

**City of Detroit**  
**Water and Sewerage Department**  
**Laboratory Analysis of Water Samples Collected at**  
**Southwest Plant**  
**July 13, 2005**

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	2.60	0.11	0.3/95% (1)		
Total Solids		mg/l	128	138		500	10
Total Dissolved Solids		mg/l	121	129		500	10
Aluminum	Al	mg/l	0.426	0.408		0.05-0.2	0.005
Iron	Fe	mg/l	0.200	0.032		0.3	0.005
Copper	Cu	mg/l	0.013	0.007	1.3		0.002
Magnesium	Mg	mg/l	7.18	7.00			0.1
Calcium	Ca	mg/l	18.7	15.7			0.5
Sodium	Na	mg/l	5.09	5.15		20 (2)	0.1
Potassium	K	mg/l	1.14	1.18			0.1
Manganese	Mn	mg/l	0.004	<0.002		0.05	0.002
Zinc	Zn	mg/l	<0.1	<0.1		5	0.1
Silica	SiO <sub>2</sub>	mg/l	10.12	17.4			0.4
Sulfate	SO <sub>4</sub>	mg/l	31.4	28.2			15
Chloride	Cl <sup>-</sup>	mg/l	7.7	9.0		250	5
Phosphorus	P	mg/l	<0.05	0.27			0.05
Free Carbon Dioxide	CO <sub>2</sub>	mg/l	1.2	3.8			
Total Hardness (3), (4), (5)		mg/l	100	101			
Total Alkalinity (3)		mg/l	80	75			
Carbonate Alkalinity (3)		mg/l	0	0			
Bi-Carbonate Alkalinity (3)		mg/l	80	75			
Non-Carbonate Hardness (3)		mg/l	20	26			
Chemical Oxygen Demand		mg/l	2.0	<2.0			2
Dissolved Oxygen		mg/l	AE	AE			
Ammonia Nitrogen	NH <sub>3</sub> -N	mg/l	<0.1	0.1			0.1
Organic Nitrogen		mg/l	0.2	0.2			0.1
Nitrite Nitrogen	NO <sub>2</sub> -N	mg/l	<0.1	<0.1	1		0.1
Nitrate Nitrogen	NO <sub>3</sub> -N	mg/l	0.26	0.27	10	10	0.1
Fluoride	F	mg/l	0.1	1.0	4		0.5
pH			8.04	7.59	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 °C.		micromhos	233	238			
Temperature in °C.			AE	AE			

Legend	Notes:
MCL: Maximum Contaminant Level	(1) Turbidity must not exceed 0.3 NTU in 95% of daily samples in any month
Sec.Std: Secondary Standard	(2) EPA Guidance Level
NTU: Nephelometric Turbidity Unit	(3) As Calcium Carbonate
mg/l: Milligram Per Liter	mg/l is equivalent to part per million (ppm)
MDL: Method Detection Limit	(4) By Titration
<: Less than	(5) Tap Water Hardness in Grains per Gallon <b>5.86 GPG</b>
EF: Equipment Failure	(6) Reported results are below the low calibration standard but above the instrument
IV: Invalid Sample	detection limit.

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