations were heading.

Poorly treated wastewater's high alkaline content can ruin the finely manicured fairways and greens of even the best golf course. Seair's new system increases the dissolved oxygen levels in the water, which gives it a more neutral pH balance. It also helps break down the hard black soil layer which restricts root growth. You get healthier grass and need less fertilizer, which helps the environment, Kinasewich says.

"All the U.S. golf courses have water problems, and being forced to reuse water and effluent is a health issue."

"We are on the cutting edge of the technology, but our biggest problem is convincing people we can treat wastewater in such a small footprint," he says.

The heart of Seair systems is the patented diffusion tower, which produces tiny stable bubbles of ozone, oxygen or carbon dioxide, depending on the application, to create a supersaturated fluid.

"The major difference between us and other diffusion technologies is our extremely small (five micron) bubble size, which allows for mass transfer of gas to fluid."

It's efficient, economical and low maintenance. The only moving parts are the compressor and the pump, Kinasewich says.

Seair's technology is also increasing oxygen levels in oilsands and forestry industry aeration ponds, providing municipal wastewater treatment for smaller communities such as Airdrie and Wolf Creek, and working with Edmonton Waste Management Centre of Excellence to develop more community applications.

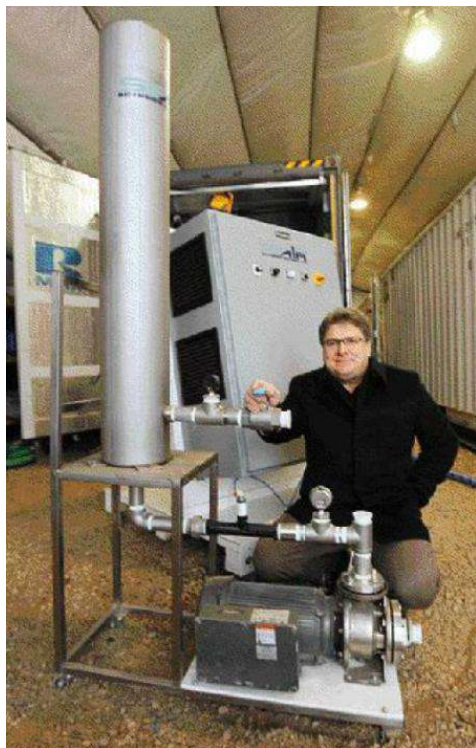
The day rate in the oilpatch is down a bit because of the reduced drilling activity, but other applications are growing quickly enough to keep the bottom line improving, Kinasewich says.

Revenue for fiscal 2007, the first full year in remote waste treatment, was \$3.4 million, up 371 per cent on 2006.

"We are really excited about the future," Kinasewich says.

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Seair president Harold Kinasewich demonstrates his company's water system.

John Lucas, The Journal



Richelle Klyne wraps a hose with bubble wrap at Seair on Monday.

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