2012 Water Quality Test Results

Disinfectant Residual, Disinfection By-Products & By-Product Precursors

Contaminant Name	Sample Date	Units	MCL (MRDL)	MCLG (MRDLG)	Highest Running Annual Average	Range	Violation?	Major Sources
TTHMs[1]	Quarterly 2012	ppb	80	N/A	38.8	27.1 - 41.0	No	By-product of drinking water chlorination
HAA5 (5 haloacetic acids)	Quarterly 2012	ppb	60	N/A	46.3	22.7 - 49.8	No	By-product of drinking water chlorination
Chlorine	Daily; plus 30 samples taken monthly	ppm	4	4	0.91	.41 - 1.05	No	Water additive used to control microbes
Total Organic Carbon - Raw H_20[2]	2012	ppm	---	TT	1.67	.79 - 3.43	No	Naturally present in the environment
Total Organic Carbon - Finished Water[2]	2012	ppm	---	TT	0.67	.50 - .97	No	Naturally present in the environment

[1] *Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5) are produced by a chemical reaction between chlorine and organic matter in the water. Optimizing disinfection in drinking water minimizes the production of these two disinfection by-products.*

[2] *Total Organic Carbon has no known health effects; however TOC provides a medium for the formation of disinfection by-products.*

Microbiological Contaminants

Turbidity	Sample Date	Units	MCL	MCLG	Maximum Detected	Range	Violation?	Major Sources
Turbidity[3]	(Continuous) Every two hours during water treatment plant operation	ntu	(TT)= 0.3 ntu in 95% of samples	N/A	0.12	0.03 - 0.12	No	Soil runoff

[3] *Turbidity is a measure of the cloudiness caused by suspended particles in the water. Turbidity is monitored and recorded because it is a good indicator of the effectiveness of the water treatment plant filtration system. 100% of the samples met the turbidity limit of < 0.3 NTU throughout 2012.*

Inorganic Compounds, Secondary & Unregulated Contaminants[4]

Contaminant Name	Sample Date	Units	Minimum Reporting Level	SMCL	Detected Level	Violation?	Major Sources
Total Sodium[5]	February 10, 2012	ppm	0.1	---	5.5	Unregulated	Runoff/leaching from natural deposits
Chloride	February 23, 2012	ppm	1	250	3.3	No	Most chloride is attached to sodium in the form of sodium chloride (table salt)
Bromodichloromethane[4]	June 12, 2012	ppb	0.5	---	2	Unregulated	By-product of chlorine disinfection, combined with organic matter
Chloroform[4]	June 12, 2012	ppb	0.5	---	30.3	Unregulated	By-product of chlorine disinfection, combined with organic matter
Zinc	March 4, 2012	ppm	0.02	5	0.06	No	Erosion of natural deposits
Total Dissolved Solids	February 8, 2012	ppm	1	500	50	No	Erosion of natural and unnatural deposits

[4] *Monitoring for unregulated contaminants helps the EPA to determine where certain contaminants occur and whether they need to regulate those contaminants in the future.*

[5] *Sodium is an unregulated contaminant, but it is recommended its content in drinking water be limited to below 20.0 ppm.*

Water Quality Data

Disinfectant Residual, Disinfection By-Products, and By-Product Precursors

Contaminant Name	Sample Date	Units	MCL (MRDL)	MCLG (MRDLG)	Running Annual Avg.	Range	Violation?	Major Sources
TTHMs[1]	Quarterly 2011	ppb	80 ppb	N/A	35.5	29.0 – 45.5	No	By-product of drinking water chlorina-
HAA5 (5 halo acetic acids)	Quarterly 2011	ppb	60 ppb	N/A	35.6	28.1 – 42.6	No	By-product of drinking water chlorina-
Chlorine	Daily; plus 30 samples taken monthly	ppm	4	4	0.79	.35 - 1.21	No	Water additive used to control microbes
Total Organic Carbon - Raw H20[2]	2011	ppm	---	TT	1.15	.82 – 1.61	No	Naturally present in the environment
Total Organic Carbon - Finished Water[2]	2011	ppm	---	TT	0.58	ND - .91	No	Naturally present in the environment

[1]Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5) are produced by a chemical reaction between chlorine and organic matter in the water. Optimizing disinfection in drinking water minimizes the production of these two disinfection by-products.

[2]Total Organic Carbon has no health effects; however TOC provides a medium for the formation of disinfection by-products.

Microbiological Contaminants

Turbidity	Sample Date	Units	MCL	MCLG	Max. Detected	Range	Violation?	Major Sources
Turbidity[1]	(Continuous) Every two hours during water treatment plant operation	ntu	(TT) = 0.3 ntu in 95% of samples	N/A	0.15	0.02 - 0.15	No	Soil runoff

[1]Turbidity is a measure of the cloudiness or suspended particles in the water. Turbidity is monitored and recorded because it is a good indicator of the effectiveness of the water treatment plant filtration system. All samples met the turbidity limit of < 0.3 NTU throughout 2010.

Inorganic Compounds, Secondary & Unregulated Contaminants[1]

Contaminant Name	Sample Date	Units	Min. Report Limit	SMCL	Detected Level	Violation?	Major Sources
Zinc	22-Feb-11	ppm	0.02	5	0.04	No	Erosion of natural deposits.
Total Dissolved Solids	22-Feb-11	ppm	1	500	60	No	Erosion of natural and unnatural deposits.
Chloride	22-Feb-11	ppm	1	250	5	No	Most chloride is attached to sodium in the form of sodium chloride (table salt).
Bromodichloromethane	19-Jul-11	ppb	0.5	---	2.9	---	By-product of chlorine disinfection, combined with organic matter.
Chloroform	19-Jul-11	ppb	0.5	---	25.6	---	By-product of chlorine disinfection, combined with organic matter.
Total Sodium[2]	22-Feb-11	ppm	0.1	---	9.8	---	Runoff/leaching from natural deposits.

[1]Monitoring for unregulated contaminants helps the EPA to determine where certain contaminants occur and whether they need to regulate those contaminants in the future.

[2]Sodium is an unregulated contaminant, but it's MCL and recommended content in drinking water, should be limited to below 20.0 ppm.

Lead & Copper

Lead/Copper Corrosion	Sample Dates	Units	MCLG	Action Level	90th Percentile[1]	Violation?	Major Sources
Lead—lead at consumers tap[2]	Round 16 June 2, 2011 thru June 8th, 2011	ppb	0	15	ND	No	Corrosion of household plumbing systems. (Samples are collected by homeowners at a tap inside of their home.)
Copper—copper at consumers tap[3]	Round 16 June 2, 2011 thru June 8th, 2011	ppm	1.3	1.3	ND	No	Corrosion of household plumbing systems. (Samples are collected by homeowners at a tap inside of their home.)

[1] The 90th percentile is the highest result found in 90% of the samples when they are listed in order from the lowest to the highest results. (30 samples taken in 2011)