

**City of Detroit**

**Water and Sewerage Department  
Laboratory Analysis of Water Samples Collected at  
Southwest Plant  
April 12, 2005**

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	23.00	0.10	0.3/95% (1)		
Total Solids		mg/l	203	197		500	10
Total Dissolved Solids		mg/l	185	183		500	10
Aluminum	Al	mg/l	0.638	0.089		0.05-0.2	0.005
Iron	Fe	mg/l	0.701	0.039		0.3	0.005
Copper	Cu	mg/l	0.023	0.011	1.3		0.002
Magnesium	Mg	mg/l	9.11	7.05			0.1
Calcium	Ca	mg/l	27.5	23.4			0.5
Sodium	Na	mg/l	8.81	7.85		20 (2)	0.1
Potassium	K	mg/l	1.80	1.20			0.1
Manganese	Mn	mg/l	0.011	<0.002		0.05	0.002
Zinc	Zn	mg/l	<0.1	<0.1		5	0.1
Silica	SiO <sub>2</sub>	mg/l	20.45	23.2			0.4
Sulfate	SO <sub>4</sub>	mg/l	24.9	37.2			15
Chloride	Cl <sup>-</sup>	mg/l	18.8	22.2		250	5
Phosphorus	P	mg/l	<0.05	0.26			0.05
Free Carbon Dioxide	CO <sub>2</sub>	mg/l	0.6	2.3			
Total Hardness (3), (4), (5)		mg/l	138	136			
Total Alkalinity (3)		mg/l	100	90			
Carbonate Alkalinity (3)		mg/l	0	0			
Bi-Carbonate Alkalinity (3)		mg/l	100	90			
Non-Carbonate Hardness (3)		mg/l	38	46			
Chemical Oxygen Demand		mg/l	4.4	3.6			2
Dissolved Oxygen		mg/l	9.1	8.9			
Ammonia Nitrogen	NH <sub>3</sub> -N	mg/l	<0.10	<0.10			0.1
Organic Nitrogen		mg/l	0.3	0.2			0.1
Nitrite Nitrogen	NO <sub>2</sub> -N	mg/l	<0.01	<0.01	1		0.1
Nitrate Nitrogen	NO <sub>3</sub> -N	mg/l	1.43	1.53	10	10	0.1
Fluoride	F	mg/l	0.1	0.9	4		0.5
pH			8.11	7.89	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 °C.		micromhos	327	336			
Temperature in °C.			9.4	10.2			

<p><b>Legend</b></p> <p>MCL: Maximum Contaminant Level                  Sec.Std: Secondary Standard                  NTU: Nephelometric Turbidity Unit                  mg/l: Milligram Per Liter                  MDL: Method Detection Limit                  &lt;: Less than                  EF: Equipment Failure                  IV: Invalid Sample</p>	<p><b>Notes:</b></p> <p>(1) Turbidity must not exceed 0.3 NTU in 95% of daily samples in any month                  (2) EPA Guidance Level                  (3) As Calcium Carbonate                  mg/l is equivalent to part per million (ppm)                  (4) By Titration                  (5) Tap Water Hardness in Grains per Gallon <b>7.89 GPG</b>                  (6) Reported results are below the low calibration standard but above the Instrument detection limit.</p>
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Date: July 1, 2005  
 Date: July 1, 2005

**Victor M. Mercado, Director  
 Detroit Water & Sewerage Department**