



DATE: February 21, 2018
TO: David Parrish, Assistant City Manager
FROM: Steven D. Drew, Director
DEPARTMENT: Water Resources
SUBJECT: **Perfluoralkyl Organic Substances (PFOS and PFOA) Investigation/Update**

The mainstream and social media news outlets have been reporting on water quality issues across North Carolina with great interest. The News and Record has been following Greensboro's progress investigating the presence of an unregulated Perfluoralkyl Organic compound known as PFOS detected in our upper watershed. The following information is meant to provide background and a summary update in advance of a News and Record article planned for publication on Sunday, March 4th regarding the Water Resources Department's investigation of the unregulated substance PFOS.

Regulation: The Safe Drinking Water Act (SDWA) requires Public Water Systems to test for no less than 30 unregulated contaminants of potential concerns and prevalence in the environment every five years under the Unregulated Contaminant Rule (UCMR). The latest list included 28 chemicals and 2 viruses. PFOS was detected at a required reporting limit during UCMR3 sampling in 2014. Drinking water detection levels never exceeded public health advisory limits.

Background: PFOS and PFOA are perfluorinated organic chemicals that belong to a larger group of chemicals known as Perfluoralkyl Substances (PFASs). These two chemicals were widely used to make carpets, clothing, fabrics for furniture, paper packaging for food and other materials that are resistant to water, grease or stains. They were also used for firefighting (in the formulation of aqueous film forming foams) purposes. 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 of the way these chemicals were used and disposed of the potential existed for their release into the watershed.

Health Risk: While PFOS and PFOA substances remain unregulated, the Environmental Protection agency established a health advisory for these compounds in order to provide Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water. Health advisories provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA has established



the health advisory levels at 70 parts per trillion for PFOA and PFOS. We are glad to report all of the drinking water samples we have taken at our treatment plants have shown levels for these chemicals below EPA's health advisory level. We continue to proactively monitor for these substances and will take prompt actions should they be found above the health advisory level.

Action to Date: The Water Resources Department has taken a proactive role in investigating and monitoring for these substances within our watershed and in the drinking water we provide our customers. Back in 2016 the Department started the current study, investigating the magnitude and source of these compounds within the city's watershed through field detection and collection activities. The Department continues to collaboratively work with key stakeholders including regulators, Guilford County Department of Public Health and research scientists to reduce and if possible eliminate the source of these compounds. Additionally, the Department is in the process of planning for future improvements at the water treatment plants that will provide a certain degree of removal for these compounds should they rise above the health advisory level.

Next Steps: Once the investigation and study are complete the Water Resources Department will evaluate all options available for implementing a long term plan to effectively manage the presence and concentration of these compounds within the city's watershed and drinking water. Source elimination and treatment plant process improvements are two options that will be fully evaluated.

cc: Jim Westmoreland, City Manager
Mike Borchers, Assistant Director Water Resources
Kristine Williams, Assistant Director Water Resources
Dell Harney, Water Supply Division Manager