

**City of Detroit**  
**Water and Sewerage Department**  
**Laboratory Analysis of Water Samples Collected at**  
**Southwest Plant**  
**June 8, 2010**

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	6.01	0.003	0.3/95% (1)		
Total Solids		mg/L	151	152		500	10
Total Dissolved Solids		mg/L	124	121		500	10
Aluminum	Al	mg/L	0.263	0.102		0.05-0.2	0.005
Iron	Fe	mg/L	0.796	<0.050		0.3	0.005
Copper	Cu	mg/L	0.014	0.003	1.3		0.002
Magnesium	Mg	mg/L	7.91	7.67			0.5
Calcium	Ca	mg/L	27.8	27.5			0.1
Sodium	Na	mg/L	6.71	6.33		20 (2)	0.1
Potassium	K	mg/L	1.09	0.84			0.1
Manganese	Mn	mg/L	0.007	<0.002		0.05	0.002
Zinc	Zn	mg/L	<0.1	<0.1		5	0.1
Silica	SiO <sub>2</sub>	mg/L	0.43	0.55			0.4
Sulfate	SO <sub>4</sub>	mg/L	15.8	24.0			
Chloride	Cl <sup>-</sup>	mg/L	8.50	9.50		250	5
Phosphorus	P	mg/L	<0.05	0.38			0.05
Free Carbon Dioxide	CO <sub>2</sub>	mg/L	0.00	6.04			
Total Hardness (3), (4), (5)		mg/L	96	110			
Total Alkalinity (3)		mg/L	85	71			
Carbonate Alkalinity (3)		mg/L	0	0			
Bi-Carbonate Alkalinity (3)		mg/L	85	71			
Non-Carbonate Hardness (3)		mg/L	11	39			
Chemical Oxygen Demand		mg/L	4.4	3.6			2
Dissolved Oxygen		mg/L	8.77	8.72			
Ammonia Nitrogen	NH <sub>3</sub> -N	mg/L	<0.1	<0.1			0.1
Organic Nitrogen		mg/L	<0.1	<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	0.32	0.34	10	10	0.1
Fluoride	F	mg/L	0.16	0.98	4		0.5
pH			8.1	7.37	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 °C.		micromhos	209	215			
Temperature		°C	20.3	19.9			

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>6.38 GPG</b>

Analyst: Brian Brown

Reviewed By: Mary Lynn Semegan

Sr. Analytical Chemist

Water Quality Manager

Initial

**B. B.**

Initial

**M.L.S.**

Date: July 7, 2010

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**Pam Turner, Director**

**Detroit Water & Sewerage Department**