



2022 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 2022 Consumer Confidence Report (CCR). The report summarizes the quality of water provided in 2022 - 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 2022. 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 2022, 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, permanent PFAS removal treatment systems were installed for wells 2, 4, 19, 20, 22, 26 and 40 and the interconnection with Aqua PA. Permanent systems for wells 10, 17 and 21 are under construction and expected to be completed in 2023. 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	3.4	2.0 – 5.1 (a)	10	0	2021	N	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium, ppm	0.40	0.06 – 1.08	2	2	2021	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium, ppb	0.7	ND – 1.8	100	100	2021	N	Discharge from steel and pulp mills; erosion of natural deposits
Nitrate, ppm	0.83	ND – 2.6	10	10	2022	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	1.36	0.19 – 2.8	MRDL = 4	MRDLG = 4	2022	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	28.7	4.8 – 37.9	60	NA	2022	N	Byproducts of drinking water disinfection
Total Trihalomethanes, ppb	48.3	9.4 – 77.5	80	NA	2022	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 - 3.5*	2022	N	Water additive used to control microbes

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

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	0.45	30	0	1.3	1.3	2022	N	Corrosion of household plumbing
Lead, ppb	3.3	30	1	15	0	2022	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. UCMR5 sampling will begin in 2023.

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 2022. 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 2022	Contaminant (ppt)	Raw Water			PFAS Removed Treated Water			PA MCL ⁺	PA MCLG ⁺
			Avg.	Min.	Max.	Avg.	Min.	Max.		
1*	Not In Service									
2	1/1/2022 - 12/31/2022	PFOS	25.2	19.0	30.0	ND	ND	ND	18	14
		PFOA	15.8	13.0	20.0	ND	ND	ND	14	8
3*	Not In Service									
4	1/1/2022 - 12/31/2022	PFOS	16.1	13.0	20.0	ND	ND	ND	18	14
		PFOA	11.1	9.1	14.0	ND	ND	ND	14	8
6*	Not In Service									
7**	Not In Service	PFOS	3.0	ND	3.5					
		PFOA	4.0	3.1	5.0					
9**	Not In Service	PFOS	2.7	ND	3.1					
		PFOA	3.8	ND	5.1					
10***	Not In Service									
17***	Not In Service									
19	1/1/2022 - 12/31/2022	PFOS	12.8	8.1	18.0	ND	ND	ND	18	14
		PFOA	10.7	8.0	14.0	ND	ND	ND	14	8
20	1/1/2022 - 12/31/2022	PFOS	17.5	14.0	23.0	ND	ND	ND	18	14
		PFOA	15.2	11.0	24.0	ND	ND	ND	14	8
21***	Not In Service									
22*	Not In Service									
26	1/1/2022 - 12/31/2022	PFOS	497.8	93.0	1035.0	ND	ND	ND	18	14
		PFOA	304.6	67.0	423.0	ND	ND	ND	14	8
40	1/1/2022 - 12/31/2022	PFOS	689.2	574.0	838.0	ND	ND	ND	18	14
		PFOA	69.6	53.0	87.0	ND	ND	ND	14	8

Notes:

- + Pennsylvania Maximum Contaminant Levels (PA MCLs) and Maximum Contaminant Level Goals (PA MCLGs) for PFOS and PFOA were adopted January 13, 2023.
- * Wells 1, 3, 6 and 22 are designated as Reserve Wells and are not sampled due to well pumps being removed.
- ** Wells 7 & 9 were maintained for emergency use only and were not utilized in 2022
- *** Wells 10, 17 and 21 were under construction throughout 2022 to install PFAS removal treatment and were not utilized in 2022.

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

Disinfectants and Disinfection By-Products

Contaminant (Unit of Measurement)	Violation Yes/No	Level Detected	Range	MCLG	MCL
Chlorine Residual (mg/L) Entry Points	No	1.52	1.20-1.67	4	4
Total Trihalomethanes (TTHMs) (ppb)	No	21.80	13.70-29.30	0	80
Haloacetic Acids (HAAs) (ppb)	No	16.30	14.10-17.90	0	60
Bromate (ppb)	No	2.0	1.1-2.8	0	10

Data presented in the above table is from calendar year 2022 monitoring performed in accordance with the regulations of the Pennsylvania Department of Environmental Protection.

* Maximum Residual Disinfectant Level Goal (MRDLG)

** Maximum Residual Disinfectant Level (MRDL)

Likely Sources of Contamination:

Bromate: By-product of drinking water disinfection
 Chlorine: Water additive used for disinfection
 Total Trihalomethanes (TTHMs): By-products of drinking water disinfection
 Haloacetic Acids (HAAs): By-products of drinking water disinfection

Microbiological Contaminants

Contaminant (Unit of Measurement)	Violation Yes/No	Level Detected	Range	MCLG	MCL
Total Coliform Bacteria (Finished Water)	No	0	N/A	0	presence of coliform bacteria in 5% of monthly samples
Fecal Coliform and <i>E. coli</i> Bacteria (Finished Water)	No	0	N/A	0	a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive
Turbidity (NTU) (Finished Water)	No	0.04	0.03-0.05	N/A	TT= INTU For a Single Measurement

Data presented in the above table is from calendar year 2022 monitoring performed in accordance with the regulations of the Pennsylvania Department of Environmental Protection. Coliform bacteria, disinfection residual and Turbidity are monitored on a continuous basis and reported monthly.

100% of all turbidity samples were below 0.1 NTU. As a member of the Partnership for Safe Drinking Water, our goal is to maintain turbidity levels below 0.1 NTU. This was achieved throughout 2022.

Raw water monitoring for Giardia and Cryptosporidium was performed during 2022. Giardia was detected in 1 out of 4 samples. Cryptosporidium was detected in 2 out of 4 samples.

Likely Sources of Contamination

Turbidity: Soil runoff.

Giardia and Cryptosporidium: Naturally present in the environment.

Inorganic Contaminants

Contaminant (Unit of Measurement)	Violation Yes/No	Level Detected	Range	MCLG	MCL
Barium (ppm)	No	0.018	N/A	2	2
Cyanide (ppb)	No	3.5	0-7	200	200
Fluoride (ppm)	No	0.102	N/A	2	2
Nitrate (as Nitrogen) (ppm)	No	0.524	0.308- 0.755	10	10

Contaminant (Unit of Measurement)	Action Level	90th Percent Value	# Of Sites Above AL	MCLG	Violation Y/N
Copper (ppm) (912022)	1.3	0.242	0 out of 35	1.3	No
Lead (ppb) (912022)	15	3.0	0 out of 35	0	No

Unless otherwise noted, data presented in the above table is from calendar year 2022 monitoring performed in accordance with the regulations of the Pennsylvania Department of Environmental Protection.

Likely Source of Contamination

Barium: Discharge of drilling wastes, discharge from metal foundries, erosion of natural deposits.

Copper: Corrosion of household plumbing

Cyanide: Discharge from steel/metal factories; discharge from plastic and fertilizer factories.

Fluoride: Erosion of natural deposits; discharge from fertilizer and aluminum factories.

Lead: Corrosion of household plumbing

Nitrate (as Nitrogen): Runoff from fertilizer use; leaking septic tanks; erosion of natural deposits.

Unregulated Contaminants-Perfluorinated Compounds

Contaminant (Unit of Measurement)	Level Detected	Range
Perfluorobutanesulfonic Acid (PFBS) (ppt)	N/D	N/A
Perfluoroheptanoic Acid (PFHpA) (ppt)	N/D	N/A
Perfluorohexanesulfonic Acid (PFHxS) (ppt)	N/D	N/A
Perfluorononanoic Acid (PFNA) (ppt)	N/D	N/A
Perfluorooctanesulfonic Acid (PFOS) (ppt)	0.50	0-2.1
Perfluorooctanoic Acid (PFOA) (ppt)	2.50	0-3.20

Data presented in the above table is from monthly monitoring of finished drinking water performed at the Forest Park Water Treatment Plant during 2022.

Environmental Sources of Contamination

Perfluorinated Compounds: Manmade chemicals used in fire-fighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives, and photographic films.

Aqua Pennsylvania Main System, PWSID: PA1460073

The following table lists contaminants that were detected during 2022 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	2022	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							
Antimony, ppb	0.08	ND – 0.48	6	6	2022	N	Erosion of natural deposits
Arsenic, ppb	1.31	1.2 – 1.5	10	0	2022	N	
Barium, ppm	0.06	0.05 – 0.08	2	2	2022	N	
Chromium, ppb	0.3	ND – 2	100	100	2022	N	
Fluoride, ppm	0.1	ND – 0.62	2	2	2022	N	Erosion of natural deposits; water additive to promote strong teeth
Nitrate, ppm	2.9	ND – 4.7 ^(a)	10	10	2022	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radiological Contaminants							
Combined radium, pCi/L	0.1	ND – 1.60	5	0	2020	N	Erosion of natural deposits
Gross alpha, pCi/L	0.6	ND – 5.0	15	0	2020	N	
Gross beta particles, pCi/L	0.5	ND – 4.03	50 ^(b)	0	2020	N	
Volatile Organic Contaminants							
cis-1,2-Dichloroethylene, ppb	0.03	ND – 0.5	70	70	2022	N	Discharge from industrial chemical factories
Tetrachloroethylene, ppb	0.44	ND – 2.5	5	0	2022	N	Discharge from factories and dry cleaners
Trichloroethylene, ppb	0.05	ND – 1.6	5	0	2022	N	Discharge from metal degreasing sites and other factories
Unregulated Volatile Organic Contaminants							
1,2,3-Trichloropropane, ppb ^(c)	0.05	0.03 – 0.08	NA	NA	2022	N	Used as a solvent and to produce other chemicals; found in pesticides

- (a) Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.
- (b) EPA considers 50 pCi/L to be the level of concern for beta particles
- (c) Samples were collected from one location (entry point 112) in the Main system.

Contaminants	Average Detection	Range of Detections	MCL	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Disinfectant Residual - Values below reflect results from routine monthly distribution sampling at multiple sites. Disinfection is accomplished using chloramination and residual disinfectant is measured as total chlorine.							
Total Chlorine, ppm	2.07	1.83 – 2.45	MRDL = 4	MRDLG = 4	2022	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.							
Chlorite, ppm	0.34	0.23 - 0.51	1	0.8	2022	N	Byproduct of drinking water chlorination
Haloacetic acids, ppb	22	ND – 55	60	NA	2022	N	Byproduct of drinking water disinfection
Total Trihalomethanes, ppb	32	1 - 60	80	NA	2022	N	

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							
Total Chlorine, ppm	112, 115, 116, 117, 136, 138	0.2	0.65	0.65 – 3.24	2022	N	Water additive used to control microbes
Free Chlorine, ppm	107, 111, 123, 125, 132, 137	0.4	0.01 ^(d)	0.01 – 3.18	2022	N	
	114	0.45	0.01 ^(d)	0.01 – 3.11	2022	N	
	126	0.51	0.01 ^(d)	0.01 – 3.07	2022	N	
	135	0.54	0.32 ^(d)	0.32 – 2.63	2022	N	
	105, 110	0.7	0.01 ^(d)	0.01 – 2.38	2022	N	
	106	0.8	0.01 ^(d)	0.01 – 2.75	2022	N	
Chlorine Dioxide, ppm	138	NA ^(e)	0	0 – 0.43	2022	N	

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

(e) Chlorine Dioxide is used to supplement disinfection.

Total Organic Carbon (TOC) during 2022 - For Total Organic Carbon removal, compliance is based on a running annual average of monthly results, not a single result.							
Contaminant	Plant ID	Range of % Removal Required	Range of % Removal Achieved	Number of Quarters Out of Compliance	Sample Date	Violation ^(f) Y/N	Sources of Contamination
TOC	313	35	27.3 – 60.0	0	2022	N	Naturally present in the environment
	314	25 - 35	10.7 - 59.6	0	2022	N	
	315	25 - 45	17.9 - 56.0	0	2022	N	
	335	25 - 45	34.5 - 71.8	0	2022	N	
	339	25 - 45	31.8 -100.0	0	2022	N	

(f) Compliance is determined by a running annual average, computed quarterly.

Tap water samples were collected from homes in the service area for lead and copper testing.

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	0.197	53	0	1.3	1.3	2022	N	Corrosion of household plumbing
Lead, ppb	3.4	53	0	15	0	2022	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. Aqua 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 at 800-426-4791 or at 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. All other contaminants tested during UCMR4 were Not Detected.

Unregulated Contaminants Detected During 2018			
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

Voluntary PFAS (Forever Chemicals) Entry Point Sampling from 2022

Name	Chemical Name	Range of Detections (ppt)
PFOA	Perfluorooctanoic acid	ND-11
PFOS	Perfluorooctane sulfonate	ND-13
PFBS	Perfluorobutane sulfonic acid and Perfluorobutane sulfonate	ND-8.6
PFHxS	Perfluorohexanesulfonic acid	ND-7.5
PFNA	Perfluorononanoic acid	ND-11

Notes: For additional information, please refer to our website: AquaWater.com/pfas
 This data represents entry points that were sampled during calendar year 2022.
 Treatment has been installed in the Main System to reduce PFAS.
 ND = Not Detected

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.