

**City of Detroit**  
**Water and Sewerage Department**  
**Laboratory Analysis of Water Samples Collected at**  
**Southwest Plant**  
**January 13, 2010**

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	1.4	0.04	0.3/95% (1)		
Total Solids		mg/L	137	141		500	10
Total Dissolved Solids		mg/L	124	135		500	10
Aluminum	Al	mg/L	0.117	<0.050		0.05-0.2	0.005
Iron	Fe	mg/L	<0.050	<0.050		0.3	0.005
Copper	Cu	mg/L	0.010	0.008	1.3		0.002
Magnesium	Mg	mg/L	8.27	8.49			0.5
Calcium	Ca	mg/L	31.4	31.5			0.1
Sodium	Na	mg/L	6.13	6.63		20 (2)	0.1
Potassium	K	mg/L	0.80	0.86			0.1
Manganese	Mn	mg/L	<0.002	<0.002		0.05	0.002
Zinc	Zn	mg/L	<0.1	<0.1		5	0.1
Silica	SiO <sub>2</sub>	mg/L	0.91	1.13			0.4
Sulfate	SO <sub>4</sub>	mg/L	78.4	47.6			
Chloride	Cl <sup>-</sup>	mg/L	8.50	9.50		250	5
Phosphorus	P	mg/L	<0.05	0.39			0.05
Free Carbon Dioxide	CO <sub>2</sub>	mg/L	1.35	4.66			
Total Hardness (3), (4), (5)		mg/L	106	110			
Total Alkalinity (3)		mg/L	82	83			
Carbonate Alkalinity (3)		mg/L	0	0			
Bi-Carbonate Alkalinity (3)		mg/L	82	83			
Non-Carbonate Hardness (3)		mg/L	24	27			
Chemical Oxygen Demand		mg/L	2	2.8			2
Dissolved Oxygen		mg/L	15.6	15.2			
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	0.35	0.38	10	10	0.1
Fluoride	F	mg/L	0.16	0.71	4		0.5
pH			8.04	7.55	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 °C.		micromhos	233	238			
Temperature		°C	1.4	4.7			

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 <span style="float: right;"><b>6.38 GPG</b></span>
AE: Analytical Error	(6) Reported results are below the low calibration standard but above the instrument
IV: Invalid Sample	detection limit.

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