

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER - BUREAU OF WATER QUALITY
WATER PURIFICATION LABORATORIES

SAMPLES COLLECTED FEBRUARY 5, 2002

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	RAW LAKE	OUTLETS		***DISTRIBUTION CENTRAL
					73rd Street	79th Street			Central	North			Central	North	
TEMPERATURE		*C	00010	3	4	4	5	3	4	4	5	6			
TURBIDITY	0.5	N.T.U.	82079	5.20	0.15	0.10	0.10	9.15	0.10	0.10	0.10	0.15			
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	2G	2Cc	2Cc	1Cc	2G	2Cc	2Cc	1M	1M			
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.			2M	1M	1M		1M	1M	1M	1M			
COLOR	*15	Pt.-Co. Units	00080	3	1	0	1	4	0	0	1	0			
pH	*6.5-8.5	STD. Units	00040	8.02	7.87	7.38	7.57	8.00	7.59	7.59	7.67	7.65			
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	0.00	0.79	0.79	0.92	0.00	0.85	0.88	0.81	0.75			
SATURATION INDEX, LANGELIER		UNITS +/-		0.07	-0.08	-0.57	-0.38	0.05	-0.36	-0.36	-0.28	-0.30			
ALKALINITY, PHENOLPHTHALEIN		CaCO ₃ , mg/L	00415	0	0	0	0	0	0	0	0	0			
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	122	96	102	98	123	113	106	104	101			
BROMIDE		Br, mg/L	71870	0.023	<0.003	<0.003	<0.003	0.027	<0.003	<0.003	<0.003	<0.003			
CHLORIDE	*250	Cl, mg/L	00940	10.7	12.1	11.8	11.7	11.4	12.2	12.5	12.0	12.3			
FLUORIDE	4	F, mg/L	00951	0.26	1.01	1.03	1.02	0.26	1.00	1.00	0.99	0.99			
SULFATE	*250	SO ₄ , mg/L	00945	22.4	27.3	27.2	27.0	22.6	26.6	26.8	26.1	26.0			
HARDNESS		CaCO ₃ , mg/L	00900	136	134	132	132	134	130	131	129	131			
CALCIUM		Ca, mg/L	00916	35.2	35.2	34.1	34.7	35.2	34.5	35.1	35.2	34.3			
MAGNESIUM		Mg, mg/L	00927	11.7	11.3	11.2	11.1	11.9	11.4	11.6	11.4	11.4			
POTASSIUM		K, mg/L	00937	1.2	1.1	1.2	1.5	1.6	1.3	1.5	1.3	1.5			
SODIUM		Na, mg/L	00006	6.2	6.7	6.7	6.5	6.6	6.9	6.8	7.0	7.0			
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	164	169	170	153	179	167	160	158	167			
SOLIDS, TOTAL		Tot. Sol, mg/L	00500	161	182	183	169	179	179	169	182	164			
TOTAL ORGANIC CARBON		NPOC, mg/L	00680	1.54	1.61	1.20	1.17	1.54	1.26	1.24	1.25	1.24			
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	<5	<5	<5	<5	<5	<5	<5	<5	<5			
NITROGEN, AMMONIA		N, mg/L	00610	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
NITROGEN, NITRATE	10	N, mg/L	00620	0.275	0.269	0.270	0.268	0.300	0.282	0.283	0.282	0.299			
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			
NITROGEN, TOTAL KJELDAHL		N, mg/L	00625	<0.1	<0.1	<0.1	<0.1	0.182	0.110	0.227	0.103	0.110			
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.055	0.440	0.482	0.476	0.087	0.415	0.418	0.491	0.467			
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.077	1.144	1.182	1.251	0.115	1.224	1.150	1.335	1.175			
CYANIDE, TOTAL	0.2	CN, mg/L	00720	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
FOAMING AGENT	*0.5	MBAS, mg/L	38260	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025			
PHENOLICS, TOTAL		Phenol, µg/L	32730	1	<1	<1	<1	<1	<1	<1	<1	<1			
RADIOACTIVITY, GROSS ALPHA	15	pCi/L	01501	<1	<1	<1	<1	<1	<1	<1	<1	<1			
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	1.3	2.0	1.2	1.5	1.4	1.5	1.7	<1	1.6			

* Federal/State Secondary MCL's ** Action Level ***Distribution samples are composited.

**COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER - BUREAU OF WATER QUALITY
WATER PURIFICATION LABORATORIES**

SAMPLES COLLECTED FEBRUARY 5, 2002

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION South	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street			Central	North		Central
ALUMINUM		Al, µg/L	01105	140	40	38	37	116	45	39	39	32
ANTIMONY	6	Sb, µg/L	01268	<2	<2	<2	<2	<2	<2	<2	<2	<2
ARSENIC	50	As, µg/L	01002	<3	<3	<3	<3	<3	<3	<3	<3	<3
BARIUM	2000	Ba, µg/L	01007	21	21	19	19	21	20	21	20	20
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	12	18	18	16	22	20	19	18	14
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	2	2	<2	<2	<2	<2	<2	<2	<2
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	4	<3	<3	<3	4	<3	<3	<3	<3
IRON	*300	Fe, µg/L	01045	127	2	<2	6	190	<2	<2	11	49
LEAD	**15	Pb, µg/L	01051	<3	<3	<3	<3	<3	<3	<3	<3	<3
LITHIUM		Li, µg/L	01132	<2	<2	<2	<2	<2	<2	<2	<2	<2
MANGANESE	*50	Mn, µg/L	01055	4	<2	<2	<2	<2	<2	<2	<2	<2
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	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	100	Ni, µg/L	01067	<2	<2	<2	<2	<2	<2	<2	<2	<2
SELENIUM	50	Se, µg/L	01147	<3	<3	<3	<3	<3	<3	<3	<3	<3
SILICON		Si, µg/L	01142	579	619	644	650	728	710	721	641	626
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		St, µg/L	01082	123	121	119	118	123	124	125	122	120
THALLIUM	2	Tl, µg/L	01059	<2	<2	<2	<2	<2	<2	<2	<2	<2
TITANIUM		Ti, µg/L	01152	<5	<5	<5	<5	<5	<5	<5	<5	<5
VANADIUM		V, µg/L	00985	<3	<3	<3	<3	<3	<3	<3	<3	<3
ZINC	*5000	Zn, µg/L	01092	<3	<3	<3	4	7	<3	<3	10	6

* Federal/State Secondary MCL's

** Action Level

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David D. Conrad
CHIEF WATER CHEMIST

Suzanne Harbering
DIRECTOR, WATER PURIFICATION LABORATORIES

Ernest P. Barragan
DEPUTY COMMISSIONER

**COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER - BUREAU OF WATER QUALITY
WATER PURIFICATION LABORATORIES**

SAMPLES COLLECTED MAY 6, 2002

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 Central North	
					73rd Street	79th Street			Central	North		Central
TEMPERATURE		°C	00010	12	12	11	10	12	11	11	10	10
TURBIDITY	0.5	N.T.U.	82079	2.05	0.10	0.10	0.10	2.10	0.10	0.10	0.15	0.20
THRESHOLD ODOR, STRAIGHT	*3	T.O.N.	00086	2G	2Cc	2Cc	2Cc	2Df	2Cc	2Cc	2Cc	2Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		1G	1G	1M			1G	1G	1M	2M
COLOR	*15	Pt-Co. Units	00080	2	0	0	0	2	1	0	0	1
pH	*6.5-8.5	STD. Units	00040	8.21	7.45	7.49	7.54	8.07	7.51	7.51	7.55	7.58
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	0.00	0.79	0.81	0.60	0.00	0.80	0.82	0.66	0.71
SATURATION INDEX, LANGELIER		UNITS +/-		-0.01	-0.68	-0.64	-0.49	-0.01	-0.52	-0.52	-0.48	-0.45
ALKALINITY, PHENOLPHTHALEIN		CaCO ₃ , mg/L	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	117	108	104	109	109	113	105	105	107
BROMIDE		Br, mg/L	71870	0.022	<0.006	<0.006	<0.006	0.031	<0.006	<0.006	<0.006	<0.006
CHLORIDE	*250	Cl, mg/L	00940	12.8	13.9	14.2	14.3	13.7	15.1	14.8	15.4	15.2
FLUORIDE	4	F, mg/L	00951	0.17	1.05	1.00	1.01	0.18	1.04	1.05	1.06	1.07
SULFATE	*250	SO ₄ , mg/L	00945	22.1	26.0	26.0	26.0	22.5	25.4	25.2	25.4	25.4
HARDNESS		CaCO ₃ , mg/L	00900	147	138	144	142	144	140	146	144	144
CALCIUM		Ca, mg/L	00916	33.7	33.3	33.3	34.1	34.3	33.5	33.8	34.1	33.7
MAGNESIUM		Mg, mg/L	00927	10.6	10.6	10.6	10.7	11.4	11.0	11.0	10.9	10.8
POTASSIUM		K, mg/L	00937	1.5	1.4	1.4	1.4	1.5	1.3	1.5	1.5	1.5
SODIUM		Na, mg/L	00006	7.8	8.4	8.4	8.2	8.4	8.8	8.8	8.7	8.6
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	191	178	171	178	191	175	186	179	203
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	257	237	201	218	224	224	214	220	207
TOTAL ORGANIC CARBON		NPOC, mg/L	00680	1.59	1.58	1.39	1.37	1.96	1.46	1.48	1.43	1.45
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	<5	<5	<5	<5	<5	<5	<5	<5	<5
NITROGEN, AMMONIA		N, mg/L	00610	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NITROGEN, NITRATE	10	N, mg/L	00620	0.326	0.323	0.323	0.330	0.323	0.343	0.330	0.343	0.332
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
NITROGEN, TOTAL KJELDAHL		N, mg/L	00625	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	<0.02	0.416	0.398	0.434	<0.02	0.443	0.445	0.440	0.459
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.031	1.154	1.038	1.266	0.050	1.255	1.309	1.170	1.156
CYANIDE, TOTAL	0.2	CN, mg/L	00720	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
FOAMING AGENT	*0.5	MBAS, mg/L	38260	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
PHENOLICS, TOTAL		Phenol, µg/L	32730	<1	<1	<1	<1	<1	<1	<1	<1	<1
RADIOACTIVITY, GROSS ALPHA	15	pCi/l	01501	<1	<1	<1	<1	<1	<1	<1	<1	<1
RADIOACTIVITY, GROSS BETA	50	pCi/l	03501	2.5	2.7	1.4	3.8	2.7	2.4	3.2	2.6	2.4

* Federal/State Secondary MCL's ** Action Level ***Distribution samples are compositied.

**COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER - BUREAU OF WATER QUALITY
WATER PURIFICATION LABORATORIES**

SAMPLES COLLECTED MAY 6, 2002

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			Central	North		Central
ALUMINUM		Al, µg/L	01105	95	76	64	67	124	73	77	44	60
ANTIMONY	6	Sb, µg/L	01268	<2	<2	<2	<2	<2	<2	<2	<2	<2
ARSENIC	50	As, µg/L	01002	<3	<3	<3	<3	<3	<3	<3	<3	<3
BARIUM	2000	Ba, µg/L	01007	19	18	18	18	19	18	18	18	18
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	26	26	26	23	27	24	25	25	22
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	<2	<2	<2	<2	<2	<2	<2	<2	<2
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	3	<3	<3	<3	<3	<3	<3	<3	<3
IRON	*300	Fe, µg/L	01045	64	<8	<8	15	73	<8	<8	11	41
LEAD	**15	Pb, µg/L	01051	<3	<3	<3	<3	<3	<3	<3	<3	<3
LITHIUM		Li, µg/L	01132	<2	<2	<2	<2	<2	<2	<2	<2	<2
MANGANESE	*50	Mn, µg/L	01055	<2	<2	<2	<2	3	<2	<2	<2	<2
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	<1	<1	<1	<1	<1	<1	<1	<1
NICKEL	100	Ni, µg/L	01067	<3	<3	<3	<3	<3	<3	<3	<3	<3
SELENIUM	50	Se, µg/L	01147	<3	<3	<3	<3	<3	<3	<3	<3	<3
SILICON		Si, µg/L	01142	124	792	808	828	438	772	762	712	708
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	139	134	131	129	132	128	137	132	130
THALLIUM	2	Tl, µg/L	01059	<2	<2	<2	<2	<2	<2	<2	<2	<2
TITANIUM		Ti, µg/L	01152	<5	<5	<5	<5	<5	<5	<5	<5	<5
VANADIUM		V, µg/L	00985	<3	<3	<3	<3	<3	<3	<3	<3	<3
ZINC	*5000	Zn, µg/L	01092	<4	<4	<4	10	8	<4	<4	19	14

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** Action Level

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David D. Oswald
CHIEF WATER CHEMIST

Stephane Harberis
DIRECTOR, WATER PURIFICATION LABORATORIES

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**COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER - BUREAU OF WATER QUALITY
WATER PURIFICATION LABORATORIES**

SAMPLES COLLECTED AUGUST 13, 2002

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT						JARDINE WATER PURIFICATION PLANT					
				RAW LAKE	OUTLETS			***DISTRIBUTION SOUTH	RAW LAKE	OUTLETS			***DISTRIBUTION		
					7 th Street	7 th Street	9 th Street			Central	North	Central		North	
TEMPERATURE		°C	00010	24	25	25	24	23	25	24	25	24			
TURBIDITY	0.5	N.T.U.	82079	1.00	0.15	0.20	0.20	1.90	0.10	0.15	0.15	0.20			
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	2M	2Cc	2Cc	2Cc	2G	2Cc	2Cc	2Cc	2Cc			
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.			2G	2M	2G		2G	2M	1G	1G			
COLOR	*15	Pt.-Co. Units	00080	2	0	1	0	2	0	0	1	0			
pH	*6.5-8.5	STD. Units	00040	8.10	7.53	7.52	7.59	8.07	7.61	7.54	7.63	7.62			
FREE CHLORINE RESIDUAL		Cl ₂ , mg/L	50064	0.00	0.84	0.93	0.51	0.00	0.81	0.81	0.54	0.45			
SATURATION INDEX, LANGELIER		UNITS +/-		0.19	-0.35	-0.38	-0.35	0.14	-0.27	-0.38	-0.26	-0.29			
ALKALINITY, PHENOLPHTHALEIN		CaCO ₃ , mg/L	00415	0	0	0	0	0	0	0	0	0			
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	111	101	100	99	109	102	103	102	103			
BROMIDE		Br, mg/L	71870	0.028	<0.006	<0.006	<0.006	0.026	<0.006	<0.006	<0.006	<0.006			
CHLORIDE	*250	Cl, mg/L	00940	11.6	13.2	13.2	13.4	11.5	13.4	13.4	13.4	13.5			
FLUORIDE	4	F, mg/L	00951	0.19	1.04	1.05	1.04	0.19	1.13	1.14	1.14	1.13			
SULFATE	*250	SO ₄ , mg/L	00945	22.3	28.8	28.4	28.0	22.2	25.9	25.9	25.7	25.7			
HARDNESS		CaCO ₃ , mg/L	00900	142	146	142	143	140	145	144	141	141			
CALCIUM		Ca, mg/L	00916	29.2	31.6	31.4	30.2	30.1	31.6	30.5	31.3	30.8			
MAGNESIUM		Mg, mg/L	00927	11.5	11.6	11.6	11.4	11.6	11.5	11.5	11.4	11.4			
POTASSIUM		K, mg/L	00937	1.6	1.3	1.3	1.4	1.4	1.2	1.2	1.1	1.3			
SODIUM		Na, mg/L	00006	6.4	6.8	6.8	6.9	6.4	6.7	6.9	6.8	6.8			
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	159	163	165	167	161	164	163	160	165			
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	181	184	186	186	181	182	183	184	184			
TOTAL ORGANIC CARBON		NPOC, mg/L	00680	1.71	1.56	1.56	1.67	1.82	1.56	1.59	1.62	1.62			
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	<5	<5	<5	<5	<5	<5	<5	<5	<5			
NITROGEN, AMMONIA		N, mg/L	00610	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
NITROGEN, NITRATE	10	N, mg/L	00620	0.257	0.241	0.240	0.250	0.244	0.224	0.222	0.254	0.241			
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			
NITROGEN, TOTAL KJELDAHL		N, mg/L	00625	<0.1	0.182	<0.1	0.221	<0.1	<0.1	<0.1	<0.1	<0.1			
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.058	0.511	0.555	0.569	0.085	0.519	0.530	0.541	0.537			
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.122	1.135	1.148	1.031	0.157	1.000	1.002	0.983	0.941			
CYANIDE, TOTAL	0.2	CN, mg/L	00720	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
FOAMING AGENT	*0.5	MBAS, mg/L	38260	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025			
PHENOLICS, TOTAL		Phenol, µg/L	32730	<1	<1	<1	<1	<1	<1	<1	<1	<1			
RADIOACTIVITY, GROSS ALPHA	15	pCi/L	01501	<1	<1	<1	<1	<1	<1	<1	<1	<1			
RADIOACTIVITY, GROSS BETA	50	pCi/L	03501	1.6	1.6	1.9	1.6	2.2	2.2	2.6	1.9	2.1			

* Federal/State Secondary MCL's

** Action Level

***Distribution samples are composited.

**COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER - BUREAU OF WATER QUALITY
WATER PURIFICATION LABORATORIES**

SAMPLES COLLECTED AUGUST 13, 2002

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			Central	North		Central
ALUMINUM		Al, µg/L	01105	28	131	154	135	59	150	162	170	134
ANTIMONY	6	Sb, µg/L	01268	<2	<2	<2	<2	<2	<2	<2	<2	<2
ARSENIC	50	As, µg/L	01002	<3	<3	<3	<3	<3	<3	<3	<3	<3
BARIUM	2000	Ba, µg/L	01007	23	22	22	22	23	23	22	22	22
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	29	23	20	25	23	19	25	26	19
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	<2	<2	<2	<2	<2	<2	<2	<2	<2
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	<3	<3	<3	<3	<3	<3	<3	<3	<3
IRON	*300	Fe, µg/L	01045	27	<7	<7	17	51	<7	<7	16	15
LEAD	**15	Pb, µg/L	01051	<3	<3	<3	<3	<3	<3	<3	<3	<3
LITHIUM		Li, µg/L	01132	<2	<2	<2	<2	<2	<2	<2	<2	<2
MANGANESE	*50	Mn, µg/L	01055	<2	<2	<2	<2	<2	<2	<2	<2	<2
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	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	100	Ni, µg/L	01067	<3	<3	<3	<3	<3	<3	<3	<3	4
SELENIUM	50	Se, µg/L	01147	<3	<3	<3	<3	<3	<3	<3	<3	<3
SILICON		Si, µg/L	01142	279	473	452	472	336	538	491	535	535
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	100	101	99	101	102	100	104	100	99
THALLIUM	2	Tl, µg/L	01059	<2	<2	<2	<2	<2	<2	<2	<2	<2
TITANIUM		Ti, µg/L	01152	<5	<5	<5	<5	<5	<5	<5	<5	<5
VANADIUM		V, µg/L	00985	<3	8	<3	<3	<3	<3	6	<3	<3
ZINC	*5000	Zn, µg/L	01092	5	<4	<4	12	4	<4	<4	10	10

* Federal/State Secondary MCL's ** Action Level ***Distribution samples are composited.

Shirley D. Conner
CHIEF WATER CHEMIST

Debra A. Harshbarger
DIRECTOR, WATER PURIFICATION LABORATORIES

Steven P. Hanagan
DEPUTY COMMISSIONER

**COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER - BUREAU OF WATER QUALITY
WATER PURIFICATION LABORATORIES**

SAMPLES COLLECTED NOVEMBER 18, 2002

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				RAW LAKE	OUTLETS		***DISTRIBUTION SOUTH	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	78th Street			Central	North		Central
TEMPERATURE		°C	00010	7	8	9	11	8	9	9	12	14
TURBIDITY	0.5	N.T.U.	82079	4.30	0.15	0.20	0.20	5.30	0.15	0.25	0.20	0.20
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	2M	2Cc	2Cc	1Cc	2G	2Cc	2Cc	2Cc	2Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.			1M	1M	1M		2M	1M	1M	2M
COLOR	*15	Pt.-Co. Units	00080	2	0	1	0	2	0	1	0	1
pH	*6.5-8.5	STD. Units	00040	8.19	7.62	7.57	7.54	8.20	7.62	7.56	7.55	7.60
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	0.00	0.96	0.96	0.59	0.00	0.93	0.87	0.60	0.52
SATURATION INDEX, LANGELIER		UNITS +/-		0.20	-0.40	-0.51	-0.52	0.23	-0.39	-0.44	-0.49	-0.40
ALKALINITY, PHENOLPHTHALEIN		CaCO ₃ , mg/L	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	112	108	102	109	112	112	113	111	110
BROMIDE		Br, mg/L	71870	0.027	<0.006	<0.006	<0.006	0.027	<0.006	<0.006	<0.006	<0.006
CHLORIDE	*250	Cl, mg/L	00940	11.7	12.6	12.8	12.2	11.5	12.6	12.6	12.3	12.6
FLUORIDE	4	F, mg/L	00951	0.22	1.09	1.09	1.10	0.21	1.05	1.07	1.06	1.08
SULFATE	*250	SO ₄ , mg/L	00945	23.2	27.8	27.2	27.0	22.7	26.0	26.0	26.4	25.9
HARDNESS		CaCO ₃ , mg/L	00900	136	135	138	137	137	137	143	136	134
CALCIUM		Ca, mg/L	00916	30.8	30.3	30.0	29.4	30.7	29.7	30.3	30.1	31.1
MAGNESIUM		Mg, mg/L	00927	13.3	13.0	12.9	12.7	12.9	12.9	13.1	13.3	13.0
POTASSIUM		K, mg/L	00937	1.6	1.5	1.3	1.4	1.4	1.4	1.4	1.4	1.8
SODIUM		Na, mg/L	00006	6.5	6.6	6.7	6.4	6.1	6.2	6.2	6.5	6.6
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	156	157	151	149	152	152	155	153	157
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	179	175	179	179	179	180	178	181	175
TOTAL ORGANIC CARBON		NPOC, mg/L	00680	1.79	1.59	1.51	1.50	2.29	1.54	1.60	1.58	1.60
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	<5	<5	6	<5	10	<5	6	6	<5
NITROGEN, AMMONIA		N, mg/L	00610	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NITROGEN, NITRATE	10	N, mg/L	00620	0.276	0.252	0.250	0.252	0.280	0.256	0.256	0.250	0.252
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
NITROGEN, TOTAL KJELDAHL		N, mg/L	00625	0.155	0.132	0.160	0.112	0.111	0.128	0.173	<0.100	0.115
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.090	0.521	0.495	0.576	0.083	0.517	0.517	0.562	0.550
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.135	0.994	0.972	1.186	0.115	1.179	0.981	1.008	0.942
CYANIDE, TOTAL	0.2	CN, mg/L	00720	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
FOAMING AGENT	*0.5	MBAS, mg/L	36260	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
PHENOLICS, TOTAL		Phenol, µg/L	32730	<1	<1	<1	<1	<1	<1	<1	<1	<1
RADIOACTIVITY, GROSS ALPHA	15	pCi/l	01501	<1	<1	<1	<1	<1	<1	<1	<1	<1
RADIOACTIVITY, GROSS BETA	50	pCi/l	03501	2.3	1.5	1.8	2.0	1.3	1.7	2.4	3.2	2.2

* Federal/State Secondary MCL's

** Action Level

***Distribution samples are composited.

**COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER - BUREAU OF WATER QUALITY
WATER PURIFICATION LABORATORIES**

SAMPLES COLLECTED NOVEMBER 18, 2002

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			Central	North		Central	North
ALUMINUM		Al, µg/L	01105	24	36	23	22	17	29	22	<16	26	
ANTIMONY	6	Sb, µg/L	01268	<2	<2	<2	<2	<2	<2	<2	<2	<2	
ARSENIC	50	As, µg/L	01002	<3	<3	<3	<3	<3	<3	<3	<3	<3	
BARIUM	2000	Ba, µg/L	01007	26	23	22	23	23	22	23	23	22	
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1	
BORON		B, µg/L	01022	26	21	25	18	18	23	25	18	19	
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1	
CHROMIUM	100	Cr, µg/L	01034	<2	<2	<2	<2	<2	<2	<2	<2	<2	
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1	
COPPER	**1300	Cu, µg/L	01042	<3	<3	<3	<3	<3	<3	<3	<3	<3	
IRON	*300	Fe, µg/L	01045	65	<7	<7	16	68	<7	<7	14	24	
LEAD	**15	Pb, µg/L	01051	<3	<3	<3	<3	<3	<3	<3	<3	<3	
LITHIUM		Li, µg/L	01132	<2	<2	<2	<2	<2	<2	<2	<2	<2	
MANGANESE	*50	Mn, µg/L	01055	<2	<2	<2	<2	<2	<2	<2	<2	<2	
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	<10	<10	<10	<10	<10	<10	<10	<10	<10	
NICKEL	100	Ni, µg/L	01067	<3	<3	<3	<3	<3	<3	<3	<3	<3	
SELENIUM	50	Se, µg/L	01147	<3	<3	<3	<3	<3	<3	<3	<3	<3	
SILICON		Si, µg/L	01142	353	548	526	551	423	534	559	563	539	
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1	
STRONTIUM		Sr, µg/L	01082	121	116	118	117	117	115	115	114	115	
THALLIUM	2	Tl, µg/L	01059	<2	<2	<2	<2	<2	<2	<2	<2	<2	
TITANIUM		Ti, µg/L	01152	<5	<5	<5	<5	<5	<5	<5	<5	<5	
VANADIUM		V, µg/L	00985	<3	<3	<3	<3	<3	<3	<3	<3	<3	
ZINC	*5000	Zn, µg/L	01092	<4	<4	<4	<4	<4	<4	<4	<4	<4	

* Federal/State Secondary MCL's

** Action Level

*** Distribution samples are composited.

70'Connor (1st)
CHIEF WATER CHEMIST

Stephane Macleod
DIRECTOR, WATER PURIFICATION LABORATORIES

Sean P. ...
DEPUTY COMMISSIONER