

# Andrews University

## 2022 Water Quality Report

This report covers the drinking water quality for Andrews University for the 2022 calendar year. This information is a snapshot of the quality of the water that we provided to you in 2022. Included are details about where your water comes from, what it contains, and how it compares to United States Environmental Protection Agency (U.S. EPA) and state standards.

**Where does my water come from?** Andrews University purchases water from the Village of Berrien Springs. Your water comes from four groundwater wells located in two well fields. One well field is over 75 feet deep, and the other well field is over 175 feet deep.

**Source water assessment and its availability:** The State performed an assessment of Berrien Springs source water in 2012 to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a seven-tiered scale from "very-low" to "very-high" based primarily on geologic sensitivity, water chemistry and contaminant sources. The susceptibility of our source is "moderately sensitive." If you would like to know more about the report, please contact: Dave Kunde, Village of Berrien Springs Water Superintendent, at Village of Berrien Springs, PO Box 112, Berrien Springs, MI 49103. Or you can email [Watersupervisor@villageofberriensprings.com](mailto:Watersupervisor@villageofberriensprings.com). You can also visit the Berrien Springs website for more information at [www.villageofberriensprings.com](http://www.villageofberriensprings.com).

**Contaminants and their presence in water:** 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)**.

**Vulnerability of sub-populations:** 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 infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the **Safe Water Drinking Hotline (800-426-4791)**.

**Sources of 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 and residential uses.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.
- **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.

### How can I get involved?

If you have questions about your drinking water quality, please contact Matthew Hosier at (260) 409-5902, or by email at [mhosier@fv-operations.com](mailto:mhosier@fv-operations.com). You can also contact Andrews University at (269) 471-7771.

In order to ensure that tap water is safe to drink, the U.S. EPA prescribes regulations that limit the levels of certain contaminants in water provided by public water systems. Federal Food and Drug Administration regulations establish limits for contaminants in bottled water which provide the same protection for public health.

**Water Quality Data Table:** The table below lists all the drinking water contaminants that we detected during the 2022 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2022. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All the data is representative of the water quality, but some are more than one year old.

- **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 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 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.
- **N/A:** Not applicable.
- **ND:** not detectable at testing limit.
- **ppb:** parts per billion or micrograms per liter.
- **ppm:** parts per million or milligrams per liter.
- **pCi/L:** picocuries per liter, a measure of radiation
- **Level 1 Assessment:** A study of the water supply to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- **Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

ANDREWS UNIVERSITY DISTRIBUTION SYSTEM							
Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contaminant
THM Total Trihalomethanes (ppb)	80	N/A	8.8	N/A	2022	No	Byproduct of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	60	N/A	1.0	N/A	2022	No	Byproduct of drinking water disinfection
Chlorine <sup>1</sup> (ppm)	4	4	0.42	0.18 – 0.71	2022	No	Water additive used to control microbes
Total Coliform (total number or % of positive samples/month)	TT	N/A	N/A	N/A	2022	No	Naturally present in the environment

<sup>1</sup> The chlorine “Level Detected” was calculated using a running annual average.

ANDREWS UNIVERSITY DISTRIBUTION SYSTEM							
Inorganic Contaminant Subject to Action Levels (AL)	Action Level	MCLG	Your Water <sup>2</sup>	Range of Results	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	0	0	0 – 0.6	2021	0	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppb)	1300	1300	200	0 - 900	2021	0	Corrosion of household plumbing systems; Erosion of natural deposits

<sup>2</sup> Ninety (90) percent of the samples collected were at or below the level reported for your water.

## Service Lines

Andrews University has zero (0) known lead service lines. We are currently working on a Distribution System Materials Inventory (DSMI) to identify all service line materials, and this information will be included on future Water Quality Reports.

### **\*\* Additional 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. Andrews 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 have a lead service line it is recommended that you run your water for at least 5 minutes to flush water from both your home plumbing and the lead service line. 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>.

**Andrews University maintains standby wells for use in the event the water supply from Berrien Springs is interrupted. No water from these wells was pumped to the distribution system during 2022, but we are still required to test them for various contaminants. The Level Detected for the Standby Wells is an average of the values for samples from each well.**

ANDREWS UNIVERSITY STANDBY WELLS							
Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Average Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contaminant
Nitrate (ppm)	10	10	3.1	0.6 – 4.9	2022	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	ND	N/A	2022	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Sodium <sup>3</sup> (ppm)	N/A	N/A	37.7	24 – 47	2022	No	Erosion of natural deposits
Sulfate <sup>3</sup> (ppm)	N/A	N/A	31.6	27 - 39	2022	No	Erosion of natural deposits
Hardness <sup>3</sup> (ppm)	N/A	N/A	391	333 - 485	2022	No	Erosion of natural deposits
Alpha emitters (pCi/L)	15	0	2.5	2.12 – 2.78	2022	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	1.29	1.20 – 1.37	2022	No	Erosion of natural deposits

<sup>3</sup> Not a regulated contaminant. Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

## ANDREWS UNIVERSITY STANDBY WELLS

### Per- and polyfluoroalkyl substances (PFAS)

Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contaminant
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ppt)	370	N/A	ND	ND	2022	No	Discharge and waste from industrial facilities utilizing the Gen X chemical process
Perfluorobutane sulfonic acid (PFBS) (ppt)	420	N/A	3.6	0 – 5	2022	No	Discharge and waste from industrial facilities; stain-resistant treatments
Perfluorohexane sulfonic acid (PFHxS) (ppt)	51	N/A	6	0 - 6	2022	No	Firefighting foam; discharge and waste from industrial facilities
Perfluorohexanoic acid (PFHxA) (ppt)	400,000	N/A	3	0 – 3	2022	No	Firefighting foam; discharge and waste from industrial facilities
Perfluorononanoic acid (PFNA) (ppt)	6	N/A	ND	ND	2022	No	Discharge and waste from industrial facilities; breakdown of precursor compounds
Perfluorooctane sulfonic acid (PFOS) (ppt)	16	N/A	ND	ND	2022	No	Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities
Perfluorooctanoic acid (PFOA) (ppt)	8	N/A	2	0 - 2	2022	No	Discharge and waste from industrial facilities; stain-resistant treatments

In the table below, we have provided additional information from monitoring performed by the Village of Berrien Springs Water System.

## BERRIEN SPRINGS WATER SYSTEM

Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contaminant
Arsenic (ppb)	10	0	ND	N/A	2018	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.06	0 - 0.06	2018	No	Discharge of drilling wastes; Discharge of metal refineries; Erosion of natural deposits
Nitrate (ppm)	10	10	0.6	0 – 0.6	2022	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	N/D	N/A	2022	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Sodium <sup>4</sup> (ppm)	N/A	N/A	34	7 - 34	2022	No	Erosion of natural deposits

<sup>4</sup> Sodium is not a regulated contaminant.

We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies are available at Andrews University Plant Services Department.

For more information about your water, or the contents of this report, please contact Matthew Hosier at (260) 409-5902, or by email at [mhosier@fv-operations.com](mailto:mhosier@fv-operations.com). You can also contact Andrews University at (269) 471-7771. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at [www.epa.gov/safewater](http://www.epa.gov/safewater).