

**City of Detroit**  
**Water and Sewerage Department**  
**Laboratory Analysis of Water Samples Collected at**  
**Southwest Plant**  
**November 3, 2010**

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	2.00	0.08	0.3/95% (1)		
Total Solids		mg/L	177	158		500	10
Total Dissolved Solids		mg/L	128	127		500	10
Aluminum	Al	mg/L	0.075	<0.050		0.05-0.2	0.005
Iron	Fe	mg/L	0.091	<0.050		0.3	0.005
Copper	Cu	mg/L	0.029	0.002	1.3		0.002
Magnesium	Mg	mg/L	7.76	7.28			0.5
Calcium	Ca	mg/L	26.7	23.7			0.1
Sodium	Na	mg/L	6.96	7.34		20 (2)	0.1
Potassium	K	mg/L	0.94	0.91			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	SiO2	mg/L	0.69	0.9			0.4
Sulfate	SO4	mg/L	31.0	46.9			
Chloride	Cl-	mg/L	9.0	9.5		250	5
Phosphorus	P	mg/L	<0.05	0.45			0.05
Free Carbon Dioxide	CO2	mg/L	7.6	4.8			
Total Hardness (3), (4), (5)		mg/L	110	111			
Total Alkalinity (3)		mg/L	78	88			
Carbonate Alkalinity (3)		mg/L	0	0			
Bi-Carbonate Alkalinity (3)		mg/L	78	88			
Non-Carbonate Hardness (3)		mg/L	32	23			
Chemical Oxygen Demand		mg/L	5.2	6.0			2
Dissolved Oxygen		mg/L	9.1	8.7			
Ammonia Nitrogen	NH3-N	mg/L	<0.1	<0.1			0.1
Organic Nitrogen		mg/L	<0.1	<0.1			0.1
Nitrite Nitrogen	NO2-N	mg/L	<0.1	<0.1	1		0.1
Nitrate Nitrogen	NO3-N	mg/L	AE	AE	10	10	0.1
Fluoride	F	mg/L	0.4	0.6	4		0.5
pH			7.51	7.56	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 oC.		micromhos	242	242			
Temperature		°C	11.2	11.2			

**Legend**

MCL: Maximum Contaminant Level  
 Sec.Std: Secondary Standard  
 NTU: Nephelometric Turbidity Unit  
 mg/l: Milligram Per Liter  
 MDL: Method Detection Limit  
 <: Less than  
 AE: Analytical Error  
 IV: Invalid Sample

**Notes:**

(1) Turbidity must not exceed 0.3 NTU in 95% of daily samples in any month  
 (2) EPA Guidance Level  
 (3) As Calcium Carbonate  
 mg/l is equivalent to part per million (ppm)  
 (4) By Titration  
 (5) Tap Water Hardness in Grains per Gallon **6.44 GPG**  
 (6) Reported results are below the low calibration standard but above the instrument detection limit.

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