



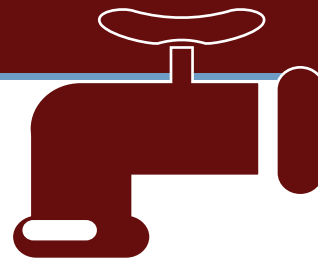
PFAS and Drinking Water Information and Frequently Asked Questions

The Town of Millis is committed to providing reliable, high-quality drinking water that meets all state and federal safety standards.

This document is intended to expand upon the information in the mailer sent October 8, 2020. There may be some differences between the two documents, as information and guidance we receive from MassDEP is subject to change.

Overview

During spring and summer 2020, Millis conducted voluntary, proactive water testing of all its wells for the presence of PFAS (per- and polyfluoroalkyl substances). One of Millis's water sources (the D'Angelis Water Treatment Plant, located at 7 Water St.) had slightly elevated levels of PFAS6 – a set of six PFAS compounds*. The detected level of 21.6 nanograms per liter (ng/L) was just above the newly published MassDEP drinking water standard (Maximum Contaminant Limit, or MCL) of 20 ng/L, but a regulatory violation was not triggered. **As a precaution, the Water Department removed the D'Angelis Water Treatment Plant from service immediately upon receiving the results. The D'Angelis Plant remains offline while Millis evaluates options. All of our other wells meet the standard, with test levels below the MCL, and we will continue to monitor them.**



What are PFAS?

PFAS are a group of numerous human-made chemicals used since the 1950s to manufacture stain-resistant, water-resistant, and non-stick products. Some examples include:



food
packaging



non-stick
cookware



waterproof
clothing



personal care
products



fire-fighting
foam

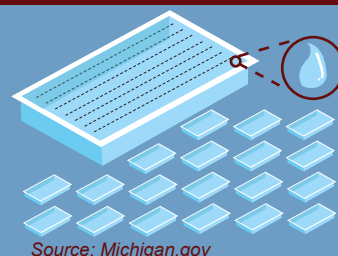
Because these chemicals have been used in many consumer products, most people have been exposed to them. PFAS have been detected in wastewater and even in rainfall. PFAS stay in the environment for a long time and do not break down easily. As a result, PFAS may be widely detected in soil, water, air, and food. While consumer products and food are the largest source of exposure to these chemicals for most people, drinking water can be an additional source in communities where PFAS is present in water supplies.

So far, over two dozen community water systems in Massachusetts have sources testing over 20 ng/L of PFAS.

What are the levels of concern for PFAS in drinking water?

Scientific information and regulatory actions on PFAS are rapidly evolving. In 2016, the U.S. Environmental Protection Agency (EPA) set a health advisory limiting the level of PFAS in drinking water to 70 ng/L for the sum of only two PFAS compounds (PFOA and PFOS). In early 2020, MassDEP proposed more stringent requirements limiting the amount of PFAS to 20 ng/L for the sum of six PFAS compounds (PFAS6)*. This was published as an enforceable MCL on October 2, 2020. This drinking water standard is set to be protective against adverse health effects for all people consuming the water. PFAS levels are not currently regulated in consumer products or food.

1 nanogram per liter (ng/L)
is equivalent to
a single drop of water in
20 Olympic-sized
swimming pools



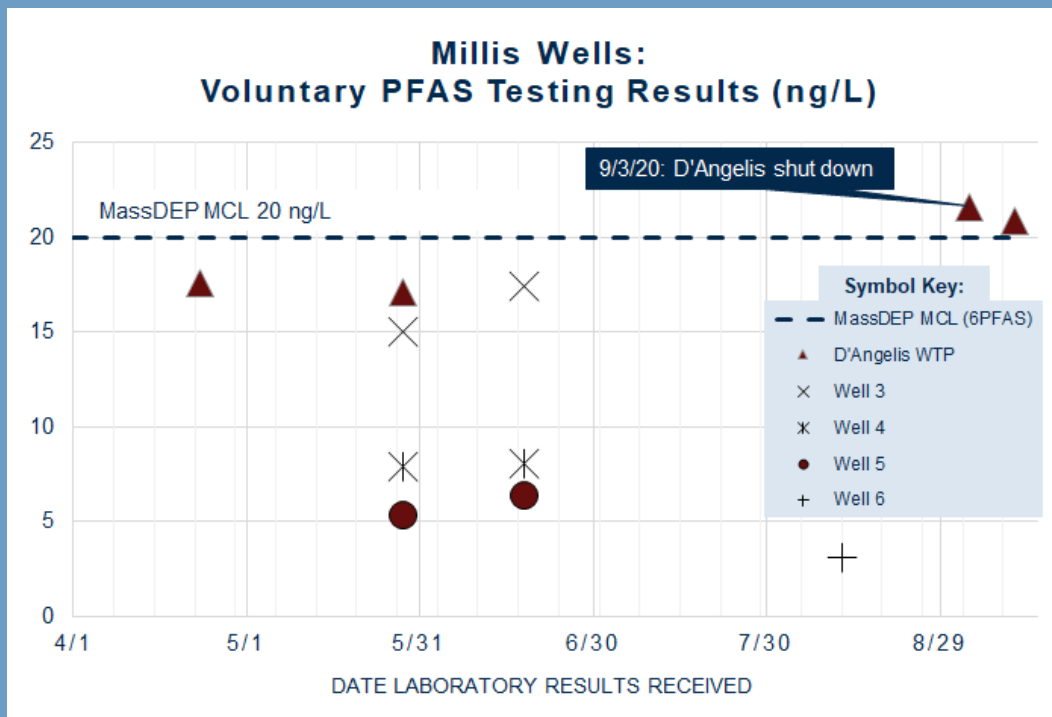
Source: Michigan.gov

*PFAS6 Compound Abbreviation & Full Chemical Name

PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
PFNA	perfluorononanoic acid
PFHxS	perfluorohexanesulfonic acid
PFHpA	perfluoroheptanoic acid
PFDA	perfluorodecanoic acid

What are the Town's proactive testing results?

Knowing that the MassDEP 20 ng/L MCL had been proposed, in April 2020 Millis began voluntarily testing its six water wells for PFAS, beginning with the D'Angelis Water Treatment Plant, which treats water blended from both Well 1 and Well 2. Each sample can take up to four weeks for results to return and costs over \$300. Following MassDEP guidance, confirmation samples were collected in May. For both April and May results, the blend of water leaving D'Angelis was below 20 ng/L (range 17 to 18 ng/L).



In May and June, Millis tested Wells 3, 4, and 5 (Well 6 was offline and was not tested); all samples were below 20 ng/L (range 6 to 16 ng/L). In August, Well 6 was back online and was tested with a result of 3 ng/L. During August, Wells 1, 2, and the D'Angelis WTP (Well 1 and 2 blended) were tested again on August 12, with confirmation samples on August 27. When initial sample results received on September 3 showed that D'Angelis WTP was 21.6 ng/L, the plant (including both Wells 1 and 2) was immediately taken offline pending the confirmatory results. With the confirmation results remaining slightly above 20 (20.9 ng/L), the D'Angelis plant (and both Wells 1 and 2) has remained offline. The individual well results show that Well 2 is primarily contributing to the exceedance (Well 2's August results average 29.3 ng/L). Millis will continue testing wells in accordance with MassDEP requirements, and updated test results will be periodically posted on the Millis PFAS website.

What additional proactive steps is Millis taking to address this issue?



The D'Angelis Water Treatment Plant remains offline. Our other sources are being blended to deliver water below 20 ng/L, and to operate wells with lower PFAS levels when possible. Millis has implemented water use restrictions and negotiated with MassDEP for relief from pumping restrictions on Wells 5 and 6.



We will continue to test the water in accordance with MassDEP requirements.



Millis Department of Public Works has been working in coordination with the Board of Selectmen, Board of Health and MassDEP to provide updates at public meetings and will continue to post updates on our website.



We are applying for grant funding to investigate treatment options to remove PFAS6.



We are reviewing well source protection and working with MassDEP to identify possible sources of PFAS.

What health effects are associated with PFAS and what steps can you take to reduce your exposure?

The MassDEP drinking water standard of 20 ng/L is based on studies of the PFAS6 substances in laboratory animals and studies of exposed people. Overall, these studies indicate that exposure to sufficiently elevated levels of the PFAS6 compounds may cause developmental effects in fetuses during pregnancy and in breastfed infants. Effects on the liver, blood, immune system, and thyroid have also been reported. Some studies suggest a cancer risk may exist following long-term exposures to elevated levels of some of these compounds.

It is important to note that consuming water with PFAS6 above 20 ng/L does not mean that adverse effects will occur. The degree of risk depends on the level and the duration of exposure. The drinking water standard assumes that individuals drink only contaminated water, which typically overestimates exposure, and that they are also exposed to PFAS from sources beyond drinking water, such as food. To enhance safety, several uncertainty factors are additionally applied to account for differences between test animals and humans, and to account for differences between people. Scientists are still working to study and better understand the health risks posed by exposures to PFAS.

If PFAS6 levels are over the MCL, sensitive consumers (pregnant women, nursing mothers, and infants) should consider using bottled water that has been tested for PFAS for drinking, for making infant formula, and for cooking foods that absorb water (such as rice). Alternatively, you could use a home water treatment system that is certified to remove PFAS by an independent testing group such as National Sanitation Foundation (NSF), Underwriters Laboratories (UL), Water Quality Association or the CSA Group. For more information, see MassDEP's website on PFAS (under "Bottled water and home water filters"):
<https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas>

More suggestions for consumers are located here: <https://www.mass.gov/doc/massdep-fact-sheet-pfas-in-drinking-water-questions-and-answers-for-consumers/download>

Where can you get more information?

Millis Water System PFAS Updates

<https://www.millisma.gov/public-works-highway-department/pages/pfas-drinking-water-information>

MassDEP

PFAS Information: <https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas>

Fact Sheets: <https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas#health-advisories-and-downloadable-fact-sheets->

Centers for Disease Control Information on PFAS for consumers and health professionals

<https://www.atsdr.cdc.gov/pfas/index.html>

If you have additional questions, contact:

- Millis Public Works Director, Jim McKay, (508) 376-7040 or jmckay@millisma.gov
- Millis Director of Public Health, John McVeigh, (508) 376-7042 or jmcveigh@millisma.gov



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