

# City of Portsmouth

Department of Public Works



## November 10, 2020 PEASE TRADEPORT WATER SUPPLY UPDATE



**Construction of New Drinking Water Treatment Facility Upgrade – October 2020**

Construction of the final treatment system, which includes both resin and activated carbon filtration systems, began in April 2019. Recent work includes the installation of new Activated Carbon (GAC) vessels and delivery of the IOX Resin Filter vessels. Work installing new piping, pumps and controls is underway.



**New Granular Activated Carbon (GAC) Filters**



**IOX Resin Filter Vessels**



Installation of Piping for Resin Filter Vessels



Control Room Construction

The City’s engineering consultant continues to sample the performance of the activated carbon filters based on the amount of water treated. The following table provides a summary of the most recent treatment system testing results from samples taken on September 22, 2020.

**PFAS Sampling for September 22, 2020**

<b>Sample Point</b>	<b>PFHxS</b>	<b>PFNA</b>	<b>PFOS</b>	<b>PFOA</b>
NH MCLs (ppt)	18	11	15	12
Grafton Road Treatment Treated Water	ND	ND	ND	ND

**Notes:**

“NH MCLs” are the New Hampshire Maximum Contaminant Levels (effective July 2020).

“ND” is considered Non Detect. Per NHDES, “estimated numbers below the reporting limit are considered Non Detects.”

New carbon filters were installed and put into service in April 2020. Since that time over 81 million gallons of Harrison and Smith well water has been treated through the filters. Sampling results show that the activated carbon filters continue to remove the PFAS contaminants that New Hampshire has set regulatory standards for.

A copy of the comprehensive demonstration filter sampling results is attached at the end of this update. The tables show all the contaminants analyzed by the laboratory. Starting in August of 2020, EPA Test Method 533 was used for sample analysis. This test method is approved for the 25 listed PFAS compounds.

## **NEW HAMPSHIRE PFAS REGULATIONS**

On July 23, 2020, Governor Chris Sununu signed into law legislation that set maximum contaminant levels for drinking water (MCLs) for the four compounds: These standards set maximum contaminant levels (MCLs) for public drinking water systems at the following levels:

- Perfluorooctanoic acid (PFOA): 12 ppt
- Perfluorooctane sulfonic acid (PFOS): 15 ppt
- Perfluorononanoic acid (PFNA): 11 ppt
- Perfluorohexane sulfonic acid (PFHxS): 18 ppt
  - ppt = Parts per Trillion

The Pease International Tradeport water system will continue to sample according to these new standards and will submit quarterly data. This also applies to the City of Portsmouth's sampling of all of their other water sources. Results of that sampling will also be posted on the City's website.

## **ONGOING WATER QUALITY MONITORING AND UPDATES**

The Air Force's consultant continues to perform routine sampling of the water supply wells in the Pease water system. In addition to these water supply wells, the Air Force's consultant samples other monitoring wells in the surrounding area to track the aquifer and monitor for any PFAS moving toward the supply wells. Currently, with the demonstration filters on line, the supply wells are sampled monthly and eleven monitoring wells are sampled quarterly. Sampling data is posted on the City's website once it has been validated by the Air Force's engineering consultant. Information is also posted on the City's website for the City of Portsmouth's PFAS sampling program. Data for the Pease Well sampling is uploaded to the City's website when it is validated by the Air Force's consultant and sent to the City.

## **OTHER ONGOING RESTORATION EFFORTS - excerpted from FORMER PEASE AIR FORCE BASE RESTORATION ADVISORY BOARD OCTOBER 2020 UPDATE**

AIRFIELD INTERIM MITIGATION TREATMENT SYSTEM (Pease southern wellfield aquifer restoration)

- Since startup in April 2019, the system has treated approximately 306,363,000 gallons of groundwater through 28 October 2020
- Redevelopment of AIMS Cutoff Extraction Wells began on 02 October and was completed on 20 October 2020.
- Discharge of treated water remains below new NH AGQS for PFOS, PFOA, PFNA, and PFHxS
- Monthly samples from the Smith, Harrison, Portsmouth, and Collins wells were collected on 26 October 2020
- Semiannual Performance Monitoring sampling event was conducted between 25 and 30 September 2020

## PUBLIC OUTREACH AND OTHER INFORMATION

### Advisory Groups and Health Studies

- **The Pease Restoration Advisory Board (RAB)** meeting scheduled for March 18, 2020 at the Pease office of the New Hampshire Department of Environmental Services was canceled due to Covid 19. A virtual meeting to the Board was held on August 5, 2020 and updates of the Pease aquifer investigations and restoration were provided.

Minutes and meeting materials from 05 August 2020 RAB can be accessed via the following link:

<https://www.afcec.af.mil/Home/BRAC/Pease-Archives/>

- Next virtual meeting: 02 Dec 2020 at 4:00-6:00pm EST
- **Pease Community Assistance Panel (CAP)** – The Agency for Toxic Substances and Disease Registry (ATSDR), a federal public health agency, is evaluating the public health impact of drinking water contaminated with per- and polyfluoroalkyl substances (PFAS) at the Pease International Tradeport site and nearby wells. ATSDR has created a Community Assistance Panel (CAP) for Pease as a way for the community to participate directly in ATSDR’s health activities. CAP members are voluntary, unpaid individuals from the Pease community. CAP members will work with ATSDR to gather and review community health concerns, provide information on how people might have been exposed to hazardous substances, and inform ATSDR how to involve the community.
  - <https://www.atsdr.cdc.gov/pfas/activities/pease/cap.html>
- **Evaluation of Exposure to Per- and Polyfluoroalkyl Substances (PFAS) in the Pease Tradeport Public Water Supply (PWS) April 1, 2019 - ATSDR releases their Public Health Consultation on PFAS in the Pease Tradeport Public Water System** - The Agency for Toxic Substances and Disease Registry (ATSDR) is a public health agency that evaluates environmental exposures for public health risks. ATSDR has released a health consultation on drinking water contamination at the Pease Tradeport PWS. The health consultation evaluated whether water containing PFAS posed a health threat to people who drank it any time since 1993. Those people included workers at the Pease International Tradeport. They also included children at the two childcare centers at the Pease International Tradeport. This fact sheet summarizes ATSDR’s findings, released in April 1, 2019. The full report is titled “Perand Polyfluoroalkyl Substances (PFAS) in the Pease Tradeport Public Water System (PWS).” You can find the report at <https://www.atsdr.cdc.gov/HAC/PHA/HCPHA.asp?State=NH>.
  - Summary of Key Findings
    - Water from the Pease Tradeport PWS between January 1993 through May 2014 could have increased the risk for harmful health effects to Pease International

Tradeport workers and children attending the childcare centers. Other possible sources of exposure to users of the Pease Tradeport PWS include food and consumer products. Those could increase the risk for harmful effects beyond the risk from the drinking water exposures alone.

- Exposure to perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), and perfluorohexane sulfonic acid (PFHxS) can depress the immune response, increase cholesterol, slow growth and development, and cause liver damage.
- Community members, particularly mothers exposed to PFAS from the Pease Tradeport PWS, have concerns about the possible health effects of PFAS exposures to infants who breastfeed. Based on available scientific information,
- ATSDR concludes that the health and nutritional benefits of breastfeeding outweigh the risks associated with PFAS in breast milk.
- Consuming water from the Pease Tradeport PWS after May 2014 is not expected to cause people harm.

- **The Pease Study: PFAS Health Effects** - The Centers for Disease Control and Prevention (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR) are studying the health effects from drinking PFAS (per and polyfluoroalkyl substances)-contaminated water in the Portsmouth, New Hampshire area.
  - Trained health professionals will be:
    - Testing blood and urine samples;
    - Taking body measurements;
    - Asking about medical history; and
    - Studying behaviors in child participants.
  - After the study ends and the results are analyzed, CDC and ATSDR will share results as soon as possible and will write and share a report with the public.
  - [https://www.atsdr.cdc.gov/pfas/activities/pease.html?CDC\\_AA\\_refVal=https%3A%2F%2Fwww.atsdr.cdc.gov%2Fpfas%2FPease-Study.html](https://www.atsdr.cdc.gov/pfas/activities/pease.html?CDC_AA_refVal=https%3A%2F%2Fwww.atsdr.cdc.gov%2Fpfas%2FPease-Study.html)
- **PFAS-REACH (Research, Education, and Action for Community Health)** – Silent Spring Institute - A five-year project funded by a grant from the National Institute of Environmental Health Sciences (NIEHS), with is part of the National Institutes of Health. One of the major goals of PFAS-REACH is to evaluation immune system effects in children (ages 4 to 6) in communities with prior PFAS water contamination. PFAS-REACH is being led by Silent Spring Institute in collaboration with Northeastern University and Michigan State University. The main community partner organizations are Testing for Pease, Massachusetts Breast Cancer Coalition, and Toxics Action Center.
  - Goals of the Study:

- To evaluate potential effects of PFAS exposures on the immune systems of young children in two communities that have had PFAS water contamination
  - To develop an innovative online resource center, called the PFAS Exchange, with data interpretation tools, tap water testing, and educational materials for affected communities and other audiences.
  - To conduct a social science analysis affected communities to assess individual, family, and community-level experiences of residents in areas impacted by PFAS-contaminated drinking water.
- [www.PFAS-Exchange.org/childrenstudy](http://www.PFAS-Exchange.org/childrenstudy)
- **PFAS Blood Testing Program – New Hampshire DHHS** - In 2015, the New Hampshire Department of Health and Human Services began a blood testing program for people who had lived on, worked on, or attended child care on the Pease Tradeport. A total of 1,578 individuals had their blood tested for PFAS between April to October 2015.
  - 1,181 Adults tested
  - 366 Children tested
  - Three public meetings announcing blood test results
  - Report can be accessed at:
    - <https://www.atsdr.cdc.gov/pfas/Pease-Study.html>

### Treatment and Drinking Water System Studies

- **Haven well resin performance piloting study** – A treatment pilot system has been set up at the Air Force’s AIMS treatment facility to study the performance of the resin media that will be installed at the new Grafton Road water treatment facility. This will help identify the filter run times for establishing time periods when the filter media should be changed out to assure adequate treatment of PFAS compounds.
- **Testing for Pease Tap Water Sampling Study** - The goal of the Testing For Pease Portsmouth Community Tap Sampling Program is to gather accurate data about the presence and concentration of PFAS coming out of city taps, enabling us to understand the precise nature of the PFAS load the public is being exposed to via the public water supply. Three rounds of testing have been performed to date with the City of Portsmouth’s water staff. So far, results are what were expected based on the PFAS detections from the various water supply sources and the blending of waters in the City’s 200 miles of water distribution system piping network. Results are posted on the Testing for Pease website: [testingforpease.com](http://testingforpease.com)

- **PFAS Costs Research Group** – Northeastern University, Dr. Phil Brown (formed August 2020) - This pilot project would be part of a larger project aimed at tallying the enormous costs to the United States due to PFAS exposures. These costs have not yet been calculated, but they are expected to be significant. The project will have two parts: One part, which is national in scope, will review newly available information showing linkages between PFAS exposure and specific health endpoints, to show how exposure to PFAS causes diseases. It will then calculate the economic burden of those diseases across the country, in terms of costs of medical care, lost workdays, and other aspects.
- **Non Target Analysis for PFAS Compounds** – October 2018 to July 2019 - In 2018, Testing for Pease was awarded grant money from the Seacoast Womens Giving Circle to fund additional water testing, which was performed by Dr. Chris Higgins, PhD, from the Colorado School of Mines. Dr. Higgin’s laboratory has technology used to conduct Non Target Analysis tests for many PFAS compounds not routinely tested for in commercial labs. Sampling occurred from October 2018 to July 2019 and results were presented to the Pease RAB at their December 5, 2020 meeting. Dr. Higgins stated that “All of the compounds that we see at Grafton can be removed by treatment. They clearly are being captured by the GAC. To the extent that GAC and resin are used in conjunction that would probably do a very good job for both of them.”
  - More information can be found at: [www.testingforpease.com](http://www.testingforpease.com)

**Additional information can be accessed at:**

**[www.cityofportsmouth.com/publicworks/water/pease-tradeport-water-system](http://www.cityofportsmouth.com/publicworks/water/pease-tradeport-water-system)**

or by calling Al Pratt, Water Resources Manager, at: 603-520-0622 or Brian Goetz, Deputy Director of Public Works at: 603-766-1420

**Table 2**  
**Summary of PFAS Analytical Results**  
**Demonstration Project**  
**December 2018 to August 2020**

Sample Location	Collection Date	Filter 1 Volume (MG)	Filter 1 Bed Volumes	Filter 2 Volume (MG)	Filter 2 Bed Volumes	6:2 Fluorotelomer sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonate (8:2 FTS)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl Perfluorooctane Sulfonamide (MEFOSA)	N-Methyl Perfluorooctane Sulfonamidoethanol (MEFOSE)	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecane sulfonate (PFDS)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	Perfluoroheptane sulfonate (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (PFOSA)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTDA)	Perfluoroundecanoic acid (PFUnA)	PFOS+PFOA				
NHDES MCL:						-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.018	-	0.012	0.011	-	0.015	-	-	-	-	-	-		
Method Detection Limit (MDL)						0.0065	0.0055	0.0053	0.0049	0.0040	0.0061	0.0019	0.0066	0.0043	0.0066	0.0057	0.0036	0.0047	0.0040	0.0046	0.0053	0.0046	0.0058	0.0033	0.0036	0.0052	0.0032	0.0037					
Reported Detection Limit (RDL)						0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	
GAC changed out in both vessels (11/7/2018)																																	
Combined Raw	06-Dec-18	2.4	450	0.5	105	ND	ND	ND	ND	ND	ND	ND	0.0092 J	ND	ND	ND	ND	0.0140 J	0.0960	0.0360	0.0290	ND	ND	0.0470	0.0330	ND	ND	ND	ND	0.0760			
Filter 1- 25%	06-Dec-18	2.4	450	0.5	105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Combined Raw	10-Jan-19	7.2	1,382	5.4	1,036	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0280	0.0100 J	0.0084 J	ND	ND	0.0160 J	0.0100 J	ND	ND	ND	ND	0.0244 J			
Filter 1- 25%	10-Jan-19	7.2	1,382	5.4	1,036	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Filter 2-100%	10-Jan-19	7.2	1,382	5.4	1,036	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Combined Raw	07-Feb-19	18.1	3,447	16.3	3,101	ND	ND	ND	ND	ND	ND	ND	0.0100 J	ND	ND	ND	ND	0.0130 J	0.0600	0.0220	0.0180 J	ND	ND	0.0270	0.0210	ND	ND	ND	ND	0.0450 J			
Filter 1- 25%	07-Feb-19	18.1	3,447	16.3	3,101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Filter 2-100%	07-Feb-19	18.1	3,447	16.3	3,101	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Combined Raw	07-Mar-19	28.9	5,522	27.1	5,176	ND	ND	ND	ND	ND	ND	0.0084 J	0.0130 J	ND	ND	ND	ND	0.0160 J	0.0920	0.0320	0.0280	ND	ND	0.0420	0.0310	ND	ND	ND	ND	0.0700			
Filter 1- 25%	07-Mar-19	28.9	5,522	27.1	5,176	ND	ND	ND	ND	ND	ND	ND	0.0089 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Filter 2-100%	07-Mar-19	28.9	5,522	27.1	5,176	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Combined Raw	05-Apr-19	39.5	7,545	37.7	7,199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0091 J	0.0660	0.0210	0.0180 J	ND	ND	0.0250	0.0210	ND	ND	ND	ND	0.0430 J			
Filter 1- 25%	05-Apr-19	39.5	7,545	37.7	7,199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0059 J	ND	ND	ND	ND	ND	ND		
Filter 1- 50%	05-Apr-19	39.5	7,545	37.7	7,199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Filter 2-100%	05-Apr-19	39.5	7,545	37.7	7,199	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Combined Raw	09-May-19	53.2	10,159	51.4	9,813	ND	ND	ND	ND	ND	ND	ND	0.0073 J	ND	ND	ND	ND	0.0095 J	0.0730	0.0240	0.0200	ND	ND	0.0280	0.0210	ND	ND	ND	ND	0.0480 J			
Filter 1- 25%	09-May-19	53.2	10,159	51.4	9,813	ND	ND	ND	ND	ND	ND	ND	0.0097 J	ND	ND	ND	ND	ND	0.0094 J	ND	ND	ND	ND	ND	0.0170 J	ND	ND	ND	ND	ND	ND		
Filter 1- 50%	09-May-19	53.2	10,159	51.4	9,813	ND	ND	ND	ND	ND	ND	ND	0.0083 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0048 J	ND	ND	ND	ND	ND	ND		
Filter 2-100%	09-May-19	53.2	10,159	51.4	9,813	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Method Detection Limit (MDL)						0.00043	0.00047	-	-	-	-	0.00037	0.00045	0.00036	0.00018	0.00025	0.00063	0.00037	0.00033	0.00026	0.00023	0.00048	0.00031	0.00043	0.00048	0.00016	0.00030	0.00038	-	-			
Reported Detection Limit (RDL)						0.004	0.004	-	-	-	-	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.004	0.002	0.002	0.002	0.002	0.002	0.002	-	
Combined Raw	07-Jun-19	67.3	12,841	65.5	12,495	0.0007 J	ND	NA	NA	NA	NA	0.0043	0.0084	ND	ND	ND	0.0022	0.0100	0.0820	0.0240	0.0210	0.0009 J	ND	0.0330	0.0220	ND	ND	ND	ND	0.0540			
Filter 1- 25%	07-Jun-19	67.3	12,841	65.5	12,495	0.0006 J	ND	NA	NA	NA	NA	0.0017 J	0.0094	ND	ND	ND	ND	0.0040	0.0110	0.0140	0.0040	ND	ND	0.0021	0.0200	ND	ND	ND	ND	0.0061			
Filter 1- 50%	07-Jun-19	67.3	12,841	65.5	12,495	0.0005 J	ND	NA	NA	NA	NA	ND	0.0094	ND	ND	ND	ND	0.0008 J	0.0009 J	0.0047	0.0003 J	ND	ND	ND	0.0140	ND	ND	ND	ND	ND			
Filter 1- 75%	07-Jun-19	67.3	12,841	65.5	12,495	0.0005 J	ND	NA	NA	NA	NA	ND	0.0097	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0023	ND	ND	ND	ND	ND			
Filter 2-100%	07-Jun-19	67.3	12,841	65.5	12,495	0.0005 J	ND	NA	NA	NA	NA	ND	0.0022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Combined Raw	08-Jul-19	84.4	16,117	82.6	15,771	0.0006 J	ND	NA	NA	NA	NA	0.0042	0.0079	ND	ND	ND	0.0018 J	0.0093	0.0740	0.0230	0.0220	0.0010 J	ND	0.0310	0.0220	ND	ND	ND	ND	0.0530			
Filter 1- 25%	08-Jul-19	84.4	16,117	82.6	15,771	ND	ND	NA	NA	NA	NA	0.0024	0.0074	ND	ND	ND	ND	0.0052	0.0240	0.0160	0.0087	ND	ND	0.0070	0.0190	ND	ND	ND	ND	0.0157			
Filter 1- 50%	08-Jul-19	84.4	16,117	82.6	15,771	ND	ND	NA	NA	NA	NA	0.0011 J	0.0082	ND	ND	ND	ND	0.0022	0.0043	0.0110	0.0024	ND	ND	0.0006 J	0.0170	ND	ND	ND	ND	0.0030 J			
Filter 1- 75%	08-Jul-19	84.4	16,117	82.6	15,771	ND	ND	NA	NA	NA	NA	ND	0.0093	ND	ND	ND	ND	ND	0.0015 J	ND	ND	ND	ND	0.0110	ND	ND	ND	ND	ND	ND			
Filter 1- 100%	08-Jul-19	84.4	16,117	82.6	15,771	ND	ND	NA	NA	NA	NA	ND	0.0087	ND	ND	ND	ND	ND	ND	0.0014 J	ND	ND	ND	ND	0.0084	ND	ND	ND	ND	ND			
Filter 2- 100%	08-Jul-19	84.4	16,117	82.6	15,771	ND	ND	NA	NA	NA	NA	ND	0.0057	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Combined Raw	15-Aug-19	107.1	20,440	105.3	20,094	ND	ND	NA	NA	NA	NA	0.0045	0.0079	ND	ND	ND	0.0021	0.0110	0.0860	0.0250	0.0230	0.0009 J	ND	0.0350	0.0240	ND	ND	ND	ND	0.0580			
Filter 1- 25%	15-Aug-19	107.1	20,440	105.3	20,094	ND	ND	NA	NA	NA	NA	0.0031	0.0076	ND	ND	ND	0.0007 J	0.0064	0.0320	0.0190	0.0110	ND	ND	0.0087	0.0200	ND	ND	ND	ND	0.0197			
Filter 1- 50%	15-Aug-19	107.1	20,440	105.3	20,094	ND	ND	NA	NA	NA	NA	0.0022	0.0080	ND	ND	ND	ND	0.0039	0.0120	0.0160	0.0050	ND	ND	0.0021	0.0190	ND	ND	ND	ND	0.0071			
Filter 1- 75%	15-Aug-19	107.1	20,440	105.3	20,094	ND	ND	NA	NA	NA	NA	0.0007 J	0.0088	ND	ND	ND	ND	0.0008 J	ND	0.0078	0.0005 J	ND	ND	ND	0.0180	ND	ND	ND	ND	ND			



**Table 2**  
**Summary of PFAS Analytical Results**  
**Demonstration Project**  
**December 2018 to August 2020**

Sample Location	Collection Date	Filter 1 Volume (MG)	Filter 1 Bed Volumes	Filter 2 Volume (MG)	Filter 2 Bed Volumes	6:2 Fluorotelomer sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonate (8:2 FTS)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl Perfluorooctane Sulfonamide (MEFOSA)	N-Methyl Perfluorooctane Sulfonamidoethanol (MEFOSE)	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecane sulfonate (PFDS)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	Perfluorooheptane sulfonate (PFHpS)	Perfluorooheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (FOSA)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTDA)	Perfluoroundecanoic acid (PFUnA)	PFOS+PFOA	
NHDES MCL:						-	-	-	-	-	-	-	-	-	-	-	-	-	0.018	-	0.012	0.011	-	0.015	-	-	-	-	-	-
Filter 1- 100%	15-Aug-19	107.1	20,440	105.3	20,094	ND	ND	NA	NA	NA	NA	0.0007 J	0.0099	ND	ND	ND	ND	0.0010 J	ND	0.0068	0.0008 J	ND	ND	ND	0.0170	ND	ND	ND	ND	
Filter 2- 25%	15-Aug-19	107.1	20,440	105.3	20,094	ND	ND	NA	NA	NA	NA	ND	0.0096	ND	ND	ND	ND	ND	ND	0.0011 J	ND	ND	ND	ND	0.0110	ND	ND	ND	ND	
Filter 2- 100%	15-Aug-19	107.1	20,440	105.3	20,094	ND	ND	NA	NA	NA	NA	ND	0.0086	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0035	ND	ND	ND	ND	
Combined Raw	20-Sep-19	128.7	24,572	126.9	24,226	ND	ND	NA	NA	NA	NA	0.0036	0.0082	ND	ND	ND	0.0016 J	0.0100	0.0830	0.0250	0.0240	ND	ND	0.0430	0.0220	ND	ND	ND	0.0670	
Filter 1- 25%	20-Sep-19	128.7	24,572	126.9	24,226	ND	ND	NA	NA	NA	NA	0.0024	0.0073	ND	ND	ND	ND	0.0066	0.0380	0.0190	0.0110	ND	ND	0.0150	0.0190	ND	ND	ND	0.0260	
Filter 1- 50%	20-Sep-19	128.7	24,572	126.9	24,226	ND	ND	NA	NA	NA	NA	0.0018 J	0.0078	ND	ND	ND	ND	0.0050	0.0190	0.0170	0.0063	ND	ND	0.0042	0.0190	ND	ND	ND	0.0105	
Filter 1- 75%	20-Sep-19	128.7	24,572	126.9	24,226	ND	ND	NA	NA	NA	NA	0.0006 J	0.0092	ND	ND	ND	ND	0.0014 J	0.0020	0.0120	0.0007 J	ND	ND	ND	0.0210	ND	ND	ND	ND	
Filter 1- 100%	20-Sep-19	128.7	24,572	126.9	24,226	ND	ND	NA	NA	NA	NA	ND	0.0080	ND	ND	ND	ND	0.0009 J	0.0017 J	0.0088	0.0006 J	ND	ND	ND	0.0180	ND	ND	ND	ND	
Filter 2- 25%	20-Sep-19	128.7	24,572	126.9	24,226	ND	ND	NA	NA	NA	NA	ND	0.0088	ND	ND	ND	ND	ND	ND	0.0036	ND	ND	ND	ND	0.0160	ND	ND	ND	ND	
Filter 2- 100%	20-Sep-19	128.7	24,572	126.9	24,226	ND	ND	NA	NA	NA	NA	ND	0.0095	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0079	ND	ND	ND	ND	
GAC changed out in Filter 1 (11/15/2019), lag filter changed to lead position																														
Combined Raw	18-Dec-19	6.2	1,191	157.9	30,140	ND	ND	NA	NA	NA	NA	0.0048	0.0095	ND	ND	ND	0.0027	0.0130	0.1000	0.0310	0.0280	0.0009 J	ND	0.0490	0.0290	ND	ND	ND	0.0770	
Filter 2- 25%*	18-Dec-19	6.2	1,191	157.9	30,140	ND	ND	NA	NA	NA	NA	0.0019 J	0.0110	ND	ND	ND	ND	0.0038	0.0130	0.0170	0.0044	ND	ND	0.0022	0.0220	ND	ND	ND	0.0066	
Filter 2- 50%*	18-Dec-19	6.2	1,191	157.9	30,140	ND	ND	NA	NA	NA	NA	ND	0.0088	ND	ND	ND	ND	ND	ND	0.0068	ND	ND	ND	ND	0.0200	ND	ND	ND	ND	
Filter 2- 100%*	18-Dec-19	6.2	1,191	157.9	30,140	ND	ND	NA	NA	NA	NA	ND	0.0094	ND	ND	ND	ND	ND	ND	0.0018 J	ND	ND	ND	ND	0.0140	ND	ND	ND	ND	
Filter 1- 25%*	18-Dec-19	6.2	1,191	157.9	30,140	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Filter 1- 50%*	18-Dec-19	6.2	1,191	157.9	30,140	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Filter 1- 75%*	18-Dec-19	6.2	1,191	157.9	30,140	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Filter 1- 100%*	18-Dec-19	6.2	1,191	157.9	30,140	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Combined Raw	23-Jan-20	21.9	4,178	173.6	33,127	ND	ND	NA	NA	NA	NA	0.0043	0.0093	ND	ND	ND	0.0023	0.0110	0.0910	0.0280	0.0230	0.0008 J	ND	0.0420	0.0260	ND	ND	ND	0.0650	
Filter 2- 25%*	23-Jan-20	21.9	4,178	173.6	33,127	ND	ND	NA	NA	NA	NA	0.0025	0.0076	ND	ND	ND	ND	0.0053	0.0230	0.0190	0.0083	ND	ND	0.0055	0.0210	ND	ND	ND	0.0138	
Filter 2- 50%*	23-Jan-20	21.9	4,178	173.6	33,127	ND	ND	NA	NA	NA	NA	0.0008 J	0.0089	ND	ND	ND	ND	0.0014 J	0.0020 J	0.0120	0.0006 J	ND	ND	ND	0.0200	ND	ND	ND	ND	
Filter 2- 100%*	23-Jan-20	21.9	4,178	173.6	33,127	ND	ND	NA	NA	NA	NA	ND	0.0091	ND	ND	ND	ND	ND	ND	0.0043	ND	ND	ND	ND	0.0160	ND	ND	ND	ND	
Filter 1- 25%*	23-Jan-20	21.9	4,178	173.6	33,127	ND	ND	NA	NA	NA	NA	ND	0.0041	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Filter 1- 50%*	23-Jan-20	21.9	4,178	173.6	33,127	ND	ND	NA	NA	NA	NA	ND	0.0008 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Filter 1- 75%*	23-Jan-20	21.9	4,178	173.6	33,127	ND	ND	NA	NA	NA	NA	ND	0.0005 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Filter 1- 100%*	23-Jan-20	21.9	4,178	173.6	33,127	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Combined Raw	25-Feb-20	35.1	6,703	186.8	35,651	ND	ND	NA	NA	NA	NA	0.0045	0.0084	ND	ND	ND	0.0024	0.0110	0.0930	0.0280	0.0250	0.0009 J	ND	0.0470	0.0260	ND	ND	ND	0.0720	
Filter 2- 25%*	25-Feb-20	35.1	6,703	186.8	35,651	ND	ND	NA	NA	NA	NA	0.0024	0.0067	ND	ND	ND	ND	0.0061	0.0340	0.0180	0.0110	ND	ND	0.0098	0.0190	ND	ND	ND	ND	
Filter 2- 50%*	25-Feb-20	35.1	6,703	186.8	35,651	ND	ND	NA	NA	NA	NA	0.0016 J	0.0070	ND	ND	ND	ND	0.0030	0.0074	0.0140	0.0032	ND	ND	0.0009 J	0.0190	ND	ND	ND	ND	
Filter 2- 100%*	25-Feb-20	35.1	6,703	186.8	35,651	ND	ND	NA	NA	NA	NA	0.0004 J	0.0071	ND	ND	ND	ND	0.0006 J	ND	0.0065	0.0005 J	ND	ND	ND	0.0160	ND	ND	ND	ND	
Filter 1- 25%*	25-Feb-20	35.1	6,703	186.8	35,651	ND	ND	NA	NA	NA	NA	ND	0.0074	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0017 J	ND	ND	ND	ND	
Filter 1- 100%*	25-Feb-20	35.1	6,703	186.8	35,651	ND	ND	NA	NA	NA	NA	ND	0.0023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Combined Raw	26-Mar-20	47.9	9,136	199.5	38,084	ND	ND	NA	NA	NA	NA	0.0038	0.0070	ND	ND	ND	0.0021	0.0098	0.0800	0.0240	0.0220	0.0007 J	ND	0.0390	0.0220	0.0002 J	ND	ND	0.0610	
Filter 2- 25%*	26-Mar-20	47.9	9,136	199.5	38,084	ND	ND	NA	NA	NA	NA	0.0030	0.0070	ND	ND	ND	0.0010 J	0.0069	0.0340	0.0200	0.0120	0.0005 J	ND	0.0100	0.0210	ND	ND	ND	0.0220	
Filter 2- 50%*	26-Mar-20	47.9	9,136	199.5	38,084	ND	ND	NA	NA	NA	NA	0.0018 J	0.0069	ND	ND	ND	ND	0.0035	0.0093	0.0150	0.0040	ND	ND	0.0011 J	0.0190	ND	ND	ND	0.0051 J	
Filter 2- 100%*	26-Mar-20	47.9	9,136	199.5	38,084	ND	ND	NA	NA	NA	NA	0.0006 J	0.0070	ND	ND	ND	ND	0.0008 J	0.0010 J	0.0079	0.0008 J	ND	ND	ND	0.0160	ND	ND	ND	ND	
Filter 1- 25%*	26-Mar-20	47.9	9,136	199.5	38,084	ND	ND	NA	NA	NA	NA	ND	0.0076	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0059	ND	ND	ND	ND	
Filter 1- 100%*	26-Mar-20	47.9	9,136	199.5	38,084	ND	ND	NA	NA	NA	NA	ND	0.0037	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	

**Table 2  
Summary of PFAS Analytical Results  
Demonstration Project  
December 2018 to August 2020**

Sample Location	Collection Date	Filter 1 Volume (MG)	Filter 1 Bed Volumes	Filter 2 Volume (MG)	Filter 2 Bed Volumes	6:2 Fluorotelomer sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonate (8:2 FTS)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl Perfluorooctane Sulfonamide (MEFOSA)	N-Methyl Perfluorooctane Sulfonamidoethanol (MEFOSE)	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecane sulfonate (PFDS)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	Perfluoroheptane sulfonate (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (PFOSA)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTDA)	Perfluoroundecanoic acid (PFUnA)	PFOS+PFOA		
NHDES MCL:						-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.018	-	0.012	0.011	-	0.015	-	-	-	-	-	-
<b>New GAC Filters Online 4/21/2020</b>																															
Combined Raw	18-May-20	8.7	1,657	8.7	1,657	ND	ND	NA	NA	NA	NA	0.0037	0.0071	ND	ND	ND	0.0016 J	0.0099	0.0800	0.0240	0.0220	0.0009 J	ND	0.0390	0.0220	ND	ND	ND	ND	0.0610	
Filter 420- 100%	18-May-20	8.7	1,657	8.7	1,657	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Filter 410- 25%	18-May-20	8.7	1,657	8.7	1,657	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Filter 420- 25%	23-Jun-20	28.2	5,380	28.2	5,380	ND	ND	NA	NA	NA	NA	ND	0.0062	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0037	ND	ND	ND	ND	ND	
Filter 410- 25%	23-Jun-20	28.2	5,380	28.2	5,380	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Filter 410-100%	23-Jun-20	28.2	5,380	28.2	5,380	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Combined Raw	20-Jul-20	44.6	8,511	44.6	8,511	ND	ND	NA	NA	NA	NA	0.0037	0.0068	ND	ND	ND	0.0020 J	0.0088	0.0740	0.0200	0.0190	0.0011 J	NA	0.0360	0.0200	ND	ND	ND	ND	0.0550	
Filter 420- 25%	20-Jul-20	44.6	8,511	44.6	8,511	ND	ND	NA	NA	NA	NA	0.0008 J	0.0070	ND	ND	ND	ND	0.0011 J	0.0013 J	0.0049	0.0010 J	ND	NA	ND	0.0110	ND	ND	ND	ND	ND	
Filter 420- 75%	20-Jul-20	44.6	8,511	44.6	8,511	ND	ND	NA	NA	NA	NA	ND	0.0044	ND	ND	ND	ND	ND	ND	ND	0.0005 J	ND	NA	ND	ND	ND	ND	ND	ND	ND	
Filter 410- 25%	20-Jul-20	44.6	8,511	44.6	8,511	ND	ND	NA	NA	NA	NA	ND	0.0009 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Filter 410-100%	20-Jul-20	44.6	8,511	44.6	8,511	ND	ND	NA	NA	NA	NA	ND	0.0008 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Combined Raw	26-Aug-20	66.7	12,739	66.7	12,739	0.0006 J	ND	NA	NA	NA	NA	0.0050	0.0095	NA	ND	ND	0.0025	0.0139	0.0960	0.0311	0.0330	0.0016 J	NA	0.0638	0.0268	NA	NA	ND	ND	0.0968	
Filter 420- 25%	26-Aug-20	66.7	12,739	66.7	12,739	ND	ND	NA	NA	NA	NA	0.0030	0.0116	NA	ND	ND	ND	0.0048	0.0141	0.0227	0.0082	ND	NA	0.0032	0.0262	NA	NA	ND	ND	0.0114	
Filter 420- 50%	26-Aug-20	66.7	12,739	66.7	12,739	ND	ND	NA	NA	NA	NA	0.0010 J	0.0120	NA	ND	ND	ND	0.0016 J	0.0017 J	0.0120	0.0014 J	ND	NA	ND	0.0230	NA	NA	ND	ND	ND	
Filter 420- 75%	26-Aug-20	66.7	12,739	66.7	12,739	0.0011 J	ND	NA	NA	NA	NA	ND	0.0124	NA	ND	ND	ND	ND	ND	0.0016 J	ND	ND	NA	ND	0.0151	NA	NA	ND	ND	ND	
Filter 410-100%	26-Aug-20	66.7	12,739	66.7	12,739	ND	ND	NA	NA	NA	NA	ND	0.0034	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	ND	ND	ND	

Grey text indicates the parameter was not analyzed or not detected.

All concentrations in µg/L - micrograms per liter (ppb)

J - The result is an estimated value.

B - Detected in Blank.

USEPA - Environmental Protection Agency

NA - Not Analysed or Not Applicable

ND - Not detected

- - No Health Advisory available

- Denotes 'B' value, detected in blank

- Denotes raw water influent sample

- Denotes short chain compound

\* - Since November 15, 2019, Filter 2 has been operating in the lead position and Filter 1 has been operating in the lag position. On 4/21/2020, Filters 1 and 2 were replaced with new vessels and filter media, called filters 410 and 420.

**Table 3**  
**Summary of PFAS Analytical Results**  
**Demonstration Project**  
**August 2020 to September 2020\***

Sample Location	Collection Date	Filter 1 Volume (MG)	Filter 1 Bed Volumes	Filter 2 Volume (MG)	Filter 2 Bed Volumes	Perfluorobutanoic Acid (PFBA)	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	Perfluoropentanoic Acid (PFPeA)	Perfluorobutanesulfonic Acid (PFBS)	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	Perfluoro(2-Ethoxyethane) Sulfonic Acid (PFEESA)	Nonfluoro-3,6-Dioxahexanoic Acid (NFDHA)	1H, 1H, 2H, 2H-Perfluorohexanesulfonic Acid (4:2FTS)	Perfluorohexanoic acid (PFHxA)	Perfluoropentanesulfonic Acid (PFPeS)	2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	Perfluoroheptanoic Acid (PFHpA)	Perfluorohexanesulfonic Acid (PFHxS)	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2FTS)	Perfluorooctanoic acid (PFOA)	Perfluoroheptanesulfonic Acid (PFHpS)	Perfluorononanoic Acid (PFNA)	Perfluorooctanesulfonic Acid (PFOS)	9-Chlorohexadecafluoro-3-Oxanon-1-Sulfonic Acid (9Cl-PF3ONS)	1H, 1H, 2H, 2H-Perfluorodecane sulfonic Acid (8:2FTS)	Perfluorodecanoic Acid (PFDA)	Perfluoroundecanoic Acid (PFUnA)	11-Chloroicosadecafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	Perfluorododecanoic Acid (PFDoA)			
NHDES MCL:						-	-	-	-	-	-	-	-	-	-	-	-	0.018	-	-	0.012	-	0.011	0.015	-	-	-	-	-	-	-	-	-
Combined Raw	26-Aug-20	66.7	12,739	66.7	12,739	0.0095	ND	0.0268	0.0050	ND	ND	ND	ND	0.0311	0.0051	ND	0.0139	0.0960	ND	0.0006 J	0.0330	0.0025	0.0016 J	0.0638	ND	ND	ND	ND	ND	ND	ND	ND	
Filter 420- 25%	26-Aug-20	66.7	12,739	66.7	12,739	0.0116	ND	0.0262	0.0030	ND	ND	ND	ND	0.0227	0.0017 J	ND	0.0048	0.0141	ND	ND	0.0082	ND	ND	0.0032	ND	ND	ND	ND	ND	ND	ND	ND	ND
Filter 420- 50%	26-Aug-20	66.7	12,739	66.7	12,739	0.0120	ND	0.0230	0.0010 J	ND	ND	ND	ND	0.0120	0.0005 J	ND	0.0016 J	0.0017 J	ND	ND	0.0014 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Filter 420- 75%	26-Aug-20	66.7	12,739	66.7	12,739	0.0124	ND	0.0151	ND	ND	ND	ND	ND	0.0016 J	ND	ND	ND	ND	ND	0.0011 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Filter 410-100%	26-Aug-20	66.7	12,739	66.7	12,739	0.0034	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Combined Raw	22-Sep-20	81.0	15,459	81.0	15,459	0.0089	ND	0.0276	0.0051	ND	ND	ND	ND	0.0289	0.0054	ND	0.0114	0.0929	ND	ND	0.0267	ND	ND	0.0568	ND	ND	ND	ND	ND	ND	ND	ND	ND
Filter 420- 25%	22-Sep-20	81.0	15,459	81.0	15,459	0.0102	ND	0.0294	0.0035	ND	ND	ND	ND	0.0252	ND	ND	0.0089	0.0305	ND	ND	0.0110	ND	ND	0.0071	ND	ND	ND	ND	ND	ND	ND	ND	ND
Filter 420- 50%	22-Sep-20	81.0	15,459	81.0	15,459	0.0106	ND	0.0285	0.0021	ND	ND	ND	ND	0.0192	ND	ND	0.0036	0.0058	ND	ND	0.0028	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Filter 420- 75%	22-Sep-20	81.0	15,459	81.0	15,459	0.0115	ND	0.0243	ND	ND	ND	ND	ND	0.0085	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Filter 410-100%	22-Sep-20	81.0	15,459	81.0	15,459	0.0079	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<b>Rolling 12-month Average Reported in ppt (ng/L)</b>																		ND			ND		ND	ND									

Grey text indicates the parameter was not analyzed or not detected.

All concentrations in µg/L - micrograms per liter (ppb)

J - The result is an estimated value.

B - Detected in Blank.

\* Starting in August of 2020, EPA Test Method 533 has been used for sample analysis. This test method is approved for the 25 listed compounds.

USEPA - Environmental Protection Agency

NA - Not Analyzed or Not Applicable

ND - Not detected

- Denotes 'B' value, detected in blank

- Denotes raw water influent sample