

## 2005 CONVENTIONAL PHYSICAL AND CHEMICAL PARAMETERS

PARAMETERS	NYS DOH MCL	US EPA MCLG	W05 raw			W05 treated			W23A raw			W23A treated			SOURCES IN DRINKING WATER
			# SAMPLES	RANGE	AVG	# SAMPLES	RANGE	AVG	# SAMPLES	RANGE	AVG	# SAMPLES	RANGE	AVG	
Alkalinity (mg/L CaCO <sub>3</sub> )	-		4	53.6 - 57.1	55.1	4	52.2 - 53.8	52.9	1	20.6	20.6	1	75.5	75.5	Erosion of natural deposits
Aluminum (µg/L)	50 - 200		-	-	-	1	10	10	-	-	-	-	-	-	Erosion of natural deposits
Barium (µg/L)			-	-	-	1	0.025	0.025	-	-	-	-	-	-	Erosion of natural deposits
Calcium (mg/L)			4	31.4 - 34.3	32.8	4	31.0 - 33.3	32.4	1	17.3	17.3	1	17.3	17.3	Erosion of natural deposits
Chloride (mg/L)	250		4	84 - 96	93	4	95 - 97	96	1	30	30	1	37	37	Naturally occurring; road salt
Chlorine Residual, free (mg/L)			-	-	-	48	0.52 - 1.40	0.87	-	-	-	2	1.10 - 1.12	1.11	Water additive for disinfection
Color (color units)	15		14	2 - 7	4	48	2 - 7	4	1	5	5	2	6 - 7	7	Presence of iron, manganese, and organics in water
Copper (mg/L)	1.3	1.3	4	0.012 - 0.015	0.014	5	0.004 - 0.005	0.004	1	0.011	0.011	1	0.017	0.017	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Corrosivity (Langelier index)	0		-	-	-	-	-	-	1	-2.77	-2.77	-	-	-	
Fluoride (mg/L)	2.2		14	ND	ND	48	0.84 - 1.09	0.98	1	ND	ND	2	1.00 - 1.06	1.03	Erosion of natural deposits; water additive which promotes strong teeth; runoff from fertilizer
Hardness (mg/L CaCO <sub>3</sub> )			4	147.6 - 159.8	153.8	4	147.0 - 156.0	152.7	1	79.8	79.8	1	81.5	81.5	Erosion of natural deposits
Hardness (grains/gallon[US]CaCO <sub>3</sub> )			4	8.5 - 9.2	8.9	4	8.5 - 9.0	8.8	1	4.6	4.6	1	4.7	4.7	Erosion of natural deposits
Iron (µg/L)	300		-	-	-	1	ND	ND	1	140	140	1	760	760	Naturally occurring
Magnesium (mg/L)			4	16.8 - 18.0	17.5	4	16.9 - 17.7	17.4	1	8.9	8.9	1	9.3	9.3	Erosion of natural deposits
Manganese (µg/L)	300		-	-	-	1	21	21	1	26	26	1	73	73	Naturally occurring
Nickel (mg/L)			-	-	-	1	ND	ND	-	-	-	-	-	-	Erosion of natural deposits
Nitrate (mg/L nitrogen)	10	10	4	5.76 - 5.87	5.83	4	5.79 - 5.88	5.84	1	8.63	8.63	1	6.30	6.30	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (mg/L nitrogen)	1	1	3	ND - 0.001	0.001	3	ND	ND	1	0.001	0.001	1	0.001	0.001	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
pH (pH units) <sup>(1)</sup>	6.5 - 8.5		14	6.37 - 6.48	6.41	48	7.96 - 8.16	8.07	1	6.06	6.06	2	7.23 - 7.24	7.24	
Phosphate, Ortho- (mg/L) <sup>(2)</sup>			14	<0.10 - 0.41	0.18	48	0.36 - 2.71	2.07	1	0.28	0.28	2	2.14 - 2.80	2.47	Water additive for corrosion control
Phosphate, Total (mg/L)			-	-	-	-	-	-	1	0.03	0.03	1	4.26	4.26	Water additive for corrosion control
Phosphorus, Total (mg/L)			-	-	-	-	-	-	1	0.01	0.01	1	1.39	1.39	Water additive for corrosion control
Selenium (mg/L)			-	-	-	1	ND	ND	-	-	-	-	-	-	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (mg/L)	NDL		-	-	-	1	45.7	45.7	1	15.7	15.7	1	46.9	46.9	Naturally occurring; road salt; water softeners; animal waste
Specific Conductance (µmho/cm)	-		14	555 - 565	559	48	552 - 583	563	1	273	273	2	394 - 397	396	
Sulfate (mg/L)	250		4	43.0 - 44.6	43.9	4	42.9 - 44.5	43.8	1	26.9	26.9	1	37.3	37.3	Naturally occurring
Temperature (°F)	-		14	55 - 60	58	48	55 - 64	59	1	58	58	2	57 - 58	58	
Total Dissolved Solids (mg/L)	500		-	-	-	1	341	341	1	171	171	-	-	-	Metals and salts naturally occurring in the soil; organic matter
Turbidity (NTU)	5		14	0.06 - 0.27	0.11	48	0.09 - 0.29	0.15	1	0.15	0.15	2	0.76	0.76	Erosion of natural deposits
Zinc (mg/L)	5		-	-	-	1	ND	ND	1	0.012	0.012	1	0.275	0.275	Naturally occurring

## 2005 MICROBIAL PARAMETERS

Total Coliform Bacteria	5%	0	12	-	ND	14	-	ND	1	-	ND	1	-	ND	Naturally present in the environment
<i>E.coli</i> (CFU/100mL)	<sup>(3)</sup>	0	12	-	ND	14	-	ND	1	-	ND	1	-	ND	Human and animal fecal waste
Heterotrophic Plate Count (CFU/mL)	NA		12	ND	ND	12	ND - 1	ND	1	ND	ND	1	ND	ND	Naturally present in the environment

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal  
mg/L = milligrams per liter (10<sup>-3</sup> grams per liter)

µg/L = micrograms per liter (10<sup>-6</sup> grams per liter)

NDL = No Designated Limit

NA = Not Applicable

ND = Not Detected

(1) The average for pH is the median value.

(2) The reported levels of ortho-phosphate are greater than total phosphate due to the difference between the two testing methods. Ortho-phosphate is tested by colorimetric method, which is subjected to the interference of high iron, manganese and other discoloring agents. Total phosphate is tested by ion-chromatography, which is not subjected to the same interference components in colorimetric method.

(3) If a sample and its repeat sample are both positive for coliform bacteria and one of the two samples is positive for *E. coli*, then an MCL violation has occurred.

## 2005 CONVENTIONAL PHYSICAL AND CHEMICAL PARAMETERS

PARAMETERS	NYS DOH MCL	US EPA MCLG	W32 treated			W43A treated			W50A raw			W50 treated			SOURCES IN DRINKING WATER
			# SAMPLES	RANGE	AVG	# SAMPLES	RANGE	AVG	# SAMPLES	RANGE	AVG	# SAMPLES	RANGE	AVG	
Alkalinity (mg/L CaCO <sub>3</sub> )	-		1	128.0	128.0	6	176.4 - 189.3	184.3	2	145.7 - 152.6	149.2	2	144.0 - 149.6	146.8	Erosion of natural deposits
Aluminum (µg/L)	50 - 200		-	-	-	1	11	11	-	-	-	1	26	26	Erosion of natural deposits
Barium (µg/L)			-	-	-	1	0.029	0.029	-	-	-	1	0.05	0.05	Erosion of natural deposits
Calcium (mg/L)			1	56.9	56.9	6	63.9 - 74.0	69.1	2	60.2 - 63.6	61.9	2	60.6 - 64.1	62.3	Erosion of natural deposits
Chloride (mg/L)	250		1	93	93	2	55 - 57	56	2	89	89	2	89	89	Naturally occurring; road salt
Chlorine Residual, free (mg/L)			3	0.84 - 1.00	0.91	15	0.03 - 1.55	0.82	-	-	-	25	0.70 - 1.18	0.95	Water additive for disinfection
Color (color units)	15		3	3 - 8	5	15	5 - 13	7	6	3 - 5	4	25	1 - 7	4	Presence of iron, manganese, and organics in water
Copper (mg/L)	1.3	1.3	1	0.142	0.142	7	0.005 - 0.034	0.016	2	0.010 - 0.011	0.011	3	0.003 - 0.006	0.004	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Corrosivity (Langelier index)	0		-	-	-	5	-0.10 to 0.01	-0.06	-	-	-	-	-	-	
Fluoride (mg/L)	2.2		3	0.95 - 1.02	0.98	15	0.14 - 1.23	0.97	6	ND - 0.11	<0.10	25	0.92 - 1.04	1.00	Erosion of natural deposits; water additive which promotes strong teeth; runoff from fertilizer
Hardness (mg/L CaCO <sub>3</sub> )			1	248.3	248.3	6	279.4 - 323.1	301.9	2	281.7 - 294.2	288.0	2	281.9 - 297.0	289.5	Erosion of natural deposits
Hardness (grains/gallon[US]CaCO <sub>3</sub> )			1	14.4	14.4	6	16.2 - 18.7	17.5	2	16.2 - 17.0	16.6	2	16.3 - 17.2	16.7	Erosion of natural deposits
Iron (µg/L)	300		-	-	-	7	500 - 610	560	-	-	-	1	ND	ND	Naturally occurring
Magnesium (mg/L)			1	25.8	25.8	6	29.1 - 33.6	31.4	2	31.9 - 32.9	32.4	2	31.7 - 33.3	32.5	Erosion of natural deposits
Manganese (µg/L)	300		-	-	-	7	114 - 124	120	-	-	-	1	ND	ND	Naturally occurring
Nickel (mg/L)			-	-	-	1	0.004	0.004	-	-	-	1	ND	ND	Erosion of natural deposits
Nitrate (mg/L nitrogen)	10	10	1	7.99	7.99	2	0.41 - 0.45	0.43	2	3.03	3.03	2	3.03	3.03	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (mg/L nitrogen)	1	1	1	0.003	0.003	2	ND - 0.006	0.003	2	ND - 0.001	ND	2	ND	ND	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
pH (pH units) <sup>(1)</sup>	6.5 - 8.5		3	7.01 - 7.09	7.02	15	7.14 - 7.52	7.25	6	6.86 - 7.02	6.93	25	7.39 - 8.31	8.22	
Phosphate, Ortho- (mg/L) <sup>(2)</sup>			3	1.47 - 2.41	1.89	15	0.91 - 3.12	2.03	6	<0.10 - 0.63	0.29	25	1.65 - 2.57	2.09	Water additive for corrosion control
Phosphate, Total (mg/L)			-	-	-	5	0.43 - 5.58	4.18	-	-	-	-	-	-	Water additive for corrosion control
Phosphorus, Total (mg/L)			-	-	-	5	0.14 - 1.82	1.36	-	-	-	-	-	-	Water additive for corrosion control
Selenium (mg/L)			-	-	-	1	0.002	0.002	-	-	-	1	ND	ND	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (mg/L)	NDL		-	-	-	7	15.3 - 19.2	17.1	-	-	-	1	27.7	27.7	Naturally occurring; road salt; water softeners; animal waste
Specific Conductance (µmho/cm)	-		3	745 - 755	751	15	280 - 690	646	6	716 - 728	722	25	712 - 731	723	
Sulfate (mg/L)	250		1	74.6	74.6	2	83.7 - 84.0	83.9	2	78.8	78.8	2	78.8	78.8	Naturally occurring
Temperature (°F)	-		3	58 - 60	59	15	44 - 60	58	6	55 - 58	57	25	55 - 59	57	
Total Dissolved Solids (mg/L)	500		-	-	-	5	398 - 441	413	-	-	-	1	439	439	Metals and salts naturally occurring in the soil; organic matter
Turbidity (NTU)	5		3	0.17	0.17	15	0.38 - 2.79	1.55	6	0.06 - 0.21	0.11	25	0.08 - 0.16	0.12	Erosion of natural deposits
Zinc (mg/L)	5		-	-	-	7	0.004 - 0.385	0.292	-	-	-	1	0.003	0.003	Naturally occurring

## 2005 MICROBIAL PARAMETERS

Total Coliform Bacteria	5%	0	1	-	ND	9	-	ND	6	-	ND	8	-	ND	Naturally present in the environment
<i>E.coli</i> (CFU/100mL)	<sup>(3)</sup>	0	1	-	ND	9	-	ND	6	-	ND	8	-	ND	Human and animal fecal waste
Heterotrophic Plate Count (CFU/mL)	NA		1	ND	ND	6	ND - 1	ND	6	ND	ND	7	ND - 1	ND	Naturally present in the environment

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal  
mg/L = milligrams per liter (10<sup>-3</sup> grams per liter)

µg/L = micrograms per liter (10<sup>-6</sup> grams per liter)

NDL = No Designated Limit

NA = Not Applicable

ND = Not Detected

(1) The average for pH is the median value.

(2) The reported levels of ortho-phosphate are greater than total phosphate due to the difference between the two testing methods. Ortho-phosphate is tested by colorimetric method, which is subjected to the interference of high iron, manganese and other discoloring agents. Total phosphate is tested by ion-chromatography, which is not subjected to the same interference components in colorimetric method.

(3) If a sample and its repeat sample are both positive for coliform bacteria and one of the two samples is positive for *E. coli*, then an MCL violation has occurred.