Washington Aqueduct

U.S. ARMY Corps of Engineers

Annual Report of Water Analysis 2022

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WASHINGTON AQUEDUCT, US ARMY CORPS OF ENGINEERS
ANNUAL REPORT OF WATER ANALYSIS (2022)

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 *Great Falls Intake*	CRYPTOSPORIDIUM *Great Falls Intake*
		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
Jan	7.6	88	376	208	5	213	38	126	3.0	5	ND	0.04	54	0.13	1.8	ND	ND	ND	29	3946	307	0.38	0.10
Feb	7.9	78	292	180	4	184	42	107	3.3	8	ND	ND	32	0.12	1.9	ND	ND	ND	21	2054	44	---	---
Mar	8.0	85	321	183	3	186	50	108	2.3	4	ND	ND	33	0.13	1.4	ND	ND	0.2	22	319	9	---	---
Apr	7.8	80	308	129	21	150	56	97	2.9	6	---	ND	27	0.17	1.2	ND	ND	ND	18	1420	87	ND	ND
May	7.7	84	270	136	68	204	66	98	4.0	9	ND	ND	26	0.20	1.3	ND	ND	ND	17	8512	285	---	---
Jun	7.9	107	357	198	4	202	77	133	2.4	4	ND	ND	32	0.23	1.2	ND	ND	---	27	7955	234	---	---
Jul	8.0	111	381	223	17	240	82	133	3.6	5	ND	ND	37	0.19	0.9	ND	ND	0.2	29	35256	61	ND	ND
Aug	8.3	112	407	251	4	255	82	143	2.7	4	ND	ND	34	0.23	0.5	ND	ND	ND	38	8113	115	---	---
Sep	8.1	110	386	198	6	204	74	123	3.2	3	ND	ND	40	0.18	0.6	ND	ND	ND	28	3648	59	---	---
Oct	8.3	117	403	264	5	269	60	140	2.8	3	ND	ND	67	0.22	0.9	ND	ND	0.2	34	2041	35	0.46	0.09
Nov	8.1	116	396	252	ND	252	53	160	3.1	4	0.07	ND	39	0.24	1.0	ND	ND	0.2	33	2919	167	---	---
Dec	8.0	96	323	229	1	230	42	137	3.4	11	0.07	ND	32	0.26	1.8	ND	ND	0.3	26	19638	115	---	---

	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	421	ND	ND	45	ND	ND	35	ND	0.6	2.5	671	0.8	3.5	9	63	ND	1.7	ND	ND	39	192	ND	ND	0.2	5.0
Feb	157	ND	ND	32	ND	ND	30	ND	ND	1.1	110	ND	2.2	8	19	ND	0.8	ND	ND	16	165	ND	ND	ND	2.4
Mar	235	ND	ND	37	ND	ND	31	ND	0.3	1.6	363	0.4	2.0	8	30	ND	1.4	ND	ND	18	130	ND	ND	ND	ND
Apr	896	ND	ND	42	ND	ND	27	3.1	1.4	3.8	1536	1.2	2.3	7	112	ND	4.3	ND	ND	14	123	ND	ND	ND	7.7
May	309	ND	ND	35	ND	ND	27	ND	0.7	2.6	621	0.6	1.7	8	64	ND	2.9	ND	ND	12	123	ND	ND	ND	4.2
Jun	264	ND	ND	46	ND	ND	39	ND	0.4	1.9	426	0.5	2.5	9	45	ND	1.3	ND	ND	13	171	ND	ND	0.2	3.0
Jul	113	ND	ND	44	ND	ND	38	ND	0.3	1.8	194	0.2	2.6	9	36	0.7	1.1	ND	ND	17	191	ND	ND	0.3	1.8
Aug	106	ND	ND	48	ND	ND	40	ND	0.2	1.4	99	ND	3.2	11	31	0.8	0.9	ND	ND	18	224	ND	ND	0.3	0.9
Sep	422	ND	ND	35	ND	ND	35	ND	0.6	2.7	689	1.5	1.3	9	68	0.6	2.4	ND	ND	18	97	ND	ND	ND	3.6
Oct	173	ND	ND	39	ND	ND	40	ND	0.2	1.7	220	0.3	1.9	10	43	0.7	1.0	ND	ND	20	167	ND	ND	0.3	2.0
Nov	64	ND	ND	43	ND	ND	46	ND	ND	1.2	50	ND	2.9	11	13	0.5	0.5	ND	ND	19	243	ND	ND	0.3	1.0
Dec	135	ND	ND	41	ND	ND	40	ND	ND	1.5	127	ND	2.2	9	19	0.7	0.8	ND	ND	16	209	ND	ND	ND	1.8

ppm = Parts Per Million ppb = Parts Per Billion ND = Not Detected MPN/100mL = Most Probable Number per 100 milliLiters NTU = Nephelometric Turbidity Units µS/cm = microSiemens per centimeter "---" = No Analysis Required

WASHINGTON AQUEDUCT, US ARMY CORPS OF ENGINEERS
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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	POTASSIUM	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	ppm	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb
Dalecarlia Water Treatment Plant Finished Water																																					
Jan	0.8	ND	65	0.5	1.7	ND	2.4	0.3	43	14	ND	ND	34	ND	ND	35	ND	ND	1.2	ND	ND	2.6	9	0.5	ND	ND	0.7	2.8	ND	ND	30	176	ND	ND	ND	ND	1.1
Feb	0.8	ND	35	0.6	1.9	ND	2.4	0.3	35	31	ND	ND	33	ND	ND	30	ND	ND	1.0	ND	ND	1.5	8	0.7	ND	ND	0.7	---	ND	ND	24	166	ND	ND	ND	ND	1.2
Mar	0.8	ND	38	0.6	1.4	ND	2.4	0.2	32	17	ND	ND	29	ND	ND	32	ND	ND	0.9	ND	ND	1.5	7	0.4	ND	ND	0.6	---	ND	ND	25	132	ND	ND	ND	ND	0.6
Apr	---	ND	29	0.6	1.2	ND	2.5	0.2	34	24	ND	ND	34	ND	ND	29	ND	ND	0.9	ND	ND	1.7	6	0.6	ND	ND	0.5	---	ND	ND	20	149	ND	ND	ND	ND	0.7
May	0.8	ND	27	0.7	1.2	ND	2.6	0.2	34	26	ND	ND	33	ND	ND	26	ND	ND	0.8	ND	ND	1.7	6	0.5	ND	ND	0.6	---	ND	ND	23	148	ND	ND	ND	ND	ND
Jun	0.8	ND	34	0.7	1.2	ND	2.6	---	38	29	ND	ND	39	ND	ND	36	ND	ND	1.2	ND	ND	1.7	8	0.5	ND	ND	0.6	---	ND	ND	23	154	ND	ND	ND	ND	ND
Jul	0.8	ND	36	0.6	1.1	ND	2.5	0.3	46	46	ND	0.2	40	ND	ND	39	ND	ND	1.9	ND	ND	2.9	9	0.8	ND	0.7	0.7	---	ND	ND	24	181	ND	ND	ND	ND	ND
Aug	0.8	ND	38	0.7	0.5	ND	2.6	0.3	50	64	ND	0.4	45	ND	ND	42	ND	ND	1.1	ND	ND	2.4	9	1.0	ND	0.8	0.7	---	ND	ND	25	232	ND	ND	ND	0.7	ND
Sep	0.8	ND	36	0.7	0.7	ND	2.5	0.2	52	95	ND	0.4	46	ND	ND	44	ND	ND	0.9	ND	ND	2.5	9	1.3	ND	0.9	0.7	---	ND	ND	23	257	ND	ND	ND	1.0	ND
Oct	0.7	ND	41	0.6	0.9	ND	2.6	0.4	48	29	ND	ND	39	ND	ND	41	ND	ND	1.2	ND	ND	1.8	10	0.5	ND	0.8	0.7	---	ND	ND	26	215	ND	ND	ND	ND	ND
Nov	0.8	ND	41	0.6	0.9	ND	2.6	0.3	47	51	ND	0.2	41	ND	ND	45	ND	ND	1.4	ND	ND	1.9	10	0.6	ND	0.6	0.5	---	ND	ND	26	245	ND	ND	ND	ND	0.8
Dec	0.9	ND	35	0.6	1.7	ND	2.7	0.3	39	24	ND	ND	36	ND	ND	34	ND	ND	1.1	ND	ND	1.6	10	0.5	ND	0.6	0.5	---	ND	ND	23	193	ND	ND	ND	ND	0.6
McMillan Water Treatment Plant Finished Water																																					
Jan	0.8	ND	52	0.6	1.7	ND	2.5	0.3	45	23	ND	ND	37	ND	ND	31	ND	ND	5.3	ND	ND	2.2	9	ND	ND	ND	0.6	2.7	ND	ND	23	210	ND	ND	ND	ND	1.4
Feb	0.8	ND	44	0.6	1.9	ND	2.5	0.3	34	15	ND	ND	28	ND	ND	29	ND	ND	3.8	ND	ND	1.3	6	ND	ND	ND	0.6	---	ND	ND	22	136	ND	ND	ND	ND	0.6
Mar	0.7	ND	37	0.6	1.4	ND	2.4	0.2	32	16	ND	ND	28	ND	ND	28	ND	ND	3.3	ND	ND	1.4	6	ND	ND	ND	0.6	---	ND	ND	19	138	ND	ND	ND	ND	0.6
Apr	---	ND	34	0.7	1.2	ND	2.4	0.2	33	52	ND	ND	33	ND	ND	26	ND	ND	3.0	ND	ND	1.4	5	ND	ND	ND	0.5	---	ND	ND	18	150	ND	ND	ND	ND	1.7
May	0.8	ND	28	0.7	1.1	ND	2.4	0.2	33	55	ND	ND	33	ND	ND	23	ND	ND	2.6	40	ND	1.6	6	0.5	ND	ND	ND	---	ND	ND	18	141	ND	ND	ND	ND	ND
Jun	0.8	ND	35	0.7	1.1	ND	2.4	---	38	30	ND	ND	37	ND	ND	29	ND	ND	7.3	ND	ND	2.0	6	0.4	ND	ND	ND	---	ND	ND	20	136	ND	ND	ND	ND	ND
Jul	0.8	ND	38	0.7	0.9	ND	2.4	0.3	44	70	ND	0.2	43	ND	ND	36	ND	ND	7.1	ND	ND	2.4	8	0.5	ND	0.6	ND	---	ND	ND	21	199	ND	ND	ND	ND	ND
Aug	0.8	ND	40	0.7	0.5	ND	2.4	0.4	50	70	ND	0.3	44	ND	ND	37	ND	ND	9.3	ND	ND	2.3	9	0.4	ND	0.7	ND	---	ND	ND	24	215	ND	ND	ND	0.5	ND
Sep	0.8	ND	38	0.7	0.6	ND	2.4	0.4	49	67	ND	0.3	41	ND	ND	32	ND	ND	7.1	ND	ND	2.1	8	0.2	ND	0.8	ND	---	ND	ND	23	222	ND	ND	ND	0.7	ND
Oct	0.8	ND	41	0.7	0.8	ND	2.6	0.3	52	38	ND	ND	40	ND	ND	38	ND	ND	7.4	ND	ND	1.7	9	ND	ND	0.8	0.6	---	ND	ND	23	221	ND	ND	ND	ND	ND
Nov	0.8	ND	44	0.6	0.7	ND	2.6	0.3	51	53	ND	ND	40	ND	ND	37	ND	ND	7.9	ND	ND	2.3	8	ND	ND	0.6	ND	---	ND	ND	22	232	ND	ND	ND	ND	ND
Dec	0.7	ND	37	0.6	1.5	ND	2.7	0.3	41	25	ND	ND	39	ND	ND	30	ND	ND	4.4	ND	ND	1.8	9	0.5	ND	ND	0.5	---	ND	ND	21	194	ND	ND	ND	ND	ND

EPA MCL* = Environmental Protection Agency's Maximum Contaminant Level for regulated parameters ppm = Parts Per Million ppb = Parts Per Billion ND = Not Detected "---" = No Analysis Required

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	Miscellaneous Physical Parameters										Microorganisms			Haloacetic Acids (HAAs)							Trihalomethanes (THMs)					Volatile Organic Compounds (VOCs)																			
	pH	ALKALINITY	CONDUCTIVITY	TEMPERATURE	CHLORINE	TOTAL HARDNESS	TOTAL ORGANIC CARBON	TOTAL DISSOLVED SOLIDS	TOTAL SUSPENDED SOLIDS	TURBIDITY (Average)*	TOTAL COLIFORM (% positive)	E. COLI (% positive)	HETEROTROPHIC PLATE COUNT	DIBROMOACETIC ACID	DICHLOROACETIC ACID	MONOBROMOACETIC ACID	MONOCHLOROACETIC ACID	TRICHLOROACETIC ACID	TOTAL HALOACETIC ACIDS	BROMOCHLOROACETIC ACID	CHLOROFORM	BROMODICHLOROMETHANE	CHLORODIBROMOMETHANE	BROMOFORM	TOTAL TRIHALOMETHANES	BENZENE	BROMOBENZENE	BROMOCHLOROMETHANE	BROMOMETHANE	tert-BUTYLBENZENE	sec-BUTYLBENZENE	n-BUTYLBENZENE	CARBON TETRACHLORIDE	CHLOROBENZENE	CHLOROETHANE	CHLOROMETHANE	2-CHLOROTOLUENE	4-CHLOROTOLUENE	DIBROMOMETHANE	1,3-DICHLOROBENZENE	1,4-DICHLOROBENZENE	1,2-DICHLOROBENZENE
EPA MCL*																										5							5	100							75	600
Units		ppm	uS/cm	°F	ppm	ppm	ppm	ppm	ppm	NTU	%+	%+	CFU/mL	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Dalecarlia Water Treatment Plant Finished Water																																												
Jan	7.7	86	406	43	3.6	124	1.6	255	ND	0.02	0.0	0.0	<1	---	---	---	---	---	---	---	---	7.8	6.0	1.9	ND	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Feb	7.7	75	326	45	3.7	107	1.9	190	ND	0.02	0.0	0.0	4	ND	8.0	ND	ND	7.7	16	1.2	9.7	3.5	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mar	7.7	82	349	53	3.5	107	1.6	211	ND	0.02	0.0	0.0	<1	---	---	---	---	---	---	---	14.8	8.1	1.8	ND	25	ND	ND	ND	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Apr	7.7	75	315	59	3.1	98	1.7	157	ND	0.03	0.0	0.0	<1	---	---	---	---	---	---	---	24.2	7.1	1.0	ND	32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May	7.7	79	304	67	3.5	91	2.0	167	1	0.03	0.0	0.0	1	ND	13.7	ND	1.8	19.3	35	1.4	23.5	4.3	ND	ND	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jun	7.7	102	382	78	3.7	121	1.9	210	ND	0.02	0.0	0.0	2	---	---	---	---	---	---	---	30.6	11.0	2.6	ND	44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jul	7.7	102	397	83	3.7	132	2.4	218	ND	0.02	0.0	0.0	9	---	---	---	---	---	---	---	43.4	11.2	1.7	ND	56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aug	7.7	106	413	83	3.8	142	2.1	270	ND	0.03	0.0	0.0	6	ND	18.1	ND	1.9	20.8	41	5.3	43.4	17.8	4.5	ND	66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sep	7.7	103	408	76	3.7	145	2.1	260	ND	0.03	0.0	0.0	25	---	---	---	---	---	---	---	29.2	15.2	4.3	ND	49	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct	7.7	108	422	62	3.7	142	2.0	265	ND	0.03	0.0	0.0	2	---	---	---	---	---	---	---	23.0	12.5	2.9	ND	38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov	7.7	111	442	55	3.7	154	2.0	264	ND	0.03	0.0	0.0	2	ND	10.6	ND	1.0	11.1	23	4.2	25.6	15.2	4.4	ND	45	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dec	7.7	94	365	47	3.6	123	2.0	235	ND	0.03	0.0	0.0	1	---	---	---	---	---	---	---	14.0	9.0	2.7	ND	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	ND	ND	ND	ND	ND	ND	ND	ND	ND
McMillan Water Treatment Plant Finished Water																																												
Jan	7.7	88	397	41	3.5	131	1.5	219	ND	0.02	0.0	0.0	<1	---	---	---	---	---	---	---	---	7.6	6.2	1.9	ND	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Feb	7.7	67	346	42	3.5	99	1.7	214	ND	0.02	0.0	0.0	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	7.7	73	328	47	3.3	104	1.5	169	ND	0.02	0.0	0.0	<1	---	---	---	---	---	---	---	15.2	7.9	1.9	ND	25	ND	ND	ND	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Apr	7.7	70	315	51	3.1	96	1.7	179	ND	0.03	0.0	0.0	<1	---	---	---	---	---	---	---	25.3	8.5	1.7	ND	36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May	7.7	74	304	58	3.5	93	1.8	206	1	0.03	0.0	0.0	<1	ND	11.1	ND	1.6	17.3	30	2.6	23.1	8.7	1.8	ND	34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jun	7.7	89	361	66	3.7	117	1.7	193	ND	0.03	0.0	0.0	<1	---	---	---	---	---	---	---	35.6	11.9	2.7	ND	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jul	7.7	94	389	70	3.6	130	2.0	239	1	0.03	0.0	0.0	2	---	---	---	---	---	---	---	35.5	12.4	3.1	ND	51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aug	7.7	97	399	71	3.7	137	1.9	254	ND	0.03	0.0	0.0	7	ND	17.7	ND	1.9	16.5	36	5.4	43.1	17.2	5.3	ND	66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sep	7.7	93	389	68	3.7	127	2.1	225	ND	0.03	0.0	0.0	4	---	---	---	---	---	---	---	34.3	15.2	4.1	ND	54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct	7.7	98	411	62	3.7	137	1.9	267	ND	0.03	0.0	0.0	3	---	---	---	---	---	---	---	22.0	10.5	3.0	ND	36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov	7.7	109	448	61	3.7	153	1.8	255	ND	0.05	0.0	0.0	2	ND	11.5	ND	1.1	10.9	24	3.8	30.1	14.7	4.4	ND	49	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dec	7.7	90	378	51	3.5	126	2.0	224	ND	0.03	0.0	0.0	<1	---	---	---	---	---	---	---	15.1	9.3	2.9	ND	27	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	ND	ND	ND	ND	ND	ND	ND	ND	ND

EPA MCL* = Environmental Protection Agency's Maximum Contaminant Level for regulated parameters
ppm = Parts Per Million
ppb = Parts Per Billion
ND = Not Detected
"---" = No Analysis Required
"-" = McMillan Water Treatment Plant out of service
Turbidity* = Water turbidity after filters
CFU/mL = Colony Forming Units per milliLiter
NTU = Nephelometric Turbidity Units
µS/cm = microSiemens per centimeter

WASHINGTON AQUEDUCT, US ARMY CORPS OF ENGINEERS
ANNUAL REPORT OF WATER ANALYSIS (2022)

	Volatile Organic Compounds																																			Oxygenates & Other VOCs									
	DICHLORODIFLUOROMETHANE	1,1-DICHLOROETHANE	1,2-DICHLOROETHANE	trans-1,2-DICHLOROETHYLENE	cis-1,2-DICHLOROETHYLENE	1,1-DICHLOROETHYLENE	1,3-DICHLOROPROPANE	2,2-DICHLOROPROPANE	1,2-DICHLOROPROPANE	trans-1,3-DICHLOROPROPENE	cis-1,3-DICHLOROPROPENE	1,1-DICHLOROPROPENE	ETHYLBENZENE	HEXACHLOROBUTADIENE	ISOPROPYLBENZENE	4-ISOPROPYLTOLUENE	METHYLENE CHLORIDE	NAPHTHALENE	n-PROPYLBENZENE	STYRENE	1,1,1,2-TETRACHLOROETHANE	1,1,2,2-TETRACHLOROETHANE	TETRACHLOROETHYLENE	TOLUENE	1,2,3-TRICHLOROBENZENE	1,2,4-TRICHLOROBENZENE	1,1,1-TRICHLOROETHANE	1,1,2-TRICHLOROETHANE	TRICHLOROETHYLENE	TRICHLOROFLUOROMETHANE	1,2,3-TRICHLOROPROPANE	1,2,4-TRIMETHYLBENZENE	1,3,5-TRIMETHYLBENZENE	TOTAL XYLENES	VINYL CHLORIDE	2-BUTANONE (MEK)	2-HEXANONE (MBK)	4-METHYL-2-PENTANONE (MIBK)	DI-ISOPROPYL ETHER	METHYL TERT-BUTYL ETHER (MTBE)	TERT-AMYL ETHYL ETHER (TAME)	TERT-BUTYL ETHYL ETHER (TBEE)	BROMOETHANE	CARBON DISULFIDE	TRICHLOROTRIFLUOROETHANE
EPA MCL*			5	100	70	7			5				700				5			100			5	1000		70	200	5	5					10,000	2										
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Dalecarlia Water Treatment Plant Finished Water																																													
Jan	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	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	ND	ND	ND	ND	ND	ND	ND	ND
Feb	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	ND	ND	ND	ND	ND	ND	ND	ND	---	---	---	---	---	---	---	---	---	---
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May	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	ND	ND	ND	ND	ND	ND	ND	ND	---	---	---	---	---	---	---	---	---	---
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McMillan Water Treatment Plant Finished Water																																													
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EPA MCL* = Environmental Protection Agency's Maximum Contaminant Level for regulated parameters ppb = Parts Per Billion ND = Not Detected "---" = No Analysis Required
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	Synthetic Organic Compounds																																										
	ACENAPHTHENE	ACENAPHTHYLENE	ACETOCHLOR	ACIFLUORFEN	ALACHLOR	ALDICARB	ALDICARB SULFONE	ALDICARB SULFOXIDE	ALDRIN	ANTHRACENE	AROCHLOR 1016 (PCBs)	AROCHLOR 1221 (PCBs)	AROCHLOR 1232 (PCBs)	AROCHLOR 1242 (PCBs)	AROCHLOR 1248 (PCBs)	AROCHLOR 1254 (PCBs)	AROCHLOR 1260 (PCBs)	TOTAL PCBs	ATRAZINE	BAYGON	BENTAZON	BENZ(a)ANTHRACENE	BENZO(b)FLUORANTHENE	BENZO(g,h,i)PERYLENE	BENZO(a)PYRENE	BENZO(K)FLUORANTHENE	alpha-BHC	beta-BHC	delta-BHC	BROMACIL	BUTACHLOR	BUTYLBENZYLPHTHALATE	CAFFEINE	CARBARYL	CARBOFURAN	alpha-CHLORDANE	gamma-CHLORDANE	CHLORDANE	CHLORPYRIFOS (DURSBAN)	CHLOROBENZILATE	CHLORONEB	CHLOROTHALONIL	CHRYSENE
EPA MCL*					2													0.5	3						0.2										40			2					
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Dalecarlia Water Treatment Plant Finished Water																																											
Jan	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	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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McMillan Water Treatment Plant Finished Water																																											
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Jul	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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EPA MCL* = Environmental Protection Agency's Maximum Contaminant Level for regulated parameters   ppb = Parts Per Billion   ND = Not Detected   "---" = No Analysis Required

"-" = McMillan Water Treatment Plant out of service

WASHINGTON AQUEDUCT, US ARMY CORPS OF ENGINEERS
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	Synthetic Organic Compounds																																							
	2,4-D	DALAPON	2,4-DB	DCPA MONO & DIACID DEGRADATE	2,4'-DDD	2,4'-DDE	2,4'-DDT	4,4'-DDD	4,4'-DDE	4,4'-DDT	DIBENZ(a,h)ANTHRACENE	DICAMBA	3,5-DICHLOROBENZOIC ACID	DICHLORPROP	DICHLORVOS (DDVP)	DIELDRIN	DIETHYLPHTHALATE	di-(2-ETHYLHEXYL)ADIPATE	di-(2-ETHYLHEXYL)PHTHALATE	DIMETHOATE	DIMETHYLPHTHALATE	DI-N-BUTYLPHTHALATE	DI-N-OCTYLPHTHALATE	2,4-DINITROTOLUENE	2,6-DINITROTOLUENE	DINOSEB	DIQUAT	ENDOTHALL	ENDRIN	ENDRIN ALDEHYDE	EPTC	FLUORANTHENE	FLUORENE	GLYPHOSATE	HEPTACHLOR	HEPTACHLOR EPOXIDE	HEXACHLOROBENZENE	HEXACHLOROCYCLOPENTADIENE	3-HYDROXYCARBOFURAN	INDENO(1,2,3,c,d)PYRENE	ISOPHORONE	LINDANE	ENDOSULFAN I (alpha)
EPA MCL*	70	200																400	6							7	20	100	2					700	0.4	0.2	1	50				0.2	
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Dalecarlia Water Treatment Plant Finished Water																																								
Jan	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	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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McMillan Water Treatment Plant Finished Water																																								
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EPA MCL* = Environmental Protection Agency's Maximum Contaminant Level for regulated parameters

ppb = Parts Per Billion

ND = Not Detected

"---" = No Analysis Required

"-" = McMillan Water Treatment Plant out of service

WASHINGTON AQUEDUCT, US ARMY CORPS OF ENGINEERS
ANNUAL REPORT OF WATER ANALYSIS (2022)

	Synthetic Organic Compounds																													Miscellaneous				Nitrosamines							
	ENDOSULFAN II (beta)	ENDOSULFAN SULFATE	MALATHION	METHIOCARB	METHOMYL	METHOXYCHLOR	1-METHYLNAPHTHALENE	METOLACHLOR	METRIBUZIN	MOLINATE	1-NAPHTHOL	trans-NONACHLOR	OXAMYL	PARAQUAT	PARATHION	PENDIMETHALIN	PERMETHRIN	PENTACHLOROPHENOL	PHENANTHRENE	PICLORAM	PROPACHLOR	PYRENE	SIMAZINE	TERBACIL	TERBUTHYLAZINE	THIOBENCARB	TRIFLURALIN	TOXAPHENE	2,4,5-T	2,4,5-TP (SILVEX)	DIBROMOCHLOROPROPANE (DBCP)	ETHELYNE DIBROMIDE (EDB)	CYANIDE	2,3,7,8-TCDD (DIOXIN)	N-NITROSODIMETHYLAMINE (NDMA)	N-NITROSO-n-PROPYLAMINE (NDPA)	N-NITROSODIBUTYLAMINE (NDBA)	N-NITROSODIETHYLAMINE (NDEA)	N-NITROSOMETHYLETHYLAMINE (NMEA)	N-NITROSOPYRROLIDINE (NPYR)	N-NITROSOMORPHOLINE	N-NITROSOPIPERIDINE (NPIP)
EPA MCL*						40							200					1		500			4					3		50	200	50	0.2	30								
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppt	ppt	ppm	ppq	ppt	ppt	ppt	ppt	ppt	ppt	ppt	ppt
Dalecarlia Water Treatment Plant Finished Water																																										
Jan	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	ND	ND	---	ND	ND	ND	ND	ND	ND	ND	ND	ND
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McMillan Water Treatment Plant Finished Water																																										
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EPA MCL* = Environmental Protection Agency's Maximum Contaminant Level for regulated parameters ppm = Parts Per Million (mg/L) ppb = Parts Per Billion (µg/L) ppt = Parts Per Trillion (ng/L) ppq = Parts Per Quadrillion (pg/L) ND = Not Detected --- = No Analysis Required

"-" = McMillan Water Treatment Plant out of service