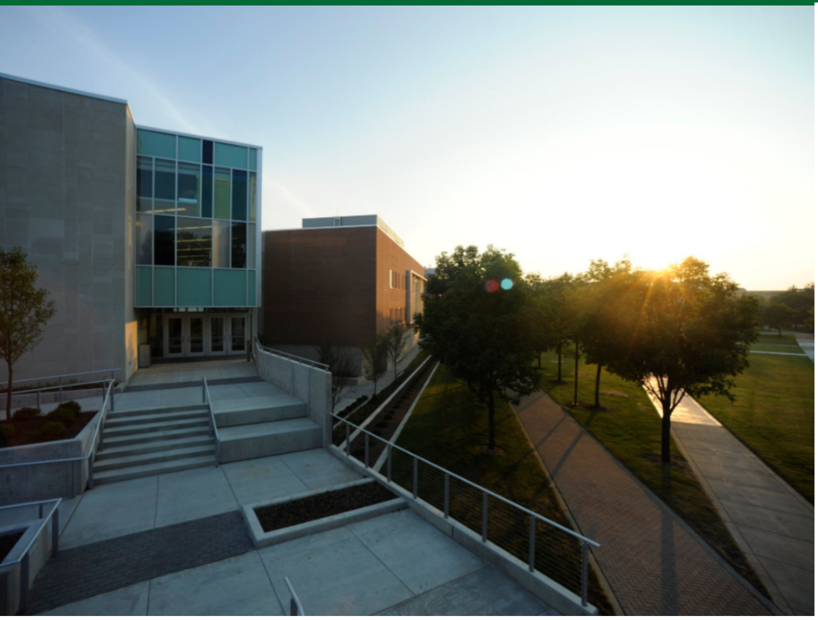
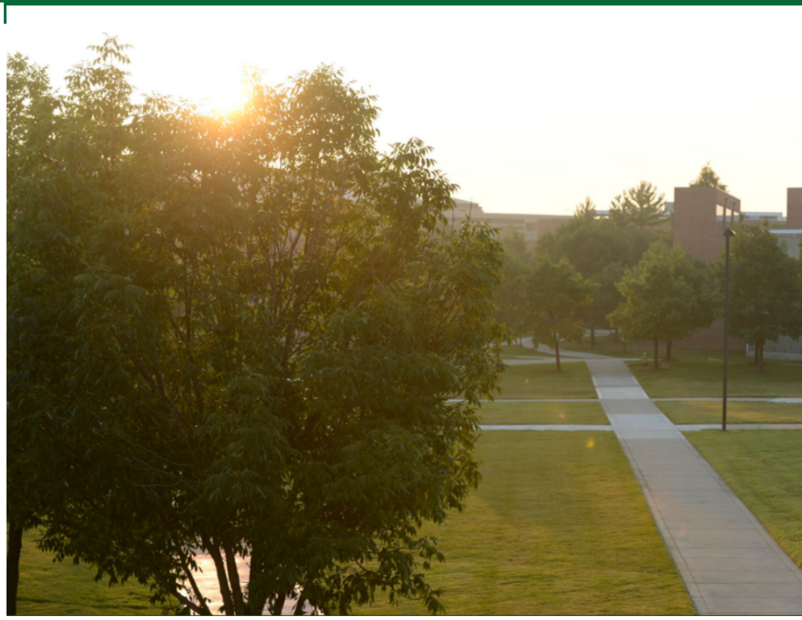
# Wright State University





## Drinking Water
## Consumer Confidence Report

Wright State University

2023

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| For more information please contact: | |
|---|---|
| Environmental Health and Safety | 937-775-2215 |
| Facilities Management and Campus Operations | 937-775-4444 |
| US EPA Safe Drinking Water Hotline | 1-800-426-4791 |

# Wright State University Drinking Water Consumer Confidence Report for 2023

## Introduction

The Wright State University Public Water System has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. Included within this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contacts.

***Your drinking water met Ohio EPA standards.***

## Source Water Information

Wright State University receives its drinking water from two wells drilled below the earth's surface. The first well was installed in 1968 and is still in operation today. These wells are located over the Mad River Buried Valley Aquifer, which are located at the northwest end of Lot #20 and adjacent to Kauffman Road.

Wright State University is a community public water system serving approximately 13,068 people. Its public water system (PWS) number is OH2902012 and name is Wright State University. It is classified as a type C – Community public water system with 39 connections and its source is from groundwater (GW). A community public water system is a system that has at least 15 service connections used by year-round residents of the area or regularly serves 25 or more year-round residents. Wright State's system is designed to produce 1,008,000 gallons per day (GPD) and Wright State's uses an average of 130,000 GPD. The treatment process includes iron and manganese removal, ion exchange softening to remove minerals, and chlorine disinfection to eliminate bacteria. A phosphorous compound is added to control pipe corrosion to prevent lead and copper that may be present in pipes from leaching into the water. One elevated storage tank holds 125,000 gallons. An emergency, auxiliary supply is available by three connections to Fairborn's water system.

The 1996 Amendments to the Safe Drinking Water Act require the Ohio Environmental Protection Agency (OEPA) to conduct source water assessments for all Public Water Systems (PWS's). In 2002, the Ohio EPA completed an assessment and provided information to assist Wright State to understand the potential threats to their water supply and help them protect their water supply.

According to the study, the aquifer that supplies the drinking water to the *Wright State University has a high susceptibility to contamination*. This determination was made because of the following reasons:

- The sand and gravel aquifer is shallow with a depth to water that ranges from 15-30 feet below the surface; and
- there is no confining layer which could act as a barrier between the ground surface and the aquifer; and
- there are potential contaminant sources that exist within and just outside the Drinking Water Source Protection Area that could potentially impact Wright State University's drinking water.

Consequently, the likelihood that the Wright State University's source of drinking water could become contaminated is high and it is critical that potential contaminant sources are handled carefully with the implementation of the appropriate protective strategies.

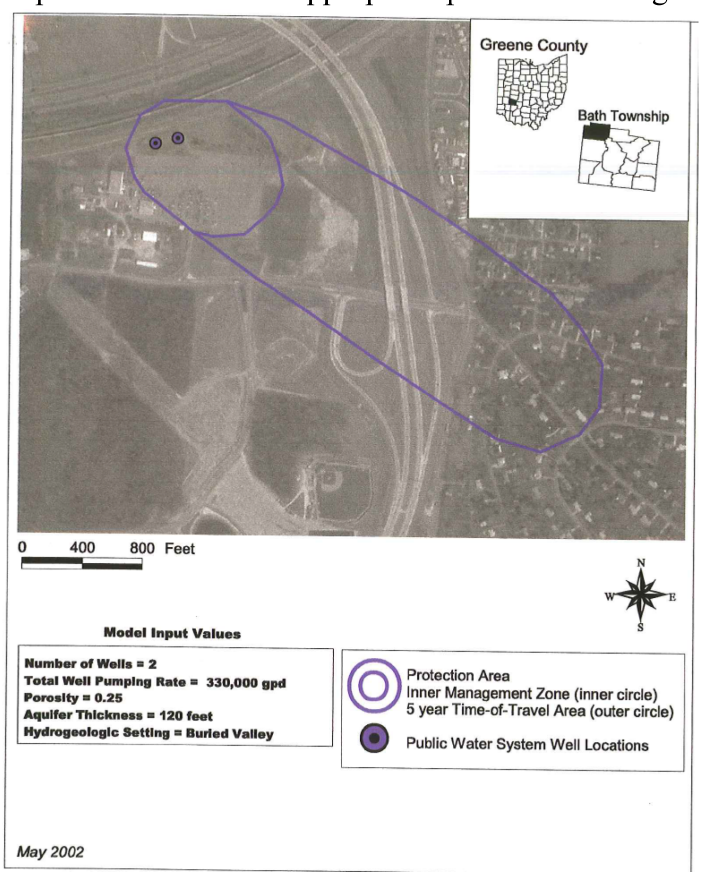


*Figure 1. Drinking Water Source Protection Area for Wright State University Public Water System Identification #2902012 (Source: Drinking Water Source Assessment for Wright State University, Ohio EPA, May 2002)*

For any questions and/or concerns and for copies of the Source Water Assessment Report prepared for Wright State University's Public Water Supply contact Marjorie Markopoulos, PhD, Director of Environmental Health and Safety at marjorie.markopoulos@wright.edu or 937-775-2797.

### Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Wright State's Public Water System also has emergency connections with the City of Fairborn. Wright State may use water from the City of Fairborn for emergency or other operational needs. During 2023, Wright State's Public Water System was connected to the City of Fairborn's water during the water treatment modernization project. The project included improving the production wells and upgrading to membrane filtration, corrosion control, and liquid chlorination. The total volume of Fairborn's water used in 2023 was 47.375 million gallons (MG) for 365 days. During routine plant operations, this connection is not use. This report does not include information for the water supplied from the City of Fairborn. A copy of Fairborn's 2023 Consumer Confidence Report can be obtained by visiting the City of Fairborn Water Department website at https://www.fairbornoh.gov/news_detail_T49_R209.php or by making a written request to: Fairborn Division of Water and Sewer, 44 W. Hebble Ave, Fairborn, OH 45324.

## What are sources of contamination to drinking water

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, 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 water 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, urban storm water runoff, and residential uses;
- ***Organic chemical contaminants***, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; and
- ***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, USEPA prescribes regulations which 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 Federal Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

### *Who needs to take special precautions?*

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 from infection. 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 (1-800-426-4791).

### *About your drinking water*

The EPA requires regular sampling to ensure drinking water safety. Wright State University conducted sampling for ***bacteria, inorganic, synthetic organic, and volatile organics*** during **2023**. Samples were collected for a total of approximately 60 different contaminants and 4000 analyses most of which were not detected in the Wright State University water supply. The Ohio EPA requires 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, though accurate, are more than one year old.

### *Monitoring & Reporting Violations & Enforcement Actions*

On January 16, 2020, Wright State failed to list two (2) individual sample results for samples that were over the lead action level for the 2018 Consumer Confidence Report. The results of 19.1 ppb and 15.2 ppb should have been added to the Table of Detected Contaminants. As a result, all lead samples that exceed the action level are individually listed in the Table of Detected Contaminants. This action will provide you, our drinking water customers, an annual report that adequately informs you about the quality of our drinking water and the risks from exposure to contaminants detected in our drinking water. For a copy of the revised 2018 Consumer Confidence Report, contact Marjorie Markopoulos at 937-775-2797 or email ehs@wright.edu.

In 2020, Wright State University detected lead in levels exceeding the federal action level of 15 ppb in 4 tap locations in 3 buildings; the levels ranged from 20.3 to 140 ppb. Thirty samples from different tap locations were taken on September 26-28, 2020. Lead can cause serious health problems, especially for pregnant women and young children.

For the 2020 sampling event, the $90^{th}$ percentile for lead at Wright State University was 20.3 micrograms per liter (µg/L), which means 90% of the samples collected had lead levels below 20.3µg/L. When the $90^{th}$ percentile for lead sample results exceeds 15 µg/L, action is required to correct the exceedance.

Wright State University worked with Ohio EPA to correct this issue. Wright State increased its sampling frequency and number of samples from 30 samples a year to 60 samples twice a year. Wright State also implemented a regular flushing program to reduce the amount of time water may spend in the pipes. Corrosion treatment to prevent lead and copper that may be present in pipes from leaching into the water was implemented in October 2022 and continues today. The treatment includes the addition of a phosphorous compound and pH control to limit pipe corrosion. Since the addition of corrosion treatment, there have been no action level exceedances for lead.

Lead typically enters the water primarily as a result of corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. There are steps the public can take to reduce their lead exposure, which include running the water for 30 seconds to 3 minutes (or until it is noticeably colder) before using it for drinking, cooking, or preparing baby formula. For more information on the health effects of lead, visit U.S. EPA's website at: www.epa.gov/lead.

On February 28, 2023, Wright State received a Sanitary Survey Notice of Violation (NOV), which noted that during the survey the water plant and the drinking water production wells were out of service. Throughout 2023, Wright State was using the City of Fairborn's water as an emergency connection. As recommended, Wright State continued the process to obtain plan approval for the upgrades that were initiated in November 2020. Furthermore, Wright State has completed rehabilitation of both production wells into compliance. The plant upgrades include the removal of the Aerator units, ion exchange units and chemicals. The improvements include new Aeralator units, membrane softening units, a new storage tank, and new chemical feed systems. These upgrades will remove impurities, improve taste, enhance environmental sustainability, provide consistent water quality, and meet regulatory requirements.

### *License to Operate (LTO) Status Information*

In 2023 Wright State had an unconditioned license to operate our water system.

### *Arsenic Educational Information*

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 effects such as skin damage and circulatory problems.

Contact Marjorie Markopoulos, PhD, Director of Environmental Health and Safety at (937) 775-2797 or ehs@wright.edu.

### *Table of Detected Contaminants*

The Table of Detected Contaminants contains the information on those contaminants that were found in the Wright State University drinking water. The Table of Detected Contaminants contains only data for regulated contaminants; contaminants subject to an MCL, treatment technique (TT), or action level (AL), and unregulated contaminants for which Ohio EPA requires monitoring. The data presented in the Consumer Confidence Report are from the most recent testing done accordance with the regulations. The Table does not include any data older than five years nor does it contain data for contaminants that are not detected.

### *Non-regulated Contaminants*

Non-regulated contaminants are contaminants for which Ohio EPA does not require testing and does not have a MCL. The table below lists the unregulated contaminants that were detected in Wright State's drinking water. Presently, there are no MCL or Action Levels for these contaminants. The table includes samples that were collected and analyzed for operational management of the water treatment plant, studies to aid in the design stage for the modernization of the treatment plant, and studies for the control of corrosion control for lead and copper.

# Table of Detected Contaminants

| Contaminants (Units) | MCLG or MRDLG | MCL or MRDL | Level Found | Range of Detections | Violation? | Year Sampled | Typical Source of Contaminants |
|---|---|---|---|---|---|---|---|
| **Radioactive Contaminants** | | | | | | | |
| **Alpha emitters (pCi/l)** | 0 | 15 | 1.41 ±1.69<br>(MDC=2.98)<br>Carrier Recovery: NA<br>Tracer Recovery: NA | NA | NO | 2020 | Erosion of natural deposits |
| **Radium-228 (pCi/l)** | 0 | 5 | 0.459 ±0.423<br>(0.863)<br>Carrier Recovery:61%<br>Tracer Recovery: 80% | NA | NO | 2020 | Erosion of natural deposits |
| **Inorganic Contaminants** | | | | | | | |
| **Arsenic (ppb)** | 0 | 10 | 5.2 | <2.0 - 5.2 | NO | 2023 | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes |
| **Barium (ppm)** | 2 | 2 | 0.31 | 0.18 - 0.31 | NO | 2023 | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| **Fluoride (ppm)** | 4 | 4 | 1 | 0.657 - 1 | NO | 2023 | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| **Nitrate [measured as Nitrogen] (ppm)** | 10 | 10 | 0.14 | <0.05 - 0.14 | NO | 2023 | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| **Residual Disinfectants** | | | | | | | |
| **Total Chlorine (mg/L)** | MRDLG<br>4 | MRDL<br>4 | 0.9 | 0.6 - 0.9 | NO | 2023 | Water additive used to control microbes. |
| **Disinfection Byproducts** | | | | | | | |
| **Haloacetic Acids (ppb)** | No goal for the total | 60 | 14.2 | 9.1 - 14.2 | NO | 2023 | By-product of drinking water chlorination |
| **TTHMs [Total Trihalomethanes] (ppb)** | No goal for the total | 80 | 28.2 | 24.6 - 28.2 | NO | 2023 | By-product of drinking water chlorination |
| **Volatile Organic Contaminants** | | | | | | | |
| **Dichloromethane (ppb)** | 0 | 5 | 1.3 | NA | NO | 2020 | Discharge from pharmaceutical and chemical factories |

**Lead and Copper (January – June 2023)**

| Contaminants (units) | Action Level (AL) | MCLG | Individual Results over the AL | 90% of test levels were less than | Violation | Month - Year Sampled | Typical Source of Contaminants |
|---|---|---|---|---|---|---|---|
| **Lead (ppb)** | 15 ppb | 0 ppb | 18.10, 18.30, 34.00, 35.00, 36.60, 176.00 | 15 | NO | May 2023 | Corrosion of household plumbing systems |
| | **6 out of 60 samples were found to have lead levels in excess of the lead action level (AL) of 15 ppb** | | | | | | |
| **Copper (ppm)** | 1.3 ppm | 1.3 ppm | NA | 0.185 | NO | May 2023 | |
| | 0 out of 60 samples were found to have copper levels in excess of the copper action level of 1.3 ppm. | | | | | | |
| **Lead and Copper (June – December 2023)** | | | | | | | |
| **Lead (ppb)** | 15 ppb | 0 ppb | NA | 2.39 | NO | October 2023 | Corrosion of household plumbing systems |
| | 0 out of 60 samples were found to have lead levels in excess of the lead action level (AL) of 15 ppb | | | | | | |
| **Copper (ppm)** | 1.3 ppm | 1.3 ppm | NA | 0.024 | NO | October 2023 | |
| | 0 out of 60 samples were found to have copper levels in excess of the copper action level of 1.3 ppm. | | | | | | |

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

## Unregulated Contaminants

Unregulated contaminants are contaminants for which Ohio EPA requires monitoring. The table below lists the unregulated contaminants that were detected in Wright State's drinking water. Presently, there are no MCL or Action Levels for these contaminants.

| Unregulated Contaminants (Units) | Average Level Found | Range of Detections | Sample Year | Sample Location |
|---|---|---|---|---|
| **Bromochloroacetic Acid (ppb)** | 4.0 | 3.4 - 4.6 | 2023 | Distribution |
| **Bromodichloromethane (ppb)** | 8.0 | 7.5 - 8.4 | 2023 | Distribution |
| **Bromodichloromethane (ppb)** | 10.4 | NA | 2023 | Entry point |
| **Bromoform (ppb)** | 0.63 | 0.60 - 0.66 | 2023 | Distribution |
| **Bromoform (ppb)** | 0.86 | NA | 2023 | Entry point |
| **Chloroform (ppb)** | 13.2 | 12.2 -14.2 | 2023 | Distribution |
| **Chloroform (ppb)** | 17 | NA | 2023 | Entry point |
| **Dibromoacetic Acid (ppb)** | 2 | NA | 2023 | Distribution |
| **Dibromochloromethane (ppb)** | 4.6 | 4.3 - 4.8 | 2023 | Distribution |
| **Dibromochloromethane (ppb)** | 6 | NA | 2023 | Distribution |
| **Dichloroacetic Acid (ppb)** | 6.6 | 5.5 - 7.7 | 2023 | Distribution |
| **Trichloroacetic Acid (ppb)** | 4.1 | 3.6 - 4.5 | 2023 | Distribution |
| **Total Organic Carbon (ppb)** | 1700 | NA | 2019 | Entry point |
| **Bromide (ppb)** | 81.2 | NA | 2019 | Entry point |
| **Haloacetic Acid (HAA5) (ppb)** | 11.7 | 9.1 - 14.2 | 2023 | Distribution |
| **Nickel (ppb)** | 3.2 | NA | 2020 | Entry point |

## Non-Regulated Contaminants

Non-regulated contaminants are contaminants for which Ohio EPA does not require testing and does not have a MCL. The table below lists the unregulated contaminants that were detected in Wright State's drinking water. Presently, there are no MCL or Action Levels for these contaminants.

| Non-regulated Contaminants (Units) | Average Level Found | Range of Detections | Sample Year | Reason for sampling |
|---|---|---|---|---|
| **Iron (ppm)** | 0.21 | <0.1 - 0.21 | 2022 | Entry point |
| **Manganese (ppm)** | 0.115 | 0.0996 - 0.127 | 2020 | Raw |
| **Manganese (ppm)** | 0.009 | <0.005 - 0.0097 | 2021 | Distribution |
| **Hardness (mg/L as $CaCO_3$)** | 298 | 267 - 322 | 2023 | Entry point |
| **Chloride (ppm)** | 34 | 31 - 41 | 2023 | Entry for operational control and monitoring for 2013 Salt Pile Notice of Violation |
| **Chloride (ppm)** | 35 | 31 - 44 | 2023 | Distribution for operational control and monitoring for 2013 Salt Pile Notice of Violation |
| **Chloride (ppm)** | 218 | NA | 2023 | Raw well for operational control and monitoring for 2013 Salt Pile Notice of Violation |
| **Strontium (ppb)** | 3075 | 2260 - 3890 | 2020 | Entry point analysis for water plant modernization |
| **pH** | 7.9 | NA | 2023 | Raw well #1 for corrosion control study |
| **Temperature (°C)** | 12.2 | NA | 2020 | Raw well for corrosion control study |
| **Alkalinity (mg/L as $CaCO_3$)** | 330 | NA | 2023 | Raw well #1 for corrosion control study |
| **Calcium (mg/L)** | 100 | NA | 2023 | Raw well #1 for corrosion control study |
| **Chloride (mg/L)** | 180 | NA | 2023 | Raw well #1 for corrosion control study |
| **Total Dissolved Solids (mg/L)** | 680 | NA | 2023 | Raw well #1 for corrosion control study |
| **Hardness (mg/L as $CaCO_3$)** | 508 | 480 - 580 | 2022 | Raw well |
| **Sulfate (mg/L)** | 54.5 | 48.2 - 60.1 | 2020 | Raw well for corrosion control study |
| **Iron (mg/L)** | 2.10 | NA | 2023 | Raw well #1 for corrosion control study |
| **Magnesium (mg/L)** | 42.8 | NA | 2023 | Raw well #1 for corrosion control study |
| **Manganese (mg/L)** | 0.097 | NA | 2023 | Raw well #1 for corrosion control study |
| **Nitrate (mg/L)** | 0.131 | NA | 2023 | Raw well #1 for corrosion control study |
| **Sodium (mg/L)** | 100 | NA | 2023 | Raw well #1 for corrosion control study |
| **Sulfate (mg/L)** | 43 | NA | 2023 | Raw well #1 for corrosion control study |
| **Zinc (mg/L)** | 0.013 | NA | 2023 | Raw well #1 for corrosion control study |
| **pH** | 7.9 | 7.5 - 8.2 | 2023 | Entry point |
| **Temperature (°C)** | 13.4 | 11.7 - 15 | 2020 | Entry point for corrosion control study |
| **Alkalinity (mg/L as $CaCO_3$)** | 255 | 229 - 290 | 2023 | Entry point |
| **Total Dissolved Solids (mg/L)** | 963 | 916 - 1010 | 2020 | Entry point for corrosion control study |
| **Hardness (mg/L as $CaCO_3$)** | 166 | 104 - 465 | 2022 | Entry point |
| **Sulfate (mg/L)** | 53.7 | 53.5 - 53.9 | 2020 | Entry point for corrosion control study |
| **pH** | 7.9 | 7.6 - 8.4 | 2022 | Distribution |
| **Temperature (°C)** | 21.59 | 16.9 - 26.7 | 2020 | Distribution for corrosion control study |
| **Alkalinity (mg/L as $CaCO_3$)** | 342 | 245 - 365 | 2022 | Distribution |
| **Calcium (mg/L as Ca)** | 26.0 | 22.9 - 28.6 | 2020 | Distribution for corrosion control study |
| **Total Dissolved Solids (mg/L)** | 937 | 580 - 1690 | 2020 | Distribution for corrosion control study |
| **Hardness (mg/L as $CaCO_3$)** | 213 | 129 - 301 | 2022 | Distribution |
| **Iron (mg/L)** | 0.22 | <0.10 - 0.22 | 2020 | Distribution for corrosion control study |
| **Magnesium (mg/L)** | 10.0 | 8.35 - 11.5 | 2020 | Distribution for corrosion control study |
| **Potassium (mg/L)** | 1.94 | 1.26 - 2.39 | 2020 | Distribution for corrosion control study |
| **Silica (mg/L)** | 14.7 | 14.1 - 15.2 | 2020 | Distribution for corrosion control study |
| **Sodium (mg/L)** | 379 | 373 - 383 | 2020 | Distribution for corrosion control study |

| | | | | |
|---|---|---|---|---|
| **Ethylene Glycol (ppb)** | 16,350 | <5000 - 67,000 | 2021 | Raw, Distribution, and Entry point for contaminant detection during 2021 Water Warning |
| **Orthophosphate as P (mg/L)** | 2.8 | 0.12 - 5.5 | 2023 | Entry point for corrosion control |
| **Orthophosphate as P (mg/L)** | 2.6 | 0.29 - 6.0 | 2022 | Distribution for corrosion control |
| **pH** | 7.4 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Temperature (°C)** | 12.4 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Alkalinity (mg/L as $CaCO_3$)** | 248 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Calcium (mg/L as Ca)** | 76.9 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Total Dissolved Solids (mg/L)** | 327 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Hardness (mg/L as $CaCO_3$)** | 314 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Iron (mg/L)** | 0.01 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Stability** | 240 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Orthophosphate (mg/L as PO4)** | 1.2 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Total Phosphorus (mg/L)** | 0.4 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Dissolved Inorganic Carbon** | 257 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Free Chlorine (mg/L as Cl2)** | 0.8 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Total Chlorine (mb/L as Cl2)** | 0.9 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Orthophosphate (mg/L as P)** | 0.3 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Chloride (mg/L)** | 29.6 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **Sulfate (mg/L)** | 31.3 | NA | 2023 | Entry Point with City of Fairborn for corrosion control study |
| **pH** | 7.4 | 7.3 - 7.6 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Temperature (°C)** | 15.0 | 11.0 - 18.8 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Alkalinity (mg/L as $CaCO_3$)** | 249 | 244 - 256 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Calcium (mg/L as Ca)** | 76.5 | 76.4 - 76.7 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Total Dissolved Solids (mg/L)** | 372 | 346 - 419 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Hardness (mg/L as $CaCO_3$)** | 314 | 314 - 315 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Iron (mg/L)** | 0.01 | NA | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Manganese (mg/L)** | 0.0007 | <0.0006 - 0.0007 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Stability** | 247 | 240 - 248 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Orthophosphate (mg/L as PO4)** | 2.2 | 0.8 - 3.4 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Total Phosphorus (mg/L)** | 0.7 | 0.2 - 1.1 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Dissolved Inorganic Carbon** | 277 | 266 - 299 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Free Chlorine (mg/L as Cl2)** | 0.8 | 0.7 - 0.8 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Total Chlorine (mb/L as Cl2)** | 0.8 | 0.7 - 0.9 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Orthophosphate (mg/L as P)** | 0.7 | 0.3 - 1.1 | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Chloride (mg/L)** | 31.7 | NA | 2023 | Distribution with City of Fairborn for corrosion control study |
| **Sulfate (mg/L)** | 35.4 | 35.3 - 35.4 | 2023 | Distribution with City of Fairborn for corrosion control study |

### *Lead Educational Information*

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.  Wright State University 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 800-426-4791or at http://www.epa.gov/safewater/lead.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

For more information about lead in drinking water, visit US EPA's Web site at www.epa.gov/lead; call the National Lead Information Center at 1-800-424-LEAD; or contact your health care provider.

### *Ground Water Rule*

On December 20, 2013, Wright State University received a Notice of Violation (NOV) relating to the road salt storage impacts to ground water in Wright State's wellfield. It was observed that the chloride levels tested from the drinking water source wells had been increasing since the mid-1980s. In 2013, the chloride levels were measured at 390 ppm, which exceeds the Secondary Maximum Contaminant Level (SMCL) of 250 ppm. SMCL's are non-mandatory guidelines and are established to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor.

From that time, Wright State has been working closely with the Ohio EPA to remediate and reduce the contaminant. Throughout 2013 to 2016, Wright State purchased approximately 40,000 to 60,000 gallons of water daily from the City of Fairborn to blend with the raw water from the Wright State wells to dilute the chloride concentrations below the SMCL. Additional corrective measures implemented included moving the salt storage barn, reviewing and improving well field protective measures, and implementing long-term remediation solutions to reduce the chloride levels below the SMCL in 2016. Wright State's Public Water System is undergoing capital improvements which will renovate our aging water treatment plant to provide improved water quality, enhanced system reliability, and continued service to our university community. The updates include changing from the ion-exchange process to a membrane-based reverse osmosis system, which will decrease the levels of chloride in the finished water. The project is designed to meet or exceed current water quality regulatory requirements and it is expected to be completed by January 2024.

Wright State continues to work with the Ohio EPA on additional measures to remediate, protect, and improve the water in the aquifer, specifically for the Notice of Violation for the Water Treatment Plant/Perched Water Bearing Zone (PWBZ).

Additional information on SMCL's can be found at https://www.epa.gov/dwregdev/drinking-water-regulations-and-contaminants#Secondary.

### *Revised Total Coliform Rule (RTCR) Information*

All water systems were required to begin compliance with a new rule, the Revised Total Coliform Rule, on April 1, 2016. The new rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of total coliform bacteria, which includes E. coli bacteria. The U.S. EPA anticipates greater public health protection under the new rule, as it requires water systems that are vulnerable to microbial contamination to identify and fix problems. As a result, under the new rule there is no longer a maximum contaminant level violation for multiple total coliform detections. Instead, the new rule requires water systems that exceed a specified frequency of total coliform occurrences to conduct an assessment to determine if any significant deficiencies exist. If found, these must be corrected by the Public Water System (PWS).

### Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit **www.epa.gov/watersense** for more information.

### Public Participation and Contact Information

**How do I participate in decisions concerning my drinking water?**

While we do not hold regular meetings, customers are encouraged to participate by contacting:

Marjorie Markopoulos, PhD
Director of Environmental Health and Safety
937-775-2797
marjorie.markopoulos@wright.edu

### Drinking Water Notice

In March 2023, Wright State received Notice of Violation for a missed sample for pH and orthophosphate for water quality monitoring. This missed sample required a Drinking Water Notice.

Monitoring requirements not met for Wright State University PWS. We are required to monitor your drinking water for corrosion control indicators. During the March 1 – 31, 2023 monitoring period, Wright State University PWS (public water system) failed to collect the appropriate number of water quality parameter samples (pH and orthophosphate) required by Ohio EPA.

*What Should I Do?*

This notice is to inform you that Wright State University PWS did not monitor and/or report results for corrosion control indicators as required by Ohio EPA during the March 1 – 31, 2023 monitoring period. You do not need to take any actions in response to this notice.

*What Is Being Done?*

Wright State University PWS will take steps to ensure that adequate monitoring will be performed in the future. Testing our drinking water for the contaminants and periods indicated ensures the quality of our drinking water during the period indicated.

Additional information may be obtained by contacting Wright State University PWS at: Marjorie Markopoulos: 937-775-2797: Marjorie.markopoulos@wright.edu:

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly. You can do this by posting this notice in a public place or distributing copies by hand or mail. Date Distributed: 6/30/2023.

*PWS ID: OH2902012 Facility ID: 2954592 Violation ID: 11190*

*Definitions of some terms contained within this report.*

| Unit Descriptions | |
|---|---|
| **Term** | Definition |
| **ppm** | parts per million, or milligrams per liter (mg/L). A part per million corresponds to one second in a little over 11.5 days. |
| **ppb** | parts per billion, or micrograms per liter (µg/L). A part per billion corresponds to one second in 31.7 years. |
| **NA** | Not applicable |
| **ND** | Not detected |
| **NR** | Monitoring not required, but recommended. |
| **"<" symbol** | A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected. |

| Important Drinking Water Definitions | |
|---|---|
| **Term** | Definition |
| **MCLG** | Maximum Contaminant Level Goal: 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. |
| **MCL** | Maximum Contaminant Level: 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. |
| **TT** | Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water. |
| **AL** | Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. |
| **Variances and Exemptions** | Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions. |
| **MRDLG** | Maximum residual disinfection level goal. 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. |
| **MRDL** | Maximum residual disinfectant level. 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. |
| **MNR** | Monitored Not Regulated |
| **MPL** | State Assigned Maximum Permissible Level |
| **SMCL** | Secondary Maximum Contaminant Level are non-mandatory water quality standards that are used as guidelines to assist public water systems in managing their drinking water for aesthetic considerations such as taste, color, and odor. |
| **Microcystins** | Liver toxins produced by a number of cyanobacteria. Total microcystins are the sum of all the variants/congeners (forms) of the cyanotoxin microcystin. |
| **Cyanobacteria** | Photosynthesizing bacteria, also called blue-green algae, which naturally occur in marine and freshwater ecosystems, and may produce cyanotoxins, which at sufficiently high concentrations can pose a risk to public health. |
| **Cyanotoxin** | Toxin produced by cyanobacteria. These toxins include liver toxins, nerve toxins, and skin toxins. Also sometimes referred to as "algal toxin". |

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