

City of Detroit
Water and Sewerage Department
Laboratory Analysis of Water Samples Collected at
Southwest Plant
July, 11, 2011

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	8.40	0.04	0.3/95% (1)		
Total Solids		mg/L	150	162		500	10
Total Dissolved Solids		mg/L	132	147		500	10
Aluminum	Al	mg/L	0.374	0.176		0.05-0.2	0.005
Iron	Fe	mg/L	0.352	<0.050		0.3	0.005
Copper	Cu	mg/L	0.009	0.006	1.3		0.002
Magnesium	Mg	mg/L	8.32	8.50			0.5
Calcium	Ca	mg/L	29.3	30.4			0.1
Sodium	Na	mg/L	5.36	5.52		20 (2)	0.1
Potassium	K	mg/L	0.99	0.96			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	0.8	0.5			0.4
Sulfate	SO4	mg/L	41.7	32.1			
Chloride	Cl-	mg/L	10.5	9.0		250	5
Phosphorus	P	mg/L	<0.05	0.29			0.05
Free Carbon Dioxide	CO2	mg/L	2.8	1.1			
Total Hardness (3), (4), (5)		mg/L	111	108			
Total Alkalinity (3)		mg/L	84	96			
Carbonate Alkalinity (3)		mg/L	0	0			
Bi-Carbonate Alkalinity (3)		mg/L	84	96			
Non-Carbonate Hardness (3)		mg/L	27	12			
Chemical Oxygen Demand		mg/L	2.8	17.2			2
Dissolved Oxygen		mg/L	6.3	6.8			
Ammonia Nitrogen	NH3-N	mg/L	<0.1	0.2			0.1
Organic Nitrogen		mg/L	0.2	0.2			0.1
Nitrite Nitrogen	NO2-N	mg/L	<0.1	<0.1	1		0.1
Nitrate Nitrogen	NO3-N	mg/L	0.49	0.50	10	10	0.1
Fluoride	F	mg/L	0.28	1.02	4		0.5
pH			7.78	8.23	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 °C.		micromhos	244	193			
Temperature		°C	24.9	25.5			

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 6.26 GPG
AE: Analytical Error	(6) Reported results are below the low calibration standard but above the instrument detection limit.
IV: Invalid Sample	

Analyst: Brian Brown
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Sr. Analytical Chemist
Principal Chemist

Initial **B. B.**
Initial **P.W.**

Date: Dec 9, 2011
Date: 01/12/2012

Sue McCormick Director
Detroit Water & Sewerage Department