

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

SAMPLE COLLECTION DATE: March 17, 2011 - 1st Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	SOUTH		North	Central	Central	North
TEMPERATURE		°C	00010	5	4	5	7	5	5	5	5	5
TURBIDITY	TT	N.T.U.	82079	12.2	0.10	0.10	0.10	11.2	0.10	0.10	0.10	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	1 Mm	1 Cc	1 Cc	1 Cc	1 Mm	1 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		--	1 M	1 M	1 M	--	1 M	1 Bs	1 Mm	1 Mm
COLOR	*15	Pt.-Co. Units	00080	H	H	H	H	H	H	H	H	H
pH	*6.5-8.5	STD. Units	00040	8.13	7.56	7.54	7.69	8.12	7.60	7.58	7.75	7.77
FREE CHLORINE RESIDUAL		Cl <sub>2</sub> , mg/L	50064	--	1.12	1.06	0.86	--	1.12	1.07	0.91	0.81
SATURATION INDEX, LANGELIER		UNITS +/-		0	-0.78	-0.76	-0.55	-0.01	-0.68	-0.69	-0.52	-0.50
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO <sub>3</sub> , mg/L	00410	110	103	105	105	117	107	108	108	106
BROMIDE		Br, mg/L	71870	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	*250	Cl, mg/L	00940	14.7	15.5	15.6	16.7	16.9	18.9	18.9	18.9	18.8
FLUORIDE	4	F, mg/L	00951	0.16	1.00	0.95	0.96	0.15	0.96	0.96	0.99	0.98
SULFATE	*250	SO <sub>4</sub> , mg/L	00945	24.8	30.6	30.6	30.4	25.4	30.4	30.4	30.5	30.4
HARDNESS		CaCO <sub>3</sub> , mg/L	00900	140	138	138	144	142	146	140	140	147
CALCIUM		Ca, mg/L	00916	39.8	36.6	37.7	37.7	38.5	38.4	38.8	39.2	39.2
MAGNESIUM		Mg, mg/L	00927	13.9	13.6	13.6	13.6	14.5	14.0	14.5	14.6	14.4
POTASSIUM		K, mg/L	00937	2.12	2.06	2.05	2.10	2.18	2.14	2.19	2.28	2.16
SODIUM		Na, mg/L	00006	8.36	8.14	8.40	8.76	9.68	10.0	10.2	9.77	9.99
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	174	155	150	162	184	176	173	178	178
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	458	210	182	199	193	199	200	192	183
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.73	1.46	1.48	1.54	1.79	1.55	1.57	1.55	1.59
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	8.2	<5	<5	<5	<5	<5	8.2	<5	8.2
NITROGEN, AMMONIA		N, mg/L	00610	<0.03	<0.03	<0.03	<0.03	0.030	<0.03	<0.03	<0.03	<0.03
NITROGEN, NITRATE	10	N, mg/L	00620	H	H	H	H	H	H	H	H	H
NITROGEN, NITRITE	1	N, mg/L	00615	H	H	H	H	H	H	H	H	H
ORTHOPHOSPHATE		PO <sub>4</sub> , mg/L	00660	0.042	0.552	0.576	0.539	0.043	0.473	0.469	0.477	0.480
PHOSPHATE, TOTAL (M)		PO <sub>4</sub> , mg/L	00650	0.010	0.840	0.755	0.839	0.012	1.090	0.967	0.922	0.867
CYANIDE, TOTAL	200	CN, ug/L	00720	H	H	H	H	H	H	H	H	H
RADIOACTIVITY, GROSS ALPHA	15	pCi/L	01501	<1	<1	<1	<1	<1	<1	<1	<1	<1
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	6.1	6.4	7.6	5.9	6.6	6.2	5.9	6.4	6.6

\* Federal/State Secondary MCLs      \*\* Action Level      \*\*\*Distribution samples are composited.      TT - Treatment Technique      M - Certain LFM QC criteria were not met for Total-P.  
 R - Sample results not reported because certain QC criteria were not met.      NA - Data not available      ND - not detected      H - Holding Time exceeded

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

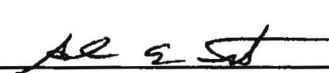
SAMPLE COLLECTION DATE: March 17, 2011 - 1st Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street			South	North		Central
ALUMINUM	*50-200	Al, µg/L	01105	296	36.7	35.7	32.1	111	39.4	33.9	29.4	29.8
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	21.6	19.7	19.3	19.0	21.8	20.5	20.4	19.9	19.9
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	19.2	17.4	19.1	19.6	20.3	21.1	16.0	19.5	22.1
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	1.0	4.0	3.5	1.03	3.6	2.4	2.0	1.7	2.8
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	4.06	1	<1	2.63	3.77	<1	1.22	1.60	3.21
IRON	*300	Fe, µg/L	00031	133	<5	<5	12.2	55.9	<5	<5	<5	8.12
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	1.17	<1	<1	<1	<1	<1
LITHIUM		Li, µg/L	01132	2.88	2.16	2.13	2.28	2.54	2.38	2.24	2.23	2.25
MANGANESE	*50	Mn, µg/L	01055	7.29	<1	<1	<1	4.13	<1	<1	1.06	1.52
MERCURY	2	Hg, µg/L	71900	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MOLYBDENUM		Mo, µg/L	01062	1.98	1.74	1.42	1.38	1.28	1.28	1.23	1.22	2.03
NICKEL		Ni, µg/L	01067	2.49	2.52	1.93	1.52	1.67	1.67	2.45	3.47	1.24
SELENIUM	50	Se, µg/L	01147	<2	<2	<2	<2	<2	<2	<2	<2	<2
SILICON		Si, µg/L	01142	1071	1203	1153	1163	1119	1219	1192	1213	1177
SILVER	*100	Ag, µg/L	01077	1.50	1.50	1.40	1.40	1.20	1.10	1.00	1.00	1.20
STRONTIUM		Sr, µg/L	01082	149	130	128	130	137	137	136	135	135
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	4.20	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
VANADIUM		V, µg/L	00985	56.6	53.0	53.6	54.0	55.4	55.0	55.2	54.9	54.4
ZINC	*5000	Zn, µg/L	01092	<5	<5	<5	10.2	<5	<5	<5	<5	17.4

\* Federal/State Secondary MCLs      \*\* Action Level      \*\*\*Distribution samples are composited.      TT - Treatment Technique  
 R - Sample results not reported because certain QC criteria were not met.      NA - Data not available      ND - not detected      H - Holding Time exceeded

  
 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

SAMPLE COLLECTION DATE: May 18 & 19, 2011 - 2nd Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	SOUTH		North	Central	Central	North
TEMPERATURE		°C	00010	8	10	11	13	12	11	11	12	12
TURBIDITY	TT	N.T.U.	82079	10.9	0.10	0.15	0.15	5.7	0.10	0.10	0.10	0.30
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	1 E	1 Cc	1 Cc	1 Cc	1 Mm	0.5 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		-	1 Df	1 G	1 Mm	-	1 Mm	1 Mm	1 M	1 Mm
COLOR	*15	Pt.-Co. CU	00080	NA	<1	<1	<1	NA	<1	<1	<1	<1
pH	*6.5-8.5	STD. Units	00040	8.21	7.68	7.69	7.76	8.21	7.69	7.71	7.81	7.81
FREE CHLORINE RESIDUAL		CL <sub>2</sub> , mg/L	50064	-	1.07	1.12	0.81	-	1.01	1.00	0.84	0.70
SATURATION INDEX, LANGELIER		UNITS +/-		0.05	-0.50	-0.43	-0.32	0.11	-0.45	-0.44	-0.31	-0.29
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO <sub>3</sub> , mg/L	00410	118	106	108	108	113	108	106	107	107
BROMIDE		Br, mg/L	71870	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	*250	Cl, mg/L	00940	18.3	19.4	20.0	19.1	14.2	17.2	17.2	18.4	19.7
FLUORIDE	4	F, mg/L	00951	0.14	0.92	0.93	0.92	0.15	0.97	0.99	0.99	1.01
SULFATE	*250	SO <sub>4</sub> , mg/L	00945	24.4	29.8	29.9	29.3	24.0	28.6	28.8	28.7	28.8
HARDNESS		CaCO <sub>3</sub> , mg/L	00900	145	139	142	141	147	135	140	140	143
CALCIUM		Ca, mg/L	00916	38.0	35.7	37.8	37.6	35.5	36.3	36.0	36.6	37.5
MAGNESIUM		Mg, mg/L	00927	14.6	13.3	13.6	13.4	14.0	13.2	12.9	13.4	13.3
POTASSIUM		K, mg/L	00937	1.07	0.925	0.662	1.07	0.750	0.880	0.740	0.930	0.740
SODIUM		Na, mg/L	00006	10.3	10.1	10.1	10.1	7.94	8.76	8.62	9.58	9.45
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	188	182	183	182	168	174	173	175	182
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	198	200	199	193	188	191	187	200	194
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.49	1.65	1.66	1.78	1.90	1.70	1.74	1.94	1.68
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	H	H	H	H	H	H	H	H	H
NITROGEN, AMMONIA		N, mg/L	00610	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
NITROGEN, NITRATE	10	N, mg/L	00620	H	H	H	H	H	H	H	H	H
NITROGEN, NITRITE	1	N, mg/L	00615	H	H	H	H	H	H	H	H	H
ORTHOPHOSPHATE - C		PO <sub>4</sub> , mg/L	00660	0.041	0.489	0.436	0.541	0.019	0.479	0.469	0.517	0.517
PHOSPHATE, TOTAL		PO <sub>4</sub> , mg/L	00650	0.019	1.180	1.780	1.238	0.012	1.105	1.139	1.172	1.164
CYANIDE, TOTAL	200	CN, ug/L	00720	<5	<5	<5	<5	<5	<5	<5	<5	<5
RADIOACTIVITY, GROSS ALPHA	15	pCi/L	01501	<1	<1	<1	<1	<1	<1	<1	<1	<1
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	5.7	5.0	6.2	6.0	4.8	5.8	5.2	5.4	5.5

\* Federal/State Secondary MCLs      \*\* Action Level      \*\*\*Distribution samples are composited.      TT - Treatment Technique      C - Certain CCV QC criteria were not met for Ortho-P.  
 R - Sample results not reported because certain QC criteria were not met.      NA - Data not available      ND - not detected      H - Holding Time exceeded

**COMPREHENSIVE CHEMICAL ANALYSIS**  
**CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY**  
**WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES**  
 LABORATORY ACCREDITATION NUMBER: 100226

SAMPLE COLLECTION DATE: May 18 & 19, 2011 - 2nd Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	South		North	Central	Central	North
ALUMINUM	*50-200	Al, µg/L	01105	91.9	52.3	110	44.1	83.5	54.6	52.9	43.8	63.3
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	19.4	19.5	19.5	19.5	19.6	19.4	19.2	18.5	19.8
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	31.0	16.3	15.8	15.3	12.5	12.6	12.7	12.1	11.0
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	1.69	1.28	1.23	1.57	4.58	1.03	9.93	1.72	2.82
IRON	*300	Fe, µg/L	00031	126	<5	<5	<5	70.2	<5	<5	<5	33.9
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	0.55	1.6
LITHIUM		Li, µg/L	01132	2.23	2.13	2.16	2.15	2.22	2.15	2.13	2.17	2.18
MANGANESE	*50	Mn, µg/L	01055	6.54	<1	<1	<1	<1	<1	1.30	1.85	1.89
MERCURY	2	Hg, µg/L	71900	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MOLYBDENUM		Mo, µg/L	01062	1.37	1.25	1.16	1.12	<1	1.00	<1	<1	<1
NICKEL		Ni, µg/L	01067	<2	<2	<2	<2	<2	<2	<2	<2	<2
SELENIUM	50	Se, µg/L	01147	<2	<2	<2	<2	<2	<2	<2	<2	<2
SILICON		Si, µg/L	01142	974	1025	1024	1027	909	1034	1035	1033	1074
SILVER	*100	Ag, µg/L	01077	<1	1.28	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	149	134	135	133	128	129	141	132	134
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	3.11	<1.5	<1.5	<1.5	1.78	<1.5	<1.5	<1.5	<1.5
VANADIUM		V, µg/L	00985	1.17	2.36	2.18	1.26	1.65	1.67	1.13	1.84	1.53
ZINC	*5000	Zn, µg/L	01092	<5	<5	<5	7.24	<5	<5	<5	48.0	21.7

\* Federal/State Secondary MCLs

\*\* Action Level

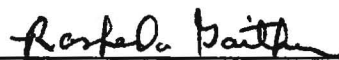
\*\*\*Distribution samples are composited. TT - Treatment Technique

R - Sample results not reported because certain QC criteria were not met.

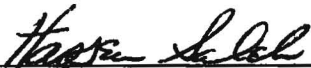
NA - Data not available

ND - not detected

H - Holding Time exceeded



CHIEF WATER CHEMIST



DIRECTOR OF LABORATORIES



DEPUTY COMMISSIONER

MANAGER OF WATER QUALITY

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

SAMPLE COLLECTION DATE: August 18 & 19, 2011 - 3rd Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	SOUTH		North	Central	Central	North
TEMPERATURE		°C	00010	24	24	24	23	24	24	24	23	23
TURBIDITY	TT	N.T.U.	82079	1.4	0.20	0.15	0.35	0.95	0.15	0.10	0.25	0.20
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	1 E	0.5 Cc	0.5 Cc	1 Cc	1 Mm	1 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		--	1 G	1 E	1 Mm	--	1 M	1 Mm	1 Mm	1 Mm
COLOR	*15	Pt.-Co. CU	00080	9	<1	<1	<1	3	<1	<1	2	2
pH	*6.5-8.5	STD. Units	00040	8.34	7.70	7.70	7.79	8.28	7.75	7.74	7.76	7.78
FREE CHLORINE RESIDUAL		CL <sub>2</sub> , mg/L	50064	--	1.03	1.06	0.80	--	1.15	1.19	0.70	0.60
SATURATION INDEX, LANGELIER		UNITS +/-		0.51	-0.17	-0.15	-0.13	0.46	-0.11	-0.12	-0.15	-0.14
ALKALINITY, PHENOLPHTHALEIN		0	00415	1	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO <sub>3</sub> , mg/L	00410	113	103	103	98	112	103	105	101	103
BROMIDE		Br, mg/L	71870	H	H	H	H	H	H	H	H	H
CHLORIDE	*250	Cl, mg/L	00940	H	H	H	H	H	H	H	H	H
FLUORIDE	4	F, mg/L	00951	0.12	0.96	0.94	0.96	0.13	1.09	1.10	1.05	1.05
SULFATE	*250	SO <sub>4</sub> , mg/L	00945	H	H	H	H	H	H	H	H	H
HARDNESS		CaCO <sub>3</sub> , mg/L	00900	132	135	136	137	140	138	138	135	141
CALCIUM		Ca, mg/L	00916	34.1	33.8	35.1	34.4	35.1	34.9	34.2	34.1	32.5
MAGNESIUM		Mg, mg/L	00927	14.2	14.1	14.2	14.1	14.4	14.2	14.2	13.9	14.2
POTASSIUM		K, mg/L	00937	1.57	1.62	1.59	1.63	1.62	1.63	1.64	1.60	1.67
SODIUM		Na, mg/L	00006	7.39	7.62	7.89	7.82	7.38	7.61	7.78	7.44	7.77
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	172	174	180	170	193	198	181	188	186
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	176	175	180	224	211	219	202	205	208
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.95	1.82	1.84	1.86	1.97	1.91	1.90	1.91	1.88
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	H	H	H	H	H	H	H	H	H
NITROGEN, AMMONIA		N, mg/L	00610	H	H	H	H	H	H	H	H	H
NITROGEN, NITRATE	10	N, mg/L	00620	H	H	H	H	H	H	H	H	H
NITROGEN, NITRITE	1	N, mg/L	00615	H	H	H	H	H	H	H	H	H
ORTHOPHOSPHATE		PO <sub>4</sub> , mg/L	00660	0.012	0.503	0.531	0.564	0.015	0.457	0.472	0.513	0.516
PHOSPHATE, TOTAL		PO <sub>4</sub> , mg/L	00650	0.035	1.003	1.001	1.010	0.039	0.850	0.828	0.905	0.949
CYANIDE, TOTAL	200	CN, ug/L	00720	<5	<5	<5	<5	<5	<5	<5	<5	<5
RADIOACTIVITY, GROSS ALPHA	15	pCi/L	01501	<2	<2	<2	<2	<2	<2	<2	<2	<2
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	9.0	8.3	4.6	7.7	5.9	8.8	6.1	7.7	7.0

\* Federal/State Secondary MCLs

\*\* Action Level

\*\*\*Distribution samples are composited. TT - Treatment Technique

NA - Data not available

ND - not detected

H - Holding Time exceeded due to understaffing

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

SAMPLE COLLECTION DATE: August 18 & 19, 2011 - 3rd Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION South	RAW LAKE	OUTLETS		***DISTRIBUTION Central North	
					73rd Street	79th Street			North	Central		
ALUMINUM	*50-200	Al, µg/L	01105	44.9	112	105	110	29	126	122	113	104
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	01002	<2	<2	<2	<2	<2	<2	<2	<2	<2
BARIUM	2000	Ba, µg/L	01007	26.6	27.7	27.3	28.1	27.9	27.8	27.8	27.6	27.0
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	R	11.9	10.2	11.3	9.59	10.0	8.49	9.26	8.95
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	1.4	2.4	<1	1.6	<1	<1
COPPER	**1300	Cu, µg/L	01042	<2	<2	<2	<2	4.2	<2	<2	<2	2.1
IRON	*300	Fe, µg/L	00031	<5	<5	<5	<5	<5	<5	<5	<5	19.5
LEAD	**15.0	Pb, µg/L	01051	<2	<2	<2	<2	<2	<2	<2	<2	<2
LITHIUM		Li, µg/L	01132	2.70	3.00	3.00	3.00	2.98	2.94	2.80	3.20	2.80
MANGANESE	*50	Mn, µg/L	01055	<3	<3	<3	<3	<3	<3	<3	<3	<3
MERCURY	2	Hg, µg/L	71900	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35
MOLYBDENUM		Mo, µg/L	01062	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL		Ni, µg/L	01067	<1	<1	<1	1.3	<1	<1	<1	<1	<1
SELENIUM	50	Se, µg/L	01147	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILICON		Si, µg/L	01142	564	760	735	768	595	840	826	812	815
SILVER	*100	Ag, µg/L	01077	<4	<4	<4	<4	<4	<4	<4	<4	<4
STRONTIUM		Sr, µg/L	01082	113	111	110	113	109	113	111	107	110
THALLIUM	2	Tl, µg/L	01059	NA	NA	NA	NA	NA	NA	NA	NA	NA
TITANIUM		Ti, µg/L	01152	<2	<2	<2	<2	<2	<2	<2	<2	<2
VANADIUM		V, µg/L	00985	<2	<2	<2	<2	<2	<2	<2	<2	<2
ZINC	*5000	Zn, µg/L	01092	<5	<5	<5	<5	<5	<5	<5	<5	<5

\* Federal/State Secondary MCLs

\*\* Action Level

\*\*\*Distribution samples are composited. TT - Treatment Technique

NA - Data not available

ND - not detected

H - Holding Time exceeded

R - Sample results not reported due to analytical error

*Ronald Baith*

CHIEF WATER CHEMIST

*Haroon Saleh*

DIRECTOR OF LABORATORIES

*[Signature]*

MANAGER OF WATER QUALITY

*Al E...*

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

SAMPLE COLLECTION DATE: December 21 & 22, 2011 - 4th Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	SOUTH		North	Central	Central	North
TEMPERATURE		°C	00010	7	7	7	7	6	7	7	7	9
TURBIDITY	TT	N.T.U.	82079	10.1	0.15	0.10	0.15	18.0	0.15	0.15	0.15	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	1 M	0.5 Cc	0.5 Cc	1 Cc	1 M	1 Cc	1 Cc	1 Cc	0.5 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		--	1 M	1 M	1 M	--	1 M	1 M	1 M	1 M
COLOR	*15	Pt.-Co. CU	00080	8	2	1	1	9	2	2	2	2
pH	*6.5-8.5	STD. Units	00040	8.28	7.73	7.71	7.63	8.26	7.78	7.78	7.61	7.67
FREE CHLORINE RESIDUAL		Cl <sub>2</sub> , mg/L	50064	--	1.05	1.02	0.80	--	1.18	1.22	0.74	0.81
SATURATION INDEX, LANGELEIER		UNITS +/-		-0.05	-0.67	-0.70	-0.76	-0.10	-0.60	-0.60	-0.78	-0.67
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO <sub>3</sub> , mg/L	00410	113	106	105	102	113	106	106	102	107
BROMIDE		Br, mg/L	71870	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
CHLORIDE	*250	Cl, mg/L	00940	12.8	14.5	14.6	15.0	13.0	15.0	15.0	14.6	15.0
FLUORIDE	4	F, mg/L	00951	0.13	0.99	1.01	0.99	0.13	1.04	1.03	1.00	1.03
SULFATE	*250	SO <sub>4</sub> , mg/L	00945	24.2	28.9	29.4	29.0	25.1	28.5	28.8	29.5	28.8
HARDNESS		CaCO <sub>3</sub> , mg/L	00900	137	138	140	138	131	135	136	138	136
CALCIUM		Ca, mg/L	00916	28.3	27.3	26.8	27.2	28.1	26.7	26.5	27.3	26.8
MAGNESIUM		Mg, mg/L	00927	13.7	13.0	13.3	13.0	14.1	13.5	13.2	12.9	13.0
POTASSIUM		K, mg/L	00937	1.63	1.63	1.74	1.28	1.76	1.57	1.73	1.66	1.67
SODIUM		Na, mg/L	00006	7.45	7.22	7.77	7.71	7.65	7.50	7.78	7.65	7.67
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	178	156	160	155	170	152	133	143	190
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	215	162	173	170	225	164	170	170	209
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.71	1.59	1.49	1.42	1.79	1.59	1.57	1.57	1.57
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	H	H	H	H	H	H	H	H	H
NITROGEN, AMMONIA		N, mg/L	00610	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
NITROGEN, NITRATE	10	N, mg/L	00620	0.299	0.280	0.303	0.319	0.299	0.301	0.306	0.295	0.307
NITROGEN, NITRITE	1	N, mg/L	00615	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
ORTHOPHOSPHATE		PO <sub>4</sub> , mg/L	00660	0.022	0.516	0.536	0.562	0.033	0.451	0.458	0.509	0.453
PHOSPHATE, TOTAL		PO <sub>4</sub> , mg/L	00650	0.093	1.28	1.38	1.31	0.039	1.11	1.14	1.15	1.06
CYANIDE, TOTAL	200	CN, ug/L	00720	H	H	H	H	H	H	H	H	H
RADIOACTIVITY, GROSS ALPHA	15	pCi/L	01501	<1	<1	<1	<1	<1	<1	<1	<1	<1
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	8.3	6.6	5.3	8.3	7.9	7.7	5.0	3.7	9.0

\* Federal/State Secondary MCLs

\*\* Action Level

\*\*\*Distribution samples are composited. TT - Treatment Technique

ND - not detected

H - Holding Time exceeded due to understaffing

M - Certain LFM QC criteria were not met for Ammonia-N.

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

SAMPLE COLLECTION DATE: December 21 & 22, 2011 - 4th Quarter

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	South		North	Central	Central	North
ALUMINUM	*50-200	Al, µg/L	01105	111	48.4	43.7	36.1	126	53.5	54.8	48.4	55.8
ANTIMONY	6	Sb, µg/L	01268	<2	<2	<2	<2	<2	<2	<2	<2	<2
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	1.35	<1	<1	<1	<1
BARIIUM	2000	Ba, µg/L	01007	21.0	19.4	19.3	19.0	22.2	20.3	20.1	19.7	19.6
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	38.3	20.9	22.3	18.9	71.4	22.4	23.1	20.2	20.6
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	2.38	<1	<1	<1	1.91	<1	<1	<1	<1
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	11.6	<1	<1	<1	10	<1	<1	<1	2.2
IRON	*300	Fe, µg/L	00031	117	<8	<8	<8	142	<8	<8	14.5	<8
LEAD	**15.0	Pb, µg/L	01051	2.4	<1	<1	<1	3.2	<1	<1	<1	<1
LITHIUM		Li, µg/L	01132	5.0	3.4	3.5	3.4	4.2	3.6	3.6	3.4	3.4
MANGANESE	*50	Mn, µg/L	01055	5.5	<1	<1	<1	8.0	<1	<1	<1	<1
MERCURY	2	Hg, µg/L	71900	H	H	H	H	H	H	H	H	H
MOLYBDENUM		Mo, µg/L	01062	<3	<3	<3	<3	<3	<3	<3	<3	<3
NICKEL		Ni, µg/L	01067	2.15	<1	<1	<1	1.56	<1	<1	<1	<1
SELENIUM	50	Se, µg/L	01147	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILICON		Si, µg/L	01142	876	887	885	863	953	805	880	876	866
SILVER	*100	Ag, µg/L	01077	<4	<4	<4	<4	<4	<4	<4	<4	<4
STRONTIUM		Sr, µg/L	01082	113	111	113	113	115	114	114	113	114
THALLIUM	2	Tl, µg/L	01059	NA	NA	NA	NA	NA	NA	NA	NA	NA
TITANIUM		Ti, µg/L	01152	3.40	<1	<1	<1	4.75	<1	<1	<1	<1
VANADIUM		V, µg/L	00985	<2	<2	<2	<2	<2	<2	<2	<2	<2
ZINC	*5000	Zn, µg/L	01092	<5	<5	<5	8.19	5.13	<5	<5	15.4	14.4

\* Federal/State Secondary MCLs

\*\* Action Level

\*\*\*Distribution samples are composited. TT - Treatment Technique

NA - ICP-MS out of service

ND - not detected

H - Holding Time exceeded

R - Sample results not reported due to analytical error

*Roshale Baith*

*Hassan*

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*DEA*

CHIEF WATER CHEMIST

DIRECTOR OF LABORATORIES

MANAGER OF WATER QUALITY

DEPUTY COMMISSIONER