Washington Aqueduct

U.S. Army Corps of Engineers

Annual Report of Water Analysis 2003

Prepared by:

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

Approved by the Chief, Washington Aqueduct

WASHINGTON AQUEDUCT, US ARMY CORPS OF ENGINEERS
ANNUAL REPORT OF WATER ANALYSIS (2003)

Potomac River Raw Water Supply

	Miscellaneous Physical Parameters										Inorganic Ions									Microorganisms					
	pH	ALKALINITY	CONDUCTIVITY	DISSOLVED SOLIDS	SUSPENDED SOLIDS	TEMPERATURE	TOTAL HARDNESS	TOTAL ORG. CARBON	TOTAL SOLIDS	TURBIDITY	TOTAL AMMONIA	BROMIDE	CHLORIDE	FLUORIDE	NITRATE	NITRITE	ORTHOPHOSPHATE	PERCHLORATE	SULFATE	ALGAE COUNT	TOTAL COLIFORM	E. COLI	GIARDIA	CRYPTOSPORIDIUM	VIRUS
		ppm	uS/cm	ppm	ppm	F	ppm	ppm	ppm	NTU	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	org/mL	MPN/100mL	MPN/100mL	cysts/10L	oocysts/10L	MPN/100L
Jan	7.8	71	315	167	22	38	118	3.32	189	28	0.05	ND	28	0.12	3.04	ND	ND	---	28	160	2618	344	ND	ND	---
Feb	7.5	76	384	222	4	39	128	3.04	226	32	0.08	ND	37	0.13	2.44	ND	ND	---	30	216	2580	81	ND	ND	512.0
Mar	7.5	50	260	134	32	46	84	3.04	166	25	0.12	ND	25	0.10	1.89	ND	ND	---	20	355	2081	186	ND	ND	---
Apr	7.7	65	245	150	15	55	99	3.11	165	8	0.07	ND	20	0.11	1.77	ND	ND	---	22	603	2451	476	ND	ND	---
May	7.5	63	230	161	20	61	97	3.63	181	22	ND	ND	15	0.11	1.54	ND	ND	---	18	578	8595	479	ND	ND	164.4
Jun	7.3	64	224	149	5	66	94	3.72	154	35	ND	ND	12	0.11	1.43	ND	ND	---	18	712	8882	1276	ND	ND	---
Jul	7.4	86	312	171	7	75	132	3.00	178	7	0.05	ND	20	0.15	1.79	ND	ND	---	24	407	11747	2491	ND	ND	---
Aug	7.5	88	313	226	8	78	131	3.42	234	5	0.07	ND	22	0.16	1.71	ND	ND	---	31	374	18384	311	ND	ND	---
Sep	7.2	73	252	226	5	68	107	4.01	231	27	0.06	ND	17	0.14	1.72	ND	ND	ND	27	112	30703	2850	ND	ND	37.5
Oct	7.2	77	278	176	27	59	118	2.76	203	11	ND	ND	25	0.12	2.16	ND	ND	ND	24	26	11569	3382	ND	ND	---
Nov	7.0	65	233	147	30	52	99	2.91	177	17	ND	ND	15	0.11	1.98	ND	ND	ND	22	122	10249	3650	ND	ND	34.3
Dec	7.2	60	243	175	31	40	95	2.17	206	27	ND	ND	25	0.09	2.26	ND	ND	ND	21	84	5459	1539	ND	ND	---
Avg	7.4	70	274	175	17	56	109	3.18	193	20	ND	ND	22	0.12	1.98	ND	ND	ND	24	312	9610	1422	ND	ND	187.1
Max	7.8	88	384	226	32	78	132	4.01	234	35	0.12	ND	37	0.16	3.04	ND	ND	ND	31	712	30703	3650	ND	ND	512.0
Min	7.0	50	224	134	4	38	84	2.17	154	5	ND	ND	12	0.09	1.43	ND	ND	ND	18	26	2081	81	ND	ND	34.3

	Metals																										
	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
	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
Jan	1706	0.9	ND	44.9	ND	ND	33	3.3	1.9	5.8	2123	2.9	2.7	9	144	ND	ND	3.8	---	ND	ND	---	78	ND	ND	ND	4.6	8.7
Feb	295	0.8	ND	36.7	ND	ND	36	0.8	ND	3.6	158	ND	2.6	9	40	ND	1.3	1.3	---	ND	ND	---	167	ND	1.6	ND	0.8	2.9
Mar	427	1.6	ND	36.3	ND	ND	24	0.9	ND	3.4	405	0.6	1.8	6	44	ND	0.5	1.8	---	ND	ND	---	103	ND	0.6	ND	0.9	2.9
Apr	188	ND	ND	36.9	ND	ND	29	ND	ND	2.9	263	0.8	1.4	6	54	ND	ND	1.3	2.1	0.5	ND	9.4	134	ND	ND	ND	0.7	2.8
May	148	ND	ND	39.8	ND	ND	28	ND	ND	2.3	125	0.5	1.9	6	45	ND	0.8	1.0	---	ND	ND	---	152	ND	ND	ND	0.8	1.2
Jun	758	ND	0.8	40.9	ND	ND	27	1.1	0.8	3.8	930	1.6	1.5	6	95	ND	ND	2.4	---	ND	ND	---	89	ND	ND	ND	2.2	4.8
Jul	214	ND	0.7	43.8	ND	ND	37	ND	ND	2.6	178	0.6	2.3	9	117	ND	0.9	1.2	2.7	0.5	ND	7.9	158	ND	ND	ND	1.0	1.9
Aug	188	ND	0.8	48.9	ND	ND	37	ND	ND	3.2	105	ND	3.0	9	179	ND	1.5	1.2	---	0.8	ND	---	198	ND	ND	ND	1.2	1.8
Sep	160	ND	0.7	44.6	ND	ND	31	ND	ND	3.2	117	ND	3.0	7	64	ND	1.7	0.9	---	0.7	ND	---	203	ND	ND	ND	1.4	1.6
Oct	385	ND	0.8	42.0	ND	ND	34	0.7	0.7	3.5	581	0.9	2.3	8	69	ND	0.5	2.2	3.2	0.5	ND	12.0	128	ND	ND	ND	1.3	6.4
Nov	131	ND	ND	17.1	ND	ND	28	ND	ND	2.6	137	ND	0.7	7	22	ND	ND	0.6	---	ND	ND	---	58	ND	ND	ND	0.5	1.8
Dec	264	ND	ND	35.8	ND	ND	27	ND	ND	2.1	203	ND	1.8	7	36	ND	0.6	1.3	---	ND	ND	---	128	ND	ND	ND	0.5	2.4
Avg	405	ND	ND	39.0	ND	ND	31	0.5	ND	3.3	444	0.7	2.1	7	76	ND	0.7	1.6	2.7	0.6	ND	9.8	133	ND	ND	ND	1.3	3.3
Max	1706	1.6	0.8	48.9	ND	ND	37	1.1	1.9	5.8	2123	2.9	3.0	9	179	ND	1.7	3.8	3.2	0.8	ND	12.0	203	ND	1.6	ND	4.6	8.7
Min	131	ND	ND	17.1	ND	ND	24	ND	ND	2.1	105	ND	0.7	6	22	ND	ND	0.6	2.1	ND	ND	7.9	58	ND	ND	ND	0.5	1.2

ppb = Parts Per Billion ppm = Parts Per Million ND = Not Detected "---" = No Analysis Required

WASHINGTON AQUEDUCT, US ARMY CORPS OF ENGINEERS
ANNUAL REPORT OF WATER ANALYSIS (2003)

	Inorganic Ions									Metals																										
	TOTAL AMMONIA	BROMIDE	CHLORIDE	FLUORIDE	NITRATE	NITRITE	ORTHOPHOSPHATE	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	50	2000	4	5		100								2		100		50				2				
Dalecarlia Water Treatment Plant Finished Water																																					
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	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
Jan	0.87	ND	28	0.77	2.87	ND	ND	ND	44	32	ND	ND	32.4	ND	ND	42	0.7	ND	2.6	5.2	0.5	1.8	9	0.7	ND	ND	1.0	2.2	0.7	ND	14.0	138	ND	ND	ND	ND	0.5
Feb	0.88	ND	46	0.71	2.60	ND	ND	---	45	29	ND	ND	36.2	ND	ND	45	1.2	ND	2.7	ND	ND	2.5	8	0.7	ND	0.8	1.1	---	0.6	ND	---	178	ND	1.0	ND	0.6	1.6
Mar	0.41	ND	37	0.77	1.87	ND	ND	---	37	37	ND	ND	32.9	ND	ND	33	0.9	ND	2.4	ND	ND	1.5	6	1.1	ND	0.8	1.0	---	ND	ND	---	116	ND	ND	ND	ND	0.7
Apr	0.57	ND	23	0.86	1.74	ND	ND	ND	35	36	ND	ND	33.9	ND	ND	37	0.8	ND	12.9	26.7	0.8	0.9	6	1.3	ND	ND	0.9	1.9	0.5	ND	9.8	133	ND	ND	ND	ND	ND
May	0.81	ND	21	0.88	1.44	ND	ND	---	38	35	ND	ND	38.1	ND	ND	37	1.4	ND	1.8	ND	ND	1.7	6	0.8	ND	0.9	0.8	---	ND	ND	---	153	ND	ND	ND	0.7	ND
Jun	0.82	ND	16	0.92	1.31	ND	ND	---	36	36	ND	ND	33.9	ND	ND	37	1.5	ND	1.8	ND	ND	0.9	6	1.0	ND	1.2	0.9	---	ND	ND	---	112	ND	ND	ND	0.8	ND
Jul	0.88	ND	25	0.90	1.90	ND	ND	ND	46	44	ND	0.5	40.7	ND	ND	45	3.0	ND	2.0	ND	ND	2.0	9	1.4	ND	1.0	0.9	3.0	0.6	ND	10.0	170	ND	ND	ND	1.4	1.1
Aug	0.90	ND	26	0.93	1.62	ND	ND	---	50	108	ND	0.6	45.9	ND	ND	46	1.6	ND	2.6	123.0	ND	2.2	9	2.2	ND	1.4	1.0	---	0.6	ND	---	202	ND	ND	ND	1.2	1.7
Sep	1.00	ND	22	0.99	1.74	ND	ND	ND	48	38	ND	ND	43.3	ND	ND	41	1.7	ND	1.8	21.8	ND	1.7	7	0.9	ND	1.1	1.0	---	0.6	ND	---	163	ND	ND	ND	0.9	0.9
Oct	1.13	ND	23	0.92	2.43	ND	ND	ND	44	32	ND	ND	39.0	ND	ND	42	1.5	ND	1.9	1.8	ND	1.5	8	0.5	ND	0.9	1.0	3.1	0.5	ND	9.9	154	ND	ND	ND	0.8	0.6
Nov	1.01	ND	17	0.89	1.85	ND	ND	ND	40	36	ND	ND	31.5	ND	ND	37	1.5	ND	2.2	5.7	ND	1.6	7	0.8	ND	1.0	1.3	---	0.6	ND	---	106	ND	ND	ND	0.7	1.5
Dec	1.03	ND	31	0.85	2.19	ND	ND	ND	37	26	ND	ND	28.4	ND	ND	36	0.9	ND	1.2	ND	ND	1.2	7	0.6	ND	0.5	0.8	---	0.5	0.9	---	121	ND	ND	ND	ND	ND
Avg	0.86	ND	26	0.87	1.96	ND	ND	ND	42	41	ND	ND	36.4	ND	ND	40	1.4	ND	3.0	15.3	ND	1.6	7	1.0	ND	0.8	1.0	2.6	ND	ND	10.9	146	ND	ND	ND	0.6	0.7
Max	1.13	ND	46	0.99	2.87	ND	ND	ND	50	108	ND	0.6	45.9	ND	ND	46	3.0	ND	12.9	123.0	0.8	2.5	9	2.2	ND	1.4	1.3	3.1	0.7	0.9	14.0	202	ND	1.0	ND	1.4	1.7
Min	0.41	ND	16	0.71	1.31	ND	ND	ND	35	26	ND	ND	28.4	ND	ND	33	0.7	ND	1.2	1.8	ND	0.9	6	0.5	ND	ND	0.8	1.9	ND	ND	9.8	106	ND	ND	ND	ND	ND
McMillan Water Treatment Plant Finished Water																																					
Jan	0.87	ND	31	0.84	2.69	ND	ND	ND	43	68	ND	ND	31.2	ND	ND	37	1.1	ND	8.2	23.3	ND	1.5	8	0.8	ND	ND	1.1	2.2	ND	ND	14.0	127	ND	ND	ND	ND	2.6
Feb	0.87	ND	39	0.75	3.02	ND	ND	---	47	31	ND	ND	35.6	ND	ND	46	0.9	ND	6.2	ND	ND	2.3	8	ND	ND	0.9	1.2	---	0.7	ND	---	191	ND	1.1	ND	0.6	1.9
Mar	0.32	ND	38	0.75	1.90	ND	ND	---	40	92	ND	ND	33.8	ND	ND	33	0.6	ND	6.2	ND	ND	2.1	6	1.2	ND	ND	1.1	---	ND	ND	---	116	ND	ND	ND	ND	1.3
Apr	0.56	ND	23	0.87	1.70	ND	ND	ND	39	42	ND	ND	33.4	ND	ND	34	0.8	ND	3.6	ND	ND	1.1	6	0.5	ND	ND	0.9	1.8	ND	ND	8.4	121	ND	ND	ND	ND	ND
May	0.68	ND	22	0.83	1.46	ND	ND	---	40	40	ND	ND	34.5	ND	ND	36	0.8	ND	8.6	ND	ND	1.9	7	0.5	ND	0.7	0.8	---	0.5	ND	---	144	ND	ND	ND	0.6	0.9
Jun	0.77	ND	20	0.81	1.58	ND	ND	---	38	158	ND	ND	34.2	ND	ND	34	1.5	ND	21.9	32.5	1.4	1.3	6	14.3	ND	0.6	1.5	---	ND	ND	---	115	ND	ND	ND	0.7	5.2
Jul	0.77	ND	24	0.95	1.70	ND	ND	ND	44	68	ND	ND	39.5	ND	ND	41	1.8	ND	9.9	4.0	ND	1.6	9	1.0	ND	0.9	0.9	2.5	ND	ND	9.8	156	ND	ND	ND	1.0	1.2
Aug	0.89	ND	29	0.95	1.54	ND	ND	---	54	75	ND	ND	45.6	ND	ND	45	1.5	ND	12.3	21.8	0.6	2.2	9	1.2	ND	1.1	1.0	---	0.5	ND	---	186	ND	ND	ND	1.0	1.4
Sep	1.01	ND	26	0.99	1.72	ND	ND	ND	48	47	ND	ND	45.8	ND	ND	40	0.6	ND	10.5	7.8	ND	2.2	8	1.5	ND	1.6	0.8	---	0.8	ND	---	198	ND	0.9	ND	0.8	0.6
Oct	1.17	ND	22	0.94	2.21	ND	ND	ND	43	32	ND	ND	37.5	ND	ND	40	1.2	ND	8.9	3.6	ND	1.2	8	0.8	ND	0.7	1.0	3.3	ND	ND	9.2	141	ND	ND	ND	0.7	2.0
Nov	1.02	ND	21	0.85	1.82	ND	ND	ND	41	85	ND	ND	33.5	ND	ND	36	2.0	ND	8.0	60.8	0.6	1.7	7	1.2	ND	0.8	1.3	---	0.7	ND	---	123	ND	0.8	ND	0.9	3.2
Dec	1.00	ND	20	0.83	1.83	ND	ND	ND	38	35	ND	ND	30.2	ND	ND	32	0.7	ND	4.2	ND	ND	1.1	6	0.6	ND	ND	0.9	---	ND	0.6	---	112	ND	ND	ND	ND	4.3
Avg	0.83	ND	26	0.86	1.93	ND	ND	ND	43	64	ND	ND	36.2	ND	ND	38	1.1	ND	9.0	12.8	ND	1.7	7	1.9	ND	0.6	1.0	2.5	ND	ND	10.4	144	ND	ND	ND	0.5	2.0
Max	1.17	ND	39	0.99	3.02	ND	ND	ND	54	158	ND	ND	45.8	ND	ND	46	2.0	ND	21.9	60.8	1.4	2.3	9	14.3	ND	1.6	1.5	3.3	0.8	0.6	14.0	198	ND	1.1	ND	1.0	5.2
Min	0.32	ND	20	0.75	1.46	ND	ND	ND	38	31	ND	ND	30.2	ND	ND	32	0.6	ND	3.6	ND	ND	1.1	6	ND	ND	ND	0.8	1.8	ND	ND	8.4	112	ND	ND	ND	ND	ND

*EPA MCL = Environmental Protection Agency's Maximum Contaminant Level for regulated parameters.

ppb = Parts Per Billion

ppm = Parts Per Million

ND = Not Detected

"---" = No Analysis Required

WASHINGTON AQUEDUCT, US ARMY CORPS OF ENGINEERS
ANNUAL REPORT OF WATER ANALYSIS (2003)

	Miscellaneous Physical Parameters										Microorganisms				Haloacetic Acids (HAAs)						Trihalomethanes (THMs)					Volatile Organic Compounds (VOCs)																			
	pH	ALKALINITY	CONDUCTIVITY	TEMPERATURE	TOTAL CHLORINE	TOTAL HARDNESS	TOTAL ORG. CARBON	TOTAL DISSOLVED SOLIDS	TOTAL SUSPENDED SOLIDS	TURBIDITY (Average)*	TOTAL COLIFORM (% positive)	E. COLI (% positive)	ALGAE COUNT	HETEROTROPHIC PLATE COUNT	DIBROMOACETIC ACID	DICHLOROACETIC ACID	MONOBROMOACETIC ACID	MONOCHLOROACETIC ACID	TRICHLOROACETIC ACID	TOTAL HALOACETIC ACIDS	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
EPA MCL*					4.0					0.5										60					80	5							5	100							75
Dalecarlia Water Treatment Plant Finished Water																																											
		ppm	uS/cm	F	ppm	ppm	ppm	ppm	ppm	NTU	%+	%+	Org/mL	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
Jan	8.4	69	364	42	3.65	140	1.48	194	3	0.05	0	0	0	<1	ND	6.4	ND	ND	5.2	11.6	5.9	4.4	1.3	ND	11.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Feb	8.4	75	442	37	3.63	147	1.56	261	16	0.05	0	0	0	<1	---	---	---	---	---	---	5.7	5.1	1.8	ND	12.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mar	8.5	52	316	47	3.6	108	1.46	173	5	0.04	0	0	0	<1	---	---	---	---	---	---	17.1	5.2	0.5	ND	22.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Apr	8.4	65	289	57	3.5	119	1.41	167	5	0.05	0	0	0	<1	ND	9.1	ND	ND	8.7	17.8	17.2	5.3	0.7	ND	23.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May	8.0	64	279	63	3.7	119	1.90	182	<1	0.05	0	0	0	<1	---	---	---	---	---	---	21.5	7.5	1.4	ND	30.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jun	8.0	63	278	69	3.6	117	1.82	200	4	0.05	0	0	0	1	---	---	---	---	---	---	20.4	6.1	0.8	ND	27.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jul	7.7	82	355	81	3.7	150	1.89	224	9	0.05	0	0	0	<1	ND	14.0	ND	ND	13.0	27.0	27.7	10.7	2.3	ND	40.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aug	7.7	83	362	83	3.7	152	2.07	272	<1	0.07	0	0	0	1	---	---	---	---	---	---	26.9	11.3	2.5	ND	40.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sep	7.7	68	308	83	3.8	133	1.92	248	<1	0.06	0	0	0	3	---	---	---	---	---	---	28.4	8.9	1.3	ND	38.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct	7.8	77	326	61	3.8	138	1.95	191	2	0.05	0	0	0	<1	ND	9.7	ND	ND	12.0	21.7	16.6	8.3	1.8	ND	26.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov	7.9	64	280	55	3.8	119	1.60	186	2	0.05	0	0	0	<1	---	---	---	---	---	---	15.7	6.5	0.9	ND	23.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dec	8.2	60	287	45	3.7	116	1.15	188	<1	0.05	0	0	0	<1	---	---	---	---	---	---	8.2	4.3	1.0	ND	13.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Avg	8.1	69	324	60	3.7	130	1.68	207	4	0.05	0	0	0	<1	ND	9.8	ND	ND	9.7	19.5	17.6	7.0	1.4	ND	25.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Max	8.5	83	442	83	3.8	152	2.07	272	16	0.07	0	0	0	3	ND	14.0	ND	ND	13.0	27.0	28.4	11.3	2.5	ND	40.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Min	7.7	52	278	37	3.5	108	1.15	167	<1	0.04	0	0	0	<1	ND	6.4	ND	ND	5.2	11.6	5.7	4.3	0.5	ND	11.6	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	8.4	57	343	37	3.7	129	1.53	179	2	0.04	0	0	0	<1	ND	8.9	ND	ND	6.3	15.2	10.3	5.6	1.5	ND	17.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Feb	8.4	81	437	36	3.7	149	1.60	229	<1	0.04	0	0	0	<1	---	---	---	---	---	---	9.9	7.4	2.5	ND	19.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mar	8.4	47	322	44	3.7	106	1.46	166	2	0.04	0	0	0	<1	---	---	---	---	---	---	15.1	6.3	1.3	ND	22.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Apr	8.4	56	278	55	3.6	112	1.44	148	6	0.04	0	0	0	<1	ND	12.0	ND	2.0	11.0	25.0	23.2	6.1	0.8	ND	30.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May	8.2	61	280	63	3.6	118	1.67	171	<1	0.05	0	0	0	<1	---	---	---	---	---	---	22.6	8.3	1.5	ND	32.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jun	8.1	52	266	68	3.6	110	1.74	193	2	0.06	0	0	0	<1	---	---	---	---	---	---	29.4	7.3	0.8	ND	37.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jul	7.9	71	334	78	3.6	142	1.88	206	<1	0.08	0	0	8	<1	ND	20.0	ND	ND	17.0	37.0	39.9	11.5	2.0	ND	53.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aug	7.8	75	360	79	3.7	150	2.01	256	2	0.07	0	0	0	<1	---	---	---	---	---	---	45.0	14.8	3.0	ND	62.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sep	7.8	65	316	79	3.7	133	1.98	248	<1	0.06	0	0	0	1	---	---	---	---	---	---	64.7	12.9	1.5	ND	79.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oct	7.8	69	314	59	3.7	132	1.91	247	<1	0.05	0	0	0	<1	ND	12.0	ND	2.6	13.0	27.6	23.9	9.9	2.1	ND	35.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov	8.0	59	281	52	3.7	119	1.89	195	<1	0.05	0	0	0	<1	---	---	---	---	---	---	28.4	8.9	1.2	ND	38.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dec	8.3	49	262	39	3.7	106	1.49	172	1	0.04	0	0	0	<1	---	---	---	---	---	---	12.5	5.3	1.1	ND	18.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Avg	8.1	62	316	57	3.7	126	1.72	201	1	0.05	0	0	0	<1	ND	13.2	ND	1.0	11.8	26.2	27.1	8.7	1.6	ND	37.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Max	8.4	81	437	79	3.7	150	2.01	256	6	0.08	0	0	8	1	ND	20.0	ND	2.6	17.0	37.0	64.7	14.8	3.0	ND	79.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Min	7.8	47	262	36	3.6	106	1.44	148	<1	0.04	0	0	0	<1	ND	8.9	ND	ND	6.3	15.2	9.9	5.3	0.8	ND	17.4	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.

ppb = Parts Per Billion

ppm = Parts Per Million

ND = Not Detected

"---" = No Analysis Required

Turbidity* = Water turbidity after filters

WASHINGTON AQUEDUCT, US ARMY CORPS OF ENGINEERS
ANNUAL REPORT OF WATER ANALYSIS (2003)

			Volatile Organic Compounds																																				Synthetic Organic Compounds						
	1,2-DICHLOROBENZENE	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	METHYL TERT-BUTYL ETHER (MTBE)	NAPHTHALENE	NITROBENZENE	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	ACENAPHTHYLENE	ACETOCHLOR	ALACHLOR	ALDICARB	ALDICARB SULFONE	ALDICARB SULFOXIDE	ALDRIN
EPA MCL*	600		5	100	70	7			5					700				5					100			5	1000		70	200	5	5					10,000	2			2	3	2	4	
	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	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	ND	ND	ND	---	---	--	--	--	--	--
Mar	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	---	---	--	--	--	--	--
Apr	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	ND
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	ND	ND	ND	---	---	--	--	--	--	--
Jun	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	---	---	--	--	--	--	--
Jul	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	ND
Aug	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	---	---	--	--	--	--	--
Sep	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	---	---	--	--	--	--	--
Oct	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	ND
Nov	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	---	---	--	--	--	--	--
Dec	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	---	---	--	--	--	--	--
Avg	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	ND
Max	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	ND
Min	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	ND
McMillan 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	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	ND	ND	ND	---	---	--	--	--	--	--
Mar	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	---	---	--	--	--	--	--
Apr	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	ND
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	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	--	--	--	--	--
Jun	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	---	---	--	--	--	--	--
Jul	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	ND
Aug	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	---	---	--	--	--	--	--
Sep	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	---	---	--	--	--	--	--
Oct	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	ND
Nov	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	---	---	--	--	--	--	--
Dec	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	---	---	--	--	--	--	--
Avg	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	ND
Max	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	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Min	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	ND

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

WASHINGTON AQUEDUCT, US ARMY CORPS OF ENGINEERS
ANNUAL REPORT OF WATER ANALYSIS (2003)

Synthetic Organic Compounds

	ANTHRACENE	AROCHLOR 1016	AROCHLOR 1221	AROCHLOR 1232	AROCHLOR 1242	AROCHLOR 1248	AROCHLOR 1254	AROCHLOR 1260	ATRAZINE	BAYGON	BENTAZON	BENZO(a)ANTHRACENE	BENZO(k)FLUORANTHENE	BENZO(g,h,i)PERYLENE	BENZO(a)PYRENE	alpha-BHC	beta-BHC	delta-BHC	BROMACIL	BUTACHLOR	BUTYLBENZYLPHTHALATE	CAFFEINE	CARBARYL	CARBOFURAN	alpha-CHLORDANE	gamma-CHLORDANE	CHLORDANE	CHLORTHALONIL	CHRYSENE	2,4-D	DALAPON	2,4-DB	DCPA MONO & DIACID DEGRADATE	p,p'DDD	4,4'DDE	p,p'DDE	p,p'DDT	DIBENZ(a,h)ANTHRACENE	DICAMBA	3,5-DICHLOROBENZOIC ACID	DICHLORPROP	DIELDRIN	DIETHYLPHTHALATE	di-(2-ETHYLHEXYL)ADIPATE
EPA MCL*		0.5	0.5	0.5	0.5	0.5	0.5	0.5	3						0.2									40			2			70	200														400
	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	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mar	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Apr	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
May	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jun	---	---	---	---	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND	ND	ND	ND	---	---	---	---	---	ND	ND	ND	---	---	---	---
Jul	ND	ND	ND	ND	ND	ND	ND	ND	0.3	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
Aug	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sep	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Oct	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	ND	ND
Nov	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dec	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Avg	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	ND	ND
Max	ND	ND	ND	ND	ND	ND	ND	ND	0.3	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
Min	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	ND	ND

McMillan 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	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mar	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Apr	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	ND	ND
May	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jun	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jul	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	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aug	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sep	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Oct	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	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dec	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Avg	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	ND	ND
Max	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	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Min	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	ND	ND

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

WASHINGTON AQUEDUCT, US ARMY CORPS OF ENGINEERS
ANNUAL REPORT OF WATER ANALYSIS (2003)

Synthetic Organic Compounds / Miscellaneous

Dalecarlia Water Treatment Plant Finished Water

	di-(2-ETHYLHEXYL)PHTHALATE	DIMETHOATE	DIMETHYLPHTHALATE	DI-N-BUTYLPHTHALATE	2,6-DINITROTOLUENE	2,4-DINITROTOLUENE	DINOSEB	DIQUAT	ENDOTHALL	ENDRIN	EPTC	FLUORANTHENE	FLUORENE	GLYPHOSATE	HEPTACHLOR	HEPTACHLOR EPOXIDE
EPA MCL*	6						7	20	100	2				700	0.4	0.2
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Jan	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Feb	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mar	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Apr	ND	ND	ND	ND	ND	ND	---	ND	ND	ND	ND	ND	ND	ND	ND	ND
May	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jun	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	---
Jul	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aug	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sep	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Oct	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dec	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Avg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Max	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Min	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

	HEXACHLOROBENZENE	HEXACHLOROCYCLOPENTADIENE	3-HYDROXYCARBOFURAN	INDENO(1,2,3,c,d)PYRENE	ISOPHORONE	LINDANE	METHIOCARB	METHOMYL	METHOXYCHLOR	METOLACHLOR	METRIBUZIN	MOLINATE	trans-NONACHLOR	OXAMYL	PARAQUAT	PENTACHLOROPHENOL
EPA MCL*	1	50				0.2			40					200		1
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Jan	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Feb	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mar	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Apr	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---
May	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jun	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND
Jul	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2	ND	ND	ND	ND	ND	ND
Aug	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sep	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Oct	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dec	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Avg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Max	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2	ND	ND	ND	ND	ND	ND
Min	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

	PHENANTHRENE	PICLORAM	PROMETRYN	PROPACHLOR	PYRENE	SIMAZINE	TERBACIL	THIOBENCARB	TRIFLURALIN	TOXAPHENE	2,4,5-TP (SILVEX)	DIBROMOCHLOROPROPANE (DBCP)	ETHELYNE DIBROMIDE (EDB)	CYANIDE	DIOXIN	PERCHLORATE
EPA MCL*		500				4				3	50	0.2	50	0.2	30	
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppt	ppm	pg/L	ppm
Jan	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	ND	---	ND
Feb	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mar	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Apr	ND	---	ND	ND	ND	ND	ND	ND	ND	ND	---	---	---	ND	---	ND
May	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jun	---	ND	---	---	---	---	---	---	---	---	ND	---	---	---	---	---
Jul	0.05	ND	ND	ND	ND	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aug	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sep	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND
Oct	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	ND	---	ND
Nov	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND
Dec	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND
Avg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Max	0.05	ND	ND	ND	ND	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Min	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

McMillan Water Treatment Plant Finished Water

	di-(2-ETHYLHEXYL)PHTHALATE	DIMETHOATE	DIMETHYLPHTHALATE	DI-N-BUTYLPHTHALATE	2,6-DINITROTOLUENE	2,4-DINITROTOLUENE	DINOSEB	DIQUAT	ENDOTHALL	ENDRIN	EPTC	FLUORANTHENE	FLUORENE	GLYPHOSATE	HEPTACHLOR	HEPTACHLOR EPOXIDE
Jan	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Feb	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mar	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Apr	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jun	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jul	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aug	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sep	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Oct	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dec	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Avg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Max	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Min	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

	HEXACHLOROBENZENE	HEXACHLOROCYCLOPENTADIENE	3-HYDROXYCARBOFURAN	INDENO(1,2,3,c,d)PYRENE	ISOPHORONE	LINDANE	METHIOCARB	METHOMYL	METHOXYCHLOR	METOLACHLOR	METRIBUZIN	MOLINATE	trans-NONACHLOR	OXAMYL	PARAQUAT	PENTACHLOROPHENOL
Jan	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Feb	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mar	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Apr	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jun	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jul	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.09	ND	ND	ND	ND	ND	ND
Aug	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sep	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Oct	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dec	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Avg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Max	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.09	ND	ND	ND	ND	ND	ND
Min	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

	PHENANTHRENE	PICLORAM	PROMETRYN	PROPACHLOR	PYRENE	SIMAZINE	TERBACIL	THIOBENCARB	TRIFLURALIN	TOXAPHENE	2,4,5-TP (SILVEX)	DIBROMOCHLOROPROPANE (DBCP)	ETHELYNE DIBROMIDE (EDB)	CYANIDE	DIOXIN	PERCHLORATE
Jan	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	ND
Feb	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mar	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Apr	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	ND
May	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jun	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jul	ND	ND	ND	ND	ND	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aug	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sep	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Oct	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	ND
Nov	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND
Dec	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ND
Avg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Max	ND	ND	ND	ND	ND	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Min	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.   ppb = Parts Per Billion   ppm = Parts Per Million   ND = Not Detected   "---" = No Analysis Required