

Friends of Merrymeeting Bay/Brunswick Sewer District

*PFAS Sampling of Sewer District Pump Stations on the Former
Brunswick Naval Air Station 7/25/2023*

Summary Report



Public Works Pump Station

Materials & Methods

Site Locations

Site Photos

Results

On 7/25/23 we sampled six sewage pump stations on the former BNAS property for PFAS using Cyclopure test kits. Five of the stations, Woodland, Mariner, Theater, Public Works and Hangar 6 are maintained by Brunswick Sewage District (BSD) and one, Martin's Point is privately owned by that medical facility but feeds into the BSD system. Screen shots are attached and we have coordinates for all sites.

Ed Friedman & (FOMB) and Jason Prout (BSD) conducted the sampling with Gerry Bibber (BSD) present at Woodland and Dan Munsey (BSD) present at Hangar 6.

Samples were grabbed in a stainless steel bucket hanging from a rope, poured through a fine stainless strainer into another stainless bucket to eliminate coarsest material that would clog Cyclopure filters even more easily. Sample water was then poured directly from the bucket into Cyclopure sample bottle/filters. Despite pre-seining through the strainer and allowing some time for settlement before pouring into Cyclopure containers, Cyclopure filters quickly clogged from fat in the sewage waste stream. All samples from the BSD-maintained pump stations needed to have waterlines marked on sample bottles and sample remainders discarded since flow through had stopped. Samples mailed UPS Ground the same day. Photos taken throughout sampling.

Here is BSD link to GIS infrastructure.

<https://brunswicksewer.maps.arcgis.com/apps/webappviewer/index.html?id=179c2f29e5a548689d9403f85cd815ca>

FOMB-BSD Woodland. 12:50pm

43° 53.877'N
69° 55.081'W

FOMB-BSD Mariner. 1:05pm

43° 54.069'N
69° 54.989'W

FOMB-BSD Theater. 1:30pm

43° 53.519'N
69° 55.566'W

FOMB-BSD Public Works. 1:55pm

43° 53.279'N
69° 55.767'W

FOMB-BSD Hangar 6. 3:10pm

43° 54.108'N
69° 55.796'W

FOMB-BSD Martin's Point. 3:40pm

43° 54.321'N
69° 55.898'W

Woodland & Mariner



Woodland





Mariner





Theater & Public Works



Theater



Public Works











Hangar 6





Martin's Point (private pump station)





FOMB BNAS BSD Pump Station PFAS Sampling 7/25/23

Format part per trillion (ng/L)

Maine PFAS Regulations

Maine has set a [Maximum Contaminant Level](#) (MCL) in total of 20 ppt for a group of six PFAS: PFOA, PFOS, PFHxS, PFNA, PFHpA and PFDA.

Barcode	WTK_PFAS_4701	WTK_PFAS_4702	WTK_PFAS_4703
Name	FOMB-BSD Martins Pt.	FOMB-BSD Public Works	FOMB-BSD Hangar 6
Location	Brunswick ME 04011	Brunswick ME 04011	Brunswick ME 04011
Comments	FOMB-BSD Martin's Pt.	FOMB-BSD Public Works	FOMB-BSD Hangar 6
Coordinates	43° 54.321'N, 69° 55.898'W	43° 53.279'N, 69° 55.767'W	43° 54.108'N, 69° 55.796'W
Filtration	unfiltered	unfiltered	unfiltered
Sampling Date	7/25/2023 15:40	7/25/2023 13:50	7/25/2023
Order Number	9903	9903	9903
PFBA	< 1 ng/L	6.9	7.5
PFPeA	< 1 ng/L	13.6	15.8
PFHxA	1.2	49.5	85.5
PFHpA	< 1 ng/L	2.4	11.3
PFOA	< 1 ng/L	< 1.8 ng/L	12
PFNA	< 1 ng/L	< 1.8 ng/L	< 3.5 ng/L
PFDA	< 1 ng/L	< 1.8 ng/L	< 3.5 ng/L
GenX	< 1 ng/L	< 1.8 ng/L	< 3.5 ng/L
PFBS	5.7	< 1.8 ng/L	20.2
PFHxS	< 1 ng/L	3.2	34.3
PFOS	1.4	132.4	246.1
Total PFAS (11 Compounds)	8.3	208	432.7
Additional PFAS			
10:2 FTS	< 1 ng/L	< 1.8 ng/L	5
5:3 FTCA	< 1 ng/L	77.3	16.5
6:2 FTS	< 1 ng/L	< 1.8 ng/L	458.9
8:2 FTS	< 1 ng/L	< 1.8 ng/L	29.6
FBSA	6	< 1.8 ng/L	2.1
FHxSA	< 1 ng/L	2.8	6.1
MeFBSA	15.2	< 1.8 ng/L	< 3.5 ng/L
N-AP-FHxSA	< 2 ng/L	< 3.5 ng/L	9.7
PFECHS	< 1 ng/L	< 1.8 ng/L	38.3
PFPrS	< 1 ng/L	< 1.8 ng/L	3.2
PFPeS	< 1 ng/L	< 1.8 ng/L	18.8
PFHpS	< 1 ng/L	< 1.8 ng/L	3
Total PFAS (All)	29.5	288.1	1023.9

Detected)			
Barcode	WTK_PFAS_4704	WTK_PFAS_4705	WTK_PFAS_4706
Name	FOMB-BSD Theater	FOMB-BSD Woodland	FOMB-BSD Mariner
Location	Brunswick ME 04011	Brunswick ME 04011	Brunswick ME 04011
Comments	FOMB-BSD Theater	FOMB-BSD Woodland	FOMB-BSD Mariner
Coordinates	43° 53.519'N, 69° 55.566'W	43° 53.877'N, 69° 55.081'W	43° 54.069'N, 69° 54.989'W
Filtration	unfiltered	unfiltered	unfiltered
Sampling Date	7/25/2023 13:30	7/25/2023 12:50	7/25/2023 13:05
Order Number	9903	9903	9903
PFBA	< 1.8 ng/L	< 3.9 ng/L	< 1.5 ng/L
PFPeA	< 1.8 ng/L	< 2 ng/L	< 1.5 ng/L
PFHxA	2.6	< 2 ng/L	1.7
PFHpA	< 1.8 ng/L	< 2 ng/L	< 1.5 ng/L
PFOA	2.5	< 2 ng/L	< 1.5 ng/L
PFNA	< 1.8 ng/L	< 2 ng/L	< 1.5 ng/L
PFDA	< 1.8 ng/L	< 2 ng/L	< 1.5 ng/L
GenX	< 1.8 ng/L	< 3.9 ng/L	< 1.5 ng/L
PFBS	< 1.8 ng/L	< 2 ng/L	< 1.5 ng/L
PFHxS	3.9	< 2 ng/L	< 1.5 ng/L
PFOS	16.8	2.4	< 1.5 ng/L
Total PFAS (11 Compounds)	25.8	2.4	1.7
Additional PFAS			
10:2 FTS	< 1.8 ng/L	< 3.9 ng/L	< 1.5 ng/L
5:3 FTCA	< 1.8 ng/L	< 3.9 ng/L	3.8
6:2 FTS	5.9	< 3.9 ng/L	< 1.5 ng/L
8:2 FTS	< 1.8 ng/L	< 3.9 ng/L	< 1.5 ng/L
FBSA	< 1.8 ng/L	< 2 ng/L	< 1.5 ng/L
FHxSA	5.1	< 2 ng/L	< 1.5 ng/L
MeFBSA	< 1.8 ng/L	< 3.9 ng/L	< 1.5 ng/L
N-AP-FHxSA	< 3.6 ng/L	< 7.8 ng/L	< 2.9 ng/L
PFECHS	< 1.8 ng/L	< 2 ng/L	< 1.5 ng/L
PFPrS	< 1.8 ng/L	< 2 ng/L	< 1.5 ng/L
PFPeS	< 1.8 ng/L	< 2 ng/L	< 1.5 ng/L
PFHpS	< 1.8 ng/L	< 2 ng/L	< 1.5 ng/L
Total PFAS (All Detected)	36.8	2.4	5.5

EPA has proposed drinking water limits of for (i) PFOA (4.0 ppt) and PFOS (4.0 ppt) and (ii) the group of GenX, PFBS, PFNA, and PFHxS using a Hazard Index calculated from the individual PFAS measurement and an assigned health risk value. See link to Hazard Index calculation.