

**City of Detroit**  
**Water and Sewerage Department**  
**Laboratory Analysis of Water Samples Collected at**  
**Southwest Plant**  
**May 11, 2010**

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	5.38	0.12	0.3/95% (1)		
Total Solids		mg/L	163	168		500	10
Total Dissolved Solids		mg/L	150	168		500	10
Aluminum	Al	mg/L	0.665	0.552		0.05-0.2	0.005
Iron	Fe	mg/L	0.263	<0.050		0.3	0.005
Copper	Cu	mg/L	0.079	0.005	1.3		0.002
Magnesium	Mg	mg/L	7.75	7.86			0.5
Calcium	Ca	mg/L	28.4	28.0			0.1
Sodium	Na	mg/L	6.25	6.34		20 (2)	0.1
Potassium	K	mg/L	0.97	1.06			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	0.55	0.81			0.4
Sulfate	SO <sub>4</sub>	mg/L	44.5	28.0			
Chloride	Cl <sup>-</sup>	mg/L	7.50	8.75		250	5
Phosphorus	P	mg/L	<0.05	0.37			0.05
Free Carbon Dioxide	CO <sub>2</sub>	mg/L	1.70	3.67			
Total Hardness (3), (4), (5)		mg/L	106	108			
Total Alkalinity (3)		mg/L	84	75			
Carbonate Alkalinity (3)		mg/L	0	0			
Bi-Carbonate Alkalinity (3)		mg/L	84	75			
Non-Carbonate Hardness (3)		mg/L	22	33			
Chemical Oxygen Demand		mg/L	6.4	3.2			2
Dissolved Oxygen		mg/L	10.9	10.6			
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	0.216	0.968	4		0.5
pH			8.03	7.61	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 °C.		micromhos	220	226			
Temperature		°C	13	12.6			

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>6.26 GPG</b>

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Water Quality Manager Initial **M.L.S.**

Date: July 2, 2010  
Date: July 12, 2010

**Pam Turner**  
**Detroit Water & Sewerage Department**