

**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

Sample Date	3/14/2018	3/14/2018	3/14/2018	3/13/2018	3/14/2018	3/14/2018	3/14/2018	3/14/2018	3/14/2018
LAB ID Nos.	18C1490	18C1491	18C1492	18C1453-58	18C1493	18C1494	18C1495	18C1459-63	18C1464-68

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	8	8	7	8	6	7	7	7	9
TURBIDITY	TT	N.T.U.	82079	5.0	0.10	0.10	0.20	2.00	0.10	0.10	0.20	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	1 Cc	1 Cc	2 Cc	1 Cc	2 Cc	1 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		1 M	1 M	1 M	1 Mm	1 Mm	1 M	1 M	1 M	1 M
COLOR	*15	Pt.-Co. CU	00080	42	5	0	1	19	0	1	1	1
pH	*6.5-8.5	STD. Units	00040	8.2	7.8	7.8	7.9	8.2	7.9	7.9	7.9	7.9
FREE CHLORINE RESIDUAL		CL <sub>2</sub> , mg/L	50064	ND	1.22	1.30	0.91	ND	1.14	1.12	0.99	0.98
SATURATION INDEX, LANGELIER		UNITS +/-		0.06	-0.45	-0.46	-0.34	ND	-0.36	-0.36	-0.28	-0.28
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO <sub>3</sub> , mg/L	00410	112	102	102	104	111	103	105	106	105
CONDUCTIVITY		uS/cm		312	310	308	313	311	309	309	315	315
BROMIDE		Br, mg/L	71870	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
CHLORIDE	*250	Cl, mg/L	00940	14.4	15.1	15.8	15.2	14.4	14.9	14.9	15.7	15.5
FLUORIDE	4	F, mg/L	00951	0.18	0.75	0.81	0.81	0.14	0.69	0.70	0.72	0.71
SULFATE	*250	SO <sub>4</sub> , mg/L	00945	23.1	27.6	27.3	27.9	23.1	26.0	25.1	26.6	26.8
HARDNESS		CaCO <sub>3</sub> , mg/L	00900	140	140	141	141	141	140	141	140	140
CALCIUM		Ca, mg/L	00916	37.4	36.6	36.6	37.1	37.4	36.4	36.4	37.2	37.1
MAGNESIUM		Mg, mg/L	00927	12.8	12.3	12.3	12.5	12.8	12.3	12.3	12.5	12.5
POTASSIUM		K, mg/L	00937	1.34	1.21	1.24	1.27	1.36	1.23	1.20	1.24	1.25
SODIUM		Na, mg/L	00006	8.64	8.45	8.51	8.77	8.82	8.62	8.62	8.97	8.97
SOLIDS, TOTAL DISSOLVED (H)	*500	TDS, mg/L	00150	173	145	143	146	166	143	152	154	164
SOLIDS, TOTAL (H)		Tot. Sol., mg/L	00500	176	161	159	162	177	166	155	166	175
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.73	1.50	1.46	1.49	1.78	1.66	1.64	1.56	1.52
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	2.04	1.50	2.41	2.81	4.48	4.97	3.69	2.55	3.66
NITROGEN, AMMONIA		N, mg/L	00610	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
NITROGEN, NITRATE	10	N, mg/L	00620	0.389	0.382	0.373	0.382	0.422	0.369	0.372	0.387	0.376
NITROGEN, NITRITE	1	N, mg/L	00615	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
ORTHOPHOSPHATE		PO <sub>4</sub> , mg/L	00660	0.027	0.423	0.483	0.498	0.021	0.470	0.474	0.480	0.481
PHOSPHATE, TOTAL		PO <sub>4</sub> , mg/L	00650	0.060	1.01	1.12	1.12	0.050	1.08	1.10	1.08	1.06
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

Cyanide - LFM 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

1st Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	Sample Date	3/14/2018	3/14/2018	3/14/2018	3/13/2018	3/14/2018	3/14/2018	3/14/2018	3/14/2018	3/14/2018			
				LAB ID Nos.	18C1490	18C1491	18C1492	18C1453-58	18C1493	18C1494	18C1495	18C1459-63	18C1464-68			
				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	151	41.4	39.9	38.1	59.2	50.0	53.1	48.6	43.9				
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1				
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1				
BARIIUM	2000	Ba, µg/L	01007	21.2	19.6	19.4	19.2	20.6	19.6	19.5	19.5	19.3				
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1				
BORON		B, µg/L	01022	25.6	25.3	25.3	25.2	25.1	25.3	24.5	25.2	25.0				
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1				
CHROMIUM	100	Cr, µg/L	01034	1.40	1.73	1.63	1.95	1.43	1.68	1.01	1.74	1.64				
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1				
COPPER	**1300	Cu, µg/L	01042	1.50	<1	<1	2.12	<1	<1	<1	<1	<1				
IRON	*300	Fe, µg/L	00031	170	<1	<1	3.78	56.4	<1	<1	2.10	5.23				
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	1.47	<1	<1	<1	<1	<1				
LITHIUM ***		Li, µg/L	01132	3.58	3.14	3.14	3.20	3.34	3.17	3.12	3.18	3.18				
MANGANESE	*50	Mn, µg/L	01055	4.34	<1	<1	<1	1.45	<1	<1	<1	<1				
MERCURY	2	Hg, µg/L	71900	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
MOLYBDENUM		Mo, µg/L	01062	1.01	<1	<1	1.03	<1	<1	<1	<1	1.01				
NICKEL		Ni, µg/L	01067	1.73	1.32	1.22	1.66	1.56	1.16	1.16	1.65	1.80				
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1				
SILICON		Si, µg/L	01142	1412	1236	1242	1265	1093	1120	1114	1154	1159				
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1				
STRONTIUM		Sr, µg/L	01082	116	115	114	121	116	114	115	124	129				
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1				
TITANIUM		Ti, µg/L	01152	3.03	1.34	1.45	1.48	1.16	1.38	1.37	1.46	1.54				
VANADIUM		V, µg/L	00985	3.06	<1	<1	<1	4.91	<1	<1	<1	<1				
ZINC	*5000	Zn, µg/L	01092	<1	<1	<1	15.2	<1	<1	<1	13.8	13.4				

\* Federal Primary/Secondary MCLs

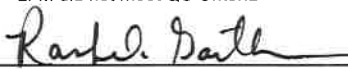
\*\* Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

\*\*\*Lithium - LFM did not meet QC Criteria

  
 CHIEF WATER CHEMIST

  
 DIRECTOR OF LABORATORIES

  
 MANAGER OF WATER QUALITY

  
 DEPUTY COMMISSIONER

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

2nd Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	Sample Date	5/25/2018	5/24/2018	5/24/2018	5/29/18- 5/31/18	5/24/2018	5/24/2018	5/24/2018	5/23/18- 5/29/18	5/23/2018		
				LAB ID Nos.	18C3172	18C3148	18C3149	18C3250 - 18C3255	18C3142	18C3143	18C3144	18C3109 - 3111, 18C3256-3257	18C3112 - 18C3116		
				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	13	13	13	14	12	12	12	13	15			
TURBIDITY	TT	N.T.U.	82079	0.60	0.20	0.05	0.45	0.70	0.05	0.05	0.10	0.08			
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	1 M	1 Cc	1 E	1 E	1 M	1 Cc	1 E	1 Cc	1 E			
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		1 M	1 M	1 E	1 M	1 M	1 M	1 E	1 M	1 E			
COLOR	*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	7.9	8.2	7.9	7.9	7.9	7.9			
FREE CHLORINE RESIDUAL		CL <sub>2</sub> , mg/L	50064	ND	1.39	1.34	0.89	ND	1.39	1.37	0.99	0.88			
SATURATION INDEX, LANGELEIER		UNITS +/-		0.13	-0.31	-0.31	-0.20	0.11	-0.26	-0.27	-0.21	-0.16			
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0			
ALKALINITY, TOTAL		CaCO <sub>3</sub> , mg/L	00410	106	100	100	100	106	100	100	101	101			
CONDUCTIVITY		uS/cm		289	298	298	297	298	305	304	301	307			
BROMIDE (Sampled 6-25-18)		Br, mg/L	71870	<0.1	<0.1	<0.1	H	<0.1	<0.1	<0.1	H	H			
CHLORIDE (Sampled 6-25-18)	*250	Cl, mg/L	00940	14.5	17.3	17.2	H	13.9	16.5	16.9	H	H			
FLUORIDE	4	F, mg/L	00951	0.14	0.83	0.79	0.80	0.14	0.73	0.73	0.74	0.73			
SULFATE (Sampled 6-25-18)	*250	SO <sub>4</sub> , mg/L	00945	21.4	25.8	25.4	H	22.3	26.1	25.8	H	H			
HARDNESS		CaCO <sub>3</sub> , mg/L	00900	140	140	141	140	140	140	140	140	140			
CALCIUM		Ca, mg/L	00916	35.7	34.9	35.0	35.1	35.8	35.0	35.1	35.0	35.0			
MAGNESIUM		Mg, mg/L	00927	12.4	12.1	12.2	12.2	12.4	12.2	12.2	12.1	12.1			
POTASSIUM		K, mg/L	00937	1.17	1.28	1.27	1.29	1.21	1.29	1.32	1.29	1.29			
SODIUM		Na, mg/L	00006	8.69	8.85	8.81	8.68	9.42	9.59	9.60	9.13	9.33			
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	157	155	153	161	155	158	156	157	159			
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	167	157	154	168	167	179	161	162	167			
TOTAL ORGANIC CARBON (H)		TOC, mg/L	00680	1.90	1.64	1.67	1.58	1.88	1.56	1.60	1.63	1.65			
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	7.11	6.43	6.32	6.55	6.44	4.95	5.61	6.69	5.64			
NITROGEN, AMMONIA		N, mg/L	00610	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
NITROGEN, NITRATE (Sampled 6-25-18)	10	N, mg/L	00620	0.536	0.517	0.503	H	0.426	0.582	0.579	H	H			
NITROGEN, NITRITE (Sampled 6-25-18)	1	N, mg/L	00615	<0.1	<0.1	<0.1	H	<0.1	<0.1	<0.1	H	H			
ORTHOPHOSPHATE		PO <sub>4</sub> , mg/L	00660	<0.01	0.525	0.446	0.515	0.011	0.518	0.521	0.532	0.534			
PHOSPHATE, TOTAL		PO <sub>4</sub> , mg/L	00650	0.038	1.21	1.02	1.17	0.076	1.18	1.19	1.18	1.22			
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

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

2nd Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	Sample Date	5/25/2018	5/24/2018	5/24/2018	5/29/18-5/31/18	5/24/2018	5/24/2018	5/24/2018	5/23/18-5/29/18	5/23/2018			
				LAB ID Nos.	18C3172	18C3148	18C3149	18C3250 - 18C3255	18C3142	18C3143	18C3144	18C3109 - 3111, 18C3256-3257	18C3112 - 18C3116			
				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	15.1	82.6	81.9	101	17.7	77.0	79.2	74.9	69.5				
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1				
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1				
BARIUM	2000	Ba, µg/L	01007	21.3	20.2	20.0	20.1	21.2	20.3	20.3	20.0	20.0				
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1				
BORON		B, µg/L	01022	24.0	25.5	24.9	24.9	24.0	25.1	25.4	24.9	24.9				
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1				
CHROMIUM	100	Cr, µg/L	01034	1.60	1.48	1.53	1.29	1.88	1.53	1.11	1.19	1.07				
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	1.00	0.80				
IRON	*300	Fe, µg/L	00031	16.0	<1	<1	6.69	19.4	<1	<1	3.41	5.90				
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	<1	1.37				
LITHIUM ***		Li, µg/L	01132	2.89	2.76	2.75	2.80	2.80	2.83	4.90	2.79	2.79				
MANGANESE	*50	Mn, µg/L	01055	<1	<1	<1	<1	<1	<1	<1	<1	<1				
MERCURY	2	Hg, µg/L	71900	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5				
MOLYBDENUM		Mo, µg/L	01062	<1	<1	<1	1.08	<1	1.00	<1	<1	<1				
NICKEL		Ni, µg/L	01067	1.79	1.77	1.77	1.76	1.80	1.74	1.74	1.77	1.77				
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1				
SILICON		Si, µg/L	01142	808	956	940	931	818	930	932	917	934				
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1				
STRONTIUM		Sr, µg/L	01082	124	124	121	126	124	123	124	124	124				
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1				
TITANIUM		Ti, µg/L	01152	<1	1.48	1.27	1.39	<1	1.42	1.42	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	8.24	1.35	<1	1.84	14.9	47.6				

\* Federal Primary/Secondary MCLs

\*\* Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

\*\*\*Lithium - LFM did not meet QC Criteria

*Rashed Ball*  
CHIEF WATER CHEMIST

*Hassan Akel*  
DIRECTOR OF LABORATORIES

*Andrea R. White*  
MANAGER OF WATER QUALITY

DEPUTY COMMISSIONER

**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	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street			North	Central	Central	North
TEMPERATURE		°C	00010	22	23	23	24	19	22	22	23	25
TURBIDITY	TT	N.T.U.	82079	0.25	0.10	0.10	0.10	0.35	0.10	0.10	0.10	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	1 M	1 Cc	1 Cc	1 Cc	1 M	2 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M
COLOR	*15	Pt.-Co. CU	00080	1	<1	<1	<1	12	<1	<1	<1	<1
pH	*6.5-8.5	STD. Units	00040	8.4	7.9	7.9	8.0	8.35	7.85	7.88	8.0	8.0
FREE CHLORINE RESIDUAL		CL <sub>2</sub> , mg/L	50064	ND	1.13	1.23	0.73	ND	1.33	1.28	1.01	0.82
SATURATION INDEX, LANGELIER		UNITS +/-		0.22	-0.15	-0.52	-0.16	0.21	-0.51	-0.47	-0.11	-0.13
ALKALINITY, PHENOLPHTHALEIN		0	00415	2	0	0	0	2	0	0	0	0
ALKALINITY, TOTAL		CaCO <sub>3</sub> , mg/L	00410	107	100	100	101	106	100	100	101	100
CONDUCTIVITY		uS/cm		296	300	299	301	294	300	300	301	300
BROMIDE (Sampled 6-25-18)		Br, mg/L	71870	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
CHLORIDE (Sampled 6-25-18)	*250	Cl, mg/L	00940	14.8	16.6	16.1	17.0	14.3	16.8	16.7	16.0	16.0
FLUORIDE	4	F, mg/L	00951	0.15	0.89	0.82	0.85	0.15	0.76	0.76	0.74	0.75
SULFATE (Sampled 6-25-18)	*250	SO <sub>4</sub> , mg/L	00945	21.4	25.7	22.4	26.2	22.3	24.9	26.8	25.8	25.7
HARDNESS		CaCO <sub>3</sub> , mg/L	00900	139	138	137	139	138	138	138	139	138
CALCIUM		Ca, mg/L	00916	35.2	34.8	34.6	35.0	35.0	34.9	34.9	35.1	34.9
MAGNESIUM		Mg, mg/L	00927	12.5	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
POTASSIUM		K, mg/L	00937	1.05	1.11	1.06	1.11	1.04	1.09	1.08	1.06	1.10
SODIUM		Na, mg/L	00006	8.13	8.66	8.63	8.65	7.91	8.48	8.50	8.48	8.53
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	149	158	160	161	164	165	159	162	159
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	173	184	185	185	176	192	186	183	185
TOTAL ORGANIC CARBON (H)		TOC, mg/L	00680	1.88	2.04	1.85	1.96	1.89	2.00	1.92	1.85	1.88
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	3.92	4.91	4.93	4.25	5.66	3.30	4.70	3.78	4.43
NITROGEN, AMMONIA		N, mg/L	00610	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
NITROGEN, NITRATE	10	N, mg/L	00620	0.188	0.160	0.173	0.166	0.216	0.170	0.193	0.156	0.149
NITROGEN, NITRITE	1	N, mg/L	00615	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
ORTHOPHOSPHATE		PO <sub>4</sub> , mg/L	00660	<0.06	0.581	0.580	0.551	<0.06	0.498	0.476	0.591	0.599
PHOSPHATE, TOTAL		PO <sub>4</sub> , mg/L	00650	<0.06	0.986	0.872	1.05	0.074	1.17	1.08	1.16	1.18
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

H - 18C5503 (TDS)

TOC- LFM & Duplicate did not meet QC Standards

**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	Sample Date	8/21/2018	8/21/2018	8/21/2018	8/21/2018	8/21/2018	8/21/2018	8/21/2018	8/21/2018	8/21/2018			
				LAB ID Nos.	18C5503	18C5504	18C5505	18C5562-18C5567	18C5500	18C5501	18C5502	18C5581-5583, 18C5568-69	18C5576-18C5580			
				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	11.2	215	219	187	17.6	190	200	139	141				
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1				
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1				
BARIUM	2000	Ba, µg/L	01007	20.3	19.7	20.0	20.0	20.1	19.4	19.4	19.1	19.3				
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1				
BORON		B, µg/L	01022	24.1	25.0	25.0	25.7	24.3	24.5	24.7	24.8	25.2				
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	<1	<1	1.01	<1	<1	<1	<1	<1				
IRON	*300	Fe, µg/L	00031	5.85	<1	<1	3.72	13.1	1.49	<1	2.71	30.9				
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	1.18	<1	<1	<1	1.06	<1				
LITHIUM		Li, µg/L	01132	2.55	2.66	2.67	2.69	2.59	2.62	2.63	2.58	2.61				
MANGANESE	*50	Mn, µg/L	01055	<1	<1	<1	<1	<1	<1	<1	<1	1.17				
MERCURY	2	Hg, µg/L	71900	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5				
MOLYBDENUM		Mo, µg/L	01062	<1	1.45	3.95	2.53	1.09	1.07	1.05	2.66	3.00				
NICKEL		Ni, µg/L	01067	1.60	1.55	1.54	1.62	1.65	1.54	1.56	1.62	1.63				
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1				
SILICON		Si, µg/L	01142	792	907	885	905	853	910	911	924	917				
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1				
STRONTIUM		Sr, µg/L	01082	114	115	114	115	114	114	112	112	114				
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1				
TITANIUM		Ti, µg/L	01152	<1	1.17	1.09	1.14	<1	1.22	1.30	1.27	1.32				
VANADIUM		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1				
ZINC	*5000	Zn, µg/L	01092	<1	<1	<1	10.1	1.61	<1	<1	16.2	10.6				

\* Federal Primary/Secondary MCLs

\*\* Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

*Rashela Daitch*  
 CHIEF WATER CHEMIST

*Haseen Sabih*  
 DIRECTOR OF LABORATORIES

*Shehnaaz Khan*  
 MANAGER OF WATER QUALITY

DEPUTY COMMISSIONER

**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	12/11/2018	12/11/2018	12/11/2018	12/13/2018	12/11/2018	12/11/2018	12/11/2018	12/12 & 12/13/18	12/12/2018			
				LAB ID Nos.	18C8555	18C8556	18C8557	18C8680- 18C8685	18C8552	18C8553	18C8554	(18C8638-8640)- (18C8685-8687)	18C8641- 18C8645			
				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	6	5	6	9	9	8	9	7	10				
TURBIDITY	TT	N.T.U.	82079	3.40	0.10	0.10	0.10	5.50	0.15	0.10	0.15	0.15				
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	1 M	2 Cc	2 Cc	2 Cc	1 M	2 Cc	2 Cc	2 Cc	1 Cc				
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		1 M	2 M	2 M	2 M	1 M	2 M	2 M	2 M	1 M				
COLOR	*15	Pt.-Co. CU	00080	22	0	0	2	22	0	0	1	2				
pH	*6.5-8.5	STD. Units	00040	8.2	7.8	7.8	7.8	8.2	7.7	7.8	7.8	7.8				
FREE CHLORINE RESIDUAL		CL <sub>2</sub> , mg/L	50064	ND	1.24	1.28	1.02	ND	1.22	1.20	1.05	0.87				
SATURATION INDEX, LANGELIER		UNITS +/-		0.13	-0.79	-0.77	-0.46	0.12	-0.71	-0.69	-0.51	-0.41				
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0				
ALKALINITY, TOTAL		CaCO <sub>3</sub> , mg/L	00410	108	100	100	100	109	101	101	102	101				
CONDUCTIVITY		uS/cm		289	297	299	303	301	307	307	310	312				
BROMIDE (Sampled 6-25-18)		Br, mg/L	71870	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
CHLORIDE (Sampled 6-25-18)	*250	Cl, mg/L	00940	14.1	16.2	12.5	18.1	15.2	17.6	17.9	18.5	18.6				
FLUORIDE	4	F, mg/L	00951	<0.5	0.84	0.82	0.81	<0.5	0.85	0.85	0.83	0.83				
SULFATE (Sampled 6-25-18)	*250	SO <sub>4</sub> , mg/L	00945	20.8	25.6	23.3	27.8	21.3	25.5	25.9	26.6	27.2				
HARDNESS		CaCO <sub>3</sub> , mg/L	00900	148	145	144	141	148	147	148	146	145				
CALCIUM		Ca, mg/L	00916	42.4	34.3	34.1	33.9	43.1	34.2	34.2	34.0	34.2				
MAGNESIUM		Mg, mg/L	00927	14.6	11.8	11.7	11.7	15.1	12.0	12.0	11.9	11.9				
POTASSIUM		K, mg/L	00937	1.38	1.29	1.23	1.23	1.42	1.31	1.28	1.29	1.30				
SODIUM		Na, mg/L	00006	10.1	8.37	8.30	8.09	11.1	9.13	9.15	8.96	9.04				
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	152	146	147	134	146	149	158	150	134				
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	155	154	144	163	155	165	151	161	170				
TOTAL ORGANIC CARBON (H)		TOC, mg/L	00680	1.68	1.46	1.46	1.41	1.69	1.46	1.46	1.46	1.56				
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	5.26	2.33	3.74	3.99	4.81	4.76	4.30	3.81	4.10				
NITROGEN, AMMONIA		N, mg/L	00610	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
NITROGEN, NITRATE	10	N, mg/L	00620	0.259	0.222	0.206	0.336	0.302	0.286	0.290	0.369	0.365				
NITROGEN, NITRITE	1	N, mg/L	00615	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
ORTHOPHOSPHATE		PO <sub>4</sub> , mg/L	00660	<0.06	0.741	0.612	0.623	<0.06	0.538	0.543	0.553	0.566				
PHOSPHATE, TOTAL		PO <sub>4</sub> , mg/L	00650	<0.06	1.43	1.31	1.18	<0.06	1.18	1.20	1.18	1.15				
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

Cyanide LFM did not meet QC Criteria, TDS did not meet QC criteria for duplicates

**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

Sample Date	12/11/2018	12/11/2018	12/11/2018	12/13/2018	12/11/2018	12/11/2018	12/11/2018	12/12 & 12/13/18	12/12/2018
LAB ID Nos.	18C8555	18C8556	18C8557	18C8680-18C8685	18C8552	18C8553	18C8554	(18C8638-8640)- (18C8686-8687)	18C8641-18C8645

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	103	32.1	36.0	33.3	113	43.7	45.5	48.0	42.5
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIUM	2000	Ba, µg/L	01007	25.6	19.4	19.2	18.4	25.8	19.8	19.8	18.9	18.7
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	30.4	24.3	24.3	23.6	30.6	25.4	25.2	24.3	24.5
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	2.46	<1	<1	<1	<1	<1	<1	<1	<1
IRON	*300	Fe, µg/L	00031	100	5.05	7.83	12.7	152	2.40	<1	7.41	31.7
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	<1	<1
LITHIUM		Li, µg/L	01132	3.47	2.48	2.46	2.40	3.55	2.50	2.49	2.47	2.45
MANGANESE	*50	Mn, µg/L	01055	1.76	<1	<1	<1	4.26	<1	<1	<1	<1
MERCURY	2	Hg, µg/L	71900	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MOLYBDENUM		Mo, µg/L	01062	1.01	1.05	1.03	<1	1.06	1.04	1.05	1.07	1.04
NICKEL		Ni, µg/L	01067	1.80	1.74	1.73	1.84	2.12	1.76	1.69	1.69	1.73
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	01142	1474	1182	1187	1229	1606	1314	1317	1328	1327
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	119	115	114	113	124	118	119	116	116
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	2.26	1.78	1.60	1.47	2.50	1.50	1.49	1.48	1.46
VANADIUM		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	<1	<1	<1	29.1	2.01	<1	<1	16.4	21.1

\* Federal Primary/Secondary MCLs

\*\* Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

*Ranella Patel*  
CHIEF WATER CHEMIST

*Kesava S. S. S.*  
DIRECTOR OF LABORATORIES

*Andrew H. Fitz*  
MANAGER OF WATER QUALITY

DEPUTY COMMISSIONER