

**Detroit Water and Sewerage Department**  
**Water Quality Division**  
**Laboratory Analysis of Water Samples Collected at**  
**Southwest Plant**  
**11/05/2013**

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	8.90	0.50	0.3/95% (1)		
Total Solids		mg/L	143	143		500	10
Total Dissolved Solids		mg/L	121	115		500	10
Aluminum	Al	mg/L	0.257	0.180		0.05-0.2	0.005
Iron	Fe	mg/L	0.545	0.153		0.3	0.005
Copper	Cu	mg/L	0.022	< 0.005	1.3		0.002
Magnesium	Mg	mg/L	7.62	7.82			0.5
Calcium	Ca	mg/L	27.8	27.2			0.1
Sodium	Na	mg/L	5.63	5.89		20 (2)	0.1
Potassium	K	mg/L	1.04	1.00			0.1
Manganese	Mn	mg/L	0.012	0.003		0.05	0.002
Zinc	Zn	mg/L	< 0.1	< 0.1		5	0.1
Silica	SiO <sub>2</sub>	mg/L	0.8	0.9			0.4
Sulfate	SO <sub>4</sub> <sup>2-</sup>	mg/L	18.8	24.0			
Chloride	Cl <sup>-</sup>	mg/L	8.5	10.0		250	5
Phosphorus	P	mg/L	< 0.05	0.38			0.05
Free Carbon Dioxide	CO <sub>2</sub>	mg/L	1.5	6.9			
Total Hardness (3), (4), (5)		mg/L	99	103			
Total Alkalinity (3)		mg/L	81	79			
Carbonate Alkalinity (3)		mg/L	0	0			
Bi-Carbonate Alkalinity (3)		mg/L	81	79			
Non-Carbonate Hardness (3)		mg/L	18	24			
Chemical Oxygen Demand		mg/L	3.2	2.8			2
Dissolved Oxygen		mg/L	9.4	9.3			
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	0.42	0.44	10	10	0.1
Fluoride	F <sup>-</sup>	mg/L	0.09	0.58	4		0.5
pH			8.04	7.36	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 °C.		micromhos	227	207			
Temperature		°C	13.5	13.6			

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 <b>5.97 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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