

**City of Detroit**  
**Water and Sewerage Department**  
**Laboratory Analysis of Water Samples Collected at**  
**Southwest Plant**  
**October 7, 2008**

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	4.00	0.07	0.3/95% (1)		
Total Solids		mg/L	149	150		500	10
Total Dissolved Solids		mg/L	106	102		500	10
Aluminum	Al	mg/L	0.131	0.063		0.05-0.2	0.005
Iron	Fe	mg/L	0.124	<0.050		0.3	0.005
Copper	Cu	mg/L	0.017	0.005	1.3		0.002
Magnesium	Mg	mg/L	7.75	7.48			0.5
Calcium	Ca	mg/L	30.6	30.5			0.1
Sodium	Na	mg/L	7.39	7.34		20 (2)	0.1
Potassium	K	mg/L	1.07	1.03			0.1
Manganese	Mn	mg/L	0.005	<0.002		0.05	0.002
Zinc	Zn	mg/L	<0.1	<0.1		5	0.1
Silica	SiO <sub>2</sub>	mg/L	1.60	2.3			0.4
Sulfate	SO <sub>4</sub>	mg/L	12.8	43.5			
Chloride	Cl <sup>-</sup>	mg/L	8.5	9.5		250	5
Phosphorus	P	mg/L	<0.05	0.40			0.05
Free Carbon Dioxide	CO <sub>2</sub>	mg/L	0.6	4.1			
Total Hardness (3), (4), (5)		mg/L	105	103			
Total Alkalinity (3)		mg/L	90	80			
Carbonate Alkalinity (3)		mg/L	0	0			
Bi-Carbonate Alkalinity (3)		mg/L	86	85			
Non-Carbonate Hardness (3)		mg/L	16	23			
Chemical Oxygen Demand		mg/L	10.8	10.8			2
Dissolved Oxygen		mg/L	7.6	7.7			
Ammonia Nitrogen	NH <sub>3</sub> -N	mg/L	<0.1	<0.1			0.1
Organic Nitrogen		mg/L	0.2	0.1			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	0.34	0.40	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	229	235			
Temperature		°C	16.6	16.4			

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
AE: Analytical Error	(6) Reported results are below the low calibration standard but above the instrument detection limit.
IV: Invalid Sample	<b>5.97 GPG</b>

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Water Quality Manager

Initial **B. B.**  
Initial **M.L.S.**

Date: Dec 17, 2008  
Date Jan 27, 2009

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