



US Army Corps
of Engineers
Baltimore District



Washington Aqueduct

U.S. ARMY Corps of Engineers

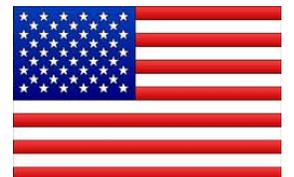
Annual Report of Water Analysis 2018

Prepared by:

Water Quality Laboratory
Plant Operations Branch
Washington Aqueduct
5900 MacArthur Boulevard, NW
Washington, D.C. 20016-2514

Anna Jordan April 23, 2019

Approved by the Chief, Washington Aqueduct





WASHINGTON AQUEDUCT, US ARMY CORPS OF ENGINEERS ANNUAL REPORT OF WATER ANALYSIS (2018)

Potomac River Raw Water Supply

	Miscellaneous Physical Parameters									Inorganic Ions									Microorganisms						
	pH	ALKALINITY	CONDUCTIVITY	DISSOLVED SOLIDS	SUSPENDED SOLIDS	TOTAL SOLIDS	TEMPERATURE	TOTAL HARDNESS	TOTAL ORGANIC CARBON	TURBIDITY	TOTAL AMMONIA - N	BROMIDE	CHLORIDE	FLUORIDE	NITRATE - N	NITRITE - N	ORTHOPHOSPHATE - PO4	PERCHLORATE	SULFATE	TOTAL COLIFORM	E. COLI	GIARDIA <i>Great Falls Intake</i>	CRYPTOSPORIDIUM <i>Great Falls Intake</i>	GIARDIA <i>Little Falls Intake</i>	CRYPTOSPORIDIUM <i>Little Falls Intake</i>
	ppm	uS/cm	ppm	ppm	ppm	°F	ppm	ppm	NTU	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	MPN/100mL	MPN/100mL	cysts/L	Oocysts/L	cysts/L	Oocysts/L	
Jan	7.7	96	400	287	2	289	38	148	4.3	24	0.06	0.07	38	0.11	2.1	ND	ND	0.8	42	32401	222	ND	ND	ND	ND
Feb	7.7	62	292	164	85	249	43	99	3.8	22	0.06	0.03	37	ND	2.0	ND	ND	0.3	22	13849	132	0.35	0.35	1.05	0.29
Mar	7.6	78	332	187	6	193	47	118	2.2	11	ND	ND	37	ND	1.9	ND	ND	0.4	26	17770	24	0.37	0.09	0.56	0.28
Apr	7.6	64	245	176	12	188	56	100	3.7	19	0.06	ND	24	ND	1.4	ND	ND	0.3	22	39330	1606	0.74	0.09	0.93	0.19
May	7.5	73	248	138	291	429	71	102	2.7	25	0.06	0.02	17	ND	1.2	ND	ND	ND	21	56790	752	ND	ND	---	---
Jun	7.5	77	231	145	129	274	73	98	4.3	33	ND	ND	15	ND	1.3	ND	ND	ND	17	59389	2096	0.19	0.19	---	---
Jul	7.7	87	298	194	2	196	78	117	3.0	19	0.05	ND	25	ND	1.4	ND	ND	0.4	24	80846	553	ND	ND	---	---
Aug	7.7	85	256	172	30	202	76	99	3.6	19	ND	0.02	22	ND	1.6	ND	ND	0.3	15	61479	1623	ND	ND	---	---
Sep	7.5	78	248	141	169	310	72	102	5.1	22	ND	ND	16	ND	1.5	ND	ND	0.3	16	97250	1623	ND	ND	---	---
Oct	7.7	94	314	176	2	178	62	133	2.9	8	ND	ND	23	ND	2.2	ND	ND	0.4	26	38756	148	0.09	ND	---	---
Nov	7.5	68	231	133	26	159	48	97	3.9	15	ND	0.02	16	ND	1.8	ND	ND	0.3	15	39551	1235	1.14	0.10	---	---
Dec	7.8	68	242	210	5	215	44	109	2.5	19	0.06	ND	18	ND	2.1	ND	ND	0.3	20	5335	248	0.74	ND	---	---

	Metals																								
	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CALCIUM	CHROMIUM	COBALT	COPPER	IRON	LEAD	LITHIUM	MAGNESIUM	MANGANESE	MOLYBDENUM	NICKEL	SELENIUM	SILVER	SODIUM	STRONTIUM	THALLIUM	THORIUM	URANIUM	ZINC
	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb
Jan	89	0.2	0.4	44	ND	ND	45	ND	ND	3.8	88	0.2	3.4	9	18	0.9	1.3	ND	ND	21	244	ND	ND	0.4	3.2
Feb	285	ND	ND	34	ND	ND	29	ND	0.2	2.0	288	0.4	1.3	6	47	0.6	1.1	ND	ND	20	117	ND	ND	ND	3.4
Mar	405	ND	ND	36	ND	ND	36	ND	0.4	1.5	429	0.5	1.7	7	61	0.3	1.5	ND	ND	20	116	ND	ND	ND	3.5
Apr	387	ND	ND	38	ND	ND	31	ND	0.6	2.7	560	0.8	1.8	6	66	0.4	1.6	ND	ND	16	110	ND	0.6	ND	5.3
May	269	ND	ND	38	ND	ND	31	ND	0.5	2.1	502	0.6	2.2	6	54	0.4	1.6	ND	ND	13	121	ND	ND	ND	3.5
Jun	1401	ND	ND	72	ND	ND	31	ND	2.7	5.0	2241	3.8	2.5	5	221	ND	5.6	ND	ND	11	89	ND	ND	0.3	15.5
Jul	227	0.2	0.3	46	ND	ND	36	ND	0.4	2.1	372	0.5	2.3	7	46	0.6	1.4	ND	ND	13	158	ND	0.8	0.3	3.6
Aug	1869	0.2	ND	49	ND	ND	30	3.0	2.7	5.2	3245	3.4	2.1	6	157	0.4	5.0	ND	ND	13	79	ND	1.2	0.3	11.7
Sep	247	ND	ND	47	ND	ND	31	ND	0.4	1.7	526	0.5	2.1	6	47	0.7	1.3	ND	ND	12	160	ND	ND	0.3	2.3
Oct	397	ND	0.3	44	ND	ND	41	ND	0.8	1.9	799	1.0	2.1	7	68	0.4	2.0	ND	ND	12	110	ND	ND	0.2	4.6
Nov	342	ND	ND	35	ND	ND	29	ND	0.5	1.7	611	0.7	1.5	6	56	0.4	1.3	ND	ND	11	101	ND	ND	ND	3.4
Dec	123	ND	ND	36	ND	ND	32	ND	ND	1.1	224	0.3	1.7	7	30	0.4	1.1	ND	ND	10	114	ND	ND	ND	2.4



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	Inorganic Ions								Metals																												
	TOTAL AMMONIA - N	BROMIDE	CHLORIDE	FLUORIDE	NITRATE - N	NITRITE - N	ORTHOPHOSPHATE - PO4	PERCHLORATE	SULFATE	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CALCIUM	CHROMIUM	COBALT	COPPER	IRON	LEAD	LITHIUM	MAGNESIUM	MANGANESE	MERCURY	MOLYBDENUM	NICKEL	SELENIUM	SILVER	SODIUM	STRONTIUM	THALLIUM	THORIUM	URANIUM	VANADIUM	ZINC	
EPA MCL*				4	10	1					6	10	2000	4	5		100								2			50				2			30		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	

Dalecarlia Water Treatment Plant Finished Water

Jan	0.8	ND	43	0.6	2.0	ND	2.2	0.9	55	63	ND	0.2	38	ND	ND	44	ND	ND	1.4	ND	ND	2.7	9	1.4	ND	0.7	1.1	ND	ND	26	253	ND	ND	ND	ND	1.8
Feb	0.8	ND	53	0.6	2.0	ND	2.4	0.3	41	23	ND	ND	22	ND	ND	35	ND	ND	0.8	ND	ND	1.4	6	1.0	ND	0.4	0.7	ND	ND	30	148	ND	ND	ND	ND	1.0
Mar	0.7	ND	40	0.7	1.9	ND	2.4	0.3	39	33	ND	ND	32	ND	ND	39	ND	ND	0.8	ND	ND	1.4	7	0.7	ND	0.3	0.8	ND	ND	24	118	ND	ND	ND	ND	ND
Apr	ND	ND	30	0.7	1.4	ND	2.4	0.3	38	35	ND	ND	31	ND	ND	32	ND	ND	0.8	ND	ND	1.8	6	0.5	ND	0.3	0.9	ND	ND	17	134	ND	ND	ND	ND	0.5
May	0.8	ND	26	0.7	1.3	ND	2.3	0.3	39	37	ND	0.3	38	ND	ND	35	ND	ND	0.7	ND	ND	1.6	6	0.8	ND	0.4	0.8	ND	ND	18	139	ND	ND	ND	ND	0.5
Jun	0.8	ND	20	0.7	1.3	ND	2.3	ND	36	28	ND	0.2	34	ND	ND	37	ND	ND	0.8	ND	ND	1.7	5	0.7	ND	0.4	0.9	ND	ND	17	98	ND	ND	ND	ND	ND
Jul	0.8	ND	29	0.8	1.4	ND	2.3	0.4	41	43	ND	0.4	31	ND	ND	40	ND	ND	0.6	ND	ND	1.3	6	0.5	ND	0.5	0.5	ND	ND	21	121	ND	ND	ND	ND	ND
Aug	0.7	ND	27	0.8	1.7	ND	2.2	0.3	38	25	ND	ND	37	ND	ND	40	ND	ND	0.9	ND	ND	1.3	6	0.9	ND	0.6	0.8	ND	ND	17	108	ND	ND	ND	ND	ND
Sep	0.8	ND	24	0.7	1.6	ND	2.3	0.5	37	34	ND	ND	33	ND	ND	36	ND	ND	1.0	ND	ND	1.2	6	0.6	ND	0.6	0.7	ND	ND	18	122	ND	ND	ND	ND	ND
Oct	0.8	ND	29	0.7	2.2	ND	2.3	0.3	40	23	ND	ND	35	ND	ND	41	ND	ND	0.7	ND	ND	1.1	6	0.6	ND	0.3	0.7	ND	ND	16	105	ND	ND	ND	ND	ND
Nov	0.7	ND	24	0.6	1.7	ND	2.4	0.3	34	31	ND	ND	30	ND	ND	30	ND	ND	1.1	ND	ND	1.7	5	0.8	ND	0.4	0.9	ND	ND	18	102	ND	ND	ND	ND	0.7
Dec	0.8	ND	24	0.6	2.1	ND	2.2	0.3	32	20	ND	ND	33	ND	ND	32	ND	ND	0.7	ND	ND	0.9	6	0.7	ND	0.2	0.9	ND	ND	19	116	ND	ND	ND	ND	ND

McMillan Water Treatment Plant Finished Water

Jan	0.7	ND	44	0.6	1.8	ND	2.5	0.5	56	13	ND	0.2	38	ND	ND	36	ND	ND	7.5	ND	ND	1.7	9	0.3	ND	0.8	1.1	ND	ND	27	221	ND	ND	ND	ND	0.9
Feb	0.7	ND	48	0.6	2.1	ND	2.5	0.4	42	14	ND	ND	31	ND	ND	29	ND	ND	3.0	ND	ND	1.7	6	ND	ND	0.4	0.8	ND	ND	31	138	ND	ND	ND	ND	ND
Mar	0.6	ND	36	0.7	1.9	ND	2.5	0.3	39	17	ND	ND	31	ND	ND	29	ND	ND	2.5	ND	ND	1.1	7	ND	ND	0.4	0.9	ND	ND	22	117	ND	ND	ND	ND	ND
Apr	ND	ND	39	0.7	1.4	ND	2.5	0.3	37	32	ND	ND	29	ND	ND	28	ND	ND	2.4	ND	ND	1.3	7	ND	ND	0.4	0.7	ND	ND	24	162	ND	ND	ND	ND	0.5
May	0.7	ND	26	0.8	1.2	ND	2.5	0.3	38	27	ND	0.2	37	ND	ND	27	ND	ND	6.1	ND	ND	1.9	6	ND	ND	0.4	0.7	ND	ND	20	137	ND	ND	ND	ND	ND
Jun	0.7	ND	23	0.7	1.3	ND	2.5	0.2	40	29	ND	ND	38	ND	ND	31	ND	ND	6.8	ND	ND	1.4	6	0.6	ND	0.4	0.5	ND	ND	20	134	ND	ND	ND	ND	ND
Jul	0.8	ND	29	0.8	1.2	ND	2.5	0.4	45	26	ND	ND	38	ND	ND	35	ND	ND	6.1	ND	ND	1.5	7	0.3	ND	0.4	0.8	ND	ND	21	130	ND	ND	ND	ND	ND
Aug	0.8	ND	26	0.7	1.5	ND	2.4	0.4	38	14	ND	ND	33	ND	ND	22	ND	ND	7.4	ND	ND	1.8	6	ND	ND	0.4	0.8	ND	ND	22	95	ND	ND	ND	ND	0.5
Sep	0.8	ND	24	0.7	1.5	ND	2.5	0.4	42	24	ND	ND	33	ND	ND	27	ND	ND	4.7	ND	ND	1.1	6	ND	ND	0.5	ND	ND	ND	20	144	ND	ND	ND	ND	ND
Oct	0.8	ND	27	0.7	2.0	ND	2.4	0.3	43	47	ND	ND	33	ND	ND	28	ND	ND	10.2	ND	ND	1.2	6	22	ND	0.3	0.6	ND	ND	17	108	ND	ND	ND	ND	ND
Nov	0.8	ND	25	0.7	1.8	ND	2.5	0.4	38	26	ND	ND	35	ND	ND	27	ND	ND	7.6	ND	ND	1.3	6	ND	ND	0.5	0.7	ND	ND	18	153	ND	ND	ND	ND	ND
Dec	0.9	ND	23	0.7	2.0	ND	2.4	0.3	33	20	ND	ND	30	ND	ND	26	ND	ND	10.4	ND	ND	1.2	6	0.4	ND	0.2	0.7	ND	ND	17	102	ND	ND	ND	ND	0.8

