



2020 Water Quality Report

Horsham Water and Sewer Authority

www.horshamwater-sewer.com

*Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo ó hable con alguien que lo entienda bien.*

About Your Drinking Water

Horsham Water and Sewer Authority (public water supply ID # PA1460033) (HWSA) is pleased to provide you with important information about your drinking water in this 2020 Consumer Confidence Report (CCR). The report summarizes the quality of water provided in 2020 - including details about water sources, what the water at your tap contains, and how it compares to standards set by regulatory agencies. Although the report lists only those regulated substances that were detected in your water, we test for more than what is reported. This report is only a summary of our testing during 2020. If you have any questions about the information in this report, please call 215-672-8011 or visit our website at www.horshamwater-sewer.com.

The Horsham Township Water Authority was established in 1954. The merger of the Horsham Township Water Authority and the Horsham Sewer Authority was completed in 1998, forming the Horsham Water and Sewer Authority. Since that time, we have upgraded services and the water supply system. In 2020, HWSA personnel performed the mandatory water quality testing required by the Pennsylvania Department of Environmental Protection (DEP) and utilized Aqua Pennsylvania (Aqua) as our primary certified drinking water laboratory.

Sources of Supply

Most of the water for the HWSA system comes from groundwater supplies (wells). A portion is derived from surface water. Sources of supply include 15 wells strategically located throughout Horsham Township and interconnections with other water suppliers: North Wales Water Authority (NWWA) (PWSID # PA1460048) and Aqua Pennsylvania's Main System (PWSID # PA1460073). Additional tables listing contaminants that were detected in each of those systems are included in this report.

In response to elevated per- and polyfluoroalkyl substances (PFAS) detected in Horsham's water wells, temporary treatment systems were installed for wells 10, 17, and 21 and permanent treatment systems were installed for wells 2, 4, 19, 20, 22, 26 and 40 and the interconnection with Aqua PA. Visit the following website for additional information about Horsham's action plan: <https://www.horshamwater-sewer.com/pfas-summary>.

The Pennsylvania Department of Environmental Protection (DEP) has completed source water assessments for the groundwater sources for this system. Information on source water assessments is available on the DEP Web site at www.dep.pa.gov (DEP keyword "Source Water Assessment Summary Reports"). Completed reports are distributed to municipalities, water suppliers, local planning agencies, and DEP offices. Copies of the reports are available for review at the DEP Southeast Regional Office, Records Management Unit (phone 484-250-5900). In January 2020, DEP approved the HWSA's Source Water Protection Plan. HWSA has also established a Wellhead Protection Steering Committee which meets at least annually.

The sources of drinking water (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 radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, which are byproducts of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. Radon is not regulated in drinking water. It is a radioactive gas that you can't see, taste or smell. Most radon enters homes directly from underground. Radon can be released into the air from tap water. Generally, tap water is a small source of radon in indoor air.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Our water systems are designed and operated to deliver water to our customers' plumbing systems that complies with state and federal drinking water standards. This water is disinfected using chlorine, but it is not necessarily sterile. Customers' plumbing, including treatment devices, might remove, introduce or increase contaminants in tap water. All customers, and in particular operators of facilities like hotels and institutions serving susceptible populations (like hospitals and nursing homes), should properly operate and maintain the plumbing systems in these facilities. You can obtain additional information from the EPA's Safe Drinking Water Hotline at 800-426-4791

The following table lists contaminants that were detected in your water system. The table provides the average of the sources used to supply the area, as well as minimum and maximum observed levels of regulated contaminants.

Horsham Water and Sewer Authority, PWSID # PA1460033

Contaminants	Average Detection	Range of Detections	MCL	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Inorganic Contaminants							
Arsenic, ppb	2.6	ND – 6.2 (a)	10	0	2018	N	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium, ppm	0.22	0.05 – 0.46	2	2	2018	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium, ppb	5.7	4.6 – 7.4	100	100	2018	N	Discharge from steel and pulp mills; erosion of natural deposits
Nitrate, ppm	1.3	ND – 3.4	10	10	2020	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radiological Contaminants							
Alpha emitters, pCi/L	5.3	ND – 9.9	15	0	2017, 2020	N	Erosion of natural deposits
Uranium, ppb	2.8	1.4 – 4.9	30	0	2017	N	
Combined Radium, pCi/L	1.3	NA	5	0	2020	N	
Gross Beta, pCi/L	2.1	ND – 4.3	50	0	2020	N	
Disinfectant Residual – Values below reflect results from routine monthly distribution sampling at multiple sites.							
Chlorine, ppm	1.5	0.04 - 3.1	MRDL = 4	MRDLG = 4	2020	N	Water additive used to control microbes
Disinfection Byproducts- For haloacetic acids and total trihalomethanes, compliance is based on a locational running annual average (LRAA) of quarterly test results, not a single sample result. The Level Detected is the highest LRAA. The Range is the lowest and highest single sample result among all samples.							
Haloacetic acids, ppb	13	ND - 24	60	NA	2020	N	Byproducts of drinking water disinfection
Total Trihalomethanes, ppb	28	2 - 70	80	NA	2020	N	

- a) While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic 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.

Contaminants	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Sample Date	Violation Y/N	Major Sources in Drinking Water
Entry Point Disinfectant Residual – PA Ground Water Rule: This rule requires that no well station operate below specific minimum free chlorine levels for more than 4 hours.						
Chlorine, ppm	0.4 at most entry points	ND	ND - 3.1	2020	N	Water additive used to control microbes

Lead and Copper Results								
Lead and Copper	90th Percentile	Total Number of Samples	Samples Exceeding Action Level	Action Level	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Copper, ppm	0.6	61	0	1.3	1.3	2020	N	Corrosion of household plumbing
Lead, ppb	4	61	1	15	0	2020	N	

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 home plumbing. Horsham Water & Sewer Authority is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 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 or at <http://www.epa.gov/safewater/lead>.

The 1996 amendments to the Safe Drinking Water Act (SDWA) require that once every 5 years, the U.S. Environmental Protection Agency (EPA) issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWS). The Unregulated Contaminant Monitoring Rule (UCMR) provides EPA and other interested parties with scientifically valid data on the occurrence of contaminants in drinking water. These data serve as a primary source of occurrence and exposure information that the agency uses to develop regulatory decisions. If a PWS monitoring for UCMR4 finds contaminants in its drinking water, it must provide the information to its customers in this annual water quality report. Below is a table of the results of our UCMR4 monitoring in 2018 for the HWSA system. All other contaminants tested during UCMR4 were Not Detected.

Unregulated Contaminants Detected During 2018 for the HWSA system			
Unregulated Contaminant	Average Detection	Range of Detections	MCL
Entry Point Samples			
Anatoxin-a, ppb	ND	ND – 0.033	NA
Manganese, ppb	21	0.49 - 255	NA
Distribution Samples			
Bromochloroacetic acid, ppb	2.0	0.82 – 3.81	NA
Bromodichloroacetic acid, ppb	2.41	ND – 4.33	NA
Chlorodibromoacetic acid	0.57	ND – 0.99	NA
Dibromoacetic acid, ppb	0.45	ND – 1.00	NA
Dichloroacetic acid, ppb	6.58	1.66 – 16.10	NA
Monobromoacetic acid, ppb	ND	ND – 0.37	NA
Monochloroacetic acid, ppb	ND	ND – 2.39	NA
Trichloroacetic acid, ppb	6.89	0.86 – 15.7	NA

Since the discovery of PFOS and PFOA in Horsham's groundwater in 2014, HWSA adopted a plan to drastically reduce the concentration of all per- and polyfluoroalkyl substances (PFAS) in the public water supply to non-detect levels. This plan includes the installation of treatment systems at 10 wells and one at the interconnection with Aqua PA Main System designed to remove PFAS. Below is a table of the results of monitoring for PFOS and PFOA which was performed at all wells used for drinking water in 2020. This plan also includes suspending multiple wells from service. Additional information about HWSA's response to the discovery of these contaminants and the results of our public water supply testing is available on the HWSA website at www.horshamwater-sewer.com.

Well #	Dates in-Service in 2020	Contaminant (ppt)	Raw Water			PFAS Removal Treated Water			MCL	MCLG	HAL
			Avg.	Min.	Max.	Avg.	Min.	Max.			
1	Not In Service	PFOS	10	4	14						
		PFOA	19	7	27						
		Combined	29	14	39						
2	1/1/2020 - 12/31/2020	PFOS	24	21	32	ND	ND	ND	NA	NA	70
		PFOA	16	10	24	ND	ND	ND	NA	NA	70
		Combined	40	34	56	ND	ND	ND	NA	NA	70
3	Not In Service	PFOS	12	9	16						
		PFOA	14	10	19						
		Combined	26	22	32						
4	1/1/2020 - 12/31/2020	PFOS	14	7	19	ND	ND	ND	NA	NA	70
		PFOA	11	7	15	ND	ND	ND	NA	NA	70
		Combined	25	18	32	ND	ND	ND	NA	NA	70
6	Not In Service	PFAS									
7	Not In Service	PFOS	4	ND	6						
		PFOA	5	3	6						
		Combined	7	3	12						
9	Not In Service	PFOS	4	ND	4						
		PFOA	4	ND	5						
		Combined	5	ND	8						
10	1/1/2020 - 12/31/2020	PFOS	29	ND	38	ND	ND	ND	NA	NA	70
		PFOA	21	13	29	ND	ND	ND	NA	NA	70
		Combined	49	13	66	ND	ND	ND	NA	NA	70
17	1/1/2020 - 12/31/2020	PFOS	104	56	151	ND	ND	ND	NA	NA	70
		PFOA	35	26	43	ND	ND	ND	NA	NA	70
		Combined	140	90	191	ND	ND	ND	NA	NA	70
19	1/1/2020 - 12/31/2020	PFOS	12	7	14	ND	ND	ND	NA	NA	70
		PFOA	11	9	15	ND	ND	ND	NA	NA	70
		Combined	22	17	29	ND	ND	ND	NA	NA	70
20	1/1/2020 - 12/31/2020	PFOS	16	9	20	ND	ND	ND	NA	NA	70
		PFOA	16	11	21	ND	ND	ND	NA	NA	70
		Combined	31	20	41	ND	ND	ND	NA	NA	70
21	Not In Service	PFOS	7	3	11						
		PFOA	12	9	15						
		Combined	19	13	23						
22	1/1/2020 - 12/31/2020	PFOS	16	11	21	ND	ND	ND	NA	NA	70
		PFOA	17	13	20	ND	ND	ND	NA	NA	70
		Combined	32	27	40	ND	ND	ND	NA	NA	70
26	1/1/2020 - 12/31/2020	PFOS	707	175	1,085	ND	ND	ND	NA	NA	70
		PFOA	340	80	454	ND	ND	ND	NA	NA	70
		Combined	1,047	410	1,470	ND	ND	ND	NA	NA	70
40	1/1/2020 - 12/31/2020	PFOS	743	393	938	ND	ND	ND	NA	NA	70
		PFOA	95	56	396	ND	ND	ND	NA	NA	70
		Combined	837	463	1,202	ND	ND	ND	NA	NA	70

The following tables list contaminants that were detected in the water supplied through interconnections with other water suppliers.

North Wales Water Authority- Forest Park Treatment Plant, PWSID: PA1460048

Contaminants	Average Detection	Range of Detections	MCL	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Inorganic Contaminants							
Barium, ppm	0.019	NA	2	2	2020	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride, ppm	0.10	NA	2	2	2020	N	Erosion of natural deposits; water additive which promotes strong teeth
Nitrate, ppm	0.58	0.35 – 0.82	10	10	2020	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Disinfection Byproducts							
Bromate, ppb	2.0	1.5 – 2.2	10	0	2020	N	Byproduct of drinking water disinfection
Haloacetic Acids, ppb	4.6	3.9 – 5.6	60	NA	2020	N	
Total Trihalomethanes, ppb	10.4	6.9 – 12.9	80	NA	2020	N	
Filtration Performance							
Turbidity, NTU	0.05	0.02 – 0.06	TT	NA	2020	N	Soil runoff
Turbidity*, % meeting	100%	100% - 100%	TT	NA	2020	N	Soil runoff

*Turbidity: Values above are % meeting plant performance level. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The Treatment Technique (TT) requirement is 95% of samples must be less than or equal to 0.3 NTU.

Raw water monitoring (prior to treatment) for *Giardia* and *Cryptosporidium* was performed quarterly throughout 2020. *Giardia* was detected in 3 out of 4 samples and *Cryptosporidium* was detected in 2 out of 4 samples.

Perfluorinated Contaminants Monitoring During 2020 for NWWA System				
Unregulated Contaminant	Average Detection	Range of Detections	Health Advisory	Violation
Perfluorooctane sulfonate (PFOS), ppt	ND	ND	70	No
Perfluorooctanoic acid (PFOA), ppt	0.9	ND – 2.4	70	No

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Unregulated Contaminants Detected for NWWA System			
Unregulated Contaminant	Average Detection	Range of Detections	MCL
Raw Samples (untreated)			
Bromide, ppb	24.1	20.3 – 28.9	NA
Total Organic Carbon, ppb	4483.3	4050 - 4810	NA
Entry Point Samples			
Manganese, ppb (2020)	8.46	4.62 – 11.3	NA

Aqua Pennsylvania Main System, PWSID: PA1460073

The following table lists contaminants that were detected during 2020 in your water system. The table provides the average for the sources used to supply the Main System, as well as minimum and maximum observed levels of regulated contaminants.

Contaminants	Average Detection	Range of Detections	MCL	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Turbidity, % meeting	100%	99.9% - 100%	TT	NA	2020	N	Soil runoff
Values above are % meeting plant performance level. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The Treatment Technique (TT) requirement is 95% of samples must be less than or equal to 0.3 NTU.							
Inorganic Contaminants							
Arsenic, ppb	ND	ND – 1.3	10	0	2018, 2019, 2020	N	Erosion of natural deposits
Barium, ppm	0.06	0.005 – 0.38	2	2	2018, 2019, 2020	N	
Chromium, ppb	3.8	ND – 7.8	100	100	2018, 2019, 2020	N	
Fluoride, ppm	0.03	ND – 0.6	2	2	2018, 2019, 2020	N	Erosion of natural deposits; water additive to promote strong teeth
Nitrate, ppm	3.0	1.2 – 4.8	10	10	2020	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radiological Contaminants							
Gross alpha, pCi/L	0.6	ND – 5.0	15	0	2017, 2020	N	Erosion of natural deposits
Combined radium, pCi/L	0.1	ND – 1.60	5	0	2020	N	
Uranium, ppb	0.46	ND – 8.7	30	0	2017, 2020	N	
Volatile Organic Contaminants							
cis-1,2-Dichloroethylene, ppb	ND	ND – 0.6	70	70	2020	N	Discharge from industrial chemical factories
Tetrachloroethylene, ppb	0.7	ND – 4.1	5	0	2020	N	Discharge from factories and dry cleaners
Trichloroethylene, ppb	ND	ND – 2.1	5	0	2020	N	Discharge from metal degreasing sites and other factories
Unregulated Volatile Organic Contaminants							
1,2,3-Trichloropropane, ppb (a)	ND	ND – 0.022	NA	NA	2020	N	Used as a solvent and to produce other chemicals; found in pesticides

a) Samples were collected from one location (entry point 112) in the Main system.

Violation: On February 15, 2020, Aqua PA Main System issued a boil water advisory for 4 customers because of a sewer line break located near the water main serving these customers. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. After receiving satisfactory bacteriological sample results, the boil water notice was lifted on February 17, 2020.

Violation: In 2020, Aqua PA Main System received a monitoring violation for failing to collect synthetic organic contaminants (SOCs) in the 1st quarter of 2020. Aqua Pennsylvania (Aqua) is required to sample SOCs on a quarterly basis for each entry point unless an approved waiver is granted by the Pennsylvania Department of Environmental Protection (DEP). Aqua submitted a waiver application during the 1st quarter of 2020 and was not approved to waive monitoring. As a result, Aqua did not collect the required SOC samples which resulted in a monitoring violation. The samples were collected in the 2nd – 4th quarters of 2020 and SOCs were not detected in the samples collected.

Most of the Main System is supplied from surface water sources. Radon is more prevalent in groundwater supplies. In 2016, the average concentration of radon in groundwater sources was 350 pCi/L. The highest level observed was 1,530 pCi/L. There is no federal or state standard for radon in drinking water.

Cryptosporidium is a microbial parasite found in waters throughout the United States. During monitoring of raw surface water sources (prior to treatment), 334 samples were collected in 2016 and 2017. The average concentration of *Cryptosporidium* oocysts was not detected. The range of samples collected during the monitoring period was ND – 0.2 oocysts per liter. As a frame of reference, the lowest category of risk has been set by EPA as an average concentration of less than 0.075 per liter. Results from 2016 and 2017 support the low risk category.

Contaminants	Entry Point #	Minimum Residual Level Required	Lowest Level Detected	Range of Detections	Sample Date	Violation Y/N	Major Sources in Drinking Water
Entry Point Disinfectant Residual							
Chloramines, ppm	112, 115, 116, 117, 136, 138	0.2	0.26	0.26 - 3.15	2020	N	Water additive used to control microbes
Chlorine, ppm	107, 111, 125, 132, 137	0.4	0.01*	0.01 – 5.5	2020	N	
	114	0.45	0.01*	0.01 – 2.94	2020	N	
	126	0.51	0.01*	0.01 – 3.11	2020	N	
	135	0.54	0.32*	0.32 – 2.81	2020	N	
	105, 110	0.7	0.01*	0.01 – 2.68	2020	N	
	106	0.8	0.82	0.82 – 3.08	2020	N	
Chlorine Dioxide, ppm	138	NA**	ND	ND - 0.09	2020	N	

*Disinfectant levels did not drop below the required minimum residual level for more than 4 hours.

**Chlorine Dioxide is used to supplement disinfection.

Total Organic Carbon (TOC)							
Contaminant	Plant ID	Range of % Removal Required	Range of % removal achieved	Number of quarters out of compliance	Sample Date	Violation* Y/N	Sources of Contamination
TOC	313	25 - 35	27 – 65	0	2020	N	Naturally present in the environment
	314	25 - 45	24 - 62	0	2020	N	
	315	25 - 45	20 – 59	0	2020	N	
	335	25 - 50	39 – 75	0	2020	N	
	339	25 - 45	30 – 61	0	2020	N	

*Compliance is determined by a running annual average, computed quarterly

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Unregulated Contaminants Detected for the Aqua PA Main System			
Unregulated Contaminant	Average Detection	Range of Detections	MCL
Raw Samples (untreated)			
Bromide, ppb	77.5	30- 290	NA
Total Organic Carbon, ppb	2908	ND - 6500	NA
Entry Point Samples			
Manganese, ppb	2.1	ND - 32	NA
Distribution Samples			
Bromochloroacetic Acid, ppb	3.26	0.34 - 7.49	NA
Bromodichloroacetic Acid, ppb	3.80	0.51 – 8.79	NA
Chlorodibromoacetic Acid	0.64	ND – 2.92	NA
Dibromoacetic Acid, ppb	0.57	ND – 3.15	NA
Dichloroacetic Acid, ppb	10.30	0.40 – 23.9	NA
Monobromoacetic Acid, ppb	0.07	ND – 0.87	NA
Monochloroacetic Acid, ppb	0.17	ND – 3.88	NA
Trichloroacetic Acid, ppb	13.9	0.62- 27.1	NA

As a part of Aqua's commitment to ensuring the ongoing health and safety of our customers, we are proactively conducting testing of our water sources for perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS).

Aqua has updated its findings for PFOA and PFOS and shared them on WaterFacts.com so customers can stay informed. In the interim, please be assured that the water Aqua provides tests below the EPA's health advisory levels for PFOA/PFOS.

Notes:

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.

Arsenic: While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic 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.

Fluoride: Fluoride may help prevent tooth decay if administered properly to children but can be harmful in excess. Customers served by the Horsham Water and Sewer Authority receive water from unfluoridated supplies. For more information about fluoride in your tap water, call Horsham at 215-672-8011. This information may be helpful to you, your pediatrician or your dentist in determining whether fluoride supplements or treatment are appropriate.

Health Advisory Level (HAL): Health Advisories (HAs) provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA's HAs are non-enforceable and provide technical guidance to state agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination. To provide Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water, EPA established the health advisory levels at 70 parts per trillion.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. Some levels are based on a running annual average.

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 allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The 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.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant 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.

Minimum Reporting Level (MRL): An indicator of the sensitivity of a laboratory test method. Results less than the MRL are reported as Not Detected (ND).

NA: Not applicable. **ND:** Not detected.

PFAS: Abbreviation for per- and polyfluoroalkyl substances. PFAS are a class of man-made chemicals which have been used for many years to make products that resist heat, stains, grease and water.

PFOS: Abbreviation for perfluorooctane sulfonate which is one of the compounds within the classification of PFAS.

PFOA: Abbreviation for perfluorooctanoic acid which is one of the compounds within the classification of PFAS.

pCi/L, picoCuries/Liter: A unit of concentration for radioactive contaminants. **ppt:** A unit of concentration equal to one part per trillion.

ppb: A unit of concentration equal to one part per billion. **ppm:** A unit of concentration equal to one part per million.

PWSID: Public water supply identification number.

UCMR: Unregulated Contaminant Monitoring Rule. The 1996 Safe Drinking Water Act (SDWA) amendments require that once every five years EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs). EPA uses UCMR to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act (SDWA). There have been four (4) UCMR monitoring periods to date.