

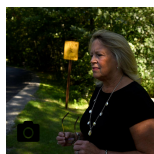
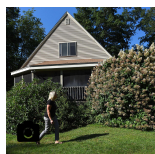
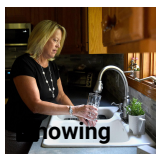
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## Experts: "Err on the side of caution" when it comes to PFAS

By Shawne K. Wickham Sunday News Staff  
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Homeowner Jeananne McCaffrey draws a glass of water from her kitchen faucet at her Londonderry home. After a Milford company, NH Tap, installed a whole-house filtration system, the family can drink their tapwater for the first time in four years.

DAVID LANE/UNION LEADER



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If you don't live near the former Pease Air Force Base on the Seacoast or the Saint-Gobain plastics plant in Merrimack, it's tempting to ignore the news headlines about PFAS contamination in drinking water.

But as more becomes known about the health risks from these "forever" chemicals, experts say everyone in New Hampshire with private wells should consider testing their water.

"PFAS is so ubiquitous, used in so many different things, it is a statewide problem," said Amy Rousseau, PFAS response coordinator at the New Hampshire Department of Environmental Services.

Per- and Polyfluoroalkyl Substances (PFAS) refers to a family of synthetic chemicals used in industry and consumer products since the 1940s. According to the Centers for Disease Control and Prevention, PFAS exposure has been linked to adverse health effects including cancer, low birth weight, liver and kidney disease, changes in the immune system and pregnancy complications.

NHDES has been testing for PFAS in wells since 2017 – and finding them in most communities, Rousseau said. "It's more shocking in southern New Hampshire because of the sheer amount of them, but it's not just southern New Hampshire," she said.

The state agency does not regulate private wells. "It really comes down to the homeowner to test their wells and to remediate their wells on their own," Rousseau said.

But if the state identifies a well that exceeds the state standards for drinking water, NHDES notifies neighboring homes and offers free testing.

The agency administers a rebate program for up to \$5,000 to install a filtration system, or up to \$10,000 to connect to a public water system, if available, for residents whose well water exceeds the state standards for PFAS.

## 'We got poisoned'

Jeananne and Glenn McCaffrey of Londonderry have been buying bottled water since 2019. That's when they got a notice from the state that a neighbor's home had elevated levels of PFAS.

Testing showed that the well at the home where the McCaffreys have lived for 40 years was contaminated with PFAS – at nearly twice the state's maximum limit for safe drinking water.

"We got poisoned," Jeananne McCaffrey said.

She worried about the health effects for her family, especially her young grandchildren. But she said, "We didn't do anything for a long time, except try not to drink the water or cook with it."

Recently, a co-worker mentioned the state rebate program for families like hers.

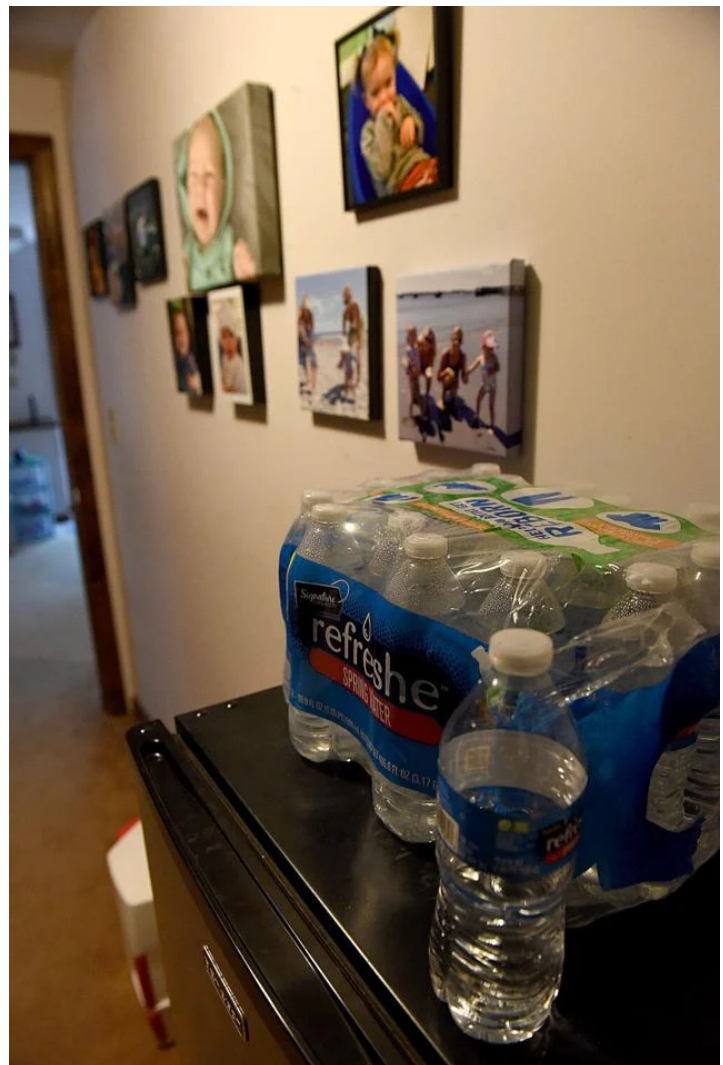
McCaffrey said they were skeptical. "Nothing's for free," her husband told her.

Still, the McCaffreys consulted the NHDES's list of water treatment companies, and last month they contracted with NH Tap in Milford, which did the work and even handled the rebate paperwork.

It cost them nothing. And it gained them peace of mind.

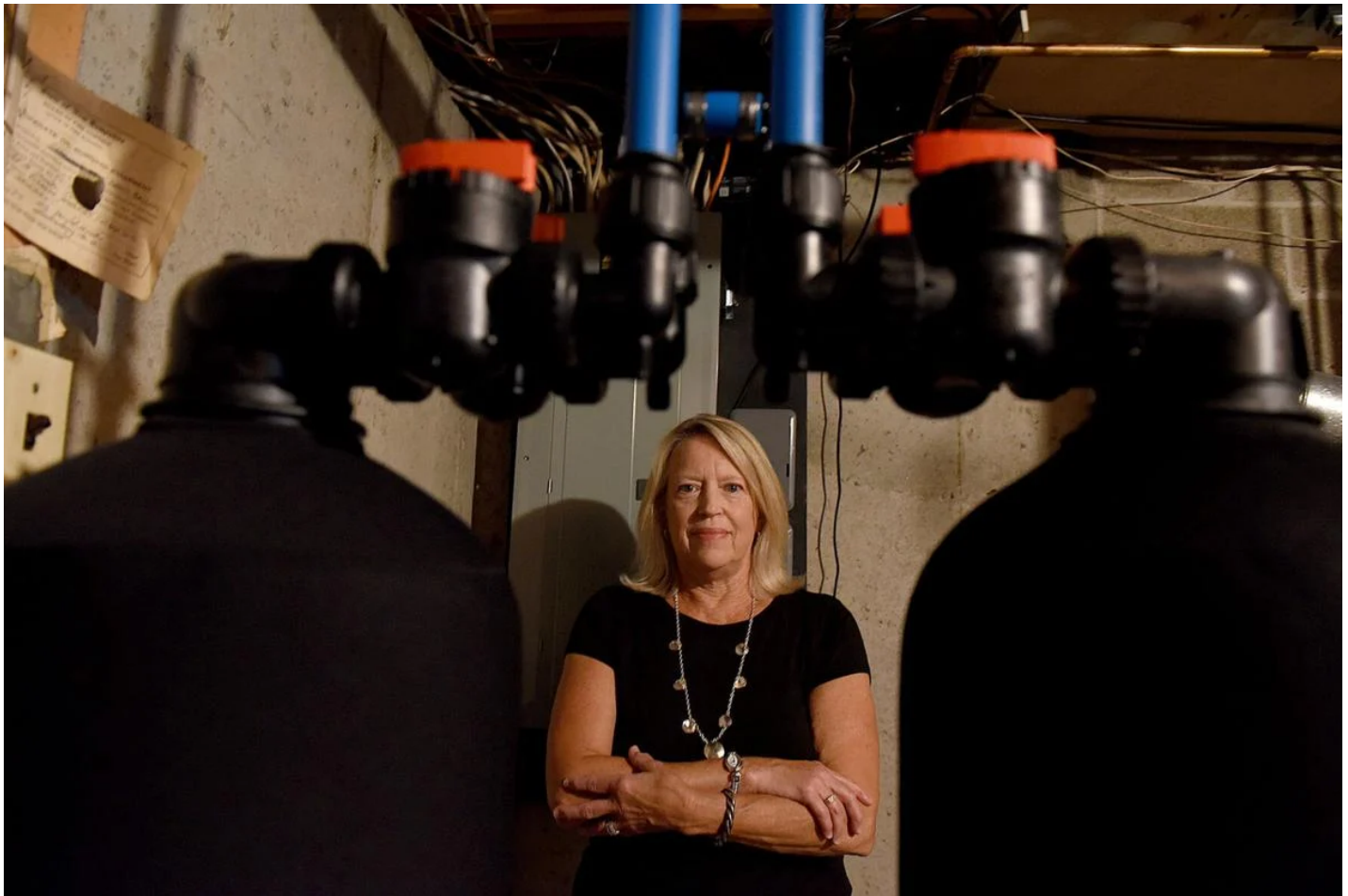
A follow-up water test showed no evidence of PFAS.

"It's gone," McCaffrey said. "It's like a miracle."



The McCaffreys no longer have to rely on bottled water for drinking and cooking, after they had a filtration system installed recently to remove PFAS from their well water.

**DAVID LANE/UNION LEADER**



Homeowner Jeananne McCaffrey stands behind a new water filtration system she recently had installed in her home in Londonderry. PFAS chemicals were found in her well water four years ago.

**DAVID LANE/UNION LEADER**

## In ‘everything we touch’

A recent study by the U.S. Geological Survey, based on samples from private wells and public water supplies in all 50 states, estimated that 45% of the nation’s tap water has one or more types of these “forever” chemicals, so-called because they break down very slowly.

As DES’s Rousseau ticks off the many household products that contain PFAS, the scope of the probe becomes clear: Floor cleaners and waxes, waterproof clothing and footwear, nonstick pans, stain-resistant carpeting and furniture.

“It’s in our food packaging; it is in our cosmetics,” Rousseau said. “Everything we touch most of our day probably has it.”

Microwave popcorn? “The bags are coated with PFAS coating on the inside so oils don’t leak through the bag and cause a fire in the microwave,” she said.

It's the same with fast-food wrappers, she said. And glossy magazines use the chemicals "so the oil from your fingers doesn't ruin the pages," she said.

The list of places PFAS has been found in New Hampshire is extensive — and alarming. Landfills, airports and fire departments all have high levels in the groundwater — but so do some schools, Rousseau said. "We believe it's the floor waxes and the cleaners that they're using," she said.

"This contamination is a little trickier than traditional ones we have dealt with, because it's used in so many different things," Rousseau said. "We're still discovering things it's being used in to this very day."

## 'Not going away on its own'

Keith McDonald started NH Tap in 2015 after he moved back to his native New Hampshire. McDonald, who had been living in Florida and working for a water testing and treatment company there, saw the need for that kind of business here.

"Much of our public water is sent through 125-year-old pipes that leach all kinds of metals," he said. "The amount of chlorine we put in water is more than any swimming pool I swam in in Florida.

"And then Saint-Gobain happened," he said.

In 2016, a type of PFAS chemical was detected in a water sample that Saint-Gobain Performance Plastics in Merrimack collected inside its plant. That prompted an expansive state investigation, which determined that airborne transport of PFAS from the facility had contaminated groundwater in several surrounding towns.

Last year, NHDES entered into an agreement with Saint-Gobain to provide alternate water sources to more than 1,100 properties, including connection to municipal water systems and filtration systems. The company provides bottled water for homeowners in affected areas.

Saint-Gobain officials last month announced plans to close its Merrimack plant but said it will continue its mitigation efforts for local residents.

Shana Hoch, president and CEO of Secondwind Water Systems Inc. in Manchester, said what happened around Saint-Gobain has boosted the number of calls her company receives from concerned residents. "We have done nearly a thousand PFAS tests this year, and installed

hundreds of PFAS remediation systems," she said in an email.

Standard water softeners and filters do not remove PFAS from water, Hoch said. She said the best way to mitigate your risk is to work with certified specialists to test your water and determine if treatment is appropriate.

NH Tap's McDonald said his company also has seen "a huge uptick" in business. In recent water testing, he estimates, seven of 10 samples are coming back positive for PFAS.

It's not just the communities close to Saint-Gobain, McDonald said. "We test all the way from Keene over to the Seacoast, and we constantly find it," he said.

"There's a lot of people in New Hampshire exposed to these chemicals."

PFAS contamination is different than other water issues, McDonald said.

"This one lasts forever, so now that it's here, it's always here," he said. "Without proper remediation at the home level, there's no removing it.

"It's not going to go away on its own."

## 'Err on side of caution'

Firefighting foam is another primary source of PFAS. That's what contaminated the groundwater around the former Pease Air Force Base.

McDonald said that can affect residential wells as well. "I've gone to homes that had fires in the '70s, and then we tested their well and their well actually has very high elevated levels of these PFAS chemicals because it was in the firefighting foam," he said.

His message to New Hampshire residents: "It's time to err on the side of caution and test your well."

On its dedicated PFAS website ([www.pfas.des.nh.gov](http://www.pfas.des.nh.gov)), NHDES recommends that residential wells be tested for PFAS if they haven't been already, and that prospective buyers test the water before purchasing a home.

What happens next is up to the homeowner, the agency's Rousseau said. "You have to absorb the information and you have to make the best decision for yourself and what risk you're willing to take on," she said.

If you just want to treat the water you use for drinking and cooking, you can use a "point-of-use" filter on the kitchen faucet that uses reverse osmosis to remove the chemicals. But if people are more comfortable treating all the water coming into their homes, "point-of-entry" filtration systems can do that, she said.

According to NH Tap's McDonald, a reverse osmosis system costs about \$1,600, and a whole-house carbon filter can run about \$3,600.

## New standards

The issue is about to get even more complicated.

By the end of the year, the Environmental Protection Agency plans to publish its first national standards on PFAS levels in drinking water, and those limits are expected to be 4 parts per trillion, far lower than New Hampshire's current standards of 11 to 18 parts per trillion, depending on the chemical.

If that happens, New Hampshire would have to adopt those new standards, Rousseau said. That would suddenly mean a lot more of us might have to do something about our wells.

"It will increase the amount of private wells in the state that will then exceed (standards)," Rousseau said. "It will increase the number of public water systems that will exceed safe drinking water standards.

"That is going to be an expense for the state," she said. "We're going to then see a strain on the funding programs that we have."

## 'We assume it's OK'

PFAS chemicals came into broad use because they made our lives more convenient.

"The properties that it has are very good for waterproofing and stain-proofing, and those are things that people look for," Rousseau said. "We don't like wet feet when we hike ... We don't like stains on our furniture.

"It does what it's meant to do very well, and that's why it's used in so many things," Rousseau said. "But now we have just found out that it's not necessarily good for our health. So then you have to figure out what is absolutely necessary and what can we change and live without."

"I don't think we're ever at this point going to eliminate your exposure. It's just minimizing it," Rousseau said. "It's just being aware of where you can find it in your everyday life and trying your best to avoid it."

For example, she said, "If you're going to put small children down on a Stainmaster rug, maybe put a blanket down."

So what changes has this environmental engineer made in her own home?

"We've changed our pots and pans," Rousseau said. "I stopped using microwave popcorn. I stopped using coated dental floss."

Most people don't even think about the water coming from their faucets, NH Tap's McDonald said.

"We live in New Hampshire and we kind of assume that it's OK," he said. "The air quality is amazing and the water quality is amazing. And then come to find out, unfortunately we have this in our water."

## 'It's going everywhere'

Londonderry homeowner McCaffrey recently convinced her neighbors to check their well for PFAS contamination. "They had their water tested three years ago and it showed nothing," she said. "But they just had it retested and it shows it's there now."





After a neighbor's well was found to be contaminated with PFAS, the McCaffreys had their Londonderry well tested and found PFAS at twice the level approved for safe drinking water. Testing after the McCaffreys installed a filtration system showed no contamination.

**DAVID LANE/UNION LEADER**

She's been urging her grown children to get their wells tested. And she plans to introduce herself to a new neighbor who just moved in. "I'm going to tell her, 'You need to get your water tested,' because she has two babies," she said.

"It's going to go everywhere," McCaffrey said. "We all have wells, and I feel like it's just a matter of time before everybody has it."

Water expert McDonald worries that PFAS contamination may be a sign of things to come.

"If we're finding these chemicals in parts per trillion – grains of sand – I'm led to believe there's a handful of other industrial chemicals that we just simply haven't brought to light," he said.

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## More on PFAS

More info: To find out more about PFAS contamination, including water testing labs and treatment companies, visit the state Department of Environmental Services' dedicated website: [pfas.des.nh.gov](https://pfas.des.nh.gov).

Health risks: To learn about potential health risks from PFAS exposure: [pfas.des.nh.gov/health-impacts](https://pfas.des.nh.gov/health-impacts).

Your options: For information about the state rebate for homeowners to install PFAS treatment systems, or to connect to a public water system: [pfas.des.nh.gov/funding/pfas-removal-rebate-program-private-wells](https://pfas.des.nh.gov/funding/pfas-removal-rebate-program-private-wells).

**Shawne Wickham**