

City of Detroit
Water and Sewerage Department
Laboratory Analysis of Water Samples Collected at
Southwest Plant
January 12, 2011

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	6.80	0.05	0.3/95% (1)		
Total Solids		mg/L	133	140		500	10
Total Dissolved Solids		mg/L	124	131		500	10
Aluminum	Al	mg/L	0.304	0.209		0.05-0.2	0.005
Iron	Fe	mg/L	0.058	<0.050		0.3	0.005
Copper	Cu	mg/L	0.003	<0.002	1.3		0.002
Magnesium	Mg	mg/L	8.05	8.22			0.5
Calcium	Ca	mg/L	25.3	25.2			0.1
Sodium	Na	mg/L	7.14	7.26		20 (2)	0.1
Potassium	K	mg/L	0.87	0.89			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	0.80	1.4			0.4
Sulfate	SO4	mg/L	40.8	39.0			
Chloride	Cl-	mg/L	8.5	9.5		250	5
Phosphorus	P	mg/L	<0.05	0.35			0.05
Free Carbon Dioxide	CO2	mg/L	3.0	6.8			
Total Hardness (3), (4), (5)		mg/L	98	102			
Total Alkalinity (3)		mg/L	97	96			
Carbonate Alkalinity (3)		mg/L	0	0			
Bi-Carbonate Alkalinity (3)		mg/L	97	96			
Non-Carbonate Hardness (3)		mg/L	1	6			
Chemical Oxygen Demand		mg/L	8.0	4.0			2
Dissolved Oxygen		mg/L	10.9	13.6			
Ammonia Nitrogen	NH3-N	mg/L	<0.1	<0.1			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	0.32	0.32	10	10	0.1
Fluoride	F	mg/L	0.2	1.1	4		0.5
pH			7.81	7.45	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 oC.		micromhos	228	233			
Temperature		°C	5	3.6			

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 **5.92 GPG**
 (6) Reported results are below the low calibration standard but above the instrument detection limit.

Analyst: Brian Brown Sr. Analytical Chemist Initial **B. B.** Date: June 3, 2011
 Reviewed By: Mary Lynn Seme Water Quality Manager Initial **M.L.S.** Date: June 3, 2011

Darryl A. Latimer
Detroit Water & Sewerage Department