

MANHATTAN BEACH 2019 ANNUAL WATER QUALITY REPORT

Only detected results are shown, and are from the most recent testing performed in accordance with state and federal drinking water regulations

SUBSTANCES MONITORED FOR PUBLIC HEALTH

	GROUNDWATER		SURFACE WATER		MCL	MCLG or PHG (a)	MAJOR SOURCES IN DRINKING WATER
	AVERAGE	RANGE	AVERAGE	RANGE			
INORGANIC CHEMICALS (b)							
Aluminum (µg/L)	1.4	ND-2.7	101	ND-290	1,000	600	Erosion of natural deposits; residue from surface water treatment processes
Arsenic (µg/L)	0.14	ND-0.27	ND	ND	10	0.004	Erosion of natural deposits; glass/electronics production wastes; runoff
Barium (µg/L)	55	ND-110	ND	ND	1,000	2,000	Oil drilling waste and metal refinery discharge; erosion of natural deposits
Chromium, total (µg/L)	0.08	ND-0.16	ND	ND	50	100	Discharge from steel and pulp mills/chrome plating; erosion of natural deposits
Fluoride (mg/L)	0.30	0.27-0.33	0.70	0.10-0.90	2	1	Erosion of natural deposits, water additive that promotes strong teeth
Nickel (µg/L)	0.95	ND-1.9	ND	ND	100	12	Erosion of natural deposits, discharge from metal factories
Nitrate (mg/L as N)	ND	ND	0.5	0.5	10	10	Runoff and leaching from fertilizer use/septic tanks/sewage, natural erosion
Selenium (µg/L)	0.7	ND-1.4	ND	ND	50	30	Discharge from petroleum/glass/metal refineries and mines, natural erosion

RADIOLOGICAL (c)							
Gross Alpha (pCi/L)	3.3	ND-6.8	ND	ND-3	15	0	Erosion of natural deposits
Uranium (pCi/L)	ND	ND	ND	ND-1	20	0.43	Erosion of natural deposits

MICROBIALS	DISTRIBUTION SYSTEM		MCL (STATE/FEDERAL)	MCLG or PHG (a)	MAJOR SOURCES IN DRINKING WATER
	HIGHEST % POSITIVE IN A MONTH	RANGE % POSITIVE			
Total Coliform Bacteria	0%	0%	5% of Monthly Samples/TT	0%	Naturally present in the environment
E.coli Bacteria	0%	0%	1 out of 2 consecutive Total Coliform samples/TT	0%	Human and animal fecal waste
No. of Acute Violations	0	0	0	0	

DISINFECTION RESIDUAL	DISTRIBUTION SYSTEM		MRDL	MRDLG	MAJOR SOURCES IN DRINKING WATER
	AVERAGE	RANGE			
Chlorine/chloramine Residual (mg/ as CL ₂)	1.6	0.4 - 2.7	4.0	4.0	Drinking water disinfectant added for treatment

DISINFECTION BYPRODUCTS (d)	HIGHEST LRAA	RANGE OF RESULTS	MCL	MCLG or PHG (a)	MAJOR SOURCES IN DRINKING WATER
Trihalomethanes-TTHMS (µg/L)	34	15-67	80	-	By-product of drinking water disinfection
Haloacetic Acids (µg/L)	4.7	3.9-9.7	60	-	By-product of drinking water disinfection
Bromate (µg/L) (e)	5.6	ND-8.4	10	0.1	By-product of drinking water disinfection

INORGANICS	DISTRIBUTION SYSTEM		MCL	MCLG or PHG (a)	MAJOR SOURCES IN DRINKING WATER
	AVERAGE	RANGE			
Fluoride (mg/L) (e)	0.7	0.1-0.9	2	1	Runoff and leaching from natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories

LEAD AND COPPER AT THE TAP	DISTRIBUTION SYSTEM		AL	MCLG or PHG (a)	MAJOR SOURCES IN DRINKING WATER
	90TH PERCENTILE	# SITES ABOVE AL			
Copper (mg/L)	0.26 (f)	0	1.3 AL	0.3	Internal corrosion of household plumbing, erosion of natural deposits
Lead (µg/L)	ND (f)	1	15 AL	0.2	Internal corrosion of household plumbing, industrial manufacturer discharges

(g)

SECONDARY STANDARDS MONITORED AT THE SOURCE FOR AESTHETIC PURPOSES

CONSTITUENT (b)	GROUNDWATER		SURFACE WATER		MCL	MCLG or PHG (a)	MAJOR SOURCES IN DRINKING WATER
	AVERAGE	RANGE	AVERAGE	RANGE			
Aluminum (µg/L) (h)	1.4	ND-2.7	101	ND-290	200	600	Erosion of natural deposits, surface water treatment process residue
Chloride (mg/L)	205	170-240	56	46-62	500	-	Runoff/leaching from natural deposits, seawater influence
Color (color units)	7.5	5-10	ND	ND-2	15	-	Naturally-occurring organic materials
Conductivity (umhos/cm)	1400	1200-1600	490	435-521	1,600	-	Substances that form ions when in water, seawater influence
Iron (µg/L)	60	ND-120	ND	ND-243	300	-	Leaching from natural deposits, industrial wastes
Manganese (µg/L) (i)	52	43-60	ND	ND	50, NL = 500	-	Leaching from natural deposits
Odor (threshold odor number)	2	2	ND	ND-1	3	-	Naturally-occurring organic materials
Sulfate (mg/L)	129	88-170	74	56-93	500	-	Runoff/leaching from natural deposits, industrial wastes
Total Dissolved Solids (mg/L)	800	680-920	284	244-312	1,000	-	Runoff/leaching from natural deposits
Turbidity (NTU)	0.3	0.26-0.33	ND	ND	5	-	Soil runoff

SUBSTANCES MONITORED IN THE DISTRIBUTION SYSTEM-FOR AESTHETIC PURPOSES

CONSTITUENT	DISTRIBUTION SYSTEM		MCL	MCLG or PHG (a)	MAJOR SOURCES IN DRINKING WATER
	AVERAGE	RANGE			
Color (color units)	0.2	ND-5	15	-	Naturally-occurring organic materials
Odor (threshold odor number)	ND	ND	3	-	Naturally-occurring organic materials
Turbidity (NTU)	0.6	0.19-1.0	5	-	Soil runoff

OTHER PARAMETERS

CONSTITUENT (b)	GROUNDWATER		SURFACE WATER		Notification Level or PHG (a)	MAJOR SOURCES IN DRINKING WATER
	AVERAGE	RANGE	AVERAGE	RANGE		
GENERAL MINERALS						
Alkalinity (mg/L)	250	250	74	67-84	-	Runoff/leaching of natural deposits; carbonate, bicarbonate, hydroxide, and occasionally borate, silicate, and phosphate
Calcium (mg/L)	100	79-120	27	23-30	-	Runoff/leaching of natural deposits
Magnesium (mg/L)	34	30-38	13	11-14	-	Runoff/leaching of natural deposits
Potassium (mg/L)	10	9-11	2.6	2.2-2.9	-	Salt present in the water; naturally-occurring
Sodium (mg/L)	125	110-140	53	46-57	-	Salt present in the water; naturally-occurring
Total Hardness (mg/L)	388	320-455	116	101-130	-	Runoff/leaching of natural deposits; sum of polyvalent cations, generally magnesium and calcium present in the water
SUBSTANCES WITH NOTIFICATION LEVELS						
	AVERAGE	RANGE	AVERAGE	RANGE	Notification Level or PHG (a)	MAJOR SOURCES IN DRINKING WATER
Boron (µg/L)	NA	NA	133	120-160	1,000	Runoff/leaching from natural deposits; industrial wastes
Chlorate (µg/L)	NA	NA	32	ND-55	800	Byproduct of drinking water chlorination; industrial processes
MISCELLANEOUS						
	AVERAGE	RANGE	AVERAGE	RANGE	Notification Level or PHG (a)	MAJOR SOURCES IN DRINKING WATER
Corrosivity	13	13	12	12	-	Natural/industrially-influenced balance of hydrogen/carbon/oxygen in water
Hexavalent chromium (µg/L)	0.03	ND-0.07	ND	ND	0.02	Electroplating factory waste, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Perfluorohexanoic Acid (PFHxA) (ng/L)	NA	NA	2.5	2.2-2.6		Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes
pH (standard unit)	8.0	7.7-8.2	8.4	8.4-8.5	-	

FOOTNOTES

- (a) Advisory Levels include: California PHGs and NLs; and Federal MCLGs and MRDLGs.
- (b) The State allows monitoring some contaminants less than once per year because the concentrations do not vary frequently. This data is from the most recent monitoring (2017-2019).
- (c) Current results for radiological data cover samples from 2013-2018.
- (d) LRAA is used to calculate averages, ranges, and State and Federal MCL compliance.
- (e) Data are taken from imported water at MWD's treatment plant effluents.
- (f) 90th percentile from the most recent sampling at selected customer taps (40 samples in 2019)
- (g) There were 7 schools in the service area that requested lead testing.
- (h) Constituent has primary and secondary standards.
- (i) Manganese exceeded the secondary MCL in one well in 2018. Water from this well is blended with imported surface water in the distribution system to reduce concentrations. The secondary MCL is set to protect against unpleasant effects such as color, taste, odor, and staining of laundry and plumbing fixtures. A manganese MCL exceedance does not pose a health risk.

ABBREVIATIONS

- ND = Not Detected at the reporting limit
- NA = Not Analyzed during this reporting period
- MFL = Million Fibers per Liter
- mg/L = Milligrams per Liter or parts per million (equivalent to 1 drop in 42 gallons)
- 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)
- NTU = Nephelometric Turbidity Units
- pCi/L = picoCuries per Liter
- umhos/cm = Micromhos per centimeter

DEFINITIONS

Location Running Annual Average (LRAA) : Locational Running Annual Averages are calculated as an average of all samples collected within a 12-month period at a single site.

Maximum Contaminant Level (MCL) : The highest level of a contaminant that is allowed in drinking water set by the State and the Environmental Protection Agency (EPA). Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect odor, taste, and appearance of drinking water. MCLs are based on the most stringent value between State and EPA MCLs. A contaminant with no MCL but requires compliance with other drinking water regulations is designated either as Treatment Technique (TT), Action Level (AL), or Notification Level (NL).

Maximum Contaminant Level Goal (MCLG) : The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs are set by the U.S.EPA.

Maximum Residual Disinfectant Level (MRDL) : The highest level of a disinfectant added allowed in drinking water. There is strong evidence that disinfectant additions are necessary for microbial control.

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 do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Notification Level (NL) : Notification levels are health-based advisory levels established by the Division of Drinking Water (DDW) for chemicals in drinking water that lack maximum contaminant levels (MCLs). When chemicals are found at concentrations greater than their notification levels, certain requirements and recommendations apply. The level at which DDW recommends removal of a drinking water source from service is called the "response level."

Primary Drinking Water Standard (PDWS) : MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

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.