

NORWALK MUNICIPAL WATER SYSTEM 2006 ANNUAL WATER QUALITY REPORT

Results are from the most recent testing performed in accordance with state and federal drinking water regulations

PRIMARY STANDARDS MONITORED AT THE SOURCE-MANDATED FOR PUBLIC HEALTH

ORGANIC CHEMICALS (µg/l)	GROUNDWATER		MWD'S SURFACE WATER		PRIMARY MCL	MCLG or PHG	MAJOR SOURCES IN DRINKING WATER
	AVERAGE	RANGE	AVERAGE	RANGE			
Trichloroethylene (TCE)	0.3	ND-1.2	(a)	(a)	5	0.8 (a)	Discharge from metal degreasing sites and other factories

INORGANICS Sampled from 2004 to 2006 (b)							
Aluminum (mg/l)	ND	ND	0.03	ND-0.19	1	0.6 (a)	Erosion of natural deposits; residue from surface water treatment processes
Arsenic (µg/l)	4.9	ND-14	ND	ND-2.4	50	0.004 (a)	Erosion of natural deposits; glass/electronics production wastes; runoff
Barium (mg/l)	0.1	ND-0.2	ND	ND	1	2 (a)	Oil drilling waste and metal refinery discharge; erosion of natural deposits
Fluoride (mg/l)	0.36	0.27-0.47	0.15	0.13-0.18	2.0	1 (a)	Erosion of natural deposits, water additive that promotes strong teeth
Nitrate (mg/l as NO3)	3.5	ND-14	0.46	0.45-0.47	45	45 (a)	Runoff and leaching from fertilizer use/septic tanks/sewage, natural erosion

RADIOLOGICAL - (pCi/l) Analyzed 4 consecutive quarters every 4 years (results are from 2003 to 2006) (b)							
Gross Alpha (d)	2.2	ND-18	ND	ND-3.2	15 (f)	0	Erosion of natural deposits. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Gross Beta	NA	NA	ND	ND-6.4	50 (f)	0	Decay of natural and man-made deposits
Radium 228	ND	ND-0.51	NA	NA	5	-	Erosion of natural deposits
Uranium	3.75	ND-5.1	0.4	ND-1.2	20 (f)	0.5 (a)	Erosion of natural deposits

PRIMARY STANDARDS MONITORED IN THE DISTRIBUTION SYSTEM - MANDATED FOR PUBLIC HEALTH

MICROBIALS	DISTRIBUTION SYSTEM		PRIMARY MCL	MCLG or PHG	
	AVERAGE % POSITIVE	RANGE % POSITIVE			
Total Coliform Bacteria	0%	0%	5%	0%	Naturally present in the environment
Fecal Coliform and E. Coli Bacteria	0%	0%	0%	0%	Human and animal fecal waste
No. of Acute Violations	0	0	-	-	

DISINFECTION BY-PRODUCTS (g)	DISTRIBUTION SYSTEM		PRIMARY MCL	MCLG or PHG	
	AVERAGE	RANGE			
Trihalomethanes-TTHMS (µg/l)	23	ND-59.1	80	-	By-product of drinking water chlorination
Haloacetic Acids (µg/l)	9.97	ND-23.4	60	-	By-product of drinking water disinfection

	DISTRIBUTION SYSTEM		PRIMARY	MCLG	
	AVERAGE	RANGE			
Turbidity (NTU)	0.3	0.1-4.8	TT	-	Soil runoff
Total Chlorine Residual (mg/l)	1.19	0.64-1.75	4.0 (h)	4.0 (i)	Drinking water disinfectant added for treatment

AT THE TAP PHYSICAL CONSTITUENTS 63 sites sampled in 2006	DISTRIBUTION SYSTEM		PRIMARY MCL	MCLG or PHG	
	90%ile	# OF SITES ABOVE THE AL			
Copper (mg/l)	0.22 (j)	0	1.3 AL	0.17 (a)	Internal corrosion of household plumbing, erosion of natural deposits
Lead (µg/l)	6.1 (j)	0	15 AL	2 (a)	Internal corrosion of household plumbing, industrial manufacturer discharges

SECONDARY STANDARDS MONITORED AT THE SOURCE-FOR AESTHETIC PURPOSES

	GROUNDWATER		MWD'S SURFACE WATER		SECONDARY MCL	MCLG or PHG	
	AVERAGE	RANGE	AVERAGE	RANGE			
Aggressiveness Index (corrosivity)	12.0	11.9-12.2	0.18	0.02-0.30	Non-corrosive	-	Natural/industrially-influenced balance of hydrogen/carbon/oxygen in water
Aluminum (µg/l) (k)	ND	ND	27	ND-190	200	600 (a)	Erosion of natural deposits, surface water treatment process residue
Chloride (mg/l)	37.3	18-79	59	42-98	500	-	Runoff/leaching from natural deposits, seawater influence
Color (color units)	0.38	ND-7.5	1.67	1.0-4.0	15	-	Naturally-occurring organic materials
Conductivity (µmhos/cm)	624	490-1100	576.7	411-829	1,600	-	Substances that form ions when in water, seawater influence
Iron (µg/l)	18.2	ND-200	ND	ND	300	-	Leaching from natural deposits, industrial wastes
Langlier Index (corrosivity) (SI)	NA	NA	NA	NA	Non-corrosive	-	Natural/industrially-influenced balance of hydrogen/carbon/oxygen in water
Manganese (µg/l)	37.4	31-41	ND	ND	50	-	Leaching from natural deposits
Odor (threshold odor number)	0.3	ND-1	2	2.0-2.0	3	-	Naturally-occurring organic materials
Sulfate (mg/l)	80	41-290	105.7	55-162	500	-	Runoff/leaching from natural deposits, industrial wastes
Total Dissolved Solids (mg/l)	366.5	290-710	331.7	236-481	1,000	-	Runoff/leaching from natural deposits
Turbidity (NTU)	0.03	ND-0.36	0.05	0.04-0.07	5	-	Soil runoff

SECONDARY STANDARDS MONITORED IN THE DISTRIBUTION SYSTEM-FOR AESTHETIC PURPOSES

GENERAL PHYSICAL CONSTITUENTS	DISTRIBUTION SYSTEM		SECONDARY MCL	MCLG or PHG	
	AVERAGE	RANGE			
Color (color units)	<3	<3-5	15	-	Naturally-occurring organic materials
Odor (threshold odor number)	1	1	3	-	Naturally-occurring organic materials

ADDITIONAL CHEMICALS OF INTEREST

	GROUNDWATER		MWD'S SURFACE WATER	
	AVERAGE	RANGE	AVERAGE	RANGE
Alkalinity (mg/l)	177	160-230	77	63-87
Boron (µg/l)	NA	NA	150	130-220
Bromate (µg/l)	NA	NA	2	ND-5.6
Calcium (mg/l)	61.6	43-130	32	24-43
Magnesium (mg/l)	10.9	7.3-26	14.7	11-20.5
N-Nitrosodimethylamine (ng/l)	NA	NA	NA	ND-3.0
Perchlorate (µg/l)	NA	NA	ND	ND-4.1
pH (standard unit)	7.8	7.6-8	8.2	8.1-8.4
Potassium (mg/l)	3.2	1.7-5.4	2.9	2.3-4.0
Sodium (mg/l)	49.3	24-130	58	39-91
Total Hardness (mg/l)	198.3	140-420	140	120-161
Total Organic Carbon (mg/l)	NA	NA	2.3	1.8-2.8
Vanadium (µg/l)	NA	NA	ND	ND-3.5

FOOTNOTES

- (a) California Public Health Goal (PHG). Other advisory levels listed in this column are federal Maximum Contaminant Level Goals (MCLGs).
- (b) Indicates dates sampled for groundwater sources only.
- (c) Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
- (d) Gross alpha standard also includes Radium-226 standard.
- (e) Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
- (f) MCL compliance based on 4 consecutive quarters of sampling.
- (g) Running annual average used to calculate average, range, and MCL compliance.
- (h) Maximum Residual Disinfectant Level (MRDL)
- (i) Maximum Residual Disinfectant Level Goal (MRDLG)
- (j) 90th percentile from the most recent sampling at selected customer taps.
- (k) Aluminum has primary and secondary standards.

ABBREVIATIONS

< = less than	SI = saturation index	ND = constituent not detected at the reporting limit
NA = constituent not analyzed	pCi/l = picoCuries per liter	mg/l = milligrams per liter or parts per million (equivalent to 1 drop in 42 gallons)
NTU = nephelometric turbidity units	µmhos/cm = micromhos per centimeter	µg/l = micrograms per liter or parts per billion (equivalent to 1 drop in 42,000 gallons)
		ng/l = nanograms per liter or parts per trillion (equivalent to 1 drop in 42,000,000 gallons)

DEFINITIONS

- Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.
- Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.
- Maximum Residual Disinfectant Level (MRDL):** The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.
- Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.
- Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.
- Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- Primary Drinking Water Standard (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Special note on Radon: Radon is a radioactive gas that you cannot taste, see or smell, and is a known human carcinogen. It is found throughout the country. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering and other household activities. Radon entering the home through tap water is a small source compared to radon entering the home through soil. If you are concerned about radon in your home, an easy and inexpensive test can show you how much radon is in your home's indoor air. There are simple and inexpensive ways to fix your home if the level of radon in air is 4 picoCuries per liter (pCi/L) of air or higher. For additional information, call your State radon program or call EPA's Radon Hotline (800-SOS-RADON).