

More Colorado communities take 'forever chemical' makers to court as contamination costs mount

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They stand at least 30 feet tall and 10 feet across, eight giant baby blue tanks filled with what is this fast-growing town's best defense against a

glut of industrial cancer-causing chemicals that have been accumulating and percolating for half a century.

Called GACs, short for "granular activated carbon" filters, the tanks at Castle Rock's main water purification facility are effective at absorbing perfluoroalkyl and polyfluoroalkyl substances—toxic and pervasive chemicals known by the shorthand PFAS—and removing them from drinking water.

"It just so happens that one of the things the GAC filters are good at is filtering out PFAS," Mark Marlowe, Castle Rock's water director, said this week. "It's definitely a big challenge because these chemicals are fairly difficult to remove."

And expensive—which is why Castle Rock's town council on Tuesday chose to retain the services of a Seattle-based law firm that specializes in environmental litigation to go after the chemicals' manufacturers, including the 3M Company, BASF Corp., Carrier Global Corp., DuPont de Nemours Inc., and The Chemours Company.

"It is important for customers to understand that PFAS contamination is an issue that was not created by the [water providers](#)," reads a memo at this week's Castle Rock council meeting. "Our customers should understand that the town is going after the parties responsible for creating this contamination to at least try and offset some of the costs associated with its remediation."

Castle Rock, with a population of 80,000 and growing, joins several other Colorado communities that have recently taken individual legal action against PFAS makers, citing the increased costs—both present and anticipated—of getting rid of the stuff. The American Water Works Association estimates that lowering the amount of PFAS in drinking water to meet stricter forthcoming federal standards for the chemicals

will run from \$2.5 to \$3.2 billion annually.

The U.S. Environmental Protection Agency this spring proposed dramatically lowering the acceptable threshold in water for PFOA and PFOS, two common PFAS compounds, from 70 parts per trillion to 4 parts per trillion. The agency expects to finalize a Safe Drinking Water Act regulation for a total of six PFAS compounds by the end of the year, according to Region 8 EPA spokesman Rich Mylott.

Denver in March filed suit against two dozen [chemical companies](#) that make PFAS. Thornton brought its own legal action in January. By the end of this month, Aurora is expected to file its own complaint with the help of outside counsel.

Colorado Attorney General Phil Weiser sued many of the same companies on behalf of the state in February 2022.

Martin Kimmes, [water treatment](#) and quality manager with Thornton, said the city may be on the hook for anywhere from \$30 million to \$80 million to buy and install GAC filters to serve its 160,000 customers. He anticipates having to spend another half a million dollars on equipment to detect the chemicals.

"It's going to be very expensive because it's affecting so many water utilities," Kimmes said.

A study published this month in *Environment International* estimates that at least one PFAS compound "could be detected in about 45% of U.S. drinking-water samples."

PFAS covers a broad range of thousands of chemical compounds valued for their oil- and water-repellent characteristics. The chemicals are used in carpets, cosmetics, furniture, clothes, adhesives and sealants,

cookware, firefighting foams and much more. They are known as "forever chemicals" due to their persistence in the environment.

Exposure to this class of chemicals can damage the liver, increase [blood pressure](#) in [pregnant women](#), lead to developmental impacts or delays in babies and young children, increase the risk of kidney and testicular cancers, and reduce the ability of the body's immune system to fight infections, according to the EPA.

For cities, counties and water districts in Colorado, the presence of perfluoroalkyl and polyfluoroalkyl compounds in water can largely be pinned on aqueous film-forming foam, or AFFF, an extinguishing agent used to put out fuel fires. Castle Rock even acknowledged in its staff memo this week that its own fire crews have used AFFF over the years.

The impact of PFAS in Castle Rock is clearest inside the big activated carbon filter tanks the town installed in 2021. Marlowe said his crew already had to change out the charcoal-like substance inside the tanks earlier this year, at a cost of \$650,000.

"Carbon treats for those chemicals but it gets exhausted over time," he said. "You can only treat for so long before you get breakthrough. PFAS is going to be one of the primary drivers for changing out the (filters)."

And that's not all. Marlowe said the cost to analyze each sample taken by the town is \$444, and about 75 water samples are required a year. That's a total of about \$33,000 a year to detect PFAS in Castle Rock's water.

"This cost does not include our internal labor cost for taking samples and managing the data as well as other administrative costs," Marlowe said.

Aurora is anticipating spending \$2 million more in 2024 to cover the increased costs of dealing with the upkeep of its granular activated

filters, according to Aurora Water spokesman Greg Baker.

"Our testing shows (the filters) to be very effective in treating PFAS, however, it means we must change out our carbon more frequently than we anticipated due to PFAS saturation," he said. "Also, since GAC is one of three common PFAS removal methods in water treatment... the demand for GAC has skyrocketed, and with it, the price."

The increased cost means the need for a 2% increase in water rates in Colorado's third-largest city, Baker said. The situation is more worrisome in Thornton, which relies on Sand Creek and the South Platte River for part of its water portfolio. The city treats and delivers 8 billion gallons of water a year to its customers.

In a story published last month in *The Denver Post*, it was reported that the giant Suncor oil refinery in Commerce City has pumped forever chemicals into Sand Creek at rates up to 38 times higher than limits proposed in its new water permit.

The company's most recent monitoring data from June shows the company discharged one PFAS compound—PFOS—at 2,500 parts per trillion. The EPA's most recent health advisory for that compound said it should be detected at levels no higher than 0.02 parts per trillion.

Kimmes, Thornton's water treatment manager, said the city is able to reduce the level of the offending chemicals to a safe level by using a "powdered activated carbon." But he worries about what will become of the exhausted PFAS-laced carbon the city will have to dispose of in the future.

If the EPA declares trapped PFAS a hazardous substance, what will the additional costs be to Thornton to process the byproduct properly and according to the law, Kimmes asks.

"We're looking for an exemption to the disposal of PFAS-laden media," he said.

Meanwhile, at the end of July, Weiser joined 22 other attorneys general in announcing his opposition to a proposed class action settlement involving 3M. If water providers agree to waive existing claims, the company would pay out \$10.5 to \$12.5 billion in settlement proceeds. That is unacceptable, Weiser said.

"Coloradans now suffer degraded water quality and public health injuries on account of the actions of 3M and other companies who manufactured and marketed PFAS," he stated in a July 26 press release. "By taking action today, we are standing up for our citizens and fighting for an adequate and appropriate resolution of the ongoing litigation."

Kimmes said he doesn't expect a resolution to the issue for a long time. And he has no idea how much money Thornton will ultimately receive—either from the state lawsuit or the city's own—to deal with the contamination.

"We don't know if we're going to get 10 dollars, or \$10 million," he said.

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