

Washington Aqueduct

U.S. ARMY Corps of Engineers

Annual Report of Water Analysis 2011

Prepared by:

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







Potomac River Raw Water Supply

			Mis	cellaneou	s Physic	al Parame	eters								Inorga	anic lons							Mic	roorganis	ms	
	рн	ALKALINITY	CONDUCTIVITY	DISSOLVED SOLIDS	SUSPENDED SOLIDS	TOTAL SOLIDS	TEMPERATURE	TOTAL HARDNESS	TOTAL ORGANIC CARBON	TURBIDITY	TOTAL AMMONIA - N	HEXAVALENT CHROMIUM	BROMIDE	CHLORIDE	FLUORIDE	IODIDE	NITRATE - N	NITRITE - N	ORTHOPHOSPHATE - PO4	PERCHLORATE	SULFATE	ALGAE COUNT	TOTAL COLIFORM	E. COLI	GIARDIA	CRYPTOSPORIDIUM
		ppm	uS/cm	ppm	ppm	ppm	°F	ppm	ppm	NTU	ppm	ppb	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppb	ppm	org/mL	MPN /100mL	MPN /100mL	cysts/L	Oocysts/L
Jan	8.5	107	436	306	1	307	47	152	2.2	4	ND	0.06	0.06	41	0.10	ND	2.2	ND	ND	0.8	42	184	17	2	ND	ND
Feb	8.0	74	407	259	24	283	52	114	3.1	11	ND	0.05	ND	60	ND	-	2.1	ND	ND	0.5	32	357	313	2	ND	ND
Mar	7.5	53	274	181	2	183	57	85	3.2	40	0.09		ND	31	ND		1.8	ND	ND	0.3	25	364	69	5	ND	ND
Apr	7.6	61	302	116	46	162	61	97	2.8	29	ND	0.05	ND	18	ND	ND	1.4	ND	ND	0.3	21	616	1737	262	0.038	ND
May	7.7	71	252	137	12	149	68	100	2.4	21	ND		ND	17	ND		1.5	ND	ND	0.3	23	628	3189	38	ND	ND
Jun	7.9	101	384	272	16	288	78	144	2.5	11	0.06		ND	25	0.11		1.4	ND	ND	0.3	37	1112	3960	9	ND	ND
Jul	7.8	99	370	234	18	252	84	147	2.8	12	ND		ND	27	0.14	ND	0.9	ND	ND	0.7	40	1412	6733	5	ND	ND
Aug	8.1	98	410	271	4	275	81	152	2.7	17	ND	0.05	0.05	33	0.14		0.6	ND	ND	0.4	49	1132	6606	14	ND	ND
Sep	7.7	75	330	176	ND	176	73	111	4.3	26	ND		ND	23	0.10		1.6	ND	ND	0.3	28	824	3168	42	ND	ND
Oct	7.7	77	295	184	12	196	66	110	3.9	20	ND		ND	23	0.11	ND	2.0	ND	ND	0.3	21	216	1781	43	ND	ND
Nov	7.7	76	309	135	4	139	61	110	2.5	20	ND	0.08	ND	25	ND		1.9	ND	ND	0.4	27	181	714	25	ND	ND
Dec	7.7	67	271	171	ND	171	51	96	2.1	21	ND		ND	17	ND		2.0	ND	ND	0.4	23	372	719	21	ND	ND

														Metals													
		1	1	1										Wietais													
	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	САБМІИМ	CALCIUM	CHROMIUM	COBALT	COPPER	IRON	LEAD	ПТНІОМ	MAGNESIUM	MANGANESE	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	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb
Jan	387	ND	ND	35	ND	ND	47	1.9	ND	1.6	93	ND	2.5	8	20	0.8	2.4	2.8	ND	ND	26	220	ND	ND	ND	ND	6.3
Feb	306	ND	ND	35	ND	ND	36	0.9	ND	2.7	159	ND	1.9	6	34	0.6	2.1		ND	ND	33	170	ND	ND	ND	ND	4.2
Mar	734	ND	ND	35	ND	ND	27	1.8	0.7	2.9	822	1.1	2.3	4	73	ND	3.1		ND	ND	14	113	ND	ND	ND	8.0	5.5
Apr	542	ND	ND	34	ND	ND	31	1.8	0.6	2.1	707	0.9	2.1	5	61	ND	2.6	2.1	ND	ND	11	113	ND	ND	ND	8.0	5.9
May	329	ND	0.6	37	ND	ND	31	1.2	ND	2.0	425	0.7	2.1	5	47	ND	2.4		ND	ND	10	125	ND	ND	ND	ND	3.8
Jun	203	ND	0.6	46	ND	ND	44	1.1	ND	2.0	209	ND	2.9	8	86	0.9	2.4		ND	ND	13	200	ND	ND	ND	ND	2.8
Jul	212	ND	0.8	45	ND	ND	43	1.1	ND	2.4	202	ND	3.5	9	94	1.0	2.4	3.7	ND	ND	16	219	ND	ND	ND	ND	2.7
Aug	260	ND	0.9	50	ND	ND	41	1.2	ND	2.1	273	0.7	5.6	12	128	1.3	2.8		ND	ND	20	243	ND	ND	ND	0.6	2.8
Sep	322	ND	0.9	34	ND	ND	34	1.2	ND	3.1	353	ND	2.8	6	39	0.8	2.5	-	ND	ND	15	145	ND	ND	ND	0.8	2.9
Oct	255	ND	0.7	37	ND	ND	36	1.2	ND	2.6	318	ND	1.6	5	32	0.6	2.3	3.2	ND	ND	13	120	ND	ND	ND	ND	2.7
Nov	178	ND	ND	35	ND	ND	34	0.8	ND	1.8	165	ND	2.0	6	25	ND	2.0		ND	ND	14	133	ND	ND	ND	ND	ND
Dec	316	ND	ND	35	ND	ND	31	1.2	ND	1.3	310	ND	1.8	5	27	ND	2.1	-	ND	ND	10	117	ND	ND	ND	ND	3.0

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

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				ı	norgar	nic Ion	s	1	1	1		1	1					1	1			1	1	Me	tals													
	TOTAL AMMONIA - N	BROMIDE	CHLORIDE	FLUORIDE	IODIDE	NITRATE - N	NITRITE - N	ORTHOPHOSPHATE - PO4	PERCHLORATE	SULFATE	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	САБМІОМ	CALCIUM	CHROMIUM	COBALT	COPPER	IRON	LEAD	ПТНІОМ	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	ppb	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
	Dale	carlia	Wate	r Trea	atmer	nt Pla	nt Fin	ished	Wat	er																												
Jan	0.7	ND	51	8.0	ND	2.2	ND	2.5	0.7	57	44	ND	ND	31	ND	ND	52	2.5	ND	1.1	ND	ND	2.0	9	1.1	ND	8.0	3.5	3.0	0.6	ND	26	214	ND	ND	ND	0.7	3.3
Feb	0.7	ND	70	0.7		2.1	ND	2.4	0.5	47	42	ND	ND	33	ND	ND	45	1.8	ND	1.4	ND	ND	2.3	6	1.1	ND	0.6	2.1		0.7	ND	36	177	ND	ND	ND	0.5	2.0
Mar	0.5	ND	33	0.7		1.9	ND	2.4	0.3	46	39	ND	ND	30	ND	ND	36	1.2	ND	0.7	ND	ND	1.8	5	8.0	ND	ND	2.1		ND	ND	16	125	ND	ND	ND	ND	1.8
Apr	ND	ND	26	0.7	ND	1.5	ND	2.5	0.3	41	39	ND	ND	30	ND	ND	36	1.3	ND	0.6	ND	ND	1.5	6	0.7	ND	ND	1.9	2.0	ND	ND	12	122	ND	ND	ND	ND	1.0
May	8.0	ND	22	0.7		1.5	ND	2.5	0.3	41	32	ND	ND	34	ND	ND	40	1.6	ND	0.6	ND	0.6	1.8	6	0.8	ND	ND	1.9		ND	ND	10	135	ND	ND	ND	0.7	0.7
Jun	8.0	ND	28	0.7		1.4	ND	2.4	0.4	55	44	ND	0.6	42	ND	ND	48	1.9	ND	8.0	ND	ND	2.2	9	1.4	ND	8.0	2.1		0.7	ND	17	190	ND	ND	ND	0.9	0.6
Jul	8.0	ND	32	0.7	ND	0.9	ND	2.5	0.6	62	51	ND	0.7	44	ND	ND	48	2.3	ND	1.0	ND	0.6	3.3	9	1.5	ND	1.1	2.2	3.2	8.0	ND	22	218	ND	ND	ND	1.2	1.1
Aug	8.0	ND	37	0.7		0.5	ND	2.4	0.6	71	53	ND	8.0	46	ND	ND	45	2.1	ND	1.0	ND	0.7	5.0	12	1.4	ND	1.3	2.3		1.0	ND	26	247	ND	ND	ND	1.2	0.6
Sep	8.0	ND	30	0.7		1.7	ND	2.5	0.5	51	62	ND	0.5	34	ND	ND	40	2.1	ND	1.2	ND	ND	2.6	6	8.0	ND	0.7	2.1		0.7	ND	20	141	ND	ND	ND	1.1	1.2
Oct	8.0	ND	27	0.7	ND	1.9	ND	2.4	0.5	45	23	ND	ND	33	ND	ND	40	1.2	ND	1.2	ND	ND	1.3	5	0.5	ND	0.6	2.0	3.8	0.6	ND	18	123	ND	ND	ND	0.7	0.9
Nov	8.0	ND	28	0.6	-	1.9	ND	2.3	0.4	47	18	ND	ND	33	ND	ND	38	1.0	ND	8.0	ND	ND	1.5	6	0.6	ND	0.5	1.9		0.5	ND	19	132	ND	ND	ND	ND	ND
Dec	0.7	ND	21	0.6		2.0	ND	2.4	0.4	41	24	ND	ND	30	ND	ND	34	0.9	ND	0.7	ND	ND	1.4	5	0.7	ND	ND	1.8		ND	ND	15	112	ND	ND	ND	ND	8.0
	МсМ	illan \	Nater	Trea	tment	Plan	t Fini	shed	Wate	r																												
Jan	0.7	ND	45	0.9	ND	2.3	ND	2.5	0.8	59	22	ND	ND	32	ND	ND	44	1.9	ND	2.4	ND	ND	2.2	8	ND	ND	8.0	2.4	3.1	0.7	ND	27	209	ND	ND	ND	0.6	2.7
Feb	0.7	ND	71	0.7		2.1	ND	2.5	0.5	51	29	ND	ND	32	ND	ND	35	1.6	ND	2.6	ND	ND	2.0	6	8.0	ND	0.7	2.1		0.6	ND	41	178	ND	ND	ND	ND	2.4
Mar	0.6	ND	38	8.0		1.9	ND	2.4	0.4	50	62	ND	ND	30	ND	ND	24	0.9	ND	1.6	ND	ND	1.5	5	1.2	ND	ND	1.9		ND	ND	22	122	ND	ND	ND	ND	1.1
Apr	ND	ND	26	8.0	ND	1.5	ND	2.5	0.3	45	39	ND	ND	30	ND	ND	28	8.0	ND	1.7	ND	ND	1.5	6	ND	ND	ND	1.8	2.1	ND	ND	15	118	ND	ND	ND	ND	0.9
May	8.0	ND	21	0.7		1.3	ND	2.4	0.3	45	37	ND	ND	34	ND	ND	28	0.9	ND	7.9	ND	0.5	1.8	5	ND	ND	ND	1.8		ND	ND	14	127	ND	ND	ND	ND	0.7
Jun	8.0	ND	26	0.7		1.2	ND	2.4	0.3	56	56	ND	ND	42	ND	ND	33	1.4	ND	9.7	ND	ND	2.0	7	1.1	ND	0.6	1.8		0.6	ND	17	176	ND	ND	ND	0.6	ND
Jul	0.7	ND	32	0.7	ND	0.9	ND	2.5	0.5	69	71	ND	0.5	45	ND	ND	42	1.9	ND	8.3	ND	0.6	2.7	9	1.5	ND	8.0	1.9	3.0	8.0	ND	23	220	ND	ND	ND	8.0	ND
Aug	0.7	ND	37	0.6		0.5	ND	2.4	0.5	74	62	ND	0.7	44	ND	ND	38	2.1	ND	7.9	ND	ND	3.9	11	1.7	ND	1.0	1.9		1.1	ND	27	232	ND	ND	ND	1.0	ND
Sep	8.0	ND	33	0.7		1.5	ND	2.4	0.6	60	29	ND	ND	38	ND	ND	30	2.0	ND	10.9	ND	ND	3.6	7	0.6	ND	0.8	1.9		0.8	ND	26	153	ND	ND	ND	0.9	0.6
Oct	0.8	ND	27	0.7	ND	1.8	ND	2.5	0.5	50	24	ND	ND	35	ND	ND	29	1.4	ND	20.2	ND	ND	1.4	5	ND	ND	0.6	1.9	3.3	0.5	ND	21	115	ND	ND	ND	0.7	1.0
Nov	0.7	ND	29	0.7		1.8	ND	2.4	0.4	51	21	ND	ND	33	ND	ND	28	0.8	ND	14.0	ND	ND	1.7	7	ND	ND	0.5	1.8		0.5	ND	22	126	ND	ND	ND	ND	0.6
Dec	0.8	ND	20	0.7		1.9	ND	2.4	0.4	44	27	ND	ND	33	ND	ND	26	0.8	ND	4.4	ND	ND	1.4	5	ND	ND	ND	1.7	-	ND	ND	18	110	ND	ND	ND	ND	0.9

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

ppb = Parts Per Billion

ppm = Parts Per Million

"---" = No Analysis Required



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		ı	Misce	llaneo	us Ph	ysical	Para	meters	S I		Mi	icroorga	anisn	ns		Hal	loacet	ic Aci	ds (HA	As)	ı	Tril	nalom	ethan	es (TH	IMs)			1			/olatil	e Orga	anic C	ompo	unds	(VOCs	;)				
	Hd	ALKALINITY	CONDUCTIVITY	TEMPERATURE	CHLORINE	TOTAL HARDNESS	TOTAL ORGANIC 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	BROMOCHLOROACETIC ACID	CHLOROFORM	BROMODICHLOROMETHANE	CHLORODIBROMOMETHANE	ВКОМОГОКМ	TOTALTRIHALOMETHANES	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*																											_							_	100	<u> </u>			<u> </u>	 	H	
		ppm	uS/cm	°F	ppm	ppm	ppm	ppm	ppm	NTU	%+	%+ O	rg/mL	CFU/ml	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	5 ppb	ppb	ppb	ppb	ppb	ppb	ppb	5 ppb	100 ppb	ppb	ppb	ppb	ppb	ppb	ppb	75 ppb
Units	<u> </u>	F F F F F F F F F F F F F F F F F F F			FP		Fr	FP	F F F F F F F F F F F F F F F F F F F	1	J	1 1	<i></i>		-6-	-6-		-6-		F12-0				FP-			-6-	F#~		-6-		F#~			F/~		r~	-1		_ F#2	-1	
	Dale	carli	a Wat	ter Tı	eatm	ent F	Plant	Finis	shed	Wate	r																															
Jan	7.8	98	500	40	3.8	165			ND	0.03		0.0	0	<1								6.6	5.8	2.1	ND	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Feb	7.7	71	459	44	3.6	138	1.9	279	5	0.03	0.0	0.0	0	<1	ND	9.2	ND	1.8	13.0	24	2.6	1	6.5		ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	1	ND	ND
Mar	7.7	53	329	52	3.6	111	1.6		ND	0.03		0.0	0	<1								14.2		0.6	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Apr	7.7	61	349	59	3.3	116	1.4	137	ND	0.03		0.0	0	<1								20.2		1.4	ND	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND
May	7.7	69	307	69	3.7	122		187	ND	0.04		0.0	0	1	ND	10.3	ND	ND	10.2	21	1.9	17.6		0.8	ND	24	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jun	7.7	94	432	81	3.7	157	1.6	296	7	0.06		0.0	0	<1								23.8		1.6	ND	34	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	1	ND
Jul	7.7	95	424	87	3.7	159	1.9	249	4	0.07		0.0	8	4								1	13.9		ND	59	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aug	7.7	93	468	84	3.7	161	1.9	269	ND	0.05		0.0	0	3	ND		ND	2.3	14.8		4.8	33.4			ND	53	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sep	7.7	72	345	75	3.7	127	2.3	208	ND	0.03		0.0	0	1								33.8		0.6	ND	41	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND
Oct	7.7	73	344	64	3.7	120	2.3	162	3	0.03		0.0	0	<1								25.5		1.1	ND	34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov	7.7	73	359	54	3.7	121	1.6	167	ND	0.03		0.0	0	<1	ND	8.1	ND	1.0	7.7	17	2.2	11.9		1.5	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dec	7.7	65	320	48	3.7	108	1.4	169	3	0.02		0.0	0	<1								9.5	3.2	0.5	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		<u> </u>	<u> </u>						l		l	1							l		l	<u> </u>	<u> </u>		1				<u> </u>													
	McM	lillan	Wate	er Tre	atme	ent Pl	ant F	inish	ned V	Vater																																
Jan	7.7	90	488	42	3.7	154	2.0	191	ND	0.03	0.0	0.0	0	<1								7.3	6.0	2.2	ND	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Feb	7.7	66	472	44	3.8	126	2.0	247	7	0.03	0.0	0.0	0	<1	ND	7.6	ND	1.5	10.2	19	3.4	11.0	8.0	2.3	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mar	7.6	41	356	50	3.5	97	1.6	178	ND	0.03	0.0	0.0	0	<1						-		11.4	5.4	1.0	ND	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Apr	7.7	52	315	62	3.1	105	1.5	144	2	0.03	0.8**	0.8**	0	29								13.1	6.5	1.7	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
May	7.7	56	299	68	3.6	104	1.6	150	ND	0.04	0.0	0.0	0	<1	ND	11.2	ND	1.6	10.5	23	2.2	25.2	6.5	1.0	ND	33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jun	7.7	78	375	78	3.7	134	1.5	261	7	0.06	0.0	0.0	16	2								_	9.3	1.3	ND	51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Jul	7.7	82	420					249		0.07		1 1		19						-		 			ND		_	ND		ND		ND			_		ND	1		1	ND	
Aug	7.7	79	435					260		0.06			_	88	ND	18.1	ND	3.2	12.1	33	5.3	41.7					ND	ND	ND	ND	ND		ND	ND	ND	ND	ND		ND		ND	ND
Sep	7.7	67	380							0.04			0	52								34.7					ND	ND		ND			ND		_		1		ND	ND	ND	ND
Oct	7.7	57	330		-			194		0.03			0	5											ND			ND		ND		_	ND						ND	ND	ND	ND
Nov	7.7	66	353	_	_			_		0.02		0.0	0	4	ND		ND	1.0	9.5	21	2.4	1			ND	_	ND	ND		ND	ND		ND			ND	1	_	ND	+		
Dec	7.7	54	314		3.7	97		179		0.01			0	2								10.4				_	ND	ND		ND	ND		ND		_	-		-		+		

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

Turbidity* = Water turbidity after filters

Org/mL = Organisms per milliLiter

ppb = Parts Per Billion
CFU/mL = Colony Forming Units per milliLiter

ppm = Parts Per Million

"---" = No Analysis Required

NTU = Nephelometric Turbidity Units

A the sample Investigation at the sample point indicated a high possibility that the sample may have been contaminated during

ND = Not Detected

**One sample out of 120 collected at the McMillan WTP in April was total coliform and *E. coli* positive. Additional analysis of the positive sample did not confirm the presence of *E. coli* in the sample. Investigation at the sample point indicated a high possibility that the sample may have been contaminated during sample collection. All follow-up samples were negative for both total coliforms and *E. coli*.

Page 3 of 7



					<u> </u>	<u> </u>	<u> </u>	<u> </u>	_				<u> </u>	<u> </u>	<u> </u>	Vo	latile	Orgar	ic Co	ompou	nds																	0:	xygen	iates &	ኔ Othe	er VOC)s	
	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	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)	4-METHYL-2-PENTANONE (MIBK)	DI-ISOPROPYL ETHER	METHYL TERT-BUTYL ETHER (MTBE)	TERT-AMYL ETHYL ETHER (TAME)	TERT-BUTYL ETHYL ETHER (TBEE)	CARBON DISULFIDE	TRICHLOROTRIFLUOROETHANE
EPA MCL*	600			5	100	70	7			5				700				5			100			5	1000		70	200	5	5				1	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
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*EPA MCL = Environmental Protection Agency's Maximum Contaminant Level for regulated parameters

ppb = Parts Per Billion

opm = Parts Per Million

ND = Not Detected "---" = No Analysis Required



																				s	ynthe	tic Or	rganic	Com	poun	ds																			
	ACENAPHTHENE	ACENAPHTHYLENE	ACETOCHLOR	ACIFLOURFEN	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,l)PERYLENE	BENZO(a)PYRENE	BENZO(K)FLUORATHENE	alpha-BHC	beta-BHC	delta-BHC	BROMACIL	BUTACHLOR	BUTYLBENZYLPHTHALATE	CAFFEINE	CARBARYL	CARBOFURAN	alpha-CHLORDANE	gamma-CHLORDANE	CHLORDANE	CHLORPYRIFOS (DURSBAN)	CHLOROBENZILATE	CHLORONEB	CHLOROTHALONIL	CHRYSENE	2,4-D	DALAPON
EPA MCL*					2													0.5	3						0.2										40			2						70	200
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
	Dale	carli	ia Wa	ater 1	reat	men	t Pla	nt Fi	nish	ed W	ater						•									•		•																	
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	2,4-DB	DCPA MONO & DIACID DEGRADATE	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)	ENDOSULFAN II (beta)	ENDOSULFAN SULFATE	MALATHION	METHIOCARB	МЕТНОМҮL	METHOXYCHLOR
EPA MCL*													400	6							7	20	100	2					700	0.4	0.2	1	50				0.2		\Box				1	40
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
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ppb = Parts Per Billion

ppm = Parts Per Million

ND = Not Detected "---" = No Analysis Required



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		1				1	1	ı	Sy	nthetic	Orga	nic Co	mpou	nds			1		ı	1	1			Misc	cellane	ous	1			Nitrosa	amine			<u> </u>	1	R	tadion	nuclide	s		
	METOLACHLOR	METRIBUZIN	MOLINATE	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)	HEXAVALENT CHROMIUM	N-NITROSODIMETHYLAMINE (NDMA)	N-NITROSO-n-PROPYLAMINE (NDPA)	N-NITROSODIBUTYLAMINE (NDBA)	N-NITROSODIETHYLAMINE (NDEA)	N-NITROSOMETHYLETHYLAMINE (NMEA)	N-NITROSOPYROLIDINE (NPYR)	GROSS ALPHA PARTICLE ACTIVITY	GROSS BETA PARTICLE ACTIVITY / PHOTON EMITTERS	RADIUM-226 & RADIUM-228	STRONTIUM-90	TRITIUM	IODINE-131	CESIUM-134	CESIUM-137
EPA MCL*					200					1		500			4					3		50	200	50	0.2	30								15	50**	5					
Units	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	ppb	ppt	ppt	ppt	ppt	ppt	ppt	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
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	Dale	carlia	Wat	er Tr	eatm	ent P	lant F	Finisł	ned W	/ater																															
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EPA MCL* = Environmental Protection Agency's Maximum Contaminant Level for regulated parameters