Table 1
Summary of PFAS Concentrations in Groundwater
Northrop Grumman Systems Corporation
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents [1] (units in ng/L)	Abbreviation	CAS Number	Location ID: / Sample ID: / Date:	BCPMW-4-1 / BCPMW-4-1 / 7/24/2018	BCPMW-4-2 / BCPMW-4-2 / 7/24/2018	BCPMW-5-1 / BCPMW-5-1 / 7/26/2018	GM-13D / GM-13D / 7/17/2018
Perfluorobutanesulfonic acid	PFBS	375-73-5		**1.58 J**	**2.36**	3.45	< 2.0
Perfluorohexanesulfonic acid	PFHxS	355-46-4		< 2.0	**2.28**	< 2.6	**2.27**
Perfluoroheptanesulfonic acid	PFHpS	375-92-8		< 4.0	< 4.0	< 5.3	< 4.0
Perflourooctanesulfonic acid	PFOS	1763-23-1		**3.35**	**3.99**	6.53	**8.80**
Perfluorodecanesulfonic acid	PFDS	335-77-3		< 4.0	< 4.0	< 5.3	< 4.0
Perfluorobutanoic acid	PFBA	375-22-4		**7.09 J**	**28.0**	13.4	**11.1**
Perfluoropentanoic acid	PFPeA	2706-90-3		**8.15**	**71.3**	19.7	**11.1**
Perfluorohexanoic acid	PFHxA	307-24-4		**6.84**	**37.6**	13.0	**8.93**
Perfluoroheptanoic acid	PFHpA	375-85-9		**7.15**	**27.6**	12.8	**7.93**
Perfluorooctanoic acid	PFOA	335-67-1		**21.1**	**18.5**	15.4	**28.2**
Perfluorononanoic acid	PFNA	375-95-1		**4.23**	**2.46**	2.80	**4.51**
Perfluorodecanoic acid	PFDA	335-76-2		< 4.0	< 4.0	1.40 J	**1.55 J**
Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8		< 4.0	< 4.0	< 5.3	< 4.0
Perfluorododecanoic acid	PFDoA	307-55-1		< 4.0	< 4.0	< 5.3	< 4.0
Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8		< 4.0	< 4.0	< 5.3	< 4.0
Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7		< 4.0	< 4.0	< 5.3	< 4.0
6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2		**7.11 J**	**21.1**	< 11	< 8.0
8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4		< 8.0	< 8.0	< 11	< 8.0
Perfluroroctanesulfonamide	FOSA	754-91-6		< 4.0	< 4.0	< 5.3	< 4.0
N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9		< 20	< 20	< 26	< 20
N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSSAA	2991-50-6		< 20	< 20	< 26	< 20

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Bethpage, New York

Constituents [1] (units in ng/L)	Abbreviation	CAS Number	Location ID: Sample ID: Date:	GM-15SR GM-15SR 7/18/2018	GM-15I GM-15I 7/18/2018	GM-15D GM-15D 7/18/2018	GM-15D2 GM-15D2 7/18/2018
Perfluorobutanesulfonic acid	PFBS	375-73-5		**1.33 J**	**2.08**	**1.28 J**	< 2.0
Perfluorohexanesulfonic acid	PFHxS	355-46-4		< 2.05 B	**10.7**	**10.2**	< 2.0
Perfluoroheptanesulfonic acid	PFHpS	375-92-8		< 4.0	< 4.0	< 4.0	< 4.0
Perflourooctanesulfonic acid	PFOS	1763-23-1		< 7.75 B	< 29.3 B	< 11.4 B	< 2.0
Perfluorodecanesulfonic acid	PFDS	335-77-3		< 4.0	< 4.0	< 4.0	< 4.0
Perfluorobutanoic acid	PFBA	375-22-4		**7.07 J**	**15.3**	**15.1**	< 8.0
Perfluoropentanoic acid	PFPeA	2706-90-3		< 8.91 B	**37.9**	**16.7**	< 4.0
Perfluorohexanoic acid	PFHxA	307-24-4		< 6.83 B	**25.5**	**16.8**	< 4.0
Perfluoroheptanoic acid	PFHpA	375-85-9		< 8.06 B	**18.5**	**18.8**	< 2.0
Perfluorooctanoic acid	PFOA	335-67-1		< 22.7 B	**93.3**	< 35.3 B	< 2.0
Perfluorononanoic acid	PFNA	375-95-1		**33.6**	**279**	< 8.44 B	< 2.0
Perfluorodecanoic acid	PFDA	335-76-2		**6.26**	**41.8**	< 4.0	< 4.0
Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8		< 4.0	**2.50 J**	< 4.0	< 4.0
Perfluorododecanoic acid	PFDoA	307-55-1		< 4.0	< 4.0	< 4.0	< 4.0
Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8		< 4.0	< 4.0	< 4.0	< 4.0
Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7		< 4.0	< 4.0	< 4.0	< 4.0
6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2		< 8.0	**5.42 J**	< 8.0	< 8.0
8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4		< 8.0	< 8.0	< 8.0	< 8.0
Perfluroroctanesulfonamide	FOSA	754-91-6		< 4.0	< 4.0	< 4.0	< 4.0
N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9		< 20	< 20	< 20	< 20
N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSSAA	2991-50-6		< 20	< 20	< 20	< 20

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ARCADIS Design & Consultancy for natural and built assets

Constituents [1] (units in ng/L)	Abbreviation	CAS Number	Location ID: / Sample ID: / Date:	GM-17I / GM-17I / 8/1/2018	GM-17D / GM-17D / 7/12/2018	GM-19S / GM-19S / 7/17/2018	GM-19I / GM-19I / 7/17/2018
Perfluorobutanesulfonic acid	PFBS	375-73-5		< 2.0	< 1.9	**3.62**	< 2.4
Perfluorohexanesulfonic acid	PFHxS	355-46-4		**4.53**	**3.83**	**1.51 J**	**2.46**
Perfluoroheptanesulfonic acid	PFHpS	375-92-8		< 4.0	< 3.7	< 4.0	< 4.8
Perflourooctanesulfonic acid	PFOS	1763-23-1		**15.0**	**16.1**	**3.95**	**14.0**
Perfluorodecanesulfonic acid	PFDS	335-77-3		< 4.0	< 3.7	< 4.0	< 4.8
Perfluorobutanoic acid	PFBA	375-22-4		**3.42 J**	**3.90 J**	**16.0**	**3.94 J**
Perfluoropentanoic acid	PFPeA	2706-90-3		**5.54**	**6.67**	**25.3**	**6.76**
Perfluorohexanoic acid	PFHxA	307-24-4		**4.79**	**5.29**	**18.3**	**5.04**
Perfluoroheptanoic acid	PFHpA	375-85-9		**4.89**	**4.55**	**31.2**	**5.78**
Perfluorooctanoic acid	PFOA	335-67-1		**10.7**	**10.6**	**55.6**	**15.3**
Perfluorononanoic acid	PFNA	375-95-1		**13.1**	**11.2**	**22.4**	**39.4**
Perfluorodecanoic acid	PFDA	335-76-2		< 4.0	< 3.7	< 4.0	< 4.8
Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8		< 4.0	< 3.7	< 4.0	**2.77 J**
Perfluorododecanoic acid	PFDoA	307-55-1		< 4.0	< 3.7	< 4.0	< 4.8
Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8		< 4.0	< 3.7	< 4.0	**2.56 J**
Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7		< 4.0	< 3.7	< 4.0	< 4.8
6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2		< 8.0	< 7.4	**34.1**	< 9.5
8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4		< 8.0	< 7.4	< 8.0	< 9.5
Perfluroroctanesulfonamide	FOSA	754-91-6		< 4.0	< 3.7	< 4.0	< 4.8
N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9		< 20	< 19	< 20	< 24
N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSSAA	2991-50-6		< 20	< 19	< 20	< 24

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Constituents [1] (units in ng/L)	Abbreviation	CAS Number	Location ID: Sample ID: Date:	GM-21D2 GM-21D2 7/19/2018	GM-21D2 REP071918DC1 7/19/2018	GM-33D2 GM-33D2 7/20/2018	GM-34D2 GM-34D2 7/20/2018
Perfluorobutanesulfonic acid	PFBS	375-73-5		< 1.9	< 1.9	< 2.1	< 2.0
Perfluorohexanesulfonic acid	PFHxS	355-46-4		**1.50 J**	**1.33 J**	**2.04 J**	< 2.0
Perfluoroheptanesulfonic acid	PFHpS	375-92-8		< 3.8	< 3.8	< 4.2	< 4.0
Perflourooctanesulfonic acid	PFOS	1763-23-1		**8.41**	**8.00**	**12.2**	**9.96**
Perfluorodecanesulfonic acid	PFDS	335-77-3		< 3.8	< 3.8	< 4.2	< 4.0 J
Perfluorobutanoic acid	PFBA	375-22-4		**3.75 J**	**4.03 J**	**2.96 J**	**3.19 J**
Perfluoropentanoic acid	PFPeA	2706-90-3		**5.38**	**5.30**	**3.51 J**	**3.77 J**
Perfluorohexanoic acid	PFHxA	307-24-4		**4.01**	**4.20**	**3.15 J**	**2.39 J**
Perfluoroheptanoic acid	PFHpA	375-85-9		**4.53**	**4.50**	**2.93**	**2.13**
Perfluorooctanoic acid	PFOA	335-67-1		**11.6**	**10.9**	**9.76**	**7.45**
Perfluorononanoic acid	PFNA	375-95-1		**32.3**	**31.3**	**2.41**	**2.70**
Perfluorodecanoic acid	PFDA	335-76-2		< 3.8	< 3.8	< 4.2	< 4.0
Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8		< 3.8	< 3.8	< 4.2	< 4.0
Perfluorododecanoic acid	PFDoA	307-55-1		< 3.8	< 3.8	< 4.2	**1.71 J**
Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8		< 3.8	< 3.8	< 4.2	< 4.0
Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7		< 3.8	< 3.8	< 4.2	< 4.0
6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2		< 7.7	< 7.7	< 8.3	< 8.0
8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4		< 7.7	< 7.7	< 8.3	< 8.0
Perfluroroctanesulfonamide	FOSA	754-91-6		< 3.8	< 3.8	< 4.2	< 4.0
N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9		< 19	< 19	< 21	< 20
N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSSAA	2991-50-6		< 19	< 19	< 21	< 20

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Bethpage, New York

Constituents [1] (units in ng/L)	Abbreviation	CAS Number	Location ID: Sample ID: Date:	GM-35D2 GM-35D2 7/17/2018	GM-38D2 GM-38D2 7/16/2018	GM-71D2 GM-71D2 7/16/2018	GM-73D GM-73D 7/12/2018
Perfluorobutanesulfonic acid	PFBS	375-73-5		< 2.0	< 2.0	< 1.9	< 1.9
Perfluorohexanesulfonic acid	PFHxS	355-46-4		**1.35 J**	**3.89**	**2.20**	**1.57 J**
Perfluoroheptanesulfonic acid	PFHpS	375-92-8		< 4.0	< 4.0	< 3.7	< 3.7
Perflourooctanesulfonic acid	PFOS	1763-23-1		**7.35**	**7.32**	**4.15**	**9.06**
Perfluorodecanesulfonic acid	PFDS	335-77-3		< 4.0	< 4.0	< 3.7	< 3.7
Perfluorobutanoic acid	PFBA	375-22-4		< 8.0	**6.77 J**	**5.24 J**	**7.37 J**
Perfluoropentanoic acid	PFPeA	2706-90-3		**3.74 J**	**20.8**	**12.9**	**16.3**
Perfluorohexanoic acid	PFHxA	307-24-4		**2.62 J**	**15.5**	**8.32**	**10.6**
Perfluoroheptanoic acid	PFHpA	375-85-9		**3.00**	**28.3**	**10.0**	**11.7**
Perfluorooctanoic acid	PFOA	335-67-1		**7.81**	**64.8**	**45.1**	**20.8**
Perfluorononanoic acid	PFNA	375-95-1		**14.1**	**99.9 J**	**113**	**149**
Perfluorodecanoic acid	PFDA	335-76-2		**1.14 J**	< 4.0	< 3.7	**2.65 J**
Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8		< 4.0	< 4.0	< 3.7	**16.8**
Perfluorododecanoic acid	PFDoA	307-55-1		< 4.0	< 4.0	< 3.7	< 3.7
Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8		< 4.0	< 4.0	< 3.7	< 3.7
Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7		< 4.0	< 4.0	< 3.7	< 3.7
6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2		< 8.0	< 8.0	**3.22 J**	< 7.4
8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4		< 8.0	< 8.0	< 7.4	**2.19 J**
Perfluoroctanesulfonamide	FOSA	754-91-6		< 4.0	< 4.0	< 3.7	< 3.7
N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9		< 20	< 20	< 19	< 19
N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSSAA	2991-50-6		< 20	< 20	< 19	< 19

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Bethpage, New York

Constituents [1] (units in ng/L)	Abbreviation	CAS Number	Location ID: Sample ID: Date:	GM-73D2 GM-73D2 7/12/2018	GM-74I GM-74I 7/11/2018	GM-74D GM-74D 7/11/2018	GM-74D2 GM-74D2 7/11/2018
Perfluorobutanesulfonic acid	PFBS	375-73-5		< 1.9	< 1.9	< 1.9	< 1.9
Perfluorohexanesulfonic acid	PFHxS	355-46-4		**1.11 J**	**1.84 J**	**1.79 J**	**1.52 J**
Perfluoroheptanesulfonic acid	PFHpS	375-92-8		< 3.7	< 3.8	< 3.8	< 3.8
Perflourooctanesulfonic acid	PFOS	1763-23-1		**7.32**	**7.89**	**7.99**	**5.89**
Perfluorodecanesulfonic acid	PFDS	335-77-3		< 3.7	< 3.8	< 3.8	< 3.8
Perfluorobutanoic acid	PFBA	375-22-4		**3.88 J**	**4.52 J**	**3.47 J**	**1.98 J**
Perfluoropentanoic acid	PFPeA	2706-90-3		**7.57**	**7.19**	**5.30**	**2.36 J**
Perfluorohexanoic acid	PFHxA	307-24-4		**5.25**	**5.75**	**4.31**	**1.88 J**
Perfluoroheptanoic acid	PFHpA	375-85-9		**5.86**	**5.57**	**4.37**	**1.65 J**
Perfluorooctanoic acid	PFOA	335-67-1		**11.6**	**14.1**	**11.0**	**8.48**
Perfluorononanoic acid	PFNA	375-95-1		**49.7**	**34.4**	**25.7**	**3.40**
Perfluorodecanoic acid	PFDA	335-76-2		< 3.7	**1.14 J**	< 3.8	< 3.8
Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8		**5.07**	< 3.8	< 3.8	< 3.8
Perfluorododecanoic acid	PFDoA	307-55-1		< 3.7	< 3.8	< 3.8	< 3.8
Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8		< 3.7	< 3.8	< 3.8	< 3.8
Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7		< 3.7	< 3.8	< 3.8	< 3.8
6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2		< 7.4	< 7.7	< 7.7	< 7.7
8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4		< 7.4	< 7.7	< 7.7	< 7.7
Perfluroroctanesulfonamide	FOSA	754-91-6		< 3.7	< 3.8	< 3.8	< 3.8
N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9		< 19	< 19	< 19	< 19
N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSSAA	2991-50-6		< 19	< 19	< 19	< 19

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Bethpage, New York

Constituents [1] (units in ng/L)	Abbreviation	CAS Number	Location ID: Sample ID: Date:	GM-75D2 GM-75D2 7/19/2018	GM-79D GM-79D 7/20/2018	MW-02GF MW-02GF 7/26/2018	MW-109-3 MW-109-3 7/13/2018
Perfluorobutanesulfonic acid	PFBS	375-73-5		< 2.0	< 1.9	**2.35**	**1.13 J**
Perfluorohexanesulfonic acid	PFHxS	355-46-4		**1.07 J**	**1.31 J**	**4.76**	< 3.73 B
Perfluoroheptanesulfonic acid	PFHpS	375-92-8		< 4.0	< 3.8	< 4.0	< 4.0
Perflourooctanesulfonic acid	PFOS	1763-23-1		**10.2**	**6.31**	**12.6**	< 15.4 B
Perfluorodecanesulfonic acid	PFDS	335-77-3		< 4.0	< 3.8	< 4.0	< 4.0
Perfluorobutanoic acid	PFBA	375-22-4		**3.49 J**	**3.41 J**	**10.5**	< 8.64 B
Perfluoropentanoic acid	PFPeA	2706-90-3		**4.74**	**6.65**	**17.0**	< 6.90 B
Perfluorohexanoic acid	PFHxA	307-24-4		**3.62 J**	**4.64**	**15.0**	< 6.49 B
Perfluoroheptanoic acid	PFHpA	375-85-9		**4.21**	**6.39**	**10.2**	< 6.51 B
Perfluorooctanoic acid	PFOA	335-67-1		**9.45**	**15.1**	**21.9**	< 10.3 B
Perfluorononanoic acid	PFNA	375-95-1		**18.2**	**32.1**	**4.16**	**2.75**
Perfluorodecanoic acid	PFDA	335-76-2		< 4.0	< 3.8	< 4.0	< 4.0
Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8		< 4.0	< 3.8	< 4.0	< 4.0
Perfluorododecanoic acid	PFDoA	307-55-1		< 4.0	< 3.8	< 4.0	< 4.0
Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8		< 4.0	< 3.8	< 4.0	< 4.0
Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7		< 4.0	< 3.8	< 4.0	< 4.0
6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2		< 8.0	< 7.7	< 8.0	< 8.0
8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4		< 8.0	< 7.7	< 8.0	< 8.0
Perfluroroctanesulfonamide	FOSA	754-91-6		< 4.0	< 3.8	< 4.0	< 4.0
N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9		< 20	< 19	< 20	< 20
N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSSAA	2991-50-6		< 20	< 19	< 20	< 20

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ARCADIS Design & Consultancy for natural and built assets

Constituents [1] (units in ng/L)	Abbreviation	CAS Number	Location ID: Sample ID: Date:	MW-111-4 MW-111-4 7/13/2018	MW-111-4 REP071318DC1 7/13/2018	MW-3-1 MW-3-1 7/19/2018	RW-21_MW-3-1 RW-21_MW-3-1 8/2/2018
Perfluorobutanesulfonic acid	PFBS	375-73-5		**39.8 J**	**1.17 J**	**2.53**	< 2.0
Perfluorohexanesulfonic acid	PFHxS	355-46-4		< 2.24 B	< 2.3	**7.40**	< 2.0
Perfluoroheptanesulfonic acid	PFHpS	375-92-8		< 4.0	< 4.5	< 4.0	< 4.0
Perflourooctanesulfonic acid	PFOS	1763-23-1		< 2.0	< 4.96 B	**44.9**	< 2.0
Perfluorodecanesulfonic acid	PFDS	335-77-3		< 4.0	< 4.5	< 4.0	< 4.0
Perfluorobutanoic acid	PFBA	375-22-4		< 8.0 B	< 9.1	**3.95 J**	< 8.0
Perfluoropentanoic acid	PFPeA	2706-90-3		< 4.0	< 4.5	**10.5**	< 4.0
Perfluorohexanoic acid	PFHxA	307-24-4		< 6.51 BJ	< 4.5 BJ	**7.04**	< 4.0
Perfluoroheptanoic acid	PFHpA	375-85-9		< 2.0 B	< 2.3	**5.50**	< 2.0
Perfluorooctanoic acid	PFOA	335-67-1		< 7.69 B	< 5.47 B	**8.60**	2.28
Perfluorononanoic acid	PFNA	375-95-1		< 2.0	**1.11 J**	**8.18**	< 2.0
Perfluorodecanoic acid	PFDA	335-76-2		< 4.0	< 4.5	< 4.0	< 4.0
Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8		< 4.0	< 4.5	< 4.0	< 4.0
Perfluorododecanoic acid	PFDoA	307-55-1		< 4.0	< 4.5	< 4.0	< 4.0
Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8		< 4.0	< 4.5	< 4.0	< 4.0
Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7		< 4.0	< 4.5	< 4.0	< 4.0
6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2		< 8.0	< 9.1	< 8.0	< 8.0
8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4		< 8.0	< 9.1	< 8.0	< 8.0
Perfluroroctanesulfonamide	FOSA	754-91-6		< 4.0 J	< 4.5	< 4.0	< 4.0
N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9		< 20	< 23	< 20	< 20
N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSSAA	2991-50-6		< 20	< 23	< 20	< 20

Table 1
Summary of PFAS Concentrations in Groundwater
Northrop Grumman Systems Corporation
Bethpage, New York

Constituents [1] (units in ng/L)	Abbreviation	CAS Number	Location ID: Sample ID: Date:	RW-21_MW-7 RW-21_MW-7 7/23/2018	RW-21-MW-11 RW-21-MW-11 7/23/2018
Perfluorobutanesulfonic acid	PFBS	375-73-5		< 2.1	< 3.1
Perfluorohexanesulfonic acid	PFHxS	355-46-4		< 2.1	< 3.1
Perfluoroheptanesulfonic acid	PFHpS	375-92-8		< 4.2	< 6.3
Perflourooctanesulfonic acid	PFOS	1763-23-1		< 2.1	< 3.1
Perfluorodecanesulfonic acid	PFDS	335-77-3		< 4.2	< 6.3
Perfluorobutanoic acid	PFBA	375-22-4		< 8.3	< 13
Perfluoropentanoic acid	PFPeA	2706-90-3		< 4.2	< 6.3
Perfluorohexanoic acid	PFHxA	307-24-4		< 4.2	< 6.3
Perfluoroheptanoic acid	PFHpA	375-85-9		< 2.1	< 3.1
Perfluorooctanoic acid	PFOA	335-67-1		**1.44 J**	**11.1**
Perfluorononanoic acid	PFNA	375-95-1		< 2.1	< 3.1
Perfluorodecanoic acid	PFDA	335-76-2		< 4.2	< 6.3
Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8		< 4.2	< 6.3
Perfluorododecanoic acid	PFDoA	307-55-1		< 4.2	< 6.3
Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8		< 4.2	< 6.3
Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7		< 4.2	< 6.3
6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2		< 8.3	< 13
8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4		< 8.3	< 13
Perfluroroctanesulfonamide	FOSA	754-91-6		< 4.2	< 6.3
N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9		< 21	< 31
N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSSAA	2991-50-6		< 21	< 31

Table 1
Summary of PFAS Concentrations in Groundwater, Northrop Grumman Systems Corporation Bethpage, New York

Notes and Abbreviations:

(1) Sample analysis by USEPA Method 537

Results validated following protocols specified in Groundwater Monitoring Plan 2016

7.11	Bold value indicates a detection
ng/L	Nanograms/ liter. Nanograms/liter is equivalent to parts per trillion (ppt)
<4.0	Constituent not detected above its laboratory quantification limit.
B	Constituent identified in associated blank sample
J	Value is estimated concentration
REP	Blind duplicate sample
PFAS	Per- and polyfluoroalkyl substances
USEPA	United States Environmental Protection Agency

Table 2
Summary of 1,4-Dioxane Concentrations in Groundwater,
Northrop Grumman Systems Corporation,
Bethpage, New York

Constituents (units in µg/L)	Location ID: / Sample ID: / Date:	BCPMW-4-1 / BCPMW-4-1 / 7/24/2018	BCPMW-4-2 / BCPMW-4-2 / 7/24/2018	BCPMW-5-1 / BCPMW-5-1 / 06/12/20	GM-13D / GM-13D / 6/13/2018	GM-15SR / GM-15SR / 6/6/2018	GM-15I / GM-15I / 6/6/2018	GM-15D / GM-15D / 6/6/2018	GM-15D2 / GM-15D2 / 6/6/2018
1,4-Dioxane		**0.68**	**2.4**	< 0.96	**3.0**	**0.50**	**0.18 J**	< 0.17	**3.8**

Table 2
Summary of 1,4-Dioxane Concentrations in Groundwater,
Northrop Grumman Systems Corporation,
Bethpage, New York

Constituents (units in µg/L)	Location ID: / Sample ID: / Date:	GM-17I / GM-17I / 7/13/2018	GM-17D / GM-17D / 6/8/2018	GM-19I / GM-19I / 7/18/2018	GM-19S / GM-19S / 7/18/2018	GM-21D2 / GM-21D2 / 6/14/2018	GM-33D2 / GM-33D2 / 6/13/2018	GM-34D2 / GM-34D2 / 6/7/2018	GM-35D2 / GM-35D2 / 6/8/2018
1,4-Dioxane		**7.7**	**7.8**	**4.1**	< 0.17	**5.2**	**14**	**13**	**8.3**

Table 2
Summary of 1,4-Dioxane Concentrations in Groundwater,
Northrop Grumman Systems Corporation,
Bethpage, New York

Constituents (units in µg/L)	Location ID: / Sample ID: / Date:	GM-38D2 / GM-38D2 / 6/7/2018	GM-71D2 / GM-71D2 / 6/15/2018	GM-73D / GM-73D / 6/5/2018	GM-73D2 / GM-73D2 / 6/5/2018	GM-74I / GM-74I / 6/5/2018	GM-74D / GM-74D / 6/5/2018	GM-74D2 / GM-74D2 / 6/5/2018	GM-75D2 / GM-75D2 / 6/13/2018
1,4-Dioxane		**3.9**	**2.2**	**4.9**	**3.3**	**5.3**	**5.3**	**3.4**	**8.8**

Table 2
Summary of 1,4-Dioxane Concentrations in Groundwater,
Northrop Grumman Systems Corporation,
Bethpage, New York

Constituents (units in µg/L)	Location ID: / Sample ID: / Date:	GM-79D / GM-79D / 6/18/2018	MW-02GF / MW-02GF / 6/15/2018	MW-109-3 / MW-109-3 / 7/13/2018	MW-111-4 / MW-111-4 / 7/13/2018	MW-3-1 / MW-3-1 / 6/11/2018	RW-21_MW-11 / RW-21_MW-11 / 8/3/2018	RW-21_MW-3-1 / RW-21_MW-3-1 / 08/02/20
1,4-Dioxane		**6.2**	**38**	**4.7**	**20**	**17**	**20**	**140**

Table 2
Summary of 1,4-Dioxane Concentrations in Groundwater,
Northrop Grumman Systems Corporation,
Bethpage, New York

Constituents (units in µg/L)	Location ID: Sample ID: Date:	RW-21_MW-7 RW-21_MW-7 8/3/2018
1,4-Dioxane		**150**

Table 2
Summary of 1,4-Dioxane Concentrations in Groundwater,
Northrop Grumman Systems Corporation,
Bethpage, New York

Notes and Abbreviations:

(1) Sample analysis by USEPA Method 8270D SIM

Results validated following protocols specified in Groundwater Monitoring Plan 2016

0.68	Bold value indicates a detection
µg/L	Micrograms per liter
<0.96	Constituent not detected above its laboratory quantification limit.
J	Value is estimated concentration
USEPA	United States Environmental Protection Agency
SIM	Selected Ion Monitoring