

MANHATTAN BEACH 2020 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			
ORGANIC CHEMICALS							
None							
INORGANIC CHEMICALS (b)							
Aluminum (µg/L)	ND	ND	134	ND-260	1,000	600	Erosion of natural deposits; residue from surface water treatment processes
Barium (µg/L)	100	ND-110	ND	ND-107	1,000	2,000	Oil drilling waste and metal refinery discharge; erosion of natural deposits
Fluoride (mg/L)	0.26	0.24-0.27	0.70	0.40-0.90	2	1	Erosion of natural deposits, water additive that promotes strong teeth
RADIOLOGICAL (c)							
Gross Alpha (pCi/L)	ND	ND	ND	ND-3	15	0	Erosion of natural deposits
Gross Beta (pCi/L)	NA	NA	ND	ND-7	50	0	Decay of natural and man-made deposits
Radium 228 (pCi/L)	ND	ND	ND	ND-2		0.019	Erosion of natural deposits
Uranium (pCi/L)	ND	ND	1.3	ND-3	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	1.7%	ND-2		5% of Monthly Samples/TT	0%	Naturally present in the environment	
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/L as CL ₂)	1.6	0.4 - 2.8		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)	41	19-78		80	-	By-product of drinking water disinfection	
Haloacetic Acids (µg/L)	13	6.4-19		60	-	By-product of drinking water disinfection	
Bromate (µg/L) (e)	4.4	ND-6.0		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	0.4-0.9		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	RANGE	# SITES ABOVE				
Copper (mg/L)	0.26 (f)	ND-0.64	0	1.3 AL	0.3	Internal corrosion of household plumbing, erosion of natural deposits	
Lead (µg/L)	ND (f)	ND-43	1	15 AL	0.2	Internal corrosion of household plumbing, industrial manufacturer discharges	

(g)

SECONDARY STANDARDS MONITORED AT THE SOURCE FOR AESTHETIC PURPOSES

CONSTITUENT (<i>b</i>)	GROUNDWATER		SURFACE WATER		MCL	MCLG or PHG (<i>a</i>)	MAJOR SOURCES IN DRINKING WATER
	AVERAGE	RANGE	AVERAGE	RANGE			
Aluminum (µg/L) (<i>h</i>)	ND	ND	134	ND-260	200	600	Erosion of natural deposits, surface water treatment process residue
Chloride (mg/L)	205	170-240	80	51-94	500	-	Runoff/leaching from natural deposits, seawater influence
Color (color units)	2.5	ND-5	1.3	1-3	15	-	Naturally-occurring organic materials
Conductivity (umhos/cm)	1450	1300-1600	799	451-975	1,600	-	Substances that form ions when in water, seawater influence
Foaming Agents (mg/L)	0.01	ND-0.03	ND	ND	0.5	-	Municipal and industrial waste discharges
Iron (µg/L)	110	100-120	ND	ND	300	-	Leaching from natural deposits, industrial wastes
Manganese (µg/L) (<i>i</i>)	55	49-60	ND	ND	50, NL = 500	-	Leaching from natural deposits
Odor (threshold odor number)	3	2-4	2	2	3	-	Naturally-occurring organic materials
Sulfate (mg/L)	140	110-170	161	53-217	500	-	Runoff/leaching from natural deposits, industrial wastes
Total Dissolved Solids (mg/L)	800	680-920	481	255-603	1,000	-	Runoff/leaching from natural deposits
Turbidity (NTU)	0.29	0.25-0.33	ND	ND	5	-	Soil runoff

SUBSTANCES MONITORED IN THE DISTRIBUTION SYSTEM-FOR AESTHETIC PURPOSES

CONSTITUENT	DISTRIBUTION SYSTEM		MCL	MCLG or PHG (<i>a</i>)	MAJOR SOURCES IN DRINKING WATER
	AVERAGE	RANGE			
Turbidity (NTU)	0.57	0.28-0.97	5	-	Soil runoff

OTHER PARAMETERS

CONSTITUENT (<i>b</i>)	GROUNDWATER		SURFACE WATER		Notification Level or PHG (<i>a</i>)	MAJOR SOURCES IN DRINKING WATER
	AVERAGE	RANGE	AVERAGE	RANGE		
GENERAL MINERALS						
Alkalinity (mg/L)	200	180-220	106	79-120	-	Runoff/leaching of natural deposits; carbonate, bicarbonate, hydroxide, and occasionally borate, silicate, and phosphate
Calcium (mg/L)	101	82-120	52	25-67	-	Runoff/leaching of natural deposits
Magnesium (mg/L)	34	29-38	21	11-26	-	Runoff/leaching of natural deposits
Potassium (mg/L)	11	10-11	3.9	2.5-4.7	-	Salt present in the water; naturally-occurring
Sodium (mg/L)	120	100-140	79	46-98	-	Salt present in the water; naturally-occurring
Total Hardness (mg/L)	390	325-455	212	107-269	-	Runoff/leaching of natural deposits; sum of polyvalent cations, generally magnesium and calcium present in the water
SUBSTANCES WITH NOTIFICATION LEVELS						
Boron (µg/L)	NA	NA	143	130-170	1,000	Runoff/leaching from natural deposits; industrial wastes
Chlorate (µg/L)	NA	NA	57	27-76	800	Byproduct of drinking water chlorination; industrial processes
N-Nitrosodimethylamine (ng/L)	NA	NA	ND	ND-3.1	10	Byproduct of drinking water chloramination; industrial processes
MISCELLANEOUS						
Corrosivity (as saturation index) (<i>j</i>)	0.49	0.48-0.50	0.52	0.32-0.69	-	Natural/industrially-influenced balance of hydrogen/carbon/oxygen in water
pH (standard unit)	7.7	7.7-7.8	8.2	8.1-8.4	-	

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 (2018-2020).
- (c) The most current results for radiological data cover samples from 2015-2018.
- (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 standard/action level and secondary standard
- (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 secondary MCL exceedance does not pose a health risk.
- (j) Positive SI= non-corrosive; tendency to precipitate and/or deposit scale on pipes. Negative SI= corrosive tendency to dissolve calcium carbonate (measured at 20° C) Reference: Standard Methods (SM2330)

ABBREVIATIONS

- ND = Not Detected at the reporting limit
- NA = Not Analyzed during this reporting period
- 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.