

LONG ISLAND/ENVIRONMENT
ONLY IN NEWSDAY

'Forever chemicals' found in Suffolk's private water wells since 2016, data shows

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Owners of private water wells are concerned over a lack of testing and an increase of contaminants on Long Island. Newsday's Steve Langford reports. Credit: Randee Daddona and Kendall Rodriguez

Two years after "forever chemicals" were regulated by the state, Long Island's health departments are not offering testing for the compounds, which have been found in hundreds of homeowners' private wells, county officials said.

Forever chemicals, perflourinated compounds also known as PFAS, have been linked to immune system problems, cancers and other health impacts, according to the U.S. Environmental Protection Agency.

Perfluorinated compounds are a group of human-made chemicals that have been used in firefighting foam, food packaging and other stain and water-resistant products. They don't break down easily, hence the nickname "forever chemicals."

Suffolk County does not have the capability to test private wells for PFAS, but the compounds have been detected in hundreds of the county's wells since 2016, according to data obtained by Newsday. County health officials could

WHAT TO KNOW

- **PFAS are commonly found** in the environment, but New York State does not regulate PFAS in private wells.
- **High-dose studies in animals indicate** that exposure to water with PFAS can cause a wide range of health effects, with the most consistent findings being effects on the liver, immune system, and impaired fetal growth and development.
- **Information on the health risks associated** with PFAS comes mostly from studies of high-level exposure in laboratory animals. Less is known about the chances of human health effects occurring from lower levels of exposure.
- **Using a filter, even a relatively** inexpensive filtered water pitcher, can reduce your exposure to PFAS.

Source: New York State Department of Health

not estimate how many of the 45,000 wells serving an estimated 200,000 people might be impacted.

Nassau has only 500 private wells serving an estimated 1,500 people, county spokesperson Chris Boyle said. The county does not have the ability to test for the compounds and could not provide data on how many wells might contain PFAS, he said.

New York State in 2020 set drinking water standards for perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), the most studied PFAS compounds, at 10 parts per trillion. The amount of PFOS and PFOA permitted

in drinking water is so low that it is the equivalent of 10 grains of sand in an Olympic-size swimming pool.

Private well survey results

Results include testing for perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), both forever chemicals deemed dangerous even in minuscule quantities. The state’s maximum contaminant level for both are 10 parts per trillion.

| Private Well Survey Title | Hamlet | No. of wells sampled | Wells w/ PFOS over 10 ppt | Wells w/ PFOA over 10 ppt | Total w/ PFOS or PFOA over 10 ppt | Maximum PFOS/PFOA Concentration |
|--|----------------|----------------------|---------------------------|---------------------------|-----------------------------------|---------------------------------|
| Wainscott/East Hampton Airport | Wainscott | 504 | 46 | 34 | 65 | 791.00 |
| Yaphank Firematics | Yaphank | 46 | 32 | 17 | 32 | 1,024.00 |
| ANG Gabreski | Westhampton | 61 | 13 | 6 | 13 | 1,880.00 |
| Former Damascus Rd | East Quogue | 98 | 7 | 6 | 11 | 220.40 |
| Old Country Rd. Westhampton | Westhampton | 41 | 9 | 9 | 11 | 204.00 |
| Speonk Solvent Plume | Speonk | 56 | 5 | 7 | 9 | 66.00 |
| VID Industries/Morabito Landfill Vicinity^^ | East Patchogue | 13 | 3 | 8 | 9 | 52.00 |
| Old Country Rd. Westhampton Repeat 2020 | Westhampton | 51 | 4 | 4 | 6 | 54.50 |
| BNL | Upton/Shirley | 83 | 2 | 5 | 5 | 123.00 |
| Navy (former Grumman Site) | Calverton | 108 | 5 | 1 | 5 | 98.50 |
| SCWA Church Street Well Field /MacArthur Airport** | Bohemia | 7 | 3 | 4 | 4 | 673.00 |

| Private Well Survey Title | Hamlet | No. of wells sampled | Wells w/ PFOS over 10 ppt | Wells w/ PFOA over 10 ppt | Total w/ PFOS or PFOA over 10 ppt | Maximum PFOS/PFOA Concentration |
|---|-----------------------|----------------------|---------------------------|---------------------------|-----------------------------------|---------------------------------|
| Freon-12 (Middle Road)+++ | Calverton | 25 | 4 | 1 | 4 | 72.00 |
| Brookhaven Town Landfill | Brookhaven | 10 | 1 | 3 | 3 | 44.60 |
| East Patchogue/Medford (Vicinity of the SCWA Foxcroft Well Field) | E. Patchogue /Medford | 35 | 0 | 3 | 3 | 21.70 |
| Bull Path Landfill | East Hampton | 60 | 0 | 3 | 3 | 18.30 |
| South River Rd | Calverton | 6 | 2 | 0 | 2 | 49.28 |
| Sebonac Road Vicinity | Southampton | 4 | 2 | 1 | 2 | 46.00 |
| Gerald Wright | Deer Park | 2 | 2 | 1 | 2 | 35.70 |
| Hampton Bays Water District | Hampton Bays | 4 | 0 | 2 | 2 | 31.70 |
| SCWA North Rd Well Field | Greenport | 3 | 1 | 1 | 2 | 30.60 |
| Quogue | Vicinity of Quogue | 18 | 0 | 2 | 2 | 26.00 |
| Smithtown Highway Yard | Smithtown | 3 | 1 | 1 | 1 | 154.40 |
| Ranch Court | Sagaponack | 12 | 0 | 1 | 1 | 109.00 |
| SCWA Great Neck Rd Well Field (vicinity of Republic Airport) | Amityville | 1 | 1 | 1 | 1 | 48.50 |
| Oakside Drive | Smithtown | 32 | 1 | 0 | 1 | 48.30 |
| Eastport Landfill | Eastport | 1 | 0 | 1 | 1 | 40.85 |
| Gerald Wright Repeat 2021 | Deer Park | 1 | 1 | 1 | 1 | 40.00 |

| Roanoke Sand & Gravel | Middle Island | 11 | 1 | 0 | 1 | 17.70 |
|---|-------------------------|----------------------|---------------------------|---------------------------|-----------------------------------|---------------------------------|
| Private Well Survey Title | Hamlet | No. of wells sampled | Wells w/ PFOS over 10 ppt | Wells w/ PFOA over 10 ppt | Total w/ PFOS or PFOA over 10 ppt | Maximum PFOS/PFOA Concentration |
| Forge Rd | Calverton | 1 | 0 | 0 | 0 | - |
| Hampton Bays Landfill /Fire Training Area | Hampton Bays | 2 | 0 | 0 | 0 | - |
| North Cartwright Road Vicinity | Shelter Island | 1 | 0 | 0 | 0 | - |
| Sand Land | Noyac | 22 | 0 | 0 | 0 | - |
| SCWA Falcon Drive Well Field | Hauppauge | 0 | 0 | 0 | 0 | - |
| SCWA Oxhead Rd Well Field | Stony Brook | 0 | 0 | 0 | 0 | - |
| SCWA Stem Lane Well Field | South Setauket | 1 | 0 | 0 | 0 | - |
| SCWA Wheeler Rd Well Field | Smithtown | 0 | 0 | 0 | 0 | - |
| Watch Hill Sand and Gravel | Islip | 0 | 0 | 0 | 0 | - |
| Yaphank Firematics 2020 | Yaphank | 0 | 0 | 0 | 0 | - |
| Yaphank Firematics 2021 | Yaphank | 0 | 0 | 0 | 0 | - |
| Coram Sand & Gravel (Brookhaven 7 Aggregates) | Miller Place | 7 | 0 | 0 | 0 | 13.45 |
| Shelter Island | Shelter Island | 7 | 0 | 0 | 0 | 9.83 |
| East Quogue | Vacinity of East Quogue | 18 | 0 | 0 | 0 | 9.80 |
| Old Northport Road Area | Kings Park | 18 | 0 | 0 | 0 | 9.80 |
| Manorville - s/o Navy/Grumman Site | Manorville | 19 | 0 | 0 | 0 | 7.60 |

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|-----------------------------------|---------------|----------------------|---------------------------|---------------------------|-----------------------------------|---------------------------------|
| Robert Cushman Murphy County Park | Manorville | 4 | 0 | 0 | 0 | 7.50 |
| BNL – 2021 | Upton/Shirley | 5 | 0 | 0 | 0 | 7.20 |
| BNL - 2020 | Upton/Shirley | 5 | 0 | 0 | 0 | 5.20 |
| Riverhead Landfill | Riverhead | 3 | 0 | 0 | 0 | 3.87 |
| Manorville Landfill | Manorville | 6 | 0 | 0 | 0 | 3.37 |
| TOTALS | | 1,415 | 146 | 123 | 202 | 6,098.65 |

Suffolk hopes to soon have the in-house ability to test for PFAS. The county "has a sophisticated and accredited laboratory, but is not yet equipped to analyze samples for PFAS, which requires specialized equipment," Department of Health Services spokeswoman Grace Kelly-McGovern wrote in an email. "The department is in the process of establishing that capability and anticipates that it will be operational by the end of the year."

Here are things to know about PFAS.

What are PFAS?

Long Island relies on underground aquifers for drinking water, drilling wells sometimes hundreds of feet deep into water-saturated sand to supply its taps.

That groundwater also has been the landing spot for decades of industrial, commercial, agricultural and residential pollution. That contamination has led to efforts to test and treat water out of concern over possible health effects. A 2019 report from the Albany-based New York Public Interest Research Group found that Long Island had the most emerging contaminants in its drinking water than any other region in the state.

On Long Island, firefighting training sites are known to cause PFAS contamination, but so can inactive landfills, wastewater treatment plants, paper mills and any site that dealt in textiles, said David Andrews, a senior scientist with the Environmental Working Group, a Washington, D.C.-based national nonprofit advocacy organization.

“Because these chemicals have been used in so many different products, and with really little oversight and scrutiny, it turns out that landfill waste in particular can be a significant source of contamination,” Andrews said.

A 2020 study from Andrews’ organization estimates that 200 million Americans are drinking water with detectable levels of PFOS or PFOA, and that 18 million to 80 million are drinking water above New York’s state standard.

Why would PFAS be in private wells?

Private well pollution from lead, bacteria and other contaminants always has been an area of concern, but environmental advocates said PFAS has elevated the issue because the chemicals are more widespread and considered harmful in tiny amounts.

Public water is regularly tested and treated to meet state drinking water standards, while private wells are pumped directly from the ground with no mandate to test or treat.

Suffolk residents who test through a private lab, which the state estimates can cost \$300 to \$600 per test, and receive a PFAS reading above state drinking water standards should contact the county health department, Kelly-McGovern said.

Thousands of people on Long Island rarely, or, in some cases, never test their private wells, advocates said.

“Ignorance is not bliss. Ignorance is dangerous,” said Adrienne Esposito, executive director of the Farmingdale-based Citizens Campaign for the Environment. “To compound it, most private well owners don’t even know

they should have their well tested. I talk to them and they're like, 'Well, it tastes good.' ”

Where has PFAS been found?

New York State has investigated and taken action to remediate PFAS at targeted sites where contaminated groundwater has been discovered since 2016, according to the state Department of Health.

The Suffolk health department has surveyed private wells near airports, firefighter training sites, inactive landfills and more, and has found chemicals in hundreds of wells. These include wells in Wainscott south of East Hampton Airport and others near Francis S. Gabreski Airport in Westhampton Beach, Brookhaven National Laboratory in Upton, the Suffolk County Firematics Training Facility in Yaphank, and more.

The state health department stressed that the known issues have been addressed.

“To be clear, private well owners in known areas of potential concern in Suffolk County have already been sampled, and those with exceedances of state MCLs [maximum contaminant limits] have been provided with an alternative water system — bottled water, connection to public water supply, or a POET [Point of Entry Treatment] system,” said Erin Silk, a spokeswoman for the state health department.

How many wells impacted?

The Suffolk health department is not yet sampling for PFAS in private wells through a program where homeowners pay \$100 to have their wells tested. The county does, however, contract with other laboratories to test for PFAS through its private well survey program, which is typically conducted near sites where contamination already has been discovered.

Newsday obtained data showing that 689 of 1,415, 47%, of private wells the county sampled from 2016 until February 2022 through the survey program

had some detection of the compounds. Of those wells, 202 had detections of either PFOS or PFOA above drinking water standards.

The data suggests that many more Suffolk private wells could have some detection of the chemicals, environmentalists said. And those who've paid the county to sample their water wouldn't be made aware.

"Some people might have thought, we'll find the worst of this in 2017, when this was all really coming to light, but then it won't be a problem beyond that," said Rob Hayes, director of clean water for the Albany-based nonprofit Environmental Advocates NY.

"We are seeing still concerning levels of these PFAS chemicals, and I think that really shows that this problem is not just a blip on the radar. It's not going away," he added.

What are homeowners saying?



Frank Riina, of the East Hampton hamlet of Springs, stands in his basement next to a system that checks the water coming in from his private well. Credit: Randee Daddona

Frank Riina, a resident in the East Hampton Town hamlet of Springs and a retired teacher, is an advocate for private well testing and education. Riina said he tests his water every other year through the county's program, but had not considered that his water wasn't being sampled for PFAS until the issue was raised by Newsday. His results have otherwise all been within state drinking water standards.

"That does worry me," he said. "But this information [on emerging contaminants] comes to us in dribs and drabs."

Riina believes that greater access to public water is the answer for many people who have contamination in their wells. But for him, regular testing makes him feel comfortable sticking with private water even though he could connect to a public system if he wanted to.

In Calverton and Manorville, Kelly McClinchy, a middle school teacher in the Tuckahoe school district, has rallied her neighbors living south and east of the former Grumman naval weapons plant. The Suffolk health department tested 108 wells there in 2020 and found 16 had some PFAS and that additional wells had other contaminants.



Kelly McClinchy stands behind a sign outside her home in Manorville. She has rallied her neighbors living south and east of the former Grumman naval weapons plant. Credit: Randee Daddona

A \$7 million allocation from a federal omnibus spending bill will fund the hookup to the public water supply for a total of 124 homes in both communities. Riverhead Town and the Suffolk County Water Authority will receive \$3.5 million apiece from the \$1.5 trillion omnibus spending bill agreement signed into law March 15 by President Joe Biden.

“This funding means access to clean water, and clean water means a great deal to our families and our future,” said McClinchy, whose own well tests have been within drinking water limits.

More testing to come

Groundwater investigations completed since 2017 by the DEC at 342 of 1,901 inactive landfills in the state found at least some PFAS in the water 97% of the time and above drinking water standards 71% of the time, according to the agency. An additional 326 investigations are in progress, according to the DEC. The agency also has investigated 1,096 state Brownfield and Superfund sites as of October. Of those, 734 were above drinking water standards for PFOA, and 685 were above drinking water standards for PFOS.

Of the 78 sites on Long Island, the Demascus Road landfill in East Quogue, where PFOS was discovered in a test well at 11,200 parts per trillion in 2018, was one of the highest priorities for remediation.

How much more contamination is out there is unknown.

“This is a significant problem that I think the full extent won't even be known necessarily for years,” Andrews said.



By Vera Chinese

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