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 - 2022

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	Sample Date	3/8/2022	3/8/2022	3/8/2022	3/8/2022	3/8/2022	3/8/2022	3/8/2022	3/9/2022 & 3/8/2022	3/9/2022
				LAB ID Nos.	22C1492	22C1494	22C1495	22C1517-22C1522	22C1488	22C1490	22C1491	22C1538-22C1540 22C1523-22C1524	22C1533-22C1537
					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	EPA 170.1		5	5	4	7	4	4	5	7	9
TURBIDITY	TT	N.T.U.	SM 2130 B- 2001		3.0	0.10	0.10	0.20	1.0	0.10	0.10	0.15	0.15
THRESHOLD ODOR, STRAIGHT ‡	*3	T.O.N	JWPP -0059 V		1 Ep	1 Cc	1 Cc	1 Cc	1 Ep	1 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED ‡	*3	T.O.N.	JWPP -0059 V		1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm
COLOR (Apparent) ‡	*15	Pt.-Co. ACU	SM 2120 C		23	<15	<15	<15	5	<15	<15	<15	<15
pH	*6.5-8.5	STD. Units	EPA 150.1 1982		8.2	7.8	7.8	7.8	8.2	7.8	7.8	7.8	7.9
FREE CHLORINE RESIDUAL ‡		CL_2, mg/L	SM 4500-Cl D - 2000		ND	1.49	1.47	1.40	ND	1.63	1.54	1.33	1.29
SATURATION INDEX, LANGELIER ‡		UNITS +/-	SM 2330 B - 2000		0.01	-0.67	-0.67	-0.31	-0.09	-0.80	-0.76	-0.36	-0.32
ALKALINITY, PHENOLPHTHALEIN		0	SM 2320 B - 1997		0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		as CaCO3, mg/L	SM 2320 B - 1997		112	104	103	103	106	102	102	102	102
CONDUCTIVITY		uS/cm @25°C	SM 2510 B - 1997		310	314	317	313	293	309	309	313	311
BROMIDE ‡		Br, mg/L	EPA 300.0 2.1 1993		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
CHLORIDE	*250	Cl, mg/L	EPA 300.0 2.1 1993		14.9	16.6	16.6	16.1	13.0	16.4	16.5	16.3	16.0
FLUORIDE	4	F, mg/L	SM4500 F - C 1997		<0.50	0.660	0.622	0.668	0.093	0.701	0.701	0.705	0.716
SULFATE	*250	SO4, mg/L	EPA 300.0 2.1 1993		23.4	27.8	27.9	27.1	21.9	25.7	25.6	26.2	25.7
HARDNESS (EDTA)		as CaCO3, mg/L	SM 2340 C - 1997		135	133	134	133	128	130	130	134	135
CALCIUM		Ca, mg/L	EPA 200.7 4.4 1994		37.2	38.0	38.0	37.9	34.8	37.1	37.0	37.0	36.7
MAGNESIUM ‡		Mg, mg/L	EPA 200.7 4.4 1994		13.0	13.2	13.2	13.2	12.2	12.9	12.9	12.8	12.7
POTASSIUM ‡		K, mg/L	EPA 200.7 4.4 1994		1.47	1.47	1.47	1.45	1.33	1.43	1.40	1.41	1.39
SODIUM		Na, mg/L	EPA 200.7 4.4 1994		9.05	9.73	9.82	9.58	7.90	9.70	9.73	9.59	9.47
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	SM 2540 C - 1997		176	168	181	167	164	170	169	169	170
SOLIDS, TOTAL		Tot. Sol., mg/L	EPA 160.3 - 1971		182	171	190	172	168	170	178	174	179
TOTAL ORGANIC CARBON		TOC, mg/L	SM 5310 C - 2000		1.74	1.50	1.51	1.49	1.66	1.48	1.49	1.42	1.39
OXYGEN DEMAND, CHEMICAL ‡		O, mg/L	EPA 410.4 - 1993		4.70	4.95	4.12	3.67	6.18	3.04	4.73	3.89	4.10
NITROGEN, AMMONIA ‡		N, mg/L	SM 4500 NH3 D - 1997		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
NITROGEN, NITRATE	10	N, mg/L	EPA 300.0 2.1 1993		0.365	0.360	0.361	0.353	0.318	0.335	0.337	0.342	0.332
NITROGEN, NITRITE	1	N, mg/L	EPA 300.0 2.1 1993		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<025	<0.25
ORTHOPHOSPHATE		PO4, mg/L	SM 4500 P E 1999		<0.06	0.466	0.584	0.582	<0.06	0.564	0.568	0.603	0.612
PHOSPHATE, TOTAL ‡		PO4, mg/L	SM 4500 P E 1999		<0.06	1.10	1.39	1.32	<0.06	1.31	1.32	1.32	1.31
CYANIDE	200	CN, ug/L	LACHAT 10-204-00-1-X 2.1		<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 avera

‡ - Non-NELAP Accredited WPL pH sample exceeded holding time of 15 minutes. H - Holding Time Exceeded R - Data rejected NA - Data Not Available

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WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
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1st Quarter - 2022

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	Sample Date	3/8/2022	3/8/2022	3/8/2022	3/8/2022	3/8/2022	3/8/2022	3/8/2022	3/9/2022 & 3/8/2022	3/9/2022
				LAB ID Nos.	22C1492	22C1494	22C1495	22C1517-22C1522	22C1488	22C1490	22CC1491	22C1538-22C1540 22C1523-22C1524	22C1533-22C1537
					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	EPA 200.7 4.4 1994		99.4	47.0	49.6	51.6	38.0	62.2	60.7	54.1	55.6
ANTIMONY ‡	6	Sb, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIUM	2000	Ba, µg/L	EPA 200.7 4.4 1994		20.1	19.5	19.3	19.0	18.9	19.3	19.2	18.8	18.5
BERYLLIUM	4	Be, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON ‡		B, µg/L	EPA 200.7 4.4 1994		23.4	24.6	24.1	24.2	22.4	24.0	23.8	23.8	23.6
CADMIUM ‡	5	Cd, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM ‡	100	Cr, µg/L	EPA 200.8 5.4 1994		2.28	<1	1.69	1.53	2.29	1.68	1.77	1.12	1.31
COBALT ‡		Co, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	EPA 200.9 3 2001		1.36	<1	<1	<1	<1	<1	<1	2.44	3.43
IRON	*300	Fe, µg/L	EPA 200.7 4.4 1994		78.0	<1	1.26	19.7	26.4	<1	<1	9.12	19.10
LEAD	**15.0	Pb, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	1.10	<1
LITHIUM ‡		Li, µg/L	EPA 200.7 4.4 1994		1.81	1.88	1.74	1.98	1.85	1.99	1.71	1.90	1.94
MANGANESE	*50	Mn, µg/L	EPA 200.8 5.4 1994		1.95	<1	<1	<1	<1	<1	<1	<1	1.24
MERCURY ‡	2	Hg, µg/L	EPA 245.1 3 1994		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MOLYBDENUM ‡		Mo, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	<1	<1	<1		<1	<1
NICKEL ‡		Ni, µg/L	EPA 200.8 5.4 1994		3.40	2.56	2.57	2.66	3.06	2.62	2.51	2.73	2.76
SELENIUM ‡	50	Se, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	1.0	<1
SILICON		Si, µg/L	EPA 200.7 4.4 1994		1256	1211	1204	1212	1054	1202	1200	1188	1179
SILVER ‡	*100	Ag, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM ‡		Sr, µg/L	EPA 200.8 5.4 1994		119	115	115	114	113	111	112	112	112
THALLIUM ‡	2	Tl, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM ‡		Ti, µg/L	EPA 200.8 5.4 1994		2.06	1.98	2.44	2.31	<1	2.80	2.43	2.28	2.32
VANADIUM ‡		V, µg/L	EPA 200.8 5.4 1994		7.34	<1	<1	<1	7.78	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	10.56	1.76	<1	<1	26.1	26.6

* Federal Primary/Secondary MCLs ** Action Level TT - Treatment Technique ND - not detected Distribution samples results are avera

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I.S. Recovery for a number of digested samples ran on 200.8 did not meet QC Criteria.

RB for some analytes ran on 200.8 did not meet QC Criteri One MSD recovery did not meet acceptance criteria for Mercury.

CHIEF WATER CHEMIST

DIRECTOR OF LABORATORIES

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LABORATORY ACCREDITATION NUMBER: 100228

2nd Quarter - 2022

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	Sample Date	6/6/2022	6/6/2022	6/6/2022	6/8/2022	6/6/2022	6/6/2022	6/6/2022	6/7/22 & 6/8/22	6/7/2022
				LAB ID Nos.	22C4082	22C4084	22C4085	22C4145 - 22C4150	22C4078	22C4080	22C4081	22C4119 - 22C4121 22C4151 - 22C4152	22C4122 - 22C4126
					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	EPA 170.1		16	16	16	18	14	15	15	16	17
TURBIDITY	TT	N.T.U.	SM 2130 B- 2001		0.30	0.10	0.10	0.10	0.50	0.10	0.05	0.10	0.15
THRESHOLD ODOR, STRAIGHT ‡	*3	T.O.N	JWPP -0059 V		1 E	1 Cc	1 Cc	1 Cc	1 E	1 Cc	1 Cc	1 Cc	2 Cc
THRESHOLD ODOR, DECHLORINATED ‡	*3	T.O.N.	JWPP -0059 V		1 E	1 Mm	1 Mm	1 Mm	1 E	1 Mm	1 Mm	1 Mm	1 Mm
COLOR (Apparent) ‡	*15	Pt.-Co. ACU	SM 2120 C		<15	<15	<15	<15	<15	<15	<15	<15	<15
pH	*6.5-8.5	STD. Units	EPA 150.1 1982		8.3	7.8	7.8	7.9	8.4	7.8	7.8	8.0	8.0
FREE CHLORINE RESIDUAL ‡		CL_2, mg/L	SM 4500-Cl D - 2000		ND	1.54	1.50	1.08	ND	1.61	1.61	1.41	1.30
SATURATION INDEX, LANGELIER ‡		UNITS +/-	SM 2330 B - 2000		0.17	-0.48	-0.53	-0.13	0.25	-0.52	-0.52	-0.11	-0.13
ALKALINITY, PHENOLPHTHALEIN		0	SM 2320 B - 1997		0	0	0	0	0.90	0	0	0	0
ALKALINITY, TOTAL		as CaCO3, mg/L	SM 2320 B - 1997		103	96.4	96.8	96.5	103	96.6	96.6	97.0	96.8
CONDUCTIVITY		uS/cm @25°C	SM 2510 B - 1997		311	316	316	315	308	314	315	314	314
BROMIDE ‡		Br, mg/L	EPA 300.0 2.1 1993		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
CHLORIDE	*250	Cl, mg/L	EPA 300.0 2.1 1993		13.0	14.8	14.8	15.4	12.6	14.6	14.7	15.1	15.1
FLUORIDE	4	F, mg/L	SM4500 F - C 1997		0.122	0.700	0.680	0.693	0.120	0.760	0.770	0.782	0.784
SULFATE	*250	SO4, mg/L	EPA 300.0 2.1 1993		22.6	26.3	26.2	26.3	22.2	25.9	25.6	25.7	25.8
HARDNESS (EDTA)		as CaCO3, mg/L	SM 2340 C - 1997		131	130	129	137	130	127	128	131	127
CALCIUM		Ca, mg/L	EPA 200.7 4.4 1994		34.5	34.8	34.2	34.5	34.7	34.3	34.7	34.8	34.5
MAGNESIUM ‡		Mg, mg/L	EPA 200.7 4.4 1994		12.2	12.3	12.1	12.2	12.2	12.1	12.2	12.2	12.2
POTASSIUM ‡		K, mg/L	EPA 200.7 4.4 1994		1.29	1.30	1.28	1.25	1.23	1.24	1.26	1.25	1.21
SODIUM		Na, mg/L	EPA 200.7 4.4 1994		9.02	9.35	9.05	9.41	8.58	9.06	9.16	9.29	9.05
SOLIDS, TOTAL DISSOLVED ‡	*500	TDS, mg/L	SM 2540 C - 1997		179	187	185	173	175	177	181	175	171
SOLIDS, TOTAL ‡		Tot. Sol., mg/L	EPA 160.3 - 1971		188	196	198	194	186	204	191	201	196
TOTAL ORGANIC CARBON		TOC, mg/L	SM 5310 C - 2000		1.58	1.46	1.44	1.43	1.59	1.45	1.43	1.38	1.39
OXYGEN DEMAND, CHEMICAL ‡		O, mg/L	EPA 410.4 - 1993		4.11	2.70	3.14	5.47	4.73	3.17	2.48	3.94	3.61
NITROGEN, AMMONIA ‡		N, mg/L	SM 4500 NH3 D - 1997		0.112	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
NITROGEN, NITRATE (*2)	10	N, mg/L	EPA 300.0 2.1 1993		0.293	0.281	0.282	0.264	0.283	0.272	0.276	0.264	0.262
NITROGEN, NITRITE (*2)	1	N, mg/L	EPA 300.0 2.1 1993		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<025	<0.25
ORTHOPHOSPHATE (*1)		PO4, mg/L	SM 4500 P E 1999		<0.06	0.651	0.769	0.729	<0.06	0.586	0.572	0.565	0.623
PHOSPHATE, TOTAL ‡		PO4, mg/L	SM 4500 P E 1999		<0.06	1.18	1.58	1.38	<0.06	1.31	1.30	1.16	1.26
CYANIDE	200	CN, ug/L	LACHAT 10-204-00-1-X 2.1		<20	<20	<20	<20	<20	<20	<20	<20	<20

* Federal Primary/Secondary MCLs ** Action Level TT - Treatment Technique ND - not detected Distribution samples results are averages

‡ - Non-NELAP Accredited WPL pH sample exceeded holding time of 15 minutes. H - Holding Time Exceeded R - Data rejected NA - Data Not Available

*1 - 5A, 5B, 2A, 2B Samples Collected 6/6/22

*2 - 1, 2A, 2B, 4, 5A, 5B Samples Collected on 6/13/22

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

2nd Quarter - 2022

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	Sample Date	6/6/2022	6/6/2022	6/6/2022	6/8/2022	6/6/2022	6/6/2022	6/6/2022	6/7/22 & 6/8/22	6/7/2022
				LAB ID Nos.	22C4082	22C4084	22C4085	22C4145 - 22C4150	22C4078	22C4080	22C4081	22C4119 - 22C4121 22C4151 - 22C4152	22C4122 - 22C4126
					SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
					1	2A	2B	3	4	5A	5B	6	7
					RAW	OUTLETS		***DISTRIBUTION	RAW	OUTLETS		***DISTRIBUTION	
					LAKE	73rd Street	79th Street	SOUTH	LAKE	North	Central	Central	North
ALUMINUM	*50-200	Al, µg/L	EPA 200.7 4.4 1994		11.2	71.3	76.2	71.8	16.7	80.6	85.9	69.9	75.8
ANTIMONY ‡	6	Sb, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIUM	2000	Ba, µg/L	EPA 200.7 4.4 1994		17.6	17.6	17.8	18.6	17.8	17.7	17.9	18.3	18.2
BERYLLIUM	4	Be, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	1.34	<1	<1	<1	1.21	1.09
BORON ‡		B, µg/L	EPA 200.7 4.4 1994		21.5	21.7	22.1	22.6	21.2	21.4	21.7	21.9	22.0
CADMIUM ‡	5	Cd, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	1.21	1.07
CHROMIUM ‡	100	Cr, µg/L	EPA 200.8 5.4 1994		<1	1.01	1.14	1.24	<1	<1	<1	1.05	<1
COBALT ‡		Co, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	EPA 200.9 3 2001		2.21	<1	<1	1.09	<1	<1	<1	1.19	2.06
IRON	*300	Fe, µg/L	EPA 200.7 4.4 1994		7.11	<1	1.57	8.95	12.4	1.31	1.32	4.57	20.6
LEAD	**15.0	Pb, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	1.10	<1	<1	<1	<1	1.22
LITHIUM ‡		Li, µg/L	EPA 200.7 4.4 1994		1.04	1.13	1.14	1.66	1.41	<1	1.10	1.49	1.54
MANGANESE	*50	Mn, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	1.63
MERCURY ‡	2	Hg, µg/L	EPA 245.1 3 1994		O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S
MOLYBDENUM ‡		Mo, µg/L	EPA 200.7 4.4 1994		1.05	1.08	1.05	1.06	<1	1.02	1.00	1.01	1.00
NICKEL ‡		Ni, µg/L	EPA 200.8 5.4 1994		2.25	2.24	1.99	2.47	2.02	2.20	2.25	2.32	2.34
SELENIUM ‡	50	Se, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	EPA 200.7 4.4 1994		539	684	677	692	609	728	722	727	736
SILVER ‡	*100	Ag, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM ‡		Sr, µg/L	EPA 200.8 5.4 1994		119	120	118	119	118	118	119	119	119
THALLIUM ‡	2	Tl, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	1.17	<1
TITANIUM ‡		Ti, µg/L	EPA 200.8 5.4 1994		<1	1.74	2.56	3.15	<1	1.85	1.73	2.81	2.95
VANADIUM ‡		V, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	12.4	<1	<1	<1	14.1	12.6

* Federal Primary/Secondary MCLs ** Action Level TT - Treatment Technique ND - not detected Distribution samples results are averages

‡ - Non-NELAP Accredited

Rachel Jantz
CHIEF WATER CHEMIST

Kristen Sabol
DIRECTOR OF 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

3rd Quarter - 2022

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	Sample Date	8/1/2022	8/1/2022	8/1/2022	8/3/2022	8/1/2022	8/1/2022	8/1/2022	8/2/2022 & 8/3/22	8/2/2022
				LAB ID Nos.	22C5179	22C5181	22C5182	22C5249 - 22C5254	22C5175	22C5177	22C5178	22C5230 - 22C5256	22C5225 - 22C5229
					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	EPA 170.1		18	19	19	22	14	15	15	19	19
TURBIDITY	TT	N.T.U.	SM 2130 B- 2001		0.40	0.10	0.10	0.14	0.30	0.05	0.05	0.10	0.15
THRESHOLD ODOR, STRAIGHT ‡	*3	T.O.N	JWPP -0059 V		1 DF	1 Cc	1 Cc	1 Cc	1 DF	2 Cc	1 Cc	1 Cc	1 M
THRESHOLD ODOR, DECHLORINATED ‡	*3	T.O.N.	JWPP -0059 V		1 DF	1 M	1 M	1 M	1 DF	1 M	1 M	1 Mm	1 M
COLOR (Apparent) ‡	*15	Pt.-Co. ACU	SM 2120 C		<15	<15	<15	<15	<15	<15	<15	<15	<15
pH	*6.5-8.5	STD. Units	EPA 150.1 1982		8.5	7.9	8.0	8.0	8.5	7.8	7.9	8.0	7.9
FREE CHLORINE RESIDUAL ‡		CL_2, mg/L	SM 4500-Cl D - 2000		ND	1.54	1.52	1.08	ND	1.66	1.64	1.42	1.41
SATURATION INDEX, LANGELIER ‡		UNITS +/-	SM 2330 B - 2000		0.44	-0.38	-0.36	0.07	0.29	-0.55	-0.54	-0.03	-0.08
ALKALINITY, PHENOLPHTHALEIN		0	SM 2320 B - 1997		2.60	0	0	0	2.15	0	0	0	0
ALKALINITY, TOTAL		as CaCO3, mg/L	SM 2320 B - 1997		103	96.2	97.0	96.7	103	96.2	96.4	97.2	97.0
CONDUCTIVITY		uS/cm @25°C	SM 2510 B - 1997		292	297	298	297	290	297	297	294	291
BROMIDE ‡		Br, mg/L	EPA 300.0 2.1 1993		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
CHLORIDE	*250	Cl, mg/L	EPA 300.0 2.1 1993		12.9	14.9	14.9	15.3	12.6	14.6	14.6	15.1	15.0
FLUORIDE	4	F, mg/L	SM4500 F - C 1997		0.113	0.667	0.617	0.653	0.111	0.679	0.682	0.677	0.666
SULFATE	*250	SO4, mg/L	EPA 300.0 2.1 1993		22.0	25.5	25.2	25.4	21.8	25.5	25.3	25.5	25.4
HARDNESS (EDTA)		as CaCO3, mg/L	SM 2340 C - 1997		134	135	135	132	137	137	130	127	125
CALCIUM		Ca, mg/L	EPA 200.7 4.4 1994		33.2	33.4	33.4	33.8	34.2	34.0	34.0	34.3	34.3
MAGNESIUM ‡		Mg, mg/L	EPA 200.7 4.4 1994		11.7	11.8	11.9	11.9	12.0	12.0	12.0	12.0	12.0
POTASSIUM ‡		K, mg/L	EPA 200.7 4.4 1994		1.41	1.43	1.39	1.39	1.37	1.37	1.38	1.39	1.39
SODIUM		Na, mg/L	EPA 200.7 4.4 1994		7.87	8.43	8.45	8.45	7.95	8.34	8.35	8.41	8.47
SOLIDS, TOTAL DISSOLVED ‡	*500	TDS, mg/L	SM 2540 C - 1997		161	182	175	171	169	173	180	175	174
SOLIDS, TOTAL ‡		Tot. Sol., mg/L	EPA 160.3 - 1971		193	196	205	194	185	188	184	181	186
TOTAL ORGANIC CARBON		TOC, mg/L	SM 5310 C - 2000		1.67	1.56	1.57	1.66	1.65	1.51	1.51	1.57	1.57
OXYGEN DEMAND, CHEMICAL ‡		O, mg/L	EPA 410.4 - 1993		6.42	5.56	5.02	5.94	6.15	4.21	4.17	6.23	5.34
NITROGEN, AMMONIA ‡		N, mg/L	EPA 350.1 - 2 1993		<0.10	<0.10	<0.10	<0.10	0.188	<0.10	<0.10	<0.10	<0.10
NITROGEN, NITRATE	10	N, mg/L	EPA 300.0 2.1 1993		<0.25	<0.25	<0.25	0.258	0.251	<0.25	<0.25	0.268	0.269
NITROGEN, NITRITE	1	N, mg/L	EPA 300.0 2.1 1993		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<025	<0.25
ORTHOPHOSPHATE		PO4, mg/L	SM 4500 P E 1999		<0.06	0.694	0.641	0.730	<0.06	0.592	0.566	0.602	0.642
PHOSPHATE, TOTAL ‡		PO4, mg/L	SM 4500 P E 1999		<0.06	1.26	1.33	1.27	<0.06	1.24	1.17	1.17	1.21
CYANIDE	200	CN, ug/L	LACHAT 10-204-00-1-X 2.1		<20	<20	<20	<20	<20	<20	<20	<20	<20

* Federal Primary/Secondary MCLs ** Action Level TT - Treatment Technique ND - not detected Distribution samples results are averages

‡ - Non-NELAP Accredited WPL pH sample exceeded holding time of 15 minutes. H - Holding Time Exceeded R - Data rejected NA - Data Not Available

Note: LFM Spiked at 1/20 all Samples (required 1/10) for EPA 300.0 for (South, Central & North Samples). H - EPA 300.0 - Nitrate & Nitrite N - South, Central & North Samples

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 - 2022

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	Sample Date	8/1/2022	8/1/2022	8/1/2022	8/3/2022	8/1/2022	8/1/2022	8/1/2022	8/2/2022 & 8/3/22	8/2/2022
				LAB ID Nos.	22C5179	22C5181	22C5182	22C5249 - 22C5254	22C5175	22C5177	22C5178	22C5230 - 22C5256	22C5225 - 22C5229
					SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
					1	2A	2B	3	4	5A	5B	6	7
					RAW	OUTLETS		***DISTRIBUTION	RAW	OUTLETS		***DISTRIBUTION	
					LAKE	73rd Street	79th Street	SOUTH	LAKE	North	Central	Central	North
ALUMINUM	*50-200	Al, µg/L	EPA 200.7 4.4 1994		37.1	167	252	146	11.1	122	126	109	104
ANTIMONY ‡	6	Sb, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIUM	2000	Ba, µg/L	EPA 200.7 4.4 1994		18.8	17.6	18.1	17.9	18.8	18.1	18.0	17.8	17.7
BERYLLIUM	4	Be, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON ‡		B, µg/L	EPA 200.7 4.4 1994		23.5	23.0	25.5	22.9	22.8	23.1	22.8	22.7	22.8
CADMIUM ‡	5	Cd, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM ‡	100	Cr, µg/L	EPA 200.8 5.4 1994		<1	1.34	1.28	1.19	1.53	1.56	1.52	1.43	1.29
COBALT ‡		Co, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	EPA 200.8 5.4 1994		1.87	<1	<1	3.15	<1	<1	<1	1.35	4.68
IRON	*300	Fe, µg/L	EPA 200.7 4.4 1994		7.55	1.41	4.92	11.2	5.75	<1	<1	8.12	10.8
LEAD	**15.0	Pb, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	2.32	<1	<1	<1	1.77	1.46
LITHIUM ‡		Li, µg/L	EPA 200.7 4.4 1994		<1	1.06	<1	1.13	1.73	<1	<1	1.11	1.57
MANGANESE	*50	Mn, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	1.27
MERCURY ‡	2	Hg, µg/L	EPA 245.1 3 1994		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MOLYBDENUM ‡		Mo, µg/L	EPA 200.7 4.4 1994		<1	1.20	<1	1.18	1.62	1.72	1.36	1.06	1.07
NICKEL ‡		Ni, µg/L	EPA 200.8 5.4 1994		1.89	1.80	1.88	1.85	1.92	1.80	9.31	1.77	1.73
SELENIUM ‡	50	Se, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	EPA 200.7 4.4 1994		590	712	697	710	702	817	818	813	813
SILVER ‡	*100	Ag, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM ‡		Sr, µg/L	EPA 200.8 5.4 1994		110	109	109	109	111	110	110	110	110
THALLIUM ‡	2	Tl, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM ‡		Ti, µg/L	EPA 200.8 5.4 1994		<1	1.81	1.97	1.89	<1	1.92	1.90	1.79	1.88
VANADIUM ‡		V, µg/L	EPA 200.8 5.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	EPA 200.7 4.4 1994		6.24	1.93	21.7	13.4	<1	2.97	<1	13.1	17.5

* Federal Primary/Secondary MCLs ** Action Level TT - Treatment Technique ND - not detected Distribution samples results are averages

‡ - Non-NELAP Accredited

Note: LFM Spiked at 1/20 Samples (required 1/10) for Method EPA 200.8

Rashesh Patel
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LABORATORY ACCREDITATION NUMBER: 100228

4th Quarter - 2022

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	Sample Date	10/3/2022	10/3/2022	10/3/2022	10/4/2022	10/3/2022	10/3/2022	10/3/2022	10/4/22 & 10/5/22	10/5/22 & 10/6/22
				LAB ID Nos.	22C6146	22C6148	22C6149	22C6192-22C6197	22C6142	22C6144	22C6145	22C6209-22C6211 22C6198 - 22C6199	22C6212-22C6215, 22C6222
					SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
					1	2A	2B	3	4	5A	5B	6	7
					RAW	OUTLETS		***DISTRIBUTION	RAW	OUTLETS		***DISTRIBUTION	
					LAKE	73rd Street	79th Street	SOUTH	LAKE	North	Central	Central	North
TEMPERATURE ‡		°C	EPA 170.1		20	18	18	24	18	19	19	21	20
TURBIDITY	TT	N.T.U.	SM 2130 B- 2001		3.00	0.10	0.10	0.12	1.60	0.15	0.05	0.09	0.15
THRESHOLD ODOR, STRAIGHT ‡	*3	T.O.N	JWPP -0059 V		1 Df	1 Cc	1 Cc	1 Cc	1 Mm	2 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED ‡	*3	T.O.N.	JWPP -0059 V		1 Df	1 Mm	1 Mm	1 Mm	1 Mm	1 M	1 Mm	1 M	1 Mm
COLOR (Apparent) ‡	*15	Pt.-Co. ACU	SM 2120 C		21.3	<15	<15	<15	<15	<15	<15	<15	<15
pH	*6.5-8.5	STD. Units	EPA 150.1 1982		8.2	7.7	7.8	7.8	8.3	7.8	7.8	7.8	8.0
FREE CHLORINE RESIDUAL ‡		CL_2, mg/L	SM 4500-Cl D - 2000		ND	1.46	1.49	1.23	ND	1.60	1.58	1.43	1.10
SATURATION INDEX, LANGELIER ‡		UNITS +/-	SM 2330 B - 2000		0.29	-0.53	-0.55	-0.05	0.28	-0.48	-0.48	-0.15	0.03
ALKALINITY, PHENOLPHTHALEIN		0	SM 2320 B - 1997		0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		as CaCO3, mg/L	SM 2320 B - 1997		105	97.2	97.7	96.4	105	97.9	98.2	93.7	97.7
CONDUCTIVITY		uS/cm @25°C	SM 2510 B - 1997		297	303	304	298	296	302	302	302	301
BROMIDE ‡		Br, mg/L	EPA 300.0 2.1 1993		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
CHLORIDE	*250	Cl, mg/L	EPA 300.0 2.1 1993		13.3	15.4	15.5	15.3	13.2	15.3	15.3	15.2	15.3
FLUORIDE	4	F, mg/L	SM4500 F - C 1997		<0.5	0.678	0.656	0.657	<0.5	0.727	0.747	0.755	0.749
SULFATE	*250	SO4, mg/L	EPA 300.0 2.1 1993		22.2	26.9	26.9	26.5	22.0	25.4	25.4	29.3	25.5
HARDNESS (EDTA)		as CaCO3, mg/L	SM 2340 C - 1997		128	130	126	133	128	127	130	134	131
CALCIUM		Ca, mg/L	EPA 200.7 4.4 1994		34.1	35.1	35.1	35.3	33.5	34.9	35.0	35.1	35.1
MAGNESIUM ‡		Mg, mg/L	EPA 200.7 4.4 1994		11.9	12.3	12.3	12.3	11.7	12.3	12.3	12.3	12.2
POTASSIUM ‡		K, mg/L	EPA 200.7 4.4 1994		1.26	1.35	1.32	1.30	1.24	1.30	1.30	1.30	1.30
SODIUM		Na, mg/L	EPA 200.7 4.4 1994		7.45	8.35	8.41	8.41	7.46	8.31	8.35	8.40	8.43
SOLIDS, TOTAL DISSOLVED ‡	*500	TDS, mg/L	SM 2540 C - 1997		155	180	173	171	171	172	176	173	160
SOLIDS, TOTAL ‡		Tot. Sol., mg/L	EPA 160.3 - 1971		189	195	185	196	180	199	206	184	190
TOTAL ORGANIC CARBON		TOC, mg/L	SM 5310 C - 2000		1.62	1.49	1.50	1.64	1.63	1.53	1.50	1.64	1.71
OXYGEN DEMAND, CHEMICAL ‡		O, mg/L	EPA 410.4 - 1993		4.02	2.75	3.01	6.90	5.61	2.98	2.72	4.96	4.75
NITROGEN, AMMONIA ‡		N, mg/L	EPA 350.1 - 2 1993		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
NITROGEN, NITRATE	10	N, mg/L	EPA 300.0 2.1 1993		0.273	<0.25	<0.25	<0.25	0.275	0.265	0.266	0.265	0.266
NITROGEN, NITRITE	1	N, mg/L	EPA 300.0 2.1 1993		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
ORTHOPHOSPHATE		PO4, mg/L	SM 4500 P E 1999		<0.06	0.676	0.661	0.729	<0.06	0.525	0.497	0.584	0.646
PHOSPHATE, TOTAL ‡		PO4, mg/L	SM 4500 P E 1999		0.122	1.34	1.46	1.38	0.012	1.24	1.16	1.18	1.28
CYANIDE	200	CN, ug/L	LACHAT 10-204-00-1-X 2.1		<20	<20	<20	<20	<20	<20	<20	<20	<20

* Federal Primary/Secondary MCLs ** Action Level TT - Treatment Technique ND - not detected Distribution samples results are averages

‡ - Non-NELAP Accredited WPL pH sample exceeded holding time of 15 minutes. H - Holding Time Exceeded R - Data rejected NA - Data Not Available

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4th Quarter - 2022

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	Sample Date	10/3/2022	10/3/2022	10/3/2022	10/4/2022	10/3/2022	10/3/2022	10/3/2022	10/4/22 & 10/5/22	10/5/22 & 10/6/22
				LAB ID Nos.	22C6146	22C6148	22C6149	22C6192-22C6197	22C6142	22C6144	22C6145	22C6209-22C6211 22C6198 - 22C6199	22C6212-22C6215, 22C6222
					SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
					1	2A	2B	3	4	5A	5B	6	7
					RAW	OUTLETS		***DISTRIBUTION	RAW	OUTLETS		***DISTRIBUTION	
					LAKE	73rd Street	79th Street	SOUTH	LAKE	North	Central	Central	North
ALUMINUM	*50-200	Al, µg/L	EPA 200.7 4.4 1994		66.4	88.6	104	86.3	43.4	175	124	98.1	92.6
ANTIMONY ‡	6	Sb, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC ‡	10	As, µg/L	EPA 200.7 4.4 1994		<1	1.77	2.26	2.44	<1	3.45	<1	1.36	2.20
BARIUM	2000	Ba, µg/L	EPA 200.7 4.4 1994		19.9	19.7	19.9	19.5	19.6	19.8	19.6	19.0	19.0
BERYLLIUM	4	Be, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON ‡		B, µg/L	EPA 200.7 4.4 1994		22.9	24.3	23.7	24.0	22.9	23.8	23.5	23.5	23.6
CADMIUM ‡	5	Cd, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM ‡	100	Cr, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
COBALT ‡		Co, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER ‡	**1300	Cu, µg/L	EPA 200.7 4.4 1994		1.62	<1	<1	1.08	<1	<1	<1	1.15	3.17
IRON	*300	Fe, µg/L	EPA 200.7 4.4 1994		74.3	2.28	2.10	11.0	43.1	1.48	<1	5.49	21.1
LEAD ‡	**15.0	Pb, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	1.07	<1	<1	<1	1.54	1.13
LITHIUM ‡		Li, µg/L	EPA 200.7 4.4 1994		1.82	2.18	2.26	2.49	3.34	2.14	2.14	2.94	2.68
MANGANESE	*50	Mn, µg/L	EPA 200.7 4.4 1994		2.78	<1	<1	1.00	1.92	<1	<1	<1	1.57
MERCURY ‡	2	Hg, µg/L	EPA 245.1 3 1994		O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S	O/S
MOLYBDENUM ‡		Mo, µg/L	EPA 200.7 4.4 1994		1.66	<1	<1	<1	<1	<1	<1	1.18	<1
NICKEL ‡		Ni, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	<1	<1	<1	<1	1.80	<1
SELENIUM ‡	50	Se, µg/L	EPA 200.7 4.4 1994		1.92	<1	1.03	2.16	<1	2.46	<1	1.47	1.35
SILICON		Si, µg/L	EPA 200.7 4.4 1994		1016	1017	1019	1037	1031	1092	1090	1084	1081
SILVER ‡	*100	Ag, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM ‡		Sr, µg/L	EPA 200.7 4.4 1994		111	112	113	112	110	111	108	111	111
THALLIUM ‡	2	Tl, µg/L	EPA 200.7 4.4 1994		2.20	3.26	1.84	2.48	2.66	2.19	2.85	1.82	2.09
TITANIUM ‡		Ti, µg/L	EPA 200.7 4.4 1994		1.60	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM ‡		V, µg/L	EPA 200.7 4.4 1994		<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	EPA 200.7 4.4 1994		<1	<1	1.54	6.53	1.21	<1	<1	32.7	16.0

* Federal Primary/Secondary MCLs ** Action Level TT - Treatment Technique ND - not detected Distribution samples results are averages

‡ - Non-NELAP Accredited

CHIEF WATER CHEMIST

DIRECTOR OF LABORATORIES