

**Detroit Water and Sewerage Department**  
**Water Quality Division**  
**Laboratory Analysis of Water Samples Collected at**  
**Southwest Plant**  
**12/09/2013**

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	5.80	0.07	0.3/95% (1)		
Total Solids		mg/L	130	129		500	10
Total Dissolved Solids		mg/L	119	117		500	10
Aluminum	Al	mg/L	2.720	1.751		0.05-0.2	0.005
Iron	Fe	mg/L	1.115	0.447		0.3	0.005
Copper	Cu	mg/L	0.011	< 0.005	1.3		0.002
Magnesium	Mg	mg/L	7.90	7.23			0.5
Calcium	Ca	mg/L	38.8	29.9			0.1
Sodium	Na	mg/L	5.75	5.53		20 (2)	0.1
Potassium	K	mg/L	1.16	1.00			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	0.7	0.9			0.4
Sulfate	SO <sub>4</sub> <sup>2-</sup>	mg/L	18.4	22.2			
Chloride	Cl <sup>-</sup>	mg/L	10.0	9.5		250	5
Phosphorus	P	mg/L	< 0.05	0.27			0.05
Free Carbon Dioxide	CO <sub>2</sub>	mg/L	2.7	7.2			
Total Hardness (3), (4), (5)		mg/L	97	100			
Total Alkalinity (3)		mg/L	77	69			
Carbonate Alkalinity (3)		mg/L	0	0			
Bi-Carbonate Alkalinity (3)		mg/L	77	69			
Non-Carbonate Hardness (3)		mg/L	20	31			
Chemical Oxygen Demand		mg/L	2.0	3.6			2
Dissolved Oxygen		mg/L	12.1	12.0			
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> <sup>-</sup> -N	mg/L	< 0.1	< 0.1	1		0.1
Nitrate Nitrogen	NO <sub>3</sub> <sup>-</sup> -N	mg/L	0.33	0.38	10	10	0.1
Fluoride	F <sup>-</sup>	mg/L	0.11	0.59	4		0.5
pH			7.75	7.28	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 °C.		micromhos	218	208			
Temperature		°C	6	6.7			

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 <b>5.80 GPG</b>
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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