

July 2022 Water Supply Well PFAS Analytical Results - Gustavus DOT&PF

Analyte	EPA LHA	Location Name	NPS Well	PW-010	PW-012	PW-032	PW-037	PW-038	PW-039	PW-040	PW-059	PW-061	PW-203
		Sample Name	NPS Well	PW-010	PW-012	PW-032	PW-037	PW-038	PW-039	PW-040	PW-059	PW-061	PW-203
	Units		7/28/2022	7/28/2022	7/29/2022	7/27/2022	7/27/2022	7/27/2022	7/27/2022	7/27/2022	7/27/2022	7/28/2022	7/28/2022
Perfluorohexanesulfonic acid (PFHxS)	—	ng/L	5.30	<1.70	1.30 J	<1.70	<1.70	<1.70	<1.80	<1.80	1.80	0.970 J	0.740 J
Perfluorohexanoic acid (PFHxA)	—	ng/L	9.30	<1.70	<1.70	<1.70	<1.70	<1.70	2.30	<1.80	1.10 J	1.20 J	<1.80
Perfluoroheptanoic acid (PFHpA)	—	ng/L	4.20	<1.70	<1.70	<1.70	<1.70	<1.70	<1.80	<1.80	0.350 J	0.630 J	<1.80
Perfluorononanoic acid (PFNA)	—	ng/L	0.370 J	<1.70	<1.70	<1.70	<1.70	<1.70	<1.80	<1.80	<1.70	<1.80	<1.80
Perfluorobutanesulfonic acid (PFBS)	2,000	ng/L	0.960 J	<1.70	0.250 J	<1.70	<1.70	<1.70	<1.80	<1.80	1.20 J	0.400 J	<1.80
Perfluorodecanoic acid (PFDA)	—	ng/L	<1.80	<1.70	<1.70	<1.70	<1.70	<1.70	<1.80	<1.80	<1.70	<1.80	<1.80
Perfluoroundecanoic acid (PFUnA)	—	ng/L	<1.80	<1.70	<1.70	<1.70	<1.70	<1.70	<1.80	<1.80	<1.70	<1.80	<1.80
Perfluorododecanoic acid (PFDoA)	—	ng/L	<1.80	<1.70	<1.70	<1.70	<1.70	<1.70	<1.80	<1.80	<1.70	<1.80	<1.80
Perfluorotridecanoic acid (PFTrDA)	—	ng/L	<1.80	<1.70	<1.70	<1.70	<1.70	<1.70	<1.80	<1.80	<1.70	<1.80	<1.80
Perfluorotetradecanoic acid (PFTeA)	—	ng/L	<1.80	<1.70	<1.70	<1.70	<1.70	<1.70	<1.80	<1.80	<1.70	<1.80	<1.80
N-Methyl perfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	—	ng/L	<4.50	<4.40	<4.20	<4.10	<4.20	<4.30	<4.50	<4.60	<4.30	<4.50	<4.50
N-Ethyl perfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	—	ng/L	<4.50	<4.40	<4.20	<4.10	<4.20	<4.30	<4.50	<4.60	<4.30	<4.50	<4.50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	—	ng/L	<1.80	<1.70	<1.70	<1.70	<1.70	<1.70	<1.80	<1.80	<1.70	<1.80	<1.80
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	—	ng/L	<1.80	<1.70	<1.70	<1.70	<1.70	<1.70	<1.80	<1.80	<1.70	<1.80	<1.80
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	—	ng/L	<1.80	<1.70	<1.70	<1.70	<1.70	<1.70	<1.80	<1.80	<1.70	<1.80	<1.80
Hexafluoropropylene oxide dimer acid (HFPO-DA)	10	ng/L	<3.60	<3.50	<3.30	<3.30	<3.40	<3.50	<3.60	<3.70	<3.40	<3.60	<3.60
Perfluorooctanesulfonic acid (PFOS)	70†	ng/L	8.50	0.470 J	2.30	<1.70	<1.70	<1.70	<1.80	<1.80	1.50 J	0.650 J	1.30 J
Perfluorooctanoic acid (PFOA)	70†	ng/L	3.90	<1.70	<1.70	<1.70	<1.70	<1.70	<1.80	<1.80	0.970 J	1.70 J	<1.80

Notes: Results reported from Eurofins Environment Testing America work order 320-90598-1.
 Samples *PW-304.1*, *PW-340*, and *PW-501* are field duplicates of samples *PW-204.1*, *PW-240*, and *PW-401*, respectively.

EPA LHA United States Environmental Protection Agency Lifetime Health Advisory Level, Final levels listed

PFAS per- and poly-fluoroalkyl substances

† EPA LHA level is 70 ppt for PFOS and PFOA combined.

ng/L nanograms per liter

— No applicable regulatory limit exists for the associated analyte.

< Analyte not detected; listed as less than the reporting limit unless otherwise flagged due to quality-control failures.

J Estimated concentration, detected greater than the method detection limit and less than the reporting limit. Flag applied by the laboratory.

JH* Estimated concentration, biased high due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)

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Analyte	Location Name		PW-204.1		PW-205.1	PW-207	PW-211	PW-212	PW-219	PW-221	PW-230	PW-240	
	EPA LHA	Sample Name	PW-204.1	PW-304.1	PW-205.1	PW-207	PW-211	PW-212	PW-219	PW-221	PW-230	PW-240	PW-340
		Units	7/28/2022	7/28/2022	7/27/2022	7/27/2022	7/27/2022	7/27/2022	7/27/2022	7/27/2022	7/28/2022	7/28/2022	7/29/2022
Perfluorohexanesulfonic acid (PFHxS)	—	ng/L	20.0	21.0	<1.80	0.590 J	0.510 J	<1.90	<1.90	<1.70	3.80	1.50 J	1.50 J
Perfluorohexanoic acid (PFHxA)	—	ng/L	8.20	7.80	1.20 J	<1.80	<1.80	0.840 J	<1.90	<1.70	0.860 J	<1.80	<1.80
Perfluoroheptanoic acid (PFHpA)	—	ng/L	3.00	3.00	0.510 J	0.230 J	<1.80	0.290 J	<1.90	<1.70	0.450 J	<1.80	<1.80
Perfluorononanoic acid (PFNA)	—	ng/L	<1.80	<1.70	<1.80	<1.80	<1.80	<1.90	<1.90	<1.70	<1.80	<1.80	<1.80
Perfluorobutanesulfonic acid (PFBS)	2,000	ng/L	2.00	2.00	<1.80	0.600 J	0.880 J	0.230 J	<1.90	<1.70	0.640 J	0.330 J	0.350 J
Perfluorodecanoic acid (PFDA)	—	ng/L	<1.80	<1.70	<1.80	0.840 J	<1.80	<1.90	<1.90	<1.70	<1.80	<1.80	<1.80
Perfluoroundecanoic acid (PFUnA)	—	ng/L	<1.80	<1.70	<1.80	<1.80	<1.80	<1.90	<1.90	<1.70	<1.80	<1.80	<1.80
Perfluorododecanoic acid (PFDoA)	—	ng/L	<1.80	<1.70	<1.80	<1.80	<1.80	<1.90	<1.90	<1.70	<1.80	<1.80	<1.80
Perfluorotridecanoic acid (PFTrDA)	—	ng/L	<1.80	<1.70	<1.80	<1.80	<1.80	<1.90	<1.90	<1.70	<1.80	<1.80	<1.80
Perfluorotetradecanoic acid (PFTeA)	—	ng/L	<1.80	<1.70	<1.80	<1.80	<1.80	<1.90	<1.90	<1.70	<1.80	<1.80	<1.80
N-Methyl perfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	—	ng/L	<4.40	<4.30	<4.40	<4.50	<4.40	<4.60	<4.60	<4.30	<4.50	<4.60	<4.50
N-Ethyl perfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	—	ng/L	<4.40	<4.30	<4.40	<4.50	<4.40	<4.60	<4.60	<4.30	<4.50	<4.60	<4.50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	—	ng/L	<1.80	<1.70	<1.80	<1.80	<1.80	<1.90	<1.90	<1.70	<1.80	<1.80	<1.80
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	—	ng/L	<1.80	<1.70	<1.80	<1.80	<1.80	<1.90	<1.90	<1.70	<1.80	<1.80	<1.80
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	—	ng/L	<1.80	<1.70	<1.80	<1.80	<1.80	<1.90	<1.90	<1.70	<1.80	<1.80	<1.80
Hexafluoropropylene oxide dimer acid (HFPO-DA)	10	ng/L	<3.50	<3.40	<3.50	<3.60	<3.50	<3.70	<3.70	<3.40	<3.60	<3.70	<3.60
Perfluorooctanesulfonic acid (PFOS)	70†	ng/L	42.0	47.0	<1.80	1.20 J	<1.80	4.10	<1.90	0.710 JH*	2.50	0.610 J	0.750 J
Perfluorooctanoic acid (PFOA)	70†	ng/L	2.10	2.30	<1.80	0.820 J	<1.80	<1.90	<1.90	<1.70	1.20 J	1.00 J	1.10 J

Notes: Results reported from Eurofins Environment Testing America work order 320-90598-1.
 Samples PW-304.1, PW-340, and PW-501 are field duplicates of samples PW-204.1, PW-240, and PW-401, respectively.

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Analyte	Location Name		PW-401		PW-414	PW-419
	EPA LHA	Sample Name	PW-401	PW-501	PW-414	PW-419
		Units	7/27/2022	7/27/2022	7/27/2022	7/28/2022
Perfluorohexanesulfonic acid (PFHxS)	—	ng/L	3.00	2.90	0.720 J	1.10 J
Perfluorohexanoic acid (PFHxA)	—	ng/L	2.10	2.20	<1.70	<1.70
Perfluoroheptanoic acid (PFHpA)	—	ng/L	1.00 J	1.00 J	0.250 J	<1.70
Perfluorononanoic acid (PFNA)	—	ng/L	<1.80	<1.80	<1.70	<1.70
Perfluorobutanesulfonic acid (PFBS)	2,000	ng/L	0.270 J	0.220 J	0.180 J	0.380 J
Perfluorodecanoic acid (PFDA)	—	ng/L	<1.80	<1.80	<1.70	<1.70
Perfluoroundecanoic acid (PFUnA)	—	ng/L	<1.80	<1.80	<1.70	<1.70
Perfluorododecanoic acid (PFDoA)	—	ng/L	<1.80	<1.80	<1.70	<1.70
Perfluorotridecanoic acid (PFTrDA)	—	ng/L	<1.80	<1.80	<1.70	<1.70
Perfluorotetradecanoic acid (PFTeA)	—	ng/L	<1.80	<1.80	<1.70	<1.70
N-Methyl perfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	—	ng/L	<4.50	<4.50	<4.30	<4.30
N-Ethyl perfluorooctane sulfonamidoacetic acid (N-EtFOSAA)	—	ng/L	<4.50	<4.50	<4.30	<4.30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	—	ng/L	<1.80	<1.80	<1.70	<1.70
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	—	ng/L	<1.80	<1.80	<1.70	<1.70
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	—	ng/L	<1.80	<1.80	<1.70	<1.70
Hexafluoropropylene oxide dimer acid (HFPO-DA)	10	ng/L	<3.60	<3.60	<3.40	<3.40
Perfluorooctanesulfonic acid (PFOS)	70†	ng/L	8.60	8.90	<1.70	2.30
Perfluorooctanoic acid (PFOA)		ng/L	<1.80	<1.80	<1.70	<1.70

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