

**City of Detroit**  
**Water and Sewerage Department**  
**Laboratory Analysis of Water Samples Collected at**  
**Water Works Park Plant**  
**June 20, 2011**

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	3.50	0.12	0.3/95% (1)		
Total Solids		mg/L	138	154		500	10
Total Dissolved Solids		mg/L	148	147		500	10
Aluminum	Al	mg/L	0.122	0.121		0.05-0.2	0.005
Iron	Fe	mg/L	0.096	<0.050		0.3	0.005
Copper	Cu	mg/L	<0.005	<0.005	1.3		0.002
Magnesium	Mg	mg/L	7.71	7.56			0.5
Calcium	Ca	mg/L	25.9	25.5			0.1
Sodium	Na	mg/L	4.98	4.97		20 (2)	0.1
Potassium	K	mg/L	0.95	0.90			0.1
Manganese	Mn	mg/L	0.006	0.002		0.05	0.002
Zinc	Zn	mg/L	<0.1	<0.1		5	0.1
Silica	SiO <sub>2</sub>	mg/L	0.6	0.8			0.4
Sulfate	SO <sub>4</sub>	mg/L	14.8	31.2			
Chloride	Cl <sup>-</sup>	mg/L	7.5	9.0		250	5
Phosphorus	P	mg/L	<0.05	0.33			0.05
Free Carbon Dioxide	CO <sub>2</sub>	mg/L	1.3	4.4			
Total Hardness (3), (4), (5)		mg/L	107	105			
Total Alkalinity (3)		mg/L	92	79			
Carbonate Alkalinity (3)		mg/L	0	0			
Bi-Carbonate Alkalinity (3)		mg/L	92	79			
Non-Carbonate Hardness (3)		mg/L	15	26			
Chemical Oxygen Demand		mg/L	22.4	22.8			2
Dissolved Oxygen		mg/L	8.8	11.0			
Ammonia Nitrogen	NH <sub>3</sub> -N	mg/L	0.1	<0.1			0.1
Organic Nitrogen		mg/L	<0.1	0.1			0.1
Nitrite Nitrogen	NO <sub>2</sub> -N	mg/L	<0.1	<0.1	1		0.1
Nitrate Nitrogen	NO <sub>3</sub> -N	mg/L	0.41	0.37	10	10	0.1
Fluoride	F	mg/L	0.10	1.01	4		0.5
pH			8.16	7.55	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 oC.		micromhos	230	224			
Temperature		°C	22.9	21.3			

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 <b>6.09 GPG</b>
AE: Analytical Error	(6) Reported results are below the low calibration standard but above the instrument
IV: Invalid Sample	detection limit.

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