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Maine company's technology cleaning PFAS contamination around the world

ECT2's process designed to sustainably eliminate 'forever chemicals'

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PORTLAND, Maine —

A Portland-based company has developed technology that is being used to clean PFAS contamination at sites around the world.

ECT2 has been deploying their systems since 2016.

Their patented process involved complex steps of specialized filtration and distillation aimed at removing so-called forever chemicals from water.

Steve Woodard, the company's chief innovation officer, said the process allows for the chemicals to be pulled from water and destroyed on-site, eliminating the need for the toxic plastics to be sent to a landfill or burned in an incinerator.

"(PFAS) have some very recalcitrant properties, which means they're very hard to break down,' Woodard said. "The processes which we develop and commercialize are always focused on sustainability, so waste minimization is a key aspect."

The process can be used for a variety of contaminated areas, including groundwater, wastewater and drinking water.

ECT2 reports their filtration vessels have been deployed to more than 350 sites across the world, including contaminated sites in Australia.

Their systems are also in-use in New England, filtering water for municipalities like Portsmouth New Hampshire.

"PFAS compounds are ubiquitous. They've been used in firefighting foams, in Gore-Tex, Teflon. They're all over the place. they've contaminated the ground, they've contaminated groundwaer, they've contaminated water supplies," Woodard said.

ECT2's filtration tanks are filled with ion exchange resin beads, which Woodard said attract and trap the plastic chemicals, allowing clean water to flow through. Woodard said water tested at the end of their process typically measures with non-detectable levels of PFAS, or in the single-digits parts-per-trillion.

PFAS contamination has been found throughout Maine, including in farmland soil and in watersheds.

Recent testing in the Androscoggin River watershed done by the Friends of Merrymeeting Bay found elevated levels of PFAS contamination well above the recommended safe drinking water standard set by the EPA.

Woodard said ECT2 is currently developing a method to "wash" PFAS from contaminated soil using their filtration vessels.