

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: January 16, 2013

LAB ID Nos. 13C0296 - 13C0304

1st QUARTER

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	SOUTH		North	Central	Central	North
TEMPERATURE		°C	00010	4	2	3	6	3	4	4	5	5
TURBIDITY	TT	N.T.U.	82079	1.45	0.10	0.05	0.10	1.9	0.10	0.10	0.15	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	--	2 Cc	2 Cc	2 Cc	1 Mm	2 Cc	2 Cc	1 Cc	2 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm	1 Mm
COLOR (Apparent)	*15	Pt.-Co. CU	00080	3	2	2	2	6	1	1	2	2
pH	*6.5-8.5	STD. Units	00040	8.33	7.74	7.75	7.87	8.28	7.71	7.77	7.85	7.90
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	ND	1.17	1.12	0.86	ND	1.16	1.17	0.93	1.03
SATURATION INDEX, LANGELIER		UNITS +/-		-0.01	-0.71	-0.64	-0.46	-0.07	-0.65	-0.59	-0.50	-0.44
ALKALINITY, PHENOLPHTHALEIN		0	00415	0.90	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	109	101	105	102	112	105	104	102	103
BROMIDE		Br, mg/L	71870	0.020	<0.01	<0.01	<0.01	0.020	<0.01	<0.01	<0.01	<0.01
CHLORIDE	*250	Cl, mg/L	00940	12.4	13.8	13.6	13.7	12.5	14.0	14.0	14.1	14.0
FLUORIDE	4	F, mg/L	00951	0.08	1.05	1.05	1.02	0.09	1.12	1.13	1.04	1.07
SULFATE	*250	SO ₄ , mg/L	00945	23.3	28.6	28.3	28.7	23.4	27.5	27.6	27.2	27.3
HARDNESS		CaCO ₃ , mg/L	00900	143	140	139	140	141	137	138	142	140
CALCIUM		Ca, mg/L	00916	34.3	33.9	34.0	33.5	34.7	34.1	34.0	34.3	34.6
MAGNESIUM		Mg, mg/L	00927	13.2	12.0	11.8	11.6	12.7	11.6	11.7	11.6	11.5
POTASSIUM		K, mg/L	00937	0.82	0.65	0.70	0.51	0.58	0.54	<0.45	<0.45	0.491
SODIUM		Na, mg/L	00006	7.0	7.3	7.0	7.0	6.8	7.2	7.0	7.1	6.9
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	163	149	151	160	156	154	158	156	163
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	203	204	206	203	197	199	176	202	R
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.62	1.43	1.42	1.41	1.62	1.49	1.45	1.45	1.48
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	<5	<5	<5	11.6	<5	<5	6.0	<5	<5
NITROGEN, AMMONIA		N, mg/L	00610	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
NITROGEN, NITRATE	10	N, mg/L	00620	0.287	0.293	0.288	0.285	0.316	0.294	0.302	0.292	0.292
NITROGEN, NITRITE	1	N, mg/L	00615	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	H	H	H	H	H	H	H	H	H
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.020	0.94	1.00	1.04	0.030	0.980	1.05	1.01	0.97
CYANIDE, TOTAL	200	CN, ug/L	00720	H	H	H	H	H	H	H	H	H
RADIOACTIVITY, GROSS ALPHA	15	pCi/L	01501	<9	<9	<9	<9	<9	<9	<9	<9	<9
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	<7	<7	<7	<7	<7	<7	<7	<7	<7

* Federal/State Secondary MCLs ** Action Level ***Distribution samples are composited. TT - Treatment Technique ND - not detected
 R - Sample results not reported due to unacceptable QC criteria or method performance H - Holding Time exceeded

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				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	South		North	Central	Central	North
ALUMINUM	*50-200	Al, µg/L	01105	85.5	30.3	21.5	22.7	74.0	35.3	47.0	41.2	39.8
ANTIMONY	6	Sb, µg/L	01268	0.249	<0.2	<0.2	<0.2	0.649	<0.2	<0.2	<0.2	<0.2
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIIUM	2000	Ba, µg/L	01007	25.5	23.2	23.2	22.7	25.3	23.8	23.7	22.9	22.9
BERYLLIUM	4	Be, µg/L	01012	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
BORON		B, µg/L	01022	47.8	31.5	29.8	31.0	40.4	30.8	30.3	28.4	28.0
CADMIUM	5	Cd, µg/L	01027	<3	<3	<3	<3	<3	<3	<3	<3	<3
CHROMIUM	100	Cr, µg/L	01034	<1	<1	<1	<1	<1	<1	<1	<1	<1
COBALT		Co, µg/L	01037	<2	<2	<2	<2	<2	<2	<2	<2	<2
COPPER	**1300	Cu, µg/L	01042	<1	2.6	<1	<1	1.8	<1	1.7	<1	1.2
IRON	*300	Fe, µg/L	00031	19.8	<6	<6	<6	15.4	<6	<6	7.2	<6
LEAD	**15.0	Pb, µg/L	01051	<3	<3	<3	<3	<3	<3	<3	<3	<3
LITHIUM		Li, µg/L	01132	3.5	2.5	2.4	2.5	3.6	2.5	2.3	2.3	2.3
MANGANESE	*50	Mn, µg/L	01055	<5	<5	<5	<5	<5	<5	<5	<5	<5
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	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
NICKEL		Ni, µg/L	01067	<3	<3	<3	<3	<3	<3	<3	<3	<3
SELENIUM	50	Se, µg/L	01147	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SILICON		Si, µg/L	01142	947	1174	1162	1174	980	1182	1193	1178	1185
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	124	119	119	118	121	121	121	120	120
THALLIUM	2	Tl, µg/L	01059	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
TITANIUM		Ti, µg/L	01152	<2	<2	<2	<2	<2	<2	<2	<2	<2
VANADIUM		V, µg/L	00985	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
ZINC	*5000	Zn, µg/L	01092	27.3	3.3	<2	9.5	52.4	<2	<2	22.4	20.8

* Federal/State Secondary MCLs ** Action Level ***Distribution samples are composited. TT - Treatment Technique ND - not detected

Note: Lithium - Laboratory Fortified Matrix (LFM) did not meet QC acceptance criteria.

Rashida Datta
CHIEF WATER CHEMIST

Hassan Saleh
DIRECTOR OF LABORATORIES

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MANAGER OF WATER QUALITY

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DEPUTY COMMISSIONER