

WATER QUALITY REPORT 2019



HOUSTON
PUBLIC WORKS



HOUSTON WATER QUALITY REPORT | JAN - DEC 2019

The U.S. Environmental Protection Agency (EPA) requires that all drinking water suppliers provide a Drinking Water Quality Report to their customers on an annual basis.

This annual water quality report includes important information regarding drinking water. For assistance in English, please call 311.

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al 311.

Bảng Báo Cáo Chất Lượng Nước hàng năm này cung cấp thông tin về nước uống. Để được trợ giúp bằng tiếng Việt, xin vui lòng gọi số 311.

Ce rapport annuel sur la Qualité de l'Eau fournit des informations sur l'eau potable. Pour de l'assistance en français, appelez le 311.

ب لاصنالا ءاجرلا ،تبيرعلا ءغلاب ءعاسملل .برشلا هايم صخت تامولعم بلع يوتحي هايملا ءدوج ريرق ت311

這份「水質年度報告」提供飲用水方面的資訊。如需中文協助，請撥 311。

The City of Houston delivers drinking water of the highest quality through six community public water systems.

CITY OF HOUSTON PUBLIC WATER SYSTEMS

1 Main System | TX1010013

2 Kingwood | TX1010348

3 Willowchase | TX1011902

4 District 73 | TX1011585

5 District 82 | TX1011593

6 Belleauwoods | TX1011594



PUBLIC PARTICIPATION

There are many opportunities for public participation. Information on Houston City Council meetings is available at houstontx.gov/citysec. To find out more about Houston Water Education & Outreach visit publicworks.houstontx.gov/waterworks.

WATER SOURCES

Customers of Houston Water Main System receive their drinking water from three water purification plants and 40 ground water plants. 16 additional groundwater plants provide for the remaining 5 Houston Water Systems. The City of Houston treats the water according to federal and state standards to remove harmful contaminants.

The sources of drinking water nationwide (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and can be polluted by animals or human activity. Contaminants that may be present in source water include: microbial contaminants, such as viruses and bacteria; inorganic contaminants, such as salts and metals; pesticides and herbicides, which may come from agriculture, storm water run-off, and residential uses; organic chemicals, from industrial or petroleum use; and naturally-occurring radioactive materials. In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For concerns with taste, odor or color of drinking water, contact 311 or email waterquality@houstontx.gov.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800.426.4791).

UNREGULATED CONTAMINANTS

Unregulated contaminants do not have EPA-established drinking water standards. The purpose of monitoring these contaminants is to assist the EPA in determining if future regulation is warranted. For more information visit epa.gov/dwucmr.

SPECIAL NOTICE

Some people may be more vulnerable to certain microbial contaminants such as Cryptosporidium, in drinking water. Infants, some elderly or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. These people should seek advice about drinking water from a physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800.426.4791).

ARSENIC

Houston's Main drinking water contains low levels of arsenic, which is below the state and federal action levels. EPA's standard balances arsenic's possible health effects against the costs of removing it from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

LEAD

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and in-home plumbing. The City of Houston is responsible for providing high quality drinking water but cannot control the variety of materials used in in-home plumbing components. When water in your home plumbing has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for one to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800.426.4791) or at epa.gov/safewater/lead.

WATER LOSS

The Infrastructure Leak Index (ILI) measures the efficiency of water loss control efforts. It is calculated by taking the real losses (water lost due to leaks) and dividing them by the unavoidable real losses, the theoretical level of minimum leakage calculated by American Water Works Association Standards. Houston Water's ILI is based on the combination of all six community public water systems. In 2019, Houston Water's ILI was 9.22.

CONTACT US

Questions about this report or your water quality? Please email waterquality@houstontx.gov or call 3-1-1 (713.837.0311) and ask to speak with a member of the Water Quality team.

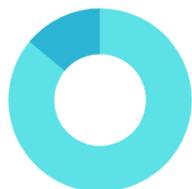


Photo by Tim Marshall

MAIN SYSTEM | TX1010013

Ground Water

14%



Surface Water
86%



SURFACE WATER SOURCE

San Jacinto River (Lake Conroe & Lake Houston)
Trinity River (Lake Livingston)



GROUND WATER SOURCE

102 Wells (Evangeline & Chicot Aquifers)
at depths greater than 750 feet



AVERAGE DAILY WATER PRODUCED

445.3M gallons



CUSTOMERS

2.2M

Parameter/Substance (units) (sampled in 2019 unless noted)	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Detections		
			Minimum	Average	Maximum
MONITORED AT WATER PLANTS					
Arsenic ¹ (ppb)	10	0	ND	2.3	8
Atrazine (ppb)	3	3	ND	0.1	0.2
Barium (ppm)	2	2	0.02	0.18	0.40
Chromium (ppb)	100	100	ND	1	14
Combined Uranium (ppb)	30	0	3 ³		
Cyanide (ppm)	0.2	0.2	ND	0.03	0.08
Fluoride (ppm)	4	4	ND	0.3	0.7
Gross Alpha (pCi/L)	15	0	4 ³		
Nitrate (ppm)	10	10	ND	0.2	1.0
Selenium (ppb)	50	50	ND	2	13
Simazine (ppb)	4	4	ND	0.0	0.2
Turbidity (NTU)	(TT) 95% of monthly samples ≤ 0.3 NTU	NA	Lowest Monthly Percentage ≤ 0.3 NTU: 96%		
			Highest Single Measurement: 0.52 NTU		
MONITORED IN DISTRIBUTION SYSTEM					
Chloramines (Disinfectant) (ppm)	4.0 (MRDL)	<4.0 (MRDLG)	0.1	3.0	4.8
Haloacetic Acids (ppb)	Yearly Average (LRAA) <60	NA	Highest LRAA: 38.63 ppb Individual sample results range from <6.0 ppb (not detected) to 49.6 ppb.		
Total Trihalomethanes (ppb)	Yearly Average (LRAA) <80	NA	Highest LRAA: 41.7 ppb Individual sample results range from <6.0 ppb (not detected) to 59.6 ppb.		
MONITORED AT CUSTOMER TAP					
Lead (ppb)	AL = 90% below 15 ppb (TT)	0	90% below 4.01 ppb Two samples above 15 ppb		
Copper (ppm)	AL = 90% below 1.3 ppm (TT)	1.3	90% below 0.13 ppm No samples above 1.3 ppm		

MAIN SYSTEM | TX1010013

SECONDARY STANDARDS				
Parameter/Substance (units)	Recommended Levels (SMCL)	Detections		
		Minimum	Average	Maximum
Aluminum (ppm)	0.2	ND	0.13	3.39
Chloride (ppm)	250	16	35	59
Texas Copper (ppm)	1	ND	0.007	0.121
Fluoride (ppm)	2	ND	0.27	0.74
Iron (ppm)	0.3	ND	0.16	2.64
Manganese (ppm)	0.05	ND	0.01	0.05
pH	6.5 - 8.5	7.4	7.9	9.2
Sulfate (ppm)	250	4	19	43
Total Dissolved Solids (ppm)	500	127	240	362
Total Hardness as CaCO ₃ (ppm)	NA	48	123	214
Zinc (ppm)	5	ND	0.005	0.047
UNREGULATED CONTAMINANTS				
Parameter/Substance (units)	Dates Monitored	Minimum	Average	Maximum
O-Toluidine (ppb)	Jan – Dec 2019	ND	0.009	0.011
Germanium (ppb)	Jan – Dec 2019	ND	0.58	1.57
Manganese (ppb)	Jan – Dec 2019	ND	7.8	48.7
Bromide (ppb)	Jan – Dec 2019	ND	228	3130
HAA5 (ppb)	Jan – Dec 2019	0.35	29.99	75.74
HAA6Br (ppb)	Jan – Dec 2019	ND	7.02	13.04
HAA9 (ppb)	Jan – Dec 2019	0.35	35.97	81.33
Total Organic Carbon (ppb)	Jan – Dec 2019	ND	6787	18800
Anatoxin-A (ppb)	Jan – Dec 2019	ND	0.129	0.405

Main System – December 2019 Monitoring and Reporting Violation

In Jan 2020 the Main System received a monitoring violation for the month of Dec 2019 for failure to collect required monthly samples for total coliform². In Dec 2019 the system collected 418 of the 420 samples required for the month. The violation was for failure to meet the sample schedule and was not related to the results of the total coliform tests. The system collected all required monthly samples in Jan 2020. The system was returned to compliance by the TCEQ on Feb 7, 2020 after evaluating that Jan 2020 samples met the required schedule.

Notes

- 1 For more background information regarding Arsenic – please refer to page 4.
- 2 Coliform is a type of bacteria that is naturally present in the environment. Water systems are required to monitor for coliform routinely, and if detected, it triggers further tests for potentially harmful bacteria, and can trigger assessments to look for potential causes or problems.
- 3 Only one sample was required to be taken for this analyte during 2019.

Kingwood | TX1010348



Ground Water
100%



GROUND WATER SOURCE

16 Wells (Evangeline & Chicot Aquifers)
at depths greater than 750 feet



AVERAGE DAILY WATER PRODUCED

7.9M gallons



CUSTOMERS

78.3K

Parameter/Substance (units) (sampled in 2019 unless noted)	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Detections		
			Minimum	Average	Maximum
MONITORED AT WATER PLANTS					
Barium (ppm)	2	2	0.3 ²		
Combined Radium (pCi/L) 2017 ¹	5	0	ND	0.3	1.0
Fluoride (ppm)	4	4	0.2 ²		
Gross Alpha (pCi/L)	15	0	3.4 ²		
Xylenes, Total (ppb)	10,000	10,000	ND	0.2	0.8
MONITORED IN DISTRIBUTION SYSTEM					
Chlorine (Disinfectant) (ppm)	4.0 (MRDL)	<4.0 (MRDLG)	.9	1.4	2.9
Haloacetic Acids (ppb)	Yearly Average (LRAA) <60	NA	Highest LRAA: 2.8 ppb. Individual sample results range from <6.0 ppb (not detected) to 5.5 ppb.		
Total Trihalomethanes (ppb)	Yearly Average (LRAA) <80	NA	Highest LRAA: 7.55 ppb. Individual sample results range from <6.0 ppb (not detected) to 15.2 ppb.		
MONITORED AT CUSTOMER TAP					
Lead (ppb)	AL = 90% below 15 ppm (TT)	0	90% below 0 ppb. 1 samples above 15 ppb		
Copper (ppm)	AL = 90% below 1.3 ppm (TT)	1.3	90% below 0.252 ppm. No sample above 1.3 ppm		
SECONDARY STANDARDS					
Parameter/Substance (units)	Recommended Levels (SMCL)	Detections			
		Minimum	Average	Maximum	
Chloride (ppm)	250	21	24	31	
Iron (ppm)	0.3	ND	0.0	0.2	
Manganese (ppm)	0.05	ND	0.01	0.08	
pH	6.5 - 8.5	7.3	7.7	8.5	
Sulfate (ppm)	250	5	7.6	13	
Total Dissolved Solids (ppm)	500	154	191	228	
Texas Copper (ppm)	1	0.006 ²			
Total Hardness as CaCO ₃ (ppm)	NA	105	117	148	
Zinc (ppm)	5	0.005 ²			

UNREGULATED CONTAMINANTS

Parameter/Substance (units)	Dates Monitored	Minimum	Average	Maximum
1-Butanol (ppb)	July 2018 - March 2019	ND	2	2
Germanium (ppb)	July 2018 - March 2019	ND	0.32	0.34
Manganese (ppb)	July 2018 - March 2019	3.7	25.9	49
Bromide	July 2018 - March 2019	24.2	52.9	162
HAA5	July 2018 - March 2019	ND	1.40	4.85
HAA6Br	July 2018 - March 2019	ND	0.79	2.41
HAA9	July 2018 - March 2019	ND	1.93	6.58

Notes

- 1 Subject to reduced monitoring requirements. Detected contaminant within the past five years, in the year indicated.
- 2 Only one sample was required to be taken for this analyte during 2019.



Photo by Alex Perez

Willowchase | TX1011902



Ground Water
100%



GROUND WATER SOURCE

5 Wells (Evangeline & Chicot Aquifers)
at depths greater than 750 feet



AVERAGE DAILY WATER PRODUCED

2.2M gallons



CUSTOMERS

12.2K

Parameter/Substance (units) (sampled in 2019 unless noted)	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Detections		
			Minimum	Average	Maximum
MONITORED AT WATER PLANTS					
Arsenic ¹ (ppb)	10	0	2.2 ³		
Barium (ppm)	2	2	0.22	0.25	0.28
Combined Uranium (ppb) 2018 ²	30	0	3.8 ³		
Fluoride (ppm) 2018 ²	4	4	0.1 ³		
Gross Alpha (pCi/L) 2018 ²	15	0	2.0 ³		
Gross Beta (pCi/L) 2018 ²	50	0	4.5 ³		
Nitrate (ppm)	10	10	0.2	0.2	0.3
Selenium (ppb)	50	50	ND	2.7	5.4
MONITORED IN DISTRIBUTION SYSTEM					
Chlorine (Disinfectant) (ppm)	4.0 (MRDL)	<4.0 (MRDLG)	0.6	1.3	2.2
Haloacetic Acids (ppb)	Yearly Average (LRAA) <60	NA	Highest LRAA: ND (not detected) All individual sample results were ND.		
Total Trihalomethanes (ppb)	Yearly Average (LRAA) <80	NA	Highest LRAA: 1.45 ppb Individual sample results range from <6.0 ppb (not detected) to 5.8 ppb		
MONITORED AT CUSTOMER TAP					
Lead (ppb) 2017 ²	AL = 90% below 15 ppm (TT)	0	90% below 0 ppb No sample above 15 ppb		
Copper (ppm) 2017 ²	AL = 90% below 1.3 ppm (TT)	1.3	90% below 0.162 ppm No sample above 1.3 ppm		
SECONDARY STANDARDS					
Parameter/Substance (units)	Recommended Levels (SMCL)	Detections			
		Minimum	Average	Maximum	
Chloride (ppm) 2018 ²	250	53 ³			
pH 2018 ²	6.5 - 8.5	7.4 ³			
Total Dissolved Solids (ppm) 2018 ²	500	281 ³			
Total Hardness as CaCO ₃ (ppm)	NA	168	171.5	175	
Sulfate (ppm) 2018 ²	250	7 ³			

UNREGULATED CONTAMINANTS

Parameter/Substance (units)	Dates Monitored	Minimum	Average	Maximum
Manganese	April - October 2018	ND	0.8	0.8
Bromide	April - October 2018	113	160	191
HAA5	April - October 2018	ND	0.11	0.63
HAA6Br	April - October 2018	ND	0.31	1.09
HAA9	April - October 2018	ND	0.38	1.09

Notes

- 1 For more background information regarding Arsenic – please refer to page 4.
- 2 Subject to reduced monitoring requirements. Detected contaminant within the past five years, in the year indicated.
- 3 Only one sample was required to be taken for this analyte during 2019.



Photo by Ethan Sykes

District 73 | TX1011585



Ground Water
100%



GROUND WATER SOURCE

2 Wells (Evangeline & Chicot Aquifers)
at depths greater than 750 feet



AVERAGE DAILY WATER PRODUCED

350K gallons



CUSTOMERS

5K

Parameter/Substance (units) (sampled in 2019 unless noted)	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Detections		
			Minimum	Average	Maximum
MONITORED AT WATER PLANTS					
Arsenic ¹ (ppb)	10	0	3 ³		
Barium (ppm)	2	2	0.26 ³		
Combined Uranium (ppb) 2017 ²	30	0	1.7	2.4	3.1
Fluoride (ppm) 2017 ²	4	4	0.17	0.19	0.20
Gross Alpha (pCi/L) 2017 ²	15	0	2	3	4
Gross Beta (pCi/L) 2017 ²	50	0	ND	2.7	5.4
Nitrate (ppm)	10	10	ND	0.03	0.06
Selenium (ppb) 2017 ²	50	50	15 ³		
Xylenes, Total (ppb)	10,000	10,000	ND	0.8	1.5
MONITORED IN DISTRIBUTION SYSTEM					
Chlorine (Disinfectant)	4.0 (MRDL)	<4.0 (MRDLG)	0.9	1.4	2.0
Haloacetic Acids (ppb)	Yearly Average (LRAA) <60	NA	Highest LRAA: 1.9 ppb Individual sample results range from <6.0 ppb (not detected) to 1.9 ppb.		
Total Trihalomethanes (ppb)	Yearly Average (LRAA) <80	NA	Highest LRAA: 9.6 ppb Individual sample results range from <6.0 ppb (not detected) to 9.6 ppb.		
MONITORED AT CUSTOMER TAP					
Lead (ppb) 2017 ²	AL = 90% below 15 ppb (TT)	0	90% below 3.31 ppb. One sample above 15 ppb.		
Copper (ppm) 2017 ²	AL = 90% below 1.3 ppm (TT)	1.3	90% below 0.13 ppm. No sample above 1.3 ppm		
SECONDARY STANDARDS					
Parameter/Substance (units)	Recommended Levels (SMCL)	Detections			
		Minimum	Average	Maximum	
Chloride (ppm) 2017 ²	250	19	21	23	
Iron (ppm)	0.3	0.18 ³			
pH 2017 ²	6.5 - 8.5	7.6	7.9	8.1	
Sulfate (ppm) 2017 ²	250	4	4.5	5	
Total Dissolved Solids (ppm) 2017 ²	500	188	190	191	
Total Hardness as CaCO ₃ (ppm)	NA	99 ³			

Notes

- 1 For more background information regarding Arsenic – please refer to page 4.
- 2 Subject to reduced monitoring requirements. Detected contaminant within the past five years, in the year indicated.
- 3 Only one sample was required to be taken for this analyte during 2019.

District 82 | TX1011593



Ground Water
100%



GROUND WATER SOURCE

102 Wells (Evangeline & Chicot Aquifers)
at depths greater than 750 feet



AVERAGE DAILY WATER PRODUCED

60K gallons



CUSTOMERS

888

Parameter/Substance (units) (sampled in 2019 unless noted)	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Detections		
			Minimum	Average	Maximum
MONITORED AT WATER PLANTS					
Barium (ppm) 2018 ¹	2	2	0.2 ²		
Nitrate (ppm)	10	10	0.2 ²		
MONITORED IN DISTRIBUTION SYSTEM					
Chlorine (Disinfectant)	4.0 (MRDL)	<4.0 (MRDLG)	1.0	1.4	2.1
Haloacetic Acids (ppb)	Yearly Average (LRAA) <60	NA	Highest LRAA: 2.7 ppb. Individual sample results range from 1.2 to 2.7 ppb.		
Total Trihalomethanes (ppb)	Yearly Average (LRAA) <80	NA	Highest LRAA: 32.7 ppb. Individual sample results range from 3.5 to 32.7 ppb.		
MONITORED AT CUSTOMER TAP					
Lead (ppb)	AL = 90% below 15 ppb (TT)	0	90% below 3.54 ppb. No sample above 15 ppb		
Copper (ppm)	AL = 90% below 1.3 ppm (TT)	1.3	90% below 0.116 ppm. No sample above 1.3 ppm		
SECONDARY STANDARDS					
Parameter/Substance (units)	Recommended Levels (SMCL)	Detections			
		Minimum	Average	Maximum	
Chloride (ppm) 2018 ¹	250	15 ²			
Iron (ppm) 2018 ¹	0.3	0.02 ²			
Ph 2018 ¹	6.5 - 8.5	7.7 ²			
Sulfate (ppm) 2018 ¹	250	2 ²			
Total Dissolved Solids (ppm) 2018 ¹	500	176 ²			
Total Hardness as CaCO ₃ (ppm) 2018 ¹	NA	106 ²			

Notes

- 1 Subject to reduced monitoring requirements. Detected contaminant within the past five years, in the year indicated.
- 2 Only one sample was required to be taken for this analyte during 2019.

Belleauwoods | TX1011594



Purchased from City of Humble
100%

MIXED SURFACE WATER & GROUND WATER SOURCES



AVERAGE DAILY WATER PRODUCED

170K gallons



CUSTOMERS

456

Parameter/Substance (units) (sampled in 2019 unless noted)	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Detections		
			Minimum	Average	Maximum
MONITORED AT WATER PLANTS					
Arsenic ¹ (ppb)	10	0	3.9 ³		
Barium (ppm)	2	2	0.4 ³		
Nitrate (ppm)	10	10	ND	0.1	0.3
Selenium (ppb)	50	50	4.9 ³		
Simazine (ppb)	4	4	ND	0.02	0.07
MONITORED IN DISTRIBUTION SYSTEM					
Chloramines (Disinfectant)	4.0 (MRDL)	<4.0 (MRDLG)	0.6	1.7	3.0
Haloacetic Acids (ppb)	Yearly Average (LRAA) <60	NA	Highest LRAA: 9.7 ppb. Individual sample results range from 1.2 ppb to 12 ppb.		
Total Trihalomethanes (ppb)	Yearly Average (LRAA) <80	NA	Highest LRAA: 11.43 ppb. Individual sample results range from 7.8 ppb to 14.8 ppb.		
MONITORED AT CUSTOMER TAP					
Lead (ppb)	AL = 90%	0	90% below 0 ppb. No sample above 15 ppb		
	below 15 ppb (TT)				
Copper (ppm)	AL = 90%	1.3	90% below .364 ppm. No sample above 1.3 ppm		
	below 1.3 ppm (TT)				
SECONDARY STANDARDS					
Parameter/Substance (units)	Recommended Levels (SMCL)	Detections			
		Minimum	Average	Maximum	
Chloride (ppm) 2017 ²	250	30	41	56	
Iron (ppm)	0.3	0.1 ³			
Manganese (ppm)	0.05	0.01 ³			
Ph 2017 ²	6.5 – 8.5	7.5	7.8	8.2	
Texas Copper (ppm)	1	0.008 ³			
Total Dissolved Solids (ppm) 2017 ²	500	195	263	295	
Total Hardness as CaCO ₃ (ppm)	NA	124 ³			
Zinc (ppm)	5	0.02 ³			

Notes

- 1 For more background information regarding Arsenic – please refer to page 4.
- 2 Subject to reduced monitoring requirements. Detected contaminant within the past five years, in the year indicated.
- 3 Only one sample was required to be taken for this analyte during 2019.

CONTAMINANT SOURCES

Arsenic	erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Atrazine	runoff from herbicide used on row crops
Barium	discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine & Chloramines	water additives used to control microbes
Chromium	discharge from steel and pulp mills; erosion of natural deposits
Combined Radium	erosion of natural deposits
Combined Uranium	erosion of natural deposits
Copper	corrosion of household plumbing systems; erosion of natural deposits
Cyanide	discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride	erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha	erosion of natural deposits
Gross Beta	decay of natural and man-made deposits
Lead	corrosion of household plumbing systems; erosion of natural deposits
Nitrate / Nitrite	runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Simazine	herbicide runoff
Total Haloacetic Acids (HAAs)	by-product of drinking water disinfection
Total Trihalomethanes (TTHMs)	by-product of drinking water disinfection
Turbidity	soil runoff
Xylenes	discharge from petroleum factories; discharge from chemical factories

ABBREVIATIONS

HAA5	dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, trichloroacetic acid
HAA6Br	bromochloroacetic acid, bromodichloroacetic acid, dibromoacetic acid, dibromochloroacetic acid, monobromoacetic acid, tribromoacetic acid
HAA9	bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, tribromoacetic acid, trichloroacetic acid
LRAA	Locational Running Annual Average - average of results taken at specific monitoring location during previous four quarters
MCL	Maximum Contaminant Level - highest level of a contaminant allowed. MCLs are set as close to MCLGs using best available treatment technology
MCLG	Maximum Contaminant Level Goal - level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety
MRDL	Maximum Residual Disinfectant Level - highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants
MRDLG	Maximum Residual Disinfectant Level Goal - level of drinking water disinfectant below known or expected health risk. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants
NA	Not Applicable
ND	Not Detected
NTU	Nephelometric Turbidity Units
pCi/L	Pico Curies per liter (measure of radioactivity)
ppb	Parts Per Billion or micrograms per liter (µg/L)
ppm	Parts Per Million or milligrams per liter (mg/L)
SMCL	Secondary Maximum Contaminant Limit - National Secondary Drinking Water Standards are non-enforceable guidelines regulating contaminants that may cause cosmetic or aesthetic effects in drinking water. The EPA recommends secondary standards but does not require systems to comply with limits
TT	Treatment Technique - required process intended to reduce the level of a contaminant in drinking water

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