



## **Notice of Drinking Water Health Advisory Exceedance - City of Freeport, Illinois**

The City of Freeport's wells and treatment plant are regularly inspected by the City and Illinois Environmental Protection Agency (EPA). Results are gathered for hundreds of contaminants. If a contaminant is over the limit, it falls into one of two categories. One category requires immediate remediation of the problem. The second category is a non-enforceable health advisory. Some communities choose to take action even for non-enforceable health advisories, as of the non-enforceable levels become the basis for later enforceable levels.

The EPA recently lowered the acceptable limits on a certain chemical, and that led to new results in a recent study by the EPA on two of Freeport's wells and one City treatment plant. That study confirmed that those two wells and the one treatment plant exceeded the Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS) & Perfluorooctanoic Acid (PFOA).

Even though the results are only at the non-enforceable advisory level, the City proactively shut down the two wells and one water filtration plant immediately upon notice from the EPA on February 10, 2017. The city still obtains its drinking water from four other wells that serve two different treatment plant. None of these wells and treatment plants exceeds the Health Advisory limit.

After shutting down the two wells and one treatment plant, follow-up sampling was performed resulting in Freeport's Distribution Drinking Water showing 2.46 and 7.08 parts per trillion that is **97% below** the Health Advisory Level of 70 parts per trillion for PFOS/PFOA. These concentrations are **estimated** below the laboratory analytical reporting level of 7.7 parts per trillion. Remaining source water supplies will continue to be monitored for any changes in water quality in these areas.

### **What is a Health Advisory?**

Health Advisories are **non-enforceable** levels established by U.S. EPA in order to provide technical information to state agencies on contaminants that can cause adverse effects and are known or anticipated to occur in drinking water.

In May 2016, U.S. EPA issued a final Health Advisory level for the combined total of PFOS and PFOA of 70 parts per trillion. The Health Advisory was set, with an adequate margin of protection, at a level to protect the most sensitive populations which are developing fetuses, and breastfed and formula-fed infants.

### **What are PFOS and PFOA?**

PFOS and PFOA are fluorinated organic chemicals that are part of a larger group of chemicals referred to as perfluoroalkyl substances (PFASs). These chemicals are manmade and do not occur naturally in the environment. PFOS and PFOA have been the most extensively produced and studied of these chemicals.

Information provided in the U.S. EPA Health Advisory indicates that between 2000 and 2002, PFOS was voluntarily phased out of production in the U.S. by its primary manufacturer. In 2006, eight major companies voluntarily agreed to phase out their global production of PFOA- and PFOA-related chemicals, although there are a limited number of ongoing uses.

Because these chemicals have been used in many consumer products, most people have been exposed to them. The chemical stability of PFOS and PFOA makes them very persistent in the environment. Scientists have found PFOS and PFOA in the blood of nearly all the people they tested, but these studies show that the levels of PFOS and PFOA in blood have been decreasing.

#### **PFOS/PFOA Health Advisory**

*In May of 2016, U.S. EPA adopted a final life time health advisory of 70 parts per trillion for PFOS and PFOA.*

***The Health Advisory was set, with an adequate margin of protection, at a level to protect the most sensitive populations which are developing fetuses, and breastfed and formula-fed infants.***

*PFASs have been used to make stain-resistant carpets and furniture, nonstick cookware, waterproof clothing and mattresses, and grease-resistant paper packaging for food. They are also used for firefighting at airfields and in a number of industrial processes.*

## **What are the potential health concerns associated with PFOS and PFOA exposure?**

Animal studies show that exposure to these chemicals can cause adverse effects on the animal's liver, kidney, and immune system along with developmental effects and cancer. Studies conducted on people who have been exposed to these chemicals suggest that exposure at certain levels may adversely affect the developing fetus and child, the thyroid gland and immune systems, and result in decreased fertility and increased cholesterol levels. There is some evidence that exposure to these chemicals over a long period of time may increase the risk of certain cancers.

### **Background**

The U.S. EPA evaluates the presence of contaminants in community water supplies on a national basis pursuant to the Unregulated Contaminant Monitoring Rule (UCMR). U.S. EPA uses the data collected from these sample results to establish new drinking water standards (maximum contaminant levels or MCLs). Under the UCMR, the U.S. EPA completed sampling in 2014 and 2015 for PFOS and PFOA in various states. In 2009, U.S. EPA developed provisional health advisories for PFOS and PFOA of 200 parts per trillion and 400 parts per trillion, respectively. While this initial sampling detected PFOS and PFOA concentrations in one of three Freeport community water supply treatment plants in 2014, no PFOS/PFOA was detected in the follow-up sample from the same treatment plant in 2015. Therefore, the results were inconclusive.

In May 2016, U.S. EPA adopted a final life time Health Advisory for PFOS/PFOA of 70 parts per trillion, significantly lowering the final Health Advisory level from the previous provisional Health Advisories' levels of 200 and 400 parts per trillion, respectively. Even though U.S. EPA has not proposed MCLs for PFOS/PFOA, the final Health Advisory recommended actions for drinking water systems if water sampling results confirm that PFOS/PFOA concentrations are greater than 70 parts per trillion.

Given the concern about these unregulated contaminants and the uncertainty in the UCMR results, Illinois EPA offered technical assistance to Freeport, including sampling support, after the final Health Advisory was adopted. Since there were only about three labs in the country that were capable of detecting and quantifying these contaminants at the levels used by U.S. EPA in the UCMR study, Illinois EPA had to first find and contract with a laboratory that could do the analyses.

In December 2016, Illinois EPA sampled for PFOS and PFOA. Illinois EPA received the final results from the sampling in January 2017 and March 2, 2017. Based upon these sampling results and further analysis, the City of Freeport officials, in consultation with the Illinois EPA, Illinois Department of Public Health, and the Agency of Toxic Substances and Disease Registry, are notifying you of the actions that have been taken in response to the Health Advisory exceedance. Future updates will be provided as additional information becomes available.

### **How can I get additional information?**

Updates will be on the City website, <http://www.ci.freeport.il.us/>

Contact the City of Freeport at:

Freeport Water & Sewer Commission  
Tom Glendenning, Executive Director of Utility Operations  
815/233-1686 7:00 am – 3:00 pm  
[wsdispatch@cityoffreeport.org](mailto:wsdispatch@cityoffreeport.org)

Questions about drinking water sampling contact:

Illinois Environmental Protection Agency  
Brad Frost, Office of Community Relations  
217/782-7027  
[brad.frost@illinois.gov](mailto:brad.frost@illinois.gov)

Questions about the health effects of PFOS/PFOA contact:

Illinois Department of Public Health, Division of Environmental Health  
217/782-5830; or

Agency for Toxic Substances and Disease Registry (ATSDR) contact:

Motria Caudill, PhD  
Environmental Health Scientist  
ATSDR  
77 W. Jackson Blvd.  
Chicago, IL 60604  
Off. 312-886-0267  
Cell 312-257-4853  
[mcaudill@cdc.gov](mailto:mcaudill@cdc.gov)

#### **Drinking Water Watch**

*The Drinking Water Watch Web Portal allows citizens to directly access drinking water monitoring data and other information for community water systems in Illinois.*

[water.epa.state.il.us/dww/index.jsp](http://water.epa.state.il.us/dww/index.jsp)

#### **Additional Resources for Information on PFOA and PFOS**

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

<https://www.epa.gov/pfas>

<https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos>