Grand Valley Lakes Annual Water Quality Report

Consumer Confidence Report 2023

In order to ensure that tap water is safe to drink, EPA and the Tennessee Department of Environment and Conservation prescribe regulation which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection of public health.

The Source of Your Water

Grand Valley Lakes is served by two (2) wells that have been declared true ground water. The only treatment required is disinfection. We have approximately 25 miles of line, with 298 connections.

Well head Protection

Water is supplied to the system by underground wells, and each individual must practice due diligence in protecting our water source from contamination by refraining from using any liquids, paints, chemicals, etc. within 750 ft. radius of the well. If you see any questionable materials within this area, please report this immediately.

Contaminants in Your Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amount of contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. For more information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap and bottled water) including surface sources and wells. As water travels through the surface of the land or through the ground, it dissolves naturally occurring mineral, and in some cases, radioactive materials and pick up substances resulting from the animals or from human activity.

Microbial Contaminants

Microbial contaminants such as viruses and bacteria which may come from sewage treatment plant, septic systems, agricultural livestock operations and wildlife. Inorganic contaminants such as salt and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic discharges, oil and gas production, mining, or farming.

Pesticides and Herbicides

Pesticides and herbicides which may come from a variety of sources, such as agriculture, urban storm runoff, and residential uses.

Organic Chemical Contaminants

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 runoff, septic systems.

Radioactive Contaminants

Radioactive Contaminants which can be naturally occurring or be the result of oil and gas productions and mining activities.

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2022 Testing Results

Contaminant	Violation Yes/No	Level Found	Range of Detections	Date of Sample	Unit Measurement	MCLG	MCL	Likely source of Contamination
Total Coliform Bacteria RTCR	NO	ND	ZERO	1/10/22-12/12/22	mg/l	0	0	Naturally present in the environment.
E. coli Bacteria	NO	ND	ZERO	1/10/22-12/12/22	mg/l	0	0	Human or animal wastes
Gross Alpha	NO	2.4	0-2.4	12/26/2016	PCi/L	0	15	Erosion of natural deposits
Combined Radium	NO	ND	ND/0.8	12/26/2018	PCi/L	0	5	Erosion of natural deposits
Lead	NO	90th %= ND		8/19/2020	ppb	0	AL-15	Corrosion of household plumbing systems, erosion of natural deposits
Copper	NO	90th % = 0.0578 ppm		8/19/2020	ppm	0	AL-1.3	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	NO	ND	<0.500	12/20/21	ppm	10	10	Runoff from fertilizer use, leaching from septic tanks, sewage; erosion of natural deposits
TTHM's Total Trihalomethanes	NO	Site 201 2.1 ppb	80 ppb	8/8/2022	ppb	N/A	80 ppb	By-product of drinking water chlorination
HAA5 (Haloacetic Acids)	NO	Site 201 ND	60 ppb	8/8/2022	ppb	N/A	60 ppb	By-product of drinking water chlorination
Chloroform	NO	0.0005	<0.0005	12/29/2022	ppm	0	0.08 mg/l	By-product of drinking water chlorination

Iron: *Iron occurs naturally in our raw water and occasionally accumulates in the distribution system. Iron shows up as "red" or "rusty" water at your tap. Although you do not want to drink water that is not clear, iron is not considered to be a hazard to your health. We test for iron daily and it is usually around 0 ppm. The aesthetic limit for iron is 0.3 ppm.*

Health Effects

Microbiological Contaminants:

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Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

Fecal coliform/E.coli. Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

Radioactive Contaminants:

Combined Radium 226/228. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Inorganic Contaminants:

Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Fluoride. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.

Lead. 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.

Nitrite. Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

Water Quality Data

What does this chart mean?

 MCLG - Maximum Contaminant Level Goal, or 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, or 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. To understand the possible health effects described for many regulated constituents,
a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

 MRDL: Maximum Residual Disinfectant Level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.

 MRDLG: Maximum residual disinfectant 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.

 AL - Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

 Below Detection Level (BDL) - laboratory analysis indicates that the contaminant is not present at a level that can be detected.

 Non-Detects (ND) - laboratory analysis indicates that the contaminant is not present.

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 Parts per million (ppm) or Milligrams per liter (mg/l) – explained as a relation to time and money as one part per million corresponds to one minute in two years or a single penny in $10,000.
 Parts per billion (ppb) or Micrograms per liter - explained as a relation to time and money as one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
 Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.
 Millirems per year (mrem/yr) - measure of radiation absorbed by the body.
 Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
 MRL – Minimum reporting level
 Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
 TT - Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.
 RTCR – Revised Total Coliform Rule. This rule went into effect on April 1, 2016 and replaces the MCL for total coliform with a Treatment Technique Trigger for a system assessment.

What is being done?

Grand Valley Lakes has enlisted the assistance of Communities Unlimited to help with all reporting of the required testing, to get our Consumer Confidence Report posted by July 1st, 2023. Board Meetings are held on the 2nd Friday of each month at 7pm except for December. All who wish to attend are welcome.

For more information, please contact James Kirk Certified Operator at 731-609-3846 or lizajanepw@yahoo.com

**Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail. **

This notice is being sent to you by **Grand Valley Lakes**. **State Water System ID#: TN-0000451**.
Date distributed: _____.

Federal and State Regulations

Source Water Assessment

The Tennessee Department of Environment and Conservation has prepared a Source Water Assessment Program Report for the untreated water sources. The report assesses susceptibility of untreated water sources to potential contamination. To ensure safe drinking water, all public water systems routinely test their water.
Water sources have been rated as reasonably susceptible, moderately susceptible based on geological factors and human activities in the vicinity of the water source. Our rate is slightly susceptible.
An explanation of this program, the Source Water Assessment summaries, susceptibility scoring and overall TDEC report to EPA at https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/source-water-assessment.html or you may contact Grand Valley Lakes to obtain copies of specific assessments.

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Important Health Information

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, person who has undergone organ transplant, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be at risk from infections.

These people should seek advice about drinking water from their healthcare 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.

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 material and components associated with service lines and home plumbing. **Grand Valley Lakes** is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components.

When 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 method, and steps you can take to minimize exposure is available through the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead. **0 out of 10 households sampled for lead and copper exceeded the action level.**

Nitrates

Greatest source of nitrates are from fertilizers. In the body, nitrate turns into nitrites. A large concentration causes serious illness of breath and sometimes even death. Nitrate can be removed by reverse osmosis.

Understanding Your Role

With the changing times, our individual role becomes even more critical in preserving safe natural resources for future generations. Active participation and understanding can help ensure protections of our most valued resource.

Detecting Cross Connection

'Backflow' and 'Backsiphonage' are two main causes of Cross Connection contamination.

Backflow is when water in your pipes flows back into the water system. If pressure suddenly drops because of heavy usage (fires, broken water main, etc.) then contaminated water can be siphoned back into your plumbing system from unprotected cross connections in your home.

Weather indoors or outdoors, if a hose is left in a bucket of soapy or uncleaned water could flow backwards into your home water piping causing danger to the health and welfare of your family.

Never, ever connect any piping, connect any water sources to pre-existing mains. Our wells have been approved by TDEC and connection to any other connections would be a violation and direct cross connection. This will result in immediate contamination of the system. Please contact Grand Valley Lakes if you feel a violation is made.

Flushing the System

We are blessed with groundwater sources and do not face the same challenges as those whose main source is surface water. Although we do not have the difficult process of filtering surface impurities, yet as water travels

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from source to your home, there are instances where soil, sediments, and other organic particles may become trapped within the pipelines. We routinely flush the lines from designated flushing points, which are throughout the system. As we flush, we watch for possible changes in color which may indicate dirt, rust or other sediments. Residents are encouraged to flush their hot and cold water taps from time to time. Preferably turning all the taps on simultaneously, to achieve the same effect within your homes piping system.

Drought Management

As a result of the preceding years, the TDEC's Division of Water Supply has required each Water System to develop a Drought Management Plan. The Divisions purpose is to maximize the ability of our water systems to support all of its users with effective management, proper planning, and responsiveness, so that the impacts of a drought can be minimized. The Division has defined different stages of drought. Each phase has its set of guidelines to ensure that all the residents of the community will continue to receive the safest water. Failure to comply may result in penalties and fines as outlined by the Emergency Plan.

Normal Conditions
Water supply is adequate
Drought Alert
Lower than normal precipitation, lower groundwater levels
Voluntary Reductions
Water quality deteriorating or conflicts among users
Mandatory Restrictions
Continued decline in water supply and/or water quality
Emergency Management
Severe water supply or water quality. Problems due to very limited resource availability.

Safe Disposal of Prescription Medication

Recently government bodies have realized that there are limitations to what elements can be removed from the process of filtration. Government bodies have expressed their growing concern of hormones and PPCP's (Pharmaceutical and Personal Care Products) entering our drinking water.
Even with intricate or highly technological water filtration PPCP's cannot be fully removed. Our wasted system is comprised of septic tanks and pipes which leach into the soil and directly into our aquifer.
Please take precaution when disposing of PPCP's. There are "take back" bins located across the state, please feel free to utilize this information at: https://tdeconline.tn.gov/rxtakeback/

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