



Detroit Water and Sewerage Department
Water Quality Division
Laboratory Analysis of Water Samples Collected at
Southwest Plant
6/10/2014

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	IV	0.04	0.3/95% (1)		
Total Solids		mg/L	IV	183		500	10
Total Dissolved Solids		mg/L	IV	150		500	10
Aluminum	Al	mg/L	IV	0.061		0.05-0.2	0.005
Iron	Fe	mg/L	IV	0.195		0.3	0.005
Copper	Cu	mg/L	IV	0.005	1.3		0.002
Magnesium	Mg	mg/L	IV	10.05			0.5
Calcium	Ca	mg/L	IV	28.4			0.1
Sodium	Na	mg/L	IV	6.21		20 (2)	0.1
Potassium	K	mg/L	IV	1.15			0.1
Manganese	Mn	mg/L	IV	0.002		0.05	0.002
Lead	Pb	mg/L	IV	< 0.002	0.015		0.002
Zinc	Zn	mg/L	IV	< 0.10		5	0.1
Silica	SiO ₂	mg/L	IV	0.4			0.4
Sulfate	SO ₄ ²⁻	mg/L	IV	25.2			
Chloride	Cl ⁻	mg/L	IV	4.5		250	5
Phosphorus	P	mg/L	IV	0.31			0.05
Free Carbon Dioxide	CO ₂	mg/L	IV	12.6			
Total Hardness (3), (4), (5)		mg/L	IV	107			
Total Alkalinity (3)		mg/L	IV	78			
Carbonate Alkalinity (3)		mg/L	IV	0			
Bi-Carbonate Alkalinity (3)		mg/L	IV	78			
Non-Carbonate Hardness (3)		mg/L	IV	29			
Chemical Oxygen Demand		mg/L	IV	5.6			2
Dissolved Oxygen		mg/L	IV	9.6			
Nitrite Nitrogen	NO ₂ ⁻ -N	mg/L	IV	< 0.1	1		0.1
Nitrate Nitrogen	NO ₃ ⁻ -N	mg/L	IV	0.33	10	10	0.1
Fluoride	F ⁻	mg/L	IV	0.58	4		0.5
pH			IV	7.23	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 °C.		micromhos	IV	249			
Temperature		°C	IV	20.8			

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 6.21 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:	7/8/2014
Reviewed By: Patrick Williford	Principal Chemist	Initial	P. W.	Date:	7/8/2014

Detroit Water & Sewerage Department