# 2023 ANNUAL DRINKING WATER QUALITY REPORT

## PWSID #:1090082 Quakertown Borough Water Department

*Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien.* (This report contains very important information about your drinking water. Translate it or speak with someone who understands it.)

**WATER SYSTEM INFORMATION:**

We want you to be informed about your water supply. This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please contact: **Steven Crotzer, Water Superintendent at 215-536- 5855**. **Monday through Friday 7:00am to 3:30pm.**

**SOURCE(S) OF WATER:**

Our water sources are derived from a network of eleven operating wells. These wells are located in and around town and are part of a geologic formation known as the Brunswick formation. The Department of Environmental Protection (DEP) has completed a source water assessment for the groundwater sources for this system and has determined that the potential for contamination varies from low to high depending on the location of the well. Information on source water assessments is available on the DEP Web site at www.depweb.state.pa.us (DEP keyword "source water").

A summary report of the Assessment is available on the Source Water Assessment & Protection Webpage at http://www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/SrceProt/SourceAssessment/default.htm. Complete reports were distributed to municipalities, water supplier, local planning agencies and PADEP offices. Copies of the complete reportare available for review at the Pa. DEP Southeast Regional Office, Records Management Unit at (484) 250-5980.

**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 organtransplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from 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 microbialcontaminants are available from the Safe Drinking Water Hotline (800-426-4791).**

**EDUCATIONAL INFORMATION:**

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, in some cases, 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, may come from sewage treatment plants, septic systems,agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, can be naturally-occurring or result from urban stormwater run-off,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, urban stormwater runoff, andresidential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products 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.

In order to ensure that tap water is safe to drink, EPA and DEP prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA and DEP regulations establish limits for contaminants in bottledwater 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 Safe Drinking WaterHotline (800-426-4791).

## Monitoring Your Water

We routinely monitor for contaminants in your drinking water according to federal and state laws. The following tables show the results of our monitoring for the period of January 1 to December 31, 2023. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data is from prior years in accordance with the Safe Drinking Water Act. The dates have been noted on the sampling results table.

| Chemical Contaminant | MCL In CCR Units | MCLG | Highest Level Detected | Range of Detections | Units | Violation Y/N | Sources of Contamination |
|---|---|---|---|---|---|---|---|
| Chlorine (2023) (Distribution) | MRDL = 4 | MRDL = 4 | 1.08 Jan. 2023 | 0.82 – 1.08 | ppm | No | Water additive used to control microbes |
| Trihalomethanes (TTHM) (2023) | 80 | N/A | 45.945 * 2nd Quarter | 8.74 94.80 | ppb | No | By-product of drinking water chlorination |
| Haloacetic Acids Five(HAA5) (2023) | 60 | N/A | 20.3025 * 4th Quarter | 4.51-41.70 | ppb | No | By-product of drinking water chlorination |
| Arsenic<br>2022<br>2023 | <br>10<br>10 | <br>0<br>0 | <br>7.40<br>7.40 | <br>0.00-7.40<br>0.00-7.40 | <br>ppb<br>ppb | <br>No<br>No | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes |
| Barium (9/27/22) | 2 | 2 | 0.45 | 0.0199-0.45 | ppm | No | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| Chromium (9/27/22) | 100 | 100 | 1.70 | 0.001–1.70 | ppb | No | Discharge from steel and pulp mills; Erosion of natural deposits |
| Fluoride (9/27/22) | 2 ** | 2 ** | 0.32 | 0.00–0.32 | ppm | No | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Nitrate (2023) | 10 | 10 | 0.563 | 0.00-0.563 | ppm | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion ofnatural deposits |
| Di(2-ethylhexyl) phthalate (SOC) (2023) | 6 | 0 | 0.673 | 0.00-0.673 | ppb | No | Discharge from rubber and chemical factories |
| 2,4-D (SOC) (2023) | 70 | 70 | 0.109 | 0.00-0.109 | ppb | No | Runoff from herbicide used on row crops |
| Tetrachloroethylene (2023) | 5 | 0 | 0.87 | 0.00 – 0.87 | ppb | No | Discharge from factories and dry cleaners |
| Combined Radium<br>(2020)<br>(2023) | 5 | 0 | <br>3.41<br>3.38 | <br>0.00 – 3.41<br>0.00-3.38 | pCi/l | No | Erosion of natural deposits |
| Combined Uranium (2020) | 30 | 0 | 1.75 | N/A | ppb | No | Erosion of natural deposits |
| Alpha emitters (2020) | 15 | 0 | 3.44 | 0.00 – 3.44 | pCi/l | No | Erosion of natural deposits |
| Gross Beta (2023) | 50*** | 50 | 1.38 | 0.00–1.38 | (mrem/ yr) | No | Decay of natural and man-made deposits |

***Entry Point Disinfectant Residual***

| Contaminant | Minimum Disinfectant Residual | Lowest Level Detected | Range of Detections | Units | Violation Y/N | Sources of Contamination |
|---|---|---|---|---|---|---|
| Chlorine (2023)<br>Entry Point 101<br>Entry Points 102-108 | <br>0.50<br>0.40 | <br>0.54 – 7/23/23<br>0.31 – 2/13/23(1) | <br>0.54-1.63<br>0.31-1.56 | <br>ppm<br>ppm | <br>No<br>No | Water additive used to controlmicrobes. |

(1) Although this Lowest Level Detected is below the Minimum Disinfectant Residual the required level was reached within the required 4-hour time frame.

* Indicates the highest running annual average calculated during the year 2023.

** EPA's MCL for fluoride is 4 ppm, however, Pennsylvania has set a lower MCL to better protect human health.

*** EPA considers 50 pCi/L to be the level of concern for beta particles

| Contaminant | Action Level (AL) | MCLG | 90th Percentile Value | Units | # of Sites Above AL of Total Sites | Violation Of TT Y/N | Sources of Contamination |
|---|---|---|---|---|---|---|---|
| Lead (2022) | 15 | 0 | 1.2 | ppb | 0 out of 33 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Copper (2022) | 1.3 | 1.3 | 0.798 | ppm | 1 out of 33 | No | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |

## Notice of Unregulated Contaminant Monitoring Rule Completed - UCMR3 & UCMR4

Our water system completed monitoring for several unregulated contaminants Unregulated contaminants are those that do not yet have a drinking water standard set by the EPA. The purpose of monitoringfor these contaminants is to help the EPA decide whether the contaminants should be regulated. The table below details the unregulated contaminants that were detected in the water system. For more information seehttps://www.epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule.

| Unregulated Contaminants | | | | | |
|---|---|---|---|---|---|
| Substance (units) | Year Sampled | MCL / MCLG | Average Amount Detected | Range Low - High | Typical Source |
| Methyl Tertiary-ButylEther (MTBE) Entry Point 103 (ppm) | 2023 | Not Regulated | 0.00052 | 0 – 0.00054 | MTBE is a member of a group of chemicals commonly known as fuel oxygenates. Oxygenates are added to fuel to increase itsoxygen content |
| HAA9 Distribution System(ppm) | 2019 | Not Regulated | 27.41 | 18.40-27.41 | By-product of drinking water chlorination |
| HAA5 Distribution System(ppm) | 2019 | Not Regulated | 16.11 | 10.60-16.11 | By-product of drinking water chlorination |
| HAA6br Distribution System(ppm) | 2019 | Not Regulated | 14.21 | 9.20-14.21 | By-product of drinking water chlorination |
| Germanium Entry Points 101-108(ppm) | 2019 | Not Regulated | 0.86 | 0- 0.86 | Naturally-occurring element; commercially available in combination with other elements and minerals; a byproduct of zinc ore processing; used in infrared optics, fiber-optic systems, electronics, and solar applications |
| Nickel Entry Points 101-108 (ppb) | 9/27/22 | Not Regulated | 0.80 | 0.50-1.00 | Leaching from metals in contact with drinking water, erosion in the production of steel alloys. |
| Manganese Entry Points 101-108 (ppm) | 2023 | Not Regulated | 0.0128 | 0- 0.0128 | Naturally occurring element; commercially available in combination with other elements and minerals; used insteel production, fertilizer, batteries and fireworks; drinking water and wastewatertreatment chemical; essential nutrient |

## Notice of PFAS Sampling

On September 9, 2020 representatives from the Pennsylvania Department of Environmental Protection Bureau of Safe Drinking Water conducted a site visit to collect sample to be analyzed for the presence of 18 per- and polyfluoroalkyl substances (PFAS) in the drinking water supply.
https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos

| PFAS Results | | | | | |
|---|---|---|---|---|---|
| **Substance (all results in ng/L)** | **Entry Point 101** | **Entry Point 102** | **Entry Point 104** | **Entry Point 105** | **EPA Combined Health Advisory Limit (HAL)** |
| Perfluorononanoic acid (PFNA) | ND | ND | ND | 18.1 | Not Applicable |
| Perfluorooctane sulfonate (PFOS) | ND | 11.2 | 4.0 | 7.0 | 70 ng/L |
| Perfluorooctanoic acid (PFOA). | ND | 9.3 | ND | 4.4 | 70 ng/L |

- Both PFOS levels and PFOA levels are not detected at **Entry Point 101**. The sum of these results for PFOS and PFOA (not detected) is below the US EPA's Combined Lifetime Health Advisory Level (HAL) for PFOS and PFOA of 70 ng/L.EPA has not established a HAL for the other PFAS contaminants.
- The PFOS levels are 11.2 ng/L and the PFOA levels are 9.3 ng/L for a sum total of 20.5 ng/L at **Entry Point 102**. The sum of these results for PFOS and PFOA is below the US EPA's Combined Lifetime Health Advisory Level (HAL) for PFOS and PFOA of 70 ng/L.
- The PFOS levels are 4.0 ng/L and the PFOA levels are not detected for a sum total of 4.0 ng/L at **Entry Point 104**. The sum of these results for PFOS and PFOA is below the US EPA's Combined Lifetime Health Advisory Level (HAL) for PFOS and PFOA of 70 ng/L.
- The PFOS levels are 7.0 ng/L and the PFOA levels are 4.4 ng/L for a sum total of 11.4 ng/L at **Entry Point 105**. The sum of these results for PFOS and PFOA is below the US EPA's Combined Lifetime Health Advisory Level (HAL) for PFOS and PFOA of 70 ng/L.

**Health Effects:** ***Arsenic:*** *While your drinking water meets EPA's standard for arsenic, it does contain lowlevels 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 linkedto other health effects such as skin damage and circulatory problems.*

**Violations:** Quakertown had violations associated with 2,4,5-TP Silvex related to reporting in April and July 2023. The water samples were taken in accordance with DEP regulations, but our laboratory did not submit the results on time.

## Information about 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 home plumbing. The Quakertown Borough Water Department 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 tapfor 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.

## DEFINITIONS AND ABBREVIATIONS:

**Action Level (AL)** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
**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.
**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.
***Minimum Residual Disinfectant Level –*** The minimum level of residual disinfectant required at the entry point to the distribution system.
***Maximum Residual Disinfectant Level Goal (MRDLG)*** - The level of a drinking water disinfectant below which thereis no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
***pCi/L*** = picocuries per liter (a measure of radioactivity) **ND**-Not Detected
***ppb*** = parts per billion, or micrograms per liter (µg/L)
***ppm*** = parts per million, or milligrams per liter (mg/L)
***ppt =*** parts per trillion, or nanograms per liter (ng/L)
***ppq*** = parts per quadrillion, or picograms per liter
***N/A*** = Not Applicable