STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
SAGINAW BAY DISTRICT OFFICE

RICK SNYDER
GOVERNOR

C. HEIDI GRETHER
DIRECTOR

March 13, 2018

Sent Via Email

Mr. Mike Quinnell, Manager
Saginaw-Midland Municipal Water Supply Corporation
4678 South Three Mile Road
Bay City, Michigan 48706

WSSN: 5880

Dear Mr. Quinnell:

SUBJECT: Saginaw-Midland Corporation Raw Water Supply
Per- and Polyfluoroalkyl Substances (PFAS)

This letter is intended to inform you of the results of analyses for PFAS in samples collected from the Saginaw-Midland Municipal Water Supply Corporation's (Corporation) raw water pumping station at Whitestone Point on December 7, 2017, and January 11, 2018. These samples were collected in response to the detection of PFAS in a sample of drinking water from the City of Au Gres, which obtains its raw water from the Corporation. Samples were collected from the raw water intake line, the 48-inch discharge pipe, and the 72-inch discharge pipe. The results of this testing are attached to this correspondence.

Currently, there is no regulatory drinking water standard for any of these chemicals. However, in May 2016, the U.S. Environmental Protection Agency (EPA) established a non-regulatory Lifetime Health Advisory (LHA) for two of these chemicals, perfluorooctyl sulfonate (PFOS) and perfluorooctanoic acid (PFOA). The LHA for PFOS and PFOA is 70 parts per trillion (ppt) combined, or individually if only one of them is present. The EPA recommends that this LHA applies to both short-term (i.e. weeks to months) scenarios during pregnancy and lactation, as well as to lifetime-exposure scenarios. The Michigan Department of Health and Human Services (MDHHS), as well as the Michigan Department of Environmental Quality (MDEQ), have used this LHA of 70 ppt to inform decisions on actions that should be taken or are recommended to reduce exposure and prevent increased risk to public health from these PFAS contaminants.

The table below summarizes the sampling results. The concentrations of PFOS and PFOA in these samples are well below the EPA LHA level of 70 ppt and are not expected to result in adverse health effects. If additional guidance and/or comparison values are developed in the future, we will then re-evaluate the status of this contamination.

Date	Location	PFOS (ppt)	PFOA (ppt)	PFOS + PFOA (ppt)	LHA (ppt)	Total of Other PFAS (ppt)
12/7/2017	Intake Line	0.857 J	1.45 J	2.307 J	70	3.051 J
12/7/2017	48-inch discharge	1.14 J	1.60 J	2.74 J	70	2.403 J
12/7/2017	72-inch discharge	0.981 J	1.76 J	2.741 J	70	2.629 J
1/11/2018	Intake line	ND	0.758 J	0.758 J	70	1.624 J
1/11/2018	48-inch discharge	0.889 J	0.548 J	1.437 J	70	2.66 J
1/11/2018	72-inch discharge	0.545 J	ND	0.545 J	70	0.724 J

J – The amount detected is below the Reporting Limit/Level of Quantification

An "ND" result means the parameter was not detected. A result qualified with a "J" means the parameter was detected below the Reporting Limit or Level of Quantification (LoQ) and should be considered estimated. Some individual PFAS compounds included in the Total of Other PFAS were also detected below the LoQ and the total should also be considered estimated. A copy of the laboratory report is attached for your review.

As previously mentioned, PFAS chemicals do not have regulatory drinking water standards and many of these chemicals do not currently have lifetime health advisory levels or other public health comparison values. This lack of scientifically-based decision-making criteria for other PFAS compounds presents challenges for public water utilities that detect these chemicals in their water supply. Scientists have found PFOA and PFOS in the blood of nearly all the people they tested but these studies show that the levels of PFOA and PFOS in blood have been decreasing. While consumer products and food are a large source of exposure to these chemicals for most people, drinking water can be an additional source in the small percentage of communities where these chemicals have contaminated water supplies (EPA, 2016).

For information on PFOA, PFOS, and other PFAS including possible health outcomes, you may visit the following websites:

- https://www.epa.gov/pfas,
- www.atsdr.cdc.gov/pfc or
- www.michigan.gov/pfasresponse

Due to the current uncertainty on the source of this contamination in Lake Huron, we have the following recommendations for your consideration. These recommendations are essentially the same actions we have advised public water systems to follow for the past 30+ years when a new contaminant has been confirmed as present in their drinking water.

1. Continue monitoring the raw water supply for PFAS on a quarterly basis to demonstrate the concentrations are consistently and reliably below any LHA. Typically, four quarterly samples have been sufficient for making this determination, at which time the monitoring may become less frequent.

2. Communities which purchase raw water from the Corporation should also sample their treated water at the point of entry to the distribution system (plant tap) to provide system-specific results for their residents as well as their consecutive customers.

3. Notify the public of these sample results. The MDEQ, in collaboration with MDHHS, is willing to assist the Corporation and its municipal customers with developing a communications plan for notifying and informing residents as well as the media on the presence of PFAS in Lake Huron and the response measures to be initiated. One example of a document that could be used to notify customers is also attached with this letter.

4. Even though the levels of PFAS detected are well below any existing LHA, as with any contaminant in a public water supply, the MDEQ recommends you minimize public exposure to the extent reasonably possible. Communities that obtain their raw water from the Corporation should began evaluating options to accomplish this goal, including an assessment of the existing treatment to see if an adjustment or enhancement will reduce PFAS levels. The communities should also evaluate new treatment methods that could reduce PFAS, with a cost/benefit analyses to see if there is a feasible option.

We look forward to working with the Corporation and its customers to address this issue, inform your customers, and evaluate solutions to this challenge.

If you have any questions regarding this letter, feel free to contact me at the number below or by email at londonr@michigan.gov.

Sincerely,

Robert London, P.E.
Surface Water Treatment Specialist
Saginaw Bay District Office
Drinking Water and Municipal Assistance Division
989-450-7834

Attachments
cc/via email/att: Mr. John Stanley, City of Au Gres
Mr. Donald Becker, Sims-Whitney Utilities Authority
Mr. Greg Schell, City of Omer
Mr. Jerry Nelson, City of Standish
Mr. Larry Chambers, Linwood Metropolitan Water District
Mr. William Bohlen, Bay County Department of Water and Sewer
Ms. Kimberly Mason, City of Saginaw
Mr. Peter Schwarz, City of Midland
Chief Frank Cloutier, Saginaw Chippewa Indian Tribe
Mr. Barry Skutt, Saginaw Chippewa Indian Tribe
Ms. Carey Pauquette, Saginaw Chippewa Indian Tribe
Ms. Jennifer Manville, U.S. EPA Region 5
Bay County Health Department
Central Michigan District Health Department
Midland County Health Department
Saginaw County Department of Public Health
Tuscola County Health Department
District Health Department No. 2
Ms. Heidi Grether, Director, DEQ
Ms. Carol Isaacs, MPART
Mr. Nate Zimmer, Chief of Staff, DEQ
Ms. Susan Leeming, External Affairs Deputy Director, DEQ
Mr. Kory Groetsch, DHHS