



Detroit Water and Sewerage Department
Water Quality Division
Laboratory Analysis of Water Samples Collected at
Southwest Plant
01/14/2014

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	5.70	0.05	0.3/95% (1)		
Total Solids		mg/L	167	172		500	10
Total Dissolved Solids		mg/L	136	156		500	10
Aluminum	Al	mg/L	1.109	0.060		0.05-0.2	0.005
Iron	Fe	mg/L	0.722	0.104		0.3	0.005
Copper	Cu	mg/L	0.013	< 0.005	1.3		0.002
Magnesium	Mg	mg/L	7.82	7.66			0.5
Calcium	Ca	mg/L	29.4	27.5			0.1
Sodium	Na	mg/L	8.68	12.19		20 (2)	0.1
Potassium	K	mg/L	1.03	0.93			0.1
Manganese	Mn	mg/L	0.004	< 0.002		0.05	0.002
Lead	Pb	mg/L	< 0.002	< 0.002	0.015		0.002
Zinc	Zn	mg/L	< 0.01	< 0.01		5	0.1
Silica	SiO ₂	mg/L	0.3	0.6			0.4
Sulfate	SO ₄ ²⁻	mg/L	20.3	22.2			
Chloride	Cl ⁻	mg/L	24.5	39.8		250	5
Phosphorus	P	mg/L	< 0.05	0.34			0.05
Free Carbon Dioxide	CO ₂	mg/L	2.4	7.7			
Total Hardness (3), (4), (5)		mg/L	95	101			
Total Alkalinity (3)		mg/L	90	90			
Carbonate Alkalinity (3)		mg/L	0	0			
Bi-Carbonate Alkalinity (3)		mg/L	90	90			
Non-Carbonate Hardness (3)		mg/L	5	11			
Chemical Oxygen Demand		mg/L	3.2	4.8			2
Dissolved Oxygen		mg/L	12.6	12.4			
Nitrite Nitrogen	NO ₂ ⁻ -N	mg/L	< 0.1	< 0.1	1		0.1
Nitrate Nitrogen	NO ₃ ⁻ -N	mg/L	0.55	0.47	10	10	0.1
Fluoride	F ⁻	mg/L	0.15	0.52	4		0.5
pH			7.87	7.37	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 °C.		micromhos	253	273			
Temperature		°C	5	5.5			

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)
µg/L: Microgram Per Liter	µg/L is equivalent to part per billion (ppb)
MDL: Method Detection Limit	(4) By Titration
< : Less than	(5) Tap Water Hardness in Grains per Gallon 5.86 GPG
AE: Analytical Error	(6) Reported results are below the low calibration standard but above the instrument
IV: Invalid Sample	detection limit.

Analyst: Brian Brown Sr. Analytical Chemist Initial **B. B.** Date: 05/07/2014
 Reviewed By: Patrick Williford Principal Chemist Initial **P. W.** Date: 06/10/2014

Detroit Water & Sewerage Department