
New Hampshire

*Department of Agriculture,
Markets & Food*

Lorraine S. Merrill, Commissioner

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New Hampshire Agricultural Products and Perfluorooctanoic Acid (PFOA) Frequently Asked Questions (FAQs) for Commercial Farmers and Home Gardeners

The State of New Hampshire is investigating the presence of perfluorooctanoic acid (PFOA), a manufactured chemical, in the environment. PFOA is a manufactured chemical used to make household and commercial products that repel water, oil, stains and grease. It has been used to manufacture nonstick cookware, stain-resistant carpets and fabrics, water repellent clothing, and paper and cardboard food packaging. A similar compound, known as PFOS (perfluorooctane sulfonate), was widely used in fire-fighting foams. Once released into the environment, PFOA and PFOS are resistant to breaking down, are persistent in the environment, and pose potential adverse effects to human health and the environment. For information regarding PFOA please visit the New Hampshire Department of Environmental Services (NHDES) webpage at <http://des.nh.gov/organization/commissioner/pfoa.htm>.

The following Frequently Asked Questions (FAQs) compiled by the Department of Agriculture, Markets & Food with assistance from NHDES, the University of New Hampshire Cooperative Extension and the Vermont Agency of Agriculture, Food & Markets are offered to provide information for common concerns in regard to agricultural activity, including farming and gardening:

1. I am a commercial grower or home gardener - should I sample my water?

NHDES has sampled over 900 private and public water supply wells in southern New Hampshire. Most of these wells are located either within a 1.5-mile radius of the Saint-Gobain Performance Plastics facility in Merrimack or within a 0.5-mile radius of the former Textiles Coatings Incorporated, Inc. facility in Amherst. If your location is within these study areas, your water source has more than likely already been sampled. NHDES has a summary of private and public supply test results on their PFOA information website (<http://des.nh.gov/organization/commissioner/pfoa.htm>).

The United States Environmental Protection Agency (EPA) issued a health advisory level for PFOA and PFOS in drinking water at 70 parts per trillion (ppt), for both compounds individually, or combined. A health advisory level offers a margin of protection for individuals throughout their lifetime from adverse health effects resulting from exposure to a certain chemical in drinking water. NHDES has adopted these values as Ambient Groundwater Quality Standards (AGQS). A number of residents in southern New

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Hampshire whose source of water tested above these levels, within the impacted study areas, are being provided with bottled water while a permanent solution is developed.

Water from a clean source (that is, with less than 70 ppt of PFOA/PFOS) should be used for irrigating crops and watering gardens.

Water from the Merrimack River is used to irrigate crops at many farm properties within the study area in Merrimack and Litchfield. Pennichuck Corporation, a water company serving towns in southern New Hampshire, sampled the Merrimack River in March 2016, and results showed extremely low levels of PFOA at around 2 parts per trillion (ppt).

If you live outside of the study areas, your water is from a private well that has not been tested and you are concerned, you can have your water tested on your own. Water sample testing costs range from about \$200 to \$350. NHDES has a list of laboratories that test for PFOA and PFOS on its website: <http://des.nh.gov/organization/commissioner/documents/pfoa-testing-labs.pdf>

2. I am a commercial grower or home gardener - Should I sample my soil?

Over 200 soil samples have been collected from 19 properties in Merrimack and Litchfield, including schools, child care centers, parks, and agricultural lands.

Preliminary results indicate PFOA at levels from non-detect up to 33 parts per billion (ppb), with the highest levels detected from a property that abuts the Saint-Gobain property. Levels at agricultural properties in Litchfield where produce is grown commercially for human consumption have levels of less than 10 ppb. Based on a review of findings from literature studies on PFOA uptake in produce, NHDES does not see the need for restrictions on produce grown in these soils, assuming if irrigation is used it is from a clean source of water (that is, with less than 70 parts per trillion of PFOA).

NHDES has established direct contact soil screening levels for PFOA and PFOS of 500 ppb. These values are intended to be protective of a young child coming into direct contact with the soil. All of the test results to date have been less than these screening levels. Based on the preliminary results, additional soil sampling at schools, child care centers, parks, and agricultural lands is not planned.

If you are interested in testing your soil on your own, please see the laboratory information listed in question 1 (note, not all of the labs listed on the NHDES website analyze soil samples).

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3. How is PFOA sampling being handled relative to agricultural operations?

Soil samples were collected from 10 farm properties in early June, 2016. Preliminary results indicate low levels of PFOA. At the levels detected, NHDES will not restrict the use of these soils for growing produce.

No additional testing is planned.

4. What are the impacts on agricultural products?

Studies show that different types of plants take up PFOA at different rates. Root vegetables and leafy green vegetables, such as lettuce, generally have greater absorption of PFOA. Available research suggests that PFOA tends to compartmentalize in the stalks, roots or leaves of vegetation and is less likely to be in the fruit (the fruit of a plant is any plant part that grows from a flower. Tomatoes, squash and corn are examples of vegetables that are “fruits”). Carrots and potatoes that were thoroughly cleaned and peeled also did not show contamination if they were grown in soils with low contamination and were irrigated using a clean source of water.

5. What are the concerns if PFOA is in my soil?

At the levels found in soils tested so far, measureable levels of PFOA are not expected in produce grown in the soils, assuming a clean source of water is used when irrigating.

Soil particles stick to surfaces of root and leafy vegetables. Washing surfaces of these vegetables with clean water (that is, less than 70 ppt PFOA) is recommended to reduce PFOA exposure if PFOA is found in soil. Root vegetables can also be peeled to limit exposure.

6. What are the concerns if PFOA is in my water?

Water with greater than 70 ppt of PFOA, PFOS, or both combined should not be used for drinking or other consumptive purposes such as cooking and brushing teeth. A number of residents in southern New Hampshire, within the impacted study areas, are being provided with bottled water while a permanent solution is developed.

Water from a clean source (that is, with less than 70 ppt of PFOA/PFOS) should be used for maintaining crops and watering gardens. A rain barrel collection system could be used to collect rainwater for irrigating gardens.

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7. How can I handle the concerns over the publicity, if I have a farm in the same area as the manufacturing plant?

If your water source indicates levels less than the NHDES Ambient Groundwater Quality Standards you can relay this information to the public. It is also helpful to indicate that PFOA air emissions in New Hampshire were phased out beginning in 2007. Based on the soil testing at agricultural properties, no restrictions on produce grown in these soils are recommended, assuming that where irrigation is used it is from a clean source of water.

8. I am a commercial grower, can I have my agricultural soil and products tested?

NHDES has a list of labs that test for PFOA and PFOS on its website: <http://des.nh.gov/organization/commissioner/documents/pfoa-testing-labs.pdf>

9. Are livestock affected?

Based on a review of available scientific literature and results from soil samples collected to date, if animals have clean water and clean feed, it is unlikely that livestock will be affected.

Livestock should be given clean water. If your water source used to water livestock is contaminated with PFOA greater than 70 ppt, you need to obtain a source of clean water and use that as the source for livestock.

Alternative sources of clean water may include:

- A Point of Entry Treatment System (POET) from your home or farm water supply
- A local bulk water delivery company that supplies clean water

10. I watered my garden from my well last year (and the year before...). My well was found to be contaminated, what should I do this season?

Studies have shown that gardens watered with PFOA-contaminated water will have higher levels of PFOA in the soil. PFOA does not stick to soil very much. The more clean water you add to your garden the lower the soil PFOA will be.

There are a few things you can do to further reduce potential exposure this year:

- Water your garden and plants with a clean source of water.
- Wash your produce in clean water after you harvest it. For root vegetables, consider peeling and washing before eating.

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11. Where can I find additional information?

NHDES has a webpage dedicated to PFOA:

<http://des.nh.gov/organization/commissioner/pfoa.htm>.

For questions in regard to this FAQs information notice please contact David J. Rousseau of the New Hampshire Department of Agriculture, Markets & Food at (603) 271-3640.

[You can also contact the PFOA Public Inquiry Line Hotline at \(603\) 271-9461.](tel:6032719461)