

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

1st Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	Sample Date	3/8/2021	3/8/2021	3/8/2021	3/9/2021	3/8/2021	3/8/2021	3/8/2021	3/10/21, 3/9/21	3/10/2021		
				LAB ID Nos.	21C0911	21C0912	21C0913	21C0947 - 21C0952	21C0907	21C0909	21C0910	21C0973-21C0975, 21C0953-21C0954	21C0968 - 21C0972		
				SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT							
				1	2A	2B	3	4	5A	5B	6	7			
RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION								
	73rd Street	79th Street	SOUTH		North	Central	Central	North							
TEMPERATURE †		°C	00010	5	4	5	5	4	6	6	5	6			
TURBIDITY	TT	N.T.U.	82079	2.0	0.25	0.10	0.10	1.5	0.05	0.05	0.06	0.16			
THRESHOLD ODOR, STRAIGHT †	*3	T.O.N	00086	1 M	1 Cc	1 Cc	1 Cc	1 M	1 Cc	1 Cc	2 Cc	1 Cc			
THRESHOLD ODOR, DECHLORINATED †	*3	T.O.N.		1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 M	1 Mm			
COLOR (Apparent) †	*15	Pt.-Co. CU	00080	15	<15	<15	<15	<15	<15	<15	<15	<15			
pH	*6.5-8.5	STD. Units	00040	8.2	7.8	7.8	7.8	8.2	7.8	7.8	7.8	7.8			
FREE CHLORINE RESIDUAL †		CL ₂ , mg/L	50064	ND	1.57	1.53	1.21	ND	1.68	1.70	1.39	1.33			
SATURATION INDEX, LANGELIER †		UNITS +/-		-0.03	-0.72	-0.73	-0.51	-0.12	-0.69	-0.70	-0.48	-0.43			
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0			
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	112	104	104	104	109	105	105	106	104			
CONDUCTIVITY		uS/cm		323	329	330	330	319	330	330	326	325			
BROMIDE †		Br, mg/L	71870	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25			
CHLORIDE	*250	Cl, mg/L	00940	14.2	15.7	15.8	17.2	13.6	15.4	15.4	17.2	17.2			
FLUORIDE	4	F, mg/L	00951	<0.5	0.687	0.679	0.758	<0.5	0.744	0.746	0.725	0.720			
SULFATE	*250	SO ₄ , mg/L	00945	23.0	26.7	26.8	27.7	22.5	25.6	25.6	27.2	27.1			
HARDNESS		CaCO ₃ , mg/L	00900	135	142	139	143	137	139	140	141	141			
CALCIUM		Ca, mg/L	00916	34.2	35.8	33.6	35.0	32.0	35.4	35.2	35.1	35.0			
MAGNESIUM †		Mg, mg/L	00927	11.8	12.4	11.6	12.1	11.4	12.3	12.2	12.1	12.1			
POTASSIUM †		K, mg/L	00937	1.37	1.45	1.35	1.40	1.29	1.42	1.39	1.39	1.38			
SODIUM †		Na, mg/L	00006	8.68	9.48	9.07	9.33	8.50	9.53	9.49	9.28	9.25			
SOLIDS, TOTAL DISSOLVED *	*500	TDS, mg/L	00150	167	170	170	155	145	159	148	148	153			
SOLIDS, TOTAL *		Tot. Sol., mg/L	00500	184	191	190	182	173	186	174	174	184			
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.94	1.65	1.61	1.57	1.77	1.93	1.71	1.57	1.58			
OXYGEN DEMAND, CHEMICAL †		O, mg/L	00335	3.51	3.35	1.74	2.67	4.37	2.58	2.10	3.23	3.50			
NITROGEN, AMMONIA †		N, mg/L	00610	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1			
NITROGEN, NITRATE † *	10	N, mg/L	00620	0.367	0.356	0.355	0.389	0.342	0.339	0.338	0.389	0.385			
NITROGEN, NITRITE	1	N, mg/L	00615	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25			
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	<0.06	0.596	0.641	0.651	<0.06	0.550	0.544	0.579	0.557			
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.105	1.25	1.56	1.43	0.095	1.36	1.34	1.35	1.34			
CYANIDE	200	CN, ug/L	00720	<12	<12	<12	<12	<12	<12	<12	<12	<12			

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

H - Holding Time Exceeded

R - Data rejected

‡ - Non-NELAP Accredited

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WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

1st Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION SOUTH	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street			North	Central	Central	North
ALUMINUM	*50-200	Al, µg/L	01105	45.4	37.4	40.9	36.8	49.7	47.0	53.0	42.7	43.5
ANTIMONY	6	Sb, µg/L	01268	1.06	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	1.38	<1	<1	<1	<1
BARIUM	2000	Ba, µg/L	01007	18.9	18.2	17.3	17.8	10.8	18.7	18.6	17.9	18.0
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON †		B, µg/L	01022	24.4	24.7	24.1	24.5	13.8	24.3	24.1	24.4	24.7
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	<1	<1	<1	<1	<1	<1	<1	<1	<1
COBALT #		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	2.72	<1	<1	1.11	<1	<1	<1	<1	1.23
IRON	*300	Fe, µg/L	00031	41.4	<1	<1	18.8	20.3	<1	<1	4.38	7.95
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	<1	<1
LITHIUM †		Li, µg/L	01132	2.77	3.39	2.90	2.38	2.51	2.91	3.14	3.13	2.72
MANGANESE	*50	Mn, µg/L	01055	<1	<1	<1	1.05	<1	<1	<1	<1	<1
MERCURY	2	Hg, µg/L	71900	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S
MOLYBDENUM		Mo, µg/L	01062	<1	<1	<1	1.17	<1	1.19	2.88	1.33	<1
NICKEL		Ni, µg/L	01067	2.25	<1	<1	<1	<1	<1	<1	<1	<1
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	01142	1356	1463	1456	1426	1264	1453	1440	1433	1426
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM †		Sr, µg/L	01082	114	116	115	111	108	115	114	110	110
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM †		Ti, µg/L	01152	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM †		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	1.95	2.74	<1	6.93	1.49	<1	<1	21.5	14.1

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

† - Non-NELAP Accredited

Rafael Datt
 CHIEF WATER CHEMIST

Hassan Saleh
 DIRECTOR OF WATER PURIFICATION LABORATORIES

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2nd Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		**DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	SOUTH		North	Central	Central	North
TEMPERATURE ‡		°C	00010	14	13	13	13	12	12	12	14	13
TURBIDITY	TT	N.T.U.	82079	0.25	0.05	0.05	0.20	0.50	0.05	0.05	0.10	0.10
THRESHOLD ODOR, STRAIGHT ‡	*3	T.O.N	00086	1 M	2 Cc	2 Cc	1 Cc	1 M	2 Cc	2 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED ‡	*3	T.O.N.		1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm
COLOR (Apparent) ‡	*15	Pt.-Co. ACU	00080	<15	<15	<15	<15	<15	<15	<15	<15	<15
pH	*6.5-8.5	STD Units	00040	8.3	7.9	7.9	7.9	8.4	7.9	7.9	7.9	8.0
FREE CHLORINE RESIDUAL ‡		CL ₂ , mg/L	50064	ND	1.56	1.57	1.40	ND	1.58	1.58	1.36	1.21
SATURATION INDEX, LANGELIER ‡		UNITS +/-		0.27	-0.50	-0.45	-0.21	0.28	-0.53	-0.54	-0.19	-0.16
ALKALINITY, PHENOLPHTHALEIN		0	00415	0.70	0	0	0	1.65	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	106	98.6	98.8	99.4	104	98.0	98.2	98.6	98.3
CONDUCTIVITY		uS/cm		302	303	303	316	296	301	301	309	307
BROMIDE ‡		Br, mg/L	71870	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
CHLORIDE	*250	Cl, mg/L	00940	14.1	15.1	15.1	15.4	13.2	14.8	14.7	14.9	15.0
FLUORIDE	4	F, mg/L	00951	<0.50	0.58	0.58	0.62	<0.50	0.68	0.69	0.71	0.71
SULFATE	*250	SO ₄ , mg/L	00945	22.4	24.8	24.7	25.1	21.9	25.0	24.7	25.2	25.6
HARDNESS		CaCO ₃ , mg/L	00900	135	133	133	134	134	133	131	137	141
CALCIUM		Ca, mg/L	00916	35.6	35.2	35.3	35.7	35.8	35.5	34.5	36.1	36.8
MAGNESIUM ‡		Mg, mg/L	00927	12.3	12.2	12.2	12.3	12.3	12.3	12.0	12.6	12.9
POTASSIUM ‡		K, mg/L	00937	1.43	1.45	1.43	1.47	1.47	1.45	1.38	1.45	1.47
SODIUM ‡		Na, mg/L	00006	8.06	8.32	8.33	8.67	8.56	8.51	8.41	8.52	8.72
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	175	177	172	165	169	161	161	165	162
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	185	193	197	190	182	182	184	182	185
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.71	1.51	1.50	1.49	1.68	1.82	1.65	1.46	1.53
OXYGEN DEMAND, CHEMICAL ‡		O, mg/L	00335	3.86	2.87	2.99	4.15	3.98	3.54	3.17	4.86	4.22
NITROGEN, AMMONIA ‡		N, mg/L	00610	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
NITROGEN, NITRATE ‡	10	N, mg/L	00620	0.314	0.292	0.293	0.296	0.282	0.277	0.275	0.272	0.267
NITROGEN, NITRITE	1	N, mg/L	00615	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	<0.06	0.677	0.604	0.632	<0.06	0.668	0.628	0.560	0.613
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.075	1.21	1.26	1.17	0.072	1.50	1.37	1.11	1.25
*CYANIDE, TOTAL	200	CN, ug/L	00720	<12	<12	<12	<12	<12	<12	<12	<12	<12

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

H - Holding Time Exceeded

R - Data rejected

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*Cyanide Lfms did not meet QC Criteria for all Sample Sites

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2nd Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	Sample Date	5/24/2021	5/24/2021	5/24/2021	5/25/2021	5/24/2021	5/24/2021	5/24/2021	5/26/21-5/25/21	5/26/2021		
				LAB ID Nos.	21C2019	21C2021	21C2022	21C2050, 21C2132, 21C2052-21C2054	21C2015	21C2017	21C2018	21C2171-21C2173 21C2055-21C2056	21C2174-21C2176 21C2173		
				SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT							
				1	2A	2B	3	4	5A	5B	6	7			
RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION								
	73rd Street	79th Street	SOUTH		North	Central	Central	North							
ALUMINUM	*50-200	Al, µg/L	01105	31.7	95.9	99.9	98.7	32.7	78.2	90.8	75.9	69.3			
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1			
ARSENIC	10	As, µg/L	01002	1.35	1.25	1.03	1.09	1.32	<1	1.02	1.08	1.10			
BARIUM	2000	Ba, µg/L	01007	18.3	17.9	17.9	18.5	18.5	17.8	17.8	18.6	18.7			
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1			
BORON ‡		B, µg/L	01022	21.7	21.6	22.0	23.4	22.9	22.2	22.5	22.9	23.1			
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1			
CHROMIUM	100	Cr, µg/L	01034	1.46	1.49	1.18	<1	1.03	1.33	1.38	2.39	3.25			
COBALT ‡		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1			
COPPER	**1300	Cu, µg/L	01042	<1	<1	<1	<1	<1	<1	<1	<1	<1			
IRON	*300	Fe, µg/L	00031	12.1	1.60	1.61	10.3	9.67	1.12	1.47	4.85	12.0			
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	<1	<1			
LITHIUM ‡		Li, µg/L	01132	2.42	2.00	2.14	1.91	2.23	1.85	1.94	2.35	2.46			
MANGANESE	*50	Mn, µg/L	01055	<1	<1	<1	<1	<1	<1	<1	<1	<1			
MERCURY	2	Hg, µg/L	71900	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S			
MOLYBDENUM		Mo, µg/L	01062	1.09	1.04	<1	<1	<1	<1	<1	<1	<1			
NICKEL		Ni, µg/L	01067	1.86	1.79	1.72	1.87	1.77	1.73	1.76	1.74	1.71			
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1			
SILICON		Si, µg/L	01142	763	883	879	980	878	968	961	924	931			
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1			
STRONTIUM ‡		Sr, µg/L	01082	125	121	116	121	121	121	121	124	125			
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1			
TITANIUM ‡		Ti, µg/L	01152	<1	1.38	1.32	1.35	<1	1.63	1.49	1.33	1.51			
VANADIUM ‡		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1			
ZINC	*5000	Zn, µg/L	01092	<1	<1	<1	6.03	<1	<1	<1	17.3	7.76			

* Federal Primary/Secondary MCLs

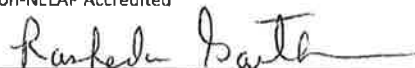
** Action Level

TT - Treatment Technique

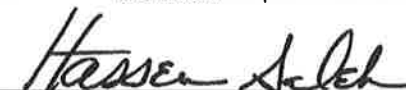
ND - not detected

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CHIEF WATER CHEMIST



DIRECTOR OF WATER PURIFICATION LABORATORIES

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3rd Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	SOUTH		North	Central	Central	North
TEMPERATURE ‡		°C	00010	22	22	22	24	22	22	22	22	22
TURBIDITY	TT	N.T.U.	82079	0.40	0.10	0.10	0.20	0.55	0.10	0.05	0.10	0.15
THRESHOLD ODOR, STRAIGHT ‡	*3	T.O.N	00086	2 E	2 Cc	2 Cc	1 Cc	2 E	2 Cc	2 Cc	2 Cc	2 Cc
THRESHOLD ODOR, DECHLORINATED ‡	*3	T.O.N.		1 M	1 M	1 M	1 Mm	1 M	1 M	1 M	1 Mm	1 Mm
COLOR (Apparent) ‡	*15	Pt.-Co. ACU	00080	<15	<15	<15	<15	<15	<15	<15	<15	<15
pH	*6.5-8.5	STD. Units	00040	8.4	7.9	8.0	7.9	8.4	7.9	7.9	7.9	8.0
FREE CHLORINE RESIDUAL ‡		CL ₂ , mg/L	50064	ND	1.50	1.56	1.02	ND	1.54	1.55	1.32	1.13
SATURATION INDEX, LANGELIER ‡		UNITS +/-		0.27	-0.33	-0.32	0.10	0.53	-0.34	-0.34	0.00	0.05
ALKALINITY, PHENOLPHTHALEIN		0	00415	2.25	0	0	0	2.25	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	108	101	102	102	108	101	101	102	101
CONDUCTIVITY		uS/cm		298	303	303	307	297	303	303	302	306
BROMIDE ‡		Br, mg/L	71870	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
CHLORIDE	*250	Cl, mg/L	00940	13.4	15.3	15.4	15.4	13.4	15.4	15.4	15.6	15.7
FLUORIDE	4	F, mg/L	00951	<0.50	0.68	0.68	0.68	<0.5	0.76	0.77	0.78	0.80
SULFATE	*250	SO ₄ , mg/L	00945	22.2	25.6	25.7	25.6	22.2	25.4	25.3	25.4	25.4
HARDNESS		CaCO ₃ , mg/L	00900	140	141	141	138	140	140	140	137	135
CALCIUM		Ca, mg/L	00916	34.0	34.0	34.0	34.3	33.8	33.8	33.8	34.2	34.2
MAGNESIUM ‡		Mg, mg/L	00927	12.3	12.3	12.3	12.3	12.2	12.2	12.2	12.3	12.4
POTASSIUM ‡		K, mg/L	00937	1.29	1.37	1.37	1.35	1.32	1.34	1.35	1.35	1.35
SODIUM ‡		Na, mg/L	00006	8.22	8.51	8.59	8.52	8.16	8.49	8.49	8.52	8.54
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	167	164	160	152	165	162	169	155	154
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	190	198	198	196	192	198	195	196	193
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.81	1.76	1.82	1.72	1.84	1.73	1.74	1.64	1.64
OXYGEN DEMAND, CHEMICAL ‡		O, mg/L	00335	6.88	5.73	5.66	4.99	5.36	5.19	5.49	5.04	4.79
NITROGEN, AMMONIA ‡		N, mg/L	00610	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
NITROGEN, NITRATE ‡	10	N, mg/L	00620	0.271	0.262	0.262	0.262	0.269	0.259	0.259	0.266	0.268
NITROGEN, NITRITE	1	N, mg/L	00615	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	<0.06	0.735	0.641	0.707	<0.06	0.594	0.567	0.582	0.599
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	<0.06	1.24	1.20	1.14	0.65	1.16	1.13	1.08	1.08
CYANIDE	200	CN, ug/L	00720	<12	<12	<12	<12	<12	<12	<12	<12	<12

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

H - Holding Time Exceeded

R - Data rejected

‡ - Non-NELAP Accredited

Cyanide LfMs did not meet QC Criteria

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

3rd Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION SOUTH	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street			North	Central	Central	North
ALUMINUM	*50-200	Al, µg/L	01105	11.1	170	167	150	18.0	165	170	151	139
ANTIMONY ‡	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	01002	1.19	1.04	1.06	1.08	1.20	<1	1.00	1.01	<1
BARIUM	2000	Ba, µg/L	01007	20.1	19.7	19.7	20.2	20.1	19.6	19.6	19.9	19.9
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON ‡		B, µg/L	01022	24.5	24.6	24.6	24.6	24.3	24.2	24.0	24.7	24.5
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	1.29	<1	<1	<1	<1	1.15	1.16	<1	<1
COBALT ‡		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	<1	<1	<1	<1	<1	<1	<1	<1	<1
IRON	*300	Fe, µg/L	00031	7.06	<1	<1	34.3	15.0	1.01	<1	4.13	22.1
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	<1	<1
LITHIUM ‡		Li, µg/L	01132	<1	2.54	2.50	1.91	1.09	<1	<1	2.53	2.53
MANGANESE	*50	Mn, µg/L	01055	<1	<1	<1	<1	<1	<1	<1	<1	<1
MERCURY	2	Hg, µg/L	71900	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S
MOLYBDENUM ‡		Mo, µg/L	01062	<1	<1	<1	<1	<1	<1	<1	<1	<1
NICKEL		Ni, µg/L	01067	2.39	2.31	2.38	2.53	2.43	2.38	2.31	2.40	2.42
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	01142	867	1012	1011	1020	888	990	995	1017	1017
SILVER ‡	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM ‡		Sr, µg/L	01082	115	112	114	116	114	114	114	115	115
THALLIUM ‡	2	Tl, µg/L	01059	<5	<5	<5	<5	<5	<5	<5	<5	<5
TITANIUM ‡		Ti, µg/L	01152	<1	1.62	1.58	1.57	<1	1.53	1.53	1.43	1.42
VANADIUM ‡		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	<1	<1	<1	16.2	<1	<1	<1	17.7	11.50

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

‡ - Non-NELAP Accredited

Rashida Datta

CHIEF WATER CHEMIST

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DIRECTOR OF WATER PURIFICATION LABORATORIES

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

4th Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	Sample Date	12/6/2021	12/6/2021	12/6/2021	12/7/2021	12/6/2021	12/6/2021	12/6/2021	12/8/21 & 12/7/21	12/8/2021		
				LAB ID Nos.	21C8661	21C8663	21C8664	21C8826- 21C8831	21C8657	21C8659	21C8660	21C8845-21C8847, 21C8832-21C8833	21C8848- 21C8852		
				SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT							
				1	2A	2B	3	4	5A	5B	6	7			
RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION								
	73rd Street	79th Street	SOUTH		North	Central	Central	North							
TEMPERATURE ‡		°C	00010	8	9	7	11	6	7	7	10	11			
TURBIDITY	TT	N.T.U.	82079	1.7	0.10	0.05	0.15	3.5	0.10	0.05	0.08	0.10			
THRESHOLD ODOR, STRAIGHT ‡	*3	T.O.N	00086	1 E	2 Cc	2 Cc	1 Cc	1 E	2 Cc	2Cc	1 Cc	1 Cc			
THRESHOLD ODOR, DECHLORINATED ‡	*3	T.O.N.		1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm			
COLOR (Apparent) ‡	*15	Pt.-Co. ACU	00080	<15	<15	<15	<15	29	<15	<15	<15	<15			
pH	*6.5-8.5	STD. Units	00040	8.3	7.9	8.0	7.9	8.3	7.9	7.9	7.9	7.9			
FREE CHLORINE RESIDUAL ‡		CL ₂ , mg/L	50064	ND	1.56	1.50	1.28	ND	1.69	1.71	1.38	1.27			
SATURATION INDEX, LANGELIER ‡		UNITS +/-		0.04	-0.73	-0.76	-0.31	-0.02	-0.64	-0.68	-0.36	-0.32			
ALKALINITY, PHENOLPHTHALEIN		0	00415	0.60	0	0	0	0.80	0	0	0	0			
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	108	100	101	100	105	99.4	99.7	99.3	100			
CONDUCTIVITY		uS/cm @25°C		305	309	309	314	302	309	309	311	308			
BROMIDE ‡		Br, mg/L	71870	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25			
CHLORIDE	*250	Cl, mg/L	00940	13.7	15.1	15.0	14.9	13.4	15.2	15.2	15.0	15.0			
FLUORIDE	4	F, mg/L	00951	<0.50	0.652	0.650	0.625	<0.50	0.773	0.789	0.745	0.72			
SULFATE	*250	SO ₄ , mg/L	00945	23.0	26.8	26.7	26.5	22.6	27.0	26.9	26.6	26.3			
HARDNESS		CaCO ₃ , mg/L	00900	133	132	130	136	137	132	134	133	133			
CALCIUM		Ca, mg/L	00916	35.3	35.1	35.3	35.7	35.0	35.0	35.2	35.7	35.8			
MAGNESIUM ‡		Mg, mg/L	00927	12.1	12.1	12.1	12.2	12.0	12.0	12.1	12.3	12.3			
POTASSIUM ‡		K, mg/L	00937	1.28	1.23	1.22	1.26	1.21	1.22	1.20	1.23	1.24			
SODIUM		Na, mg/L	00006	8.25	8.43	8.55	8.61	8.04	8.48	8.53	8.61	8.63			
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	169	184	183	177	175	153	178	176	173			
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	189	196	195	194	196	211	193	191	192			
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.59	1.40	1.41	1.37	1.56	1.36	1.37	1.41	1.47			
OXYGEN DEMAND, CHEMICAL ‡		O, mg/L	00335	3.86	1.95	2.88	3.53	4.58	2.65	1.65	3.44	4.36			
NITROGEN, AMMONIA ‡		N, mg/L	00610	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.236			
NITROGEN, NITRATE	10	N, mg/L	00620	0.320	0.308	0.301	0.285	0.311	0.300	0.299	0.287	0.285			
NITROGEN, NITRITE	1	N, mg/L	00615	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25			
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	<0.06	0.681	0.646	0.697	<0.06	0.546	0.567	0.568	0.612			
PHOSPHATE, TOTAL ‡		PO ₄ , mg/L	00650	0.091	1.32	1.45	1.39	0.103	1.28	1.32	1.23	1.27			
CYANIDE	200	CN, ug/L	00720	H	H	H	H	H	H	H	H	H			

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

H - Holding Time Exceeded

R - Data rejected

‡ - Non-NELAP Accredited

NA - Data Not Available

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

4th Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	Sample Date	12/6/2021	12/6/2021	12/6/2021	12/7/2021	12/6/2021	12/6/2021	12/6/2021	12/8/21 & 12/7/21	12/8/2021		
				LAB ID Nos.	21C8661	21C8663	21C8664	21C8826- 21C8831	21C8657	21C8659	21C8660	21C8845-21C8847, 21C8832-21C8833	21C8848- 21C8852		
				SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT							
				1	2A	2B	3	4	5A	5B	6	7			
RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION								
	73rd Street	79th Street	SOUTH		North	Central	Central	North							
ALUMINUM	*50-200	Al, µg/L	01105	64.0	41.6	46.0	47.7	97.3	50.2	51.8	44.0	49.5			
ANTIMONY ‡	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1			
ARSENIC	10	As, µg/L	01002	1.13	<1	<1	<1	1.24	<1	<1	<1	<1			
BARIUM	2000	Ba, µg/L	01007	20.5	19.6	19.3	19.0	20.2	19.6	19.6	18.9	18.5			
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1			
BORON ‡		B, µg/L	01022	24.2	24.0	24.4	24.6	23.5	24.1	23.7	24.2	24.2			
CADMIUM ‡	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1			
CHROMIUM ‡	100	Cr, µg/L	01034	<1	<1	<1	<1	<1	<1	<1	<1	<1			
COBALT ‡		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1			
COPPER	**1300	Cu, µg/L	01042	1.42	<1	<1	<1	<1	<1	<1	2.50	<1			
IRON	*300	Fe, µg/L	00031	43.2	<1	<1	11.2	74.9	104	<1	5.42	4.21			
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	<1	2.36			
LITHIUM ‡		Li, µg/L	01132	3.59	1.76	<1	2.13	3.51	1.73	1.84	1.51	1.51			
MANGANESE	*50	Mn, µg/L	01055	1.20	<1	<1	<1	2.64	<1	<1	<1	<1			
MERCURY ‡	2	Hg, µg/L	71900	<1	<1	<1	<1	<1	<1	<1	<1	<1			
MOLYBDENUM ‡		Mo, µg/L	01062	<1	<1	<1	<1	<1	<1	1.14	<1	<1			
NICKEL ‡		Ni, µg/L	01067	<1	<1	1.01	<1	<1	<1	<1	<1	<1			
SELENIUM ‡	50	Se, µg/L	01147	<1	<1	<1	<1	<1	1.51	<1	<1	<1			
SILICON		Si, µg/L	01142	1227	1240	1241	1254	1139	1226	1210	1212	1184			
SILVER ‡	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1			
STRONTIUM ‡		Sr, µg/L	01082	117	119	119	120	121	120	120	120	121			
THALLIUM ‡	2	Tl, µg/L	01059	<1	<1	<1	1.52	<1	<1	<1	<1	<1			
TITANIUM ‡		Ti, µg/L	01152	2.70	<1	<1	<1	4.01	<1	<1	<1	<1			
VANADIUM ‡		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1			
ZINC	*5000	Zn, µg/L	01092	<1	<1	1.10	9.49	1.42	<1	<1	25.3	31.2			

* Federal Primary/Secondary MCLs

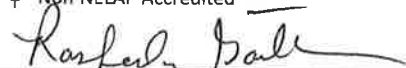
** Action Level

TT - Treatment Technique

ND - not detected

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CHIEF WATER CHEMIST



DIRECTOR OF LABORATORIES