

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 - 2023

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	Sample Date	2/6/2023	2/6/2023	2/6/2023	2/6/23-2/8/23	2/6/2023	2/6/2023	2/6/2023	2/7/23 - 2/8/23	2/7/23 - 2/8/2023		
				LAB ID Nos.	23C0512	23C0514	23C0515	23C0690-23C0695	23C0508	23C0510	23C0511	23C0668-23C0670 23C0696-23C0697	23C0671-23C0675		
				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	3	3	2	10	6	3	3	9	8			
TURBIDITY	TT	NTU	SM 2130 B- 2001	2.4	0.10	0.10	0.15	0.10	0.10	0.10	0.11	0.15			
THRESHOLD ODOR, STRAIGHT ‡	*3	TON	JWPP -0059 V	1 EP	2 Cc	2 Cc	2 Cc	1 Ep	2 Cc	2 Cc	1 Cc	1 Cc			
THRESHOLD ODOR, DECHLORINATED ‡	*3	TON	JWPP -0059 V	1 Ep	1 Mm	1 Mm	1 Mm	1 Ep	1Mm	1 Mm	1 Mm	1 Mm			
COLOR‡	*15	Apparent CU	SM 2120 C	17.9	<5	<5	<5	7	<5	<5	<5	<5			
pH	*6.5-8.5	pH Unit	EPA 150.1 1982	8.1	7.7	7.6	7.7	8.0	7.7	7.6	7.7	7.7			
FREE CHLORINE RESIDUAL ‡		CL ₂ , mg/L	SM 4500-Cl D - 2000	ND	1.53	1.54	1.13	ND	1.66	1.65	1.34	1.27			
SATURATION INDEX, LANGELIER ‡		UNITS +/-	SM 2330 B - 2000	-0.24	-0.84	-0.85	-0.52	-0.12	-0.84	-0.83	-0.52	-0.58			
ALKALINITY, PHENOLPHTHALEIN		as CaCO ₃ , mg/L	SM 2320 B - 1997	0	0	0	0	0	0	0	0	0			
ALKALINITY, TOTAL		as CaCO ₃ , mg/L	SM 2320 B - 1997	107	100	100	99.5	106	98.2	98.6	99.4	97.7			
CONDUCTIVITY		uS/cm @25°C	SM 2510 B - 1997	314	319	320	319	305	310	311	312	320			
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	14.0	15.6	15.9	15.4	14.1	15.7	15.7	15.3	15.2			
FLUORIDE	4	F, mg/L	SM4500 F - C 1997	<0.5	0.685	0.637	0.656	<0.5	0.722	0.737	0.691	0.686			
SULFATE	*250	SO ₄ , mg/L	EPA 300.0 2.1 1993	22.6	27.4	27.4	27.5	22.3	26.1	26.1	25.9	26.1			
HARDNESS (EDTA)		as CaCO ₃ , mg/L	SM 2340 C - 1997	130	135	135	138	131	134	130	136	132			
CALCIUM		Ca, mg/L	EPA 200.7 4.4 1994	34.3	35.0	35.0	35.4	33.3	34.7	34.6	35.1	35.0			
MAGNESIUM ‡		Mg, mg/L	EPA 200.7 4.4 1994	11.8	12.2	12.1	12.3	11.5	12.1	12.0	12.2	12.2			
POTASSIUM ‡		K, mg/L	EPA 200.7 4.4 1994	1.27	1.34	1.32	1.31	1.18	1.29	1.28	1.29	1.30			
SODIUM		Na, mg/L	EPA 200.7 4.4 1994	7.75	8.71	8.71	8.52	7.32	8.36	8.35	8.48	8.42			
SOLIDS, TOTAL DISSOLVED ‡	*500	TDS, mg/L	SM 2540 C - 1997	174	178	178	177	170	178	181	177	178			
SOLIDS, TOTAL ‡		Tot. Sol., mg/L	EPA 160.3 - 1971	186	188	187	194	181	187	180	185	188			
TOTAL ORGANIC CARBON		TOC, mg/L	SM 5310 C - 2000	1.72	1.50	1.48	1.45	1.71	1.49	1.49	1.48	1.45			
OXYGEN DEMAND, CHEMICAL ‡		O, mg/L	EPA 410.4 - 1993	4.77	3.36	3.36	2.65	5.08	3.49	3.25	2.84	3.30			
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	0.329	0.322	0.327	0.320	0.326	0.323	0.324	0.319	0.317			
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		PO ₄ , mg/L	SM 4500 P E 1999	<0.06	0.607	0.625	0.630	<0.06	0.571	0.568	0.570	0.544			
PHOSPHATE, TOTAL ‡		PO ₄ , mg/L	SM 4500 P E 1999	<0.06	1.30	1.36	1.42	<0.06	1.20	1.20	1.31	1.25			
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

Cyanide MS - did not meet QC Criteria

EPA 300.0 Analytes were sampled 2/27/2023 - Sample ID: (23C1050, 23C1052-53, 23C1054, 23C1056-57)

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 - 2023

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	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	90.3	42.0	42.3	38.2	31.8	58.4	61.4	55.1	54.6
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	18.6	18.3	18.0	17.6	18.5	18.1	18.0	17.5	17.4
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	22.0	23.7	23.7	23.1	21.7	22.7	22.8	22.8	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	1.01	<1	<1	<1	1.02	<1	<1	<1	<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 200.8 5.4 1994	1.40	<1	<1	1.93	<1	<1	<1	1.07	3.07
IRON	*300	Fe, µg/L	EPA 200.7 4.4 1994	72.1	1.39	<1	4.48	19.8	<1	<1	4.89	25.2
LEAD	**15.0	Pb, µg/L	EPA 200.8 5.4 1994	<1	<1	<1	1.13	<1	<1	<1	<1	<1
LITHIUM ‡		Li, µg/L	EPA 200.7 4.4 1994	1.10	1.39	1.44	1.10	1.16	1.54	<1	1.22	1.20
MANGANESE	*50	Mn, µg/L	EPA 200.8 5.4 1994	1.82	<1	<1	<1	<1	<1	<1	<1	1.34
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 200.8 5.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1
NICKEL		Ni, µg/L	EPA 200.8 5.4 1994	1.66	1.43	1.46	1.44	1.43	1.35	1.40	1.40	1.38
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	1020	1061	1051	1079	973	1096	1089	1090	1105
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	109	112	112	109	108	110	109	108	109
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	3.99	2.16	2.20	2.20	1.05	1.96	2.02	2.06	1.94
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	7.16	<1	<1	<1	27.5	21.0

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

‡ - Non-NELAP Accredited

Robt. Saut

CHIEF WATER CHEMIST

Hassen Sahel

DIRECTOR OF LABORATORIES

COMPREHENSIVE CHEMICAL ANALYSIS
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WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES

LABORATORY ACCREDITATION NUMBER: 100228

2nd Quarter - 2023

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT					
				Sample Date	5/1/2023	5/1/2023	5/1/2023	5/3/2023	5/1/2023	5/1/2023	5/1/2023	5/2/2023 - 5/3/2023	5/2/2023
				LAB ID Nos.	23C2562	23C2564	23C2565	23C2615 - 23C2620	23C2558	23C2560	23C2561	23C2598-23C2600 23C2621-23C2622	23C0601 - 23C2605
				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	10	10	10	9	10	11	11	10	13	
TURBIDITY	TT	NTU	SM 2130 B - 2001	0.65	0.05	0.05	0.15	0.75	0.10	0.10	0.15	0.10	
THRESHOLD ODOR, STRAIGHT ‡	*3	TON	JWPP -0059 V	2 M	2 Cc	2 Cc	1 Cc	2 M	2 Cc	2 Cc	1 Cc	1 Cc	
THRESHOLD ODOR, DECHLORINATED ‡	*3	TON	JWPP -0059 V	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	
COLOR‡	*15	Apparent CU	SM 2120 C	<5	<5	<5	<5	5.09	<5	<5	<5	<5	
pH	*6.5-8.5	pH Unit	EPA 150.1 1982	8.0	7.6	7.6	7.7	8.0	7.6	7.6	7.6	7.6	
FREE CHLORINE RESIDUAL ‡		CL ₂ , mg/L	SM 4500-Cl D - 2000	ND	1.55	1.48	1.13	ND	1.59	1.61	1.30	1.18	
SATURATION INDEX, LANGELIER ‡		UNITS +/-	SM 2330 B - 2000	0.15	-0.54	-0.50	-0.56	0.14	-0.60	-0.60	-0.56	-0.49	
ALKALINITY, PHENOLPHTHALEIN		as CaCO ₃ , mg/L	SM 2320 B - 1997	0	0	0	0	0	0	0	0	0	
ALKALINITY, TOTAL		as CaCO ₃ , mg/L	SM 2320 B - 1997	110	102	106	101	106	102	103	102	100	
CONDUCTIVITY		uS/cm @25°C	SM 2510 B - 1997	304	312	311	313	302	313	315	309	310	
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	16.4	16.4	16.8	14.8	17.6	17.5	17.0	17.5	
FLUORIDE	4	F, mg/L	SM4500 F - C 1997	0.059	0.632	0.602	0.658	0.057	0.659	0.666	0.712	0.730	
SULFATE	*250	SO ₄ , mg/L	EPA 300.0 2.1 1993	22.8	26.8	26.5	26.7	22.5	26.2	25.8	26.0	26.1	
HARDNESS (EDTA)		as CaCO ₃ , mg/L	SM 2340 C - 1997	128	127	127	133	127	126	131	133	134	
CALCIUM		Ca, mg/L	EPA 200.7 4.4 1994	35.6	35.3	35.4	35.9	35.4	35.6	35.9	35.5	35.5	
MAGNESIUM ‡		Mg, mg/L	EPA 200.7 4.4 1994	12.8	12.7	12.7	12.8	12.8	12.8	12.9	12.8	12.8	
POTASSIUM ‡		K, mg/L	EPA 200.7 4.4 1994	1.26	1.28	1.29	1.30	1.23	1.26	1.28	1.27	1.27	
SODIUM		Na, mg/L	EPA 200.7 4.4 1994	9.22	9.58	9.67	10.0	9.29	10.2	10.3	9.91	10.2	
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	SM 2540 C - 1997	172	178	174	178	174	173	177	177	180	
SOLIDS, TOTAL ‡		Tot. Sol., mg/L	EPA 160.3 - 1971	180	201	200	187	179	220	195	194	194	
TOTAL ORGANIC CARBON		TOC, mg/L	SM 5310 C - 2000	1.64	1.49	1.46	1.49	1.63	1.47	1.48	1.48	1.51	
OXYGEN DEMAND, CHEMICAL ‡		O, mg/L	EPA 410.4 - 1993	4.60	3.60	3.50	2.74	4.30	4.20	5.40	3.27	4.57	
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	0.345	0.337	0.338	0.343	0.336	0.350	0.348	0.343	0.357	
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		PO ₄ , mg/L	SM 4500 P E 1999	<0.06	0.675	0.716	0.778	<0.06	0.551	0.556	0.619	0.598	
PHOSPHATE, TOTAL ‡		PO ₄ , mg/L	SM 4500 P E 1999	<0.06	1.51	1.60	1.59	<0.06	1.28	1.26	1.25	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

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WPL pH sample exceeded holding time of 15 minutes.

H - Holding Time Exceeded

R - Data rejected

NA - Data Not Available

Cyanide MS & MSD - samples 23C2620-23C2622 (6S, 4C, 5C) did not meet QC Criteria

COMPREHENSIVE CHEMICAL ANALYSIS
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WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

2nd Quarter - 2023

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	Sample Date	5/1/2023	5/1/2023	5/1/2023	5/3/2023	5/1/2023	5/1/2023	5/1/2023	5/2/2023 - 5/3/2023	5/2/2023			
				LAB ID Nos.	23C2562	23C2564	23C2565	23C2615 - 23C2620	23C2558	23C2560	23C2561	23C2598-23C2600 23C2621-23C2622	23C0601 - 23C2605			
				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	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	28.0	51.3	53.3	54.5	25.3	68.7	70.6	61.5	62.3				
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 200.8 4.4 1994	19.3	18.7	18.6	18.5	19.0	18.7	18.9	18.4	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	23.2	23.3	23.8	23.2	22.7	22.7	23.2	23.2	23.0				
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 200.8 5.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1				
COPPER	**1300	Cu, µg/L	EPA 200.9 3 2001	1.09	<1	<1	1.01	<1	<1	<1	1.02	3.94				
IRON	*300	Fe, µg/L	EPA 200.7 4.4 1994	13.4	<1	1.83	21.0	15.5	<1	<1	12.9	6.18				
LEAD	**15.0	Pb, µg/L	EPA 200.9 3 2001	<1	<1	<1	1.13	<1	<1	<1	<1	3.36				
LITHIUM ‡		Li, µg/L	EPA 200.7 4.4 1994	3.57	3.39	3.33	2.80	3.04	3.03	2.88	2.86	2.72				
MANGANESE	*50	Mn, µg/L	EPA 200.8 5.4 1994	<1	<1	<1	<1	<1	<1	<1	1.10	1.05				
MERCURY ‡	2	Hg, µg/L	EPA 245.1 3 1994	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25				
MOLYBDENUM		Mo, µg/L	EPA 200.8 5.4 1994	<1	1.01	1.03	1.02	<1	<1	<1	1.01	1.00				
NICKEL		Ni, µg/L	EPA 200.8 5.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1				
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	770	937	920	895	850	905	902	912	904				
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	111	110	110	113	110	110	111	111	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	<1	2.88	3.02	3.07	1.04	2.42	2.44	2.51	2.45				
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	11.6	<1	<1	<1	46.2	20.3				

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

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Rashel Dault
 CHIEF WATER CHEMIST

Hassan Saleh
 DIRECTOR OF LABORATORIES

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

3rd Quarter - 2023

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	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
TEMPERATURE ‡		°C	EPA 170.1	23	23	23	22	23	22	22	21	21
TURBIDITY	TT	NTU	SM 2130 B - 2001	0.30	0.10	0.10	0.15	0.35	0.05	0.10	0.20	0.10
THRESHOLD ODOR, STRAIGHT ‡	*3	TON	JWPP -0059 V	1 Mm	1 Mm	1 Cc	1 Mm	2 Df	1 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED ‡	*3	TON	JWPP -0059 V	1 Mm	1 Mm	1 Mm	1 Mm	1 Df	1 Mm	1 Mm	1 M	1 M
COLOR‡	*15	Apparent CU	SM 2120 C	<5	<5	<5	<5	<5	<5	<5	<5	<5
pH	*6.5-8.5	pH Unit	EPA 150.1 1982	8.1	7.7	7.6	7.6	8.2	7.6	7.6	7.7	7.7
FREE CHLORINE RESIDUAL ‡		CL ₂ , mg/L	SM 4500-Cl D - 2000	ND	1.67	1.70	1.14	ND	1.57	1.54	1.23	1.08
SATURATION INDEX, LANGELIER ‡		UNITS +/-	SM 2330 B - 2000	0.15	-0.66	-0.68	-0.61	0.21	-0.59	-0.62	-0.59	-0.44
ALKALINITY, PHENOLPHTHALEIN		as CaCO ₃ , mg/L	SM 2320 B - 1997	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		as CaCO ₃ , mg/L	SM 2320 B - 1997	103	97.0	97.4	97.0	103	96.8	96.3	96.2	96.2
CONDUCTIVITY		uS/cm @25°C	SM 2510 B - 1997	300	307	306	318	300	305	306	303	300
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	15.3	15.3	15.3	13.2	15.2	15.2	15.2	15.3
FLUORIDE	4	F, mg/L	SM4500 F - C 1997	0.111	0.751	0.726	0.730	0.109	0.742	0.741	0.743	0.742
SULFATE	*250	SO ₄ , mg/L	EPA 300.0 2.1 1993	21.4	24.7	24.4	24.4	21.4	24.4	24.6	24.5	24.4
HARDNESS (CALC)		as CaCO ₃ , mg/L	SM 2340 B - 1997	137	137	137	138	137	137	137	136	136
CALCIUM		Ca, mg/L	EPA 200.7 4.4 1994	34.8	34.7	34.9	35.2	34.6	34.8	34.7	34.3	34.5
MAGNESIUM ‡		Mg, mg/L	EPA 200.7 4.4 1994	12.2	12.2	12.3	12.3	12.3	12.2	12.2	12.2	12.3
POTASSIUM ‡		K, mg/L	EPA 200.7 4.4 1994	1.43	1.48	1.50	1.50	1.44	1.46	1.47	1.47	1.48
SODIUM		Na, mg/L	EPA 200.7 4.4 1994	8.67	8.98	9.08	9.10	8.57	8.95	8.94	8.99	8.98
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	SM 2540 C - 1997	165	170	144	183	184	172	169	178	173
SOLIDS, TOTAL ‡		Tot. Sol., mg/L	EPA 160.3 - 1971	184	194	195	220	194	188	194	194	186
TOTAL ORGANIC CARBON		TOC, mg/L	SM 5310 C - 2000	1.66	1.61	1.62	1.67	1.73	1.62	1.62	1.66	1.66
OXYGEN DEMAND, CHEMICAL ‡		O, mg/L	EPA 410.4 - 1993	3.79	3.25	2.41	3.95	5.22	2.72	3.80	4.29	4.69
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	0.269	0.260	0.261	0.275	0.262	<0.25	0.251	0.261	0.260
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		PO ₄ , mg/L	SM 4500 P E 1999	<0.06	0.651	0.632	0.723	<0.06	0.600	0.602	0.652	0.651
PHOSPHATE, TOTAL ‡		PO ₄ , mg/L	SM 4500 P E 1999	<0.06	1.12	1.19	1.32	<0.06	1.24	1.30	1.31	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

‡ - Non-NELAP Accredited

WPL pH sample exceeded holding time of 15 minutes.

H - Holding Time Exceeded

R - Data rejected

NA - Data Not Available

Cyanide MS & MSD - samples 23C2620-23C2622 (6S, AC, SC) 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 - 2023

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	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	EPA 200.7 4.4 1994	16.4	162	178	133	21.8	162	158	144	138
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 200.8 4.4 1994	19.0	18.8	19.0	19.3	19.0	18.9	19.0	19.3	19.1
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	23.7	23.6	23.8	24.0	24.0	23.6	23.3	23.8	23.7
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 200.8 5.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	EPA 200.9 3 2001	1.60	<1	<1	<1	<1	<1	<1	1.74	1.63
IRON	*300	Fe, µg/L	EPA 200.7 4.4 1994	5.38	<1	<1	3.84	9.33	<1	<1	14.8	11.4
LEAD	**15.0	Pb, µg/L	EPA 200.9 3 2001	<1	<1	<1	1.14	<1	<1	<1	1.23	1.59
LITHIUM ‡		Li, µg/L	EPA 200.7 4.4 1994	<1	<1	1.24	<1	1.01	<1	<1	1.02	<1
MANGANESE	*50	Mn, µg/L	EPA 200.8 5.4 1994	<1	<1	<1	<1	<1	<1	<1	1.10	1.13
MERCURY ‡	2	Hg, µg/L	EPA 245.1 3 1994	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
MOLYBDENUM		Mo, µg/L	EPA 200.8 5.4 1994	1.07	1.07	1.06	1.08	1.02	1.18	1.04	<1	1.01
NICKEL		Ni, µg/L	EPA 200.8 5.4 1994	1.58	1.55	1.55	1.60	1.76	1.62	1.58	1.64	1.63
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	712	864	852	870	736	869	864	865	866
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	107	108	107	107	109	108	108	107	106
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	2.37	2.52	2.62	<1	2.58	2.58	2.63	2.62
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	5.16	<1	<1	<1	28.0	20.4

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

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 CHIEF WATER CHEMIST


 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

4th Quarter - 2023

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	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
TEMPERATURE ‡		°C	EPA 170.1	17	17	17	21	16	17	17	20	21
TURBIDITY	TT	N.T.U.	SM 2130 B - 2001	0.30	0.20	0.10	0.12	0.30	0.10	0.15	0.15	0.15
THRESHOLD ODOR, STRAIGHT ‡	*3	T.O.N	JWPP -0059 V	2 E	1 Cc	1 M	1 Cc	1 E	1 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED ‡	*3	T.O.N.	JWPP -0059 V	2 E	1 Cc	1 M	1 M	1 E	1 M	1 M	1 M	1 M
COLOR (Apparent) ‡	*15	Pt.-Co. ACU	SM 2120 C	5.52	<5	<5	<5	<5	<5	<5	<5	<5
pH	*6.5-8.5	STD. Units	EPA 150.1 1982	7.9	7.5	7.5	7.5	7.9	7.4	7.4	7.6	7.6
FREE CHLORINE RESIDUAL ‡		CL ₂ , mg/L	SM 4500-Cl D - 2000	ND	1.48	1.60	1.16	ND	1.63	1.65	1.23	1.09
SATURATION INDEX, LANGELIER ‡		UNITS +/-	SM 2330 B - 2000	-0.11	-0.58	-0.54	-0.61	-0.17	-0.62	-0.62	-0.44	-0.36
ALKALINITY, PHENOLPHTHALEIN		0	SM 2320 B - 1997	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		as CaCO ₃ , mg/L	SM 2320 B - 1997	106	99.2	99.6	98.7	105	98.4	98.5	97.1	98.9
CONDUCTIVITY		uS/cm @25°C	SM 2510 B - 1997	307	313	312	313	303	310	311	311	310
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	14.0	16.1	16.1	15.6	13.4	16.0	16.0	15.6	15.8
FLUORIDE	4	F, mg/L	SM4500 F - C 1997/EPA 300.0	<0.5	0.708	0.693	0.671	<0.5	0.743	0.742	0.697	0.697
SULFATE	*250	SO ₄ , mg/L	EPA 300.0 2.1 1993	22.2	25.8	25.6	24.7	21.7	25.6	25.8	24.8	24.9
HARDNESS (SM 2340 B)		as CaCO ₃ , mg/L	SM 2340 B - 1997	134	135	134	140	135	133	133	136	136
CALCIUM		Ca, mg/L	EPA 200.7 4.4 1994	34.2	34.4	34.2	35.6	34.5	33.8	33.8	34.5	34.6
MAGNESIUM ‡		Mg, mg/L	EPA 200.7 4.4 1994	11.9	11.9	11.9	12.4	11.9	11.7	11.8	12.1	12.0
POTASSIUM ‡		K, mg/L	EPA 200.7 4.4 1994	1.17	1.19	1.20	1.38	1.29	1.21	1.21	1.24	1.20
SODIUM		Na, mg/L	EPA 200.7 4.4 1994	7.83	8.14	8.17	8.91	8.41	8.16	8.21	8.29	8.17
SOLIDS, TOTAL DISSOLVED ‡	*500	TDS, mg/L	SM 2540 C - 1997	176	183	201	175	177	197	177	170	152
SOLIDS, TOTAL ‡		Tot. Sol., mg/L	EPA 160.3 - 1971	265	192	216	208	222	186	211	223	216
TOTAL ORGANIC CARBON		TOC, mg/L	SM 5310 C - 2000	1.75	1.60	1.60	1.63	1.73	1.59	1.58	1.60	1.60
OXYGEN DEMAND, CHEMICAL ‡		O, mg/L	EPA 410.4 - 1993	3.81	4.06	2.50	4.21	4.19	3.05	2.78	4.27	4.59
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	0.315	0.308	0.309	0.301	0.303	0.289	0.291	0.289	0.289
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		PO ₄ , mg/L	SM 4500 P E 1999	<0.06	0.661	0.725	0.707	<0.06	0.585	0.598	0.634	0.630
PHOSPHATE, TOTAL ‡		PO ₄ , mg/L	SM 4500 P E 1999	<0.06	1.11	1.43	1.28	0.087	1.21	1.22	1.17	1.13
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

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 - 2023

PARAMETER	IEPA MCL	DETERMINED AS	METHOD	Sample Date				LAB ID Nos.				
				10/2/2023	10/2/2023	10/2/2023	10/5/2023	10/2/2023	10/2/2023	10/2/2023	10/4/23 & 10/5/23	10/4/2023
				23C7895	23C7897	23C7898	23C7970- 23C7975	23C7891	23C7993	23C7894	23C7949-23C7951 23C7968-23C7969	23C7952- 23C7956
				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	12.4	81.4	91.4	82.3	14.4	109	110	89.7	85.8
ANTIMONY	6	Sb, µg/L	EPA 200.8 4.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	EPA 200.8 4.4 1994	1.18	1.02	1.01	<1	1.14	<1	<1	1.03	1.03
BARIUM	2000	Ba, µg/L	EPA 200.7 4.4 1994	20.3	19.6	19.7	19.4	20.1	19.6	19.6	19.4	19.3
BERYLLIUM	4	Be, µg/L	EPA 200.8 4.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	EPA 200.7 4.4 1994	23.8	24.4	24.2	24.4	23.5	23.9	23.8	24.3	23.9
CADMIUM	5	Cd, µg/L	EPA 200.8 4.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	EPA 200.8 4.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1
COBALT ‡		Co, µg/L	EPA 200.8 4.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	EPA 200.8 4.4 1994	1.25	<1	<1	1.05	<1	<1	<1	1.15	3.17
IRON	*300	Fe, µg/L	EPA 200.7 4.4 1994	6.97	2.18	2.64	5.18	9.76	2.45	2.41	4.75	23.1
LEAD	**15.0	Pb, µg/L	EPA 200.8 4.4 1994	<1	<1	<1	1.07	<1	<1	<1	1.54	3.69
LITHIUM ‡		Li, µg/L	EPA 200.7 4.4 1994	2.35	<1	2.15	1.46	<1	1.27	<1	1.88	2.16
MANGANESE	*50	Mn, µg/L	EPA 200.8 4.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	1.34
MERCURY ‡	2	Hg, µg/L	EPA 245.1 3 1994	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
MOLYBDENUM		Mo, µg/L	EPA 200.8 4.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1
NICKEL		Ni, µg/L	EPA 200.8 4.4 1994	1.33	1.25	1.26	1.56	1.33	1.27	1.27	1.32	1.25
SELENIUM	50	Se, µg/L	EPA 200.8 4.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	EPA 200.7 4.4 1994	1008	1135	1125	1138	981	1089	1094	1109	1137
SILVER	*100	Ag, µg/L	EPA 200.8 4.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM ‡		Sr, µg/L	EPA 200.8 4.4 1994	107	108	108	106	109	108	108	108	107
THALLIUM	2	Tl, µg/L	EPA 200.8 4.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM ‡		Ti, µg/L	EPA 200.8 4.4 1994	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM ‡		V, µg/L	EPA 200.8 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	12.8	1.35	<1	<1	22.2	30.6

* Federal Primary/Secondary MCLs

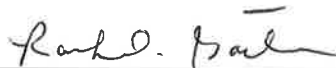
** Action Level


TT - Treatment Technique

ND - not detected

Distribution samples results are averages

‡ - Non-NELAP Accredited


 CHIEF WATER CHEMIST


 DIRECTOR OF LABORATORIES