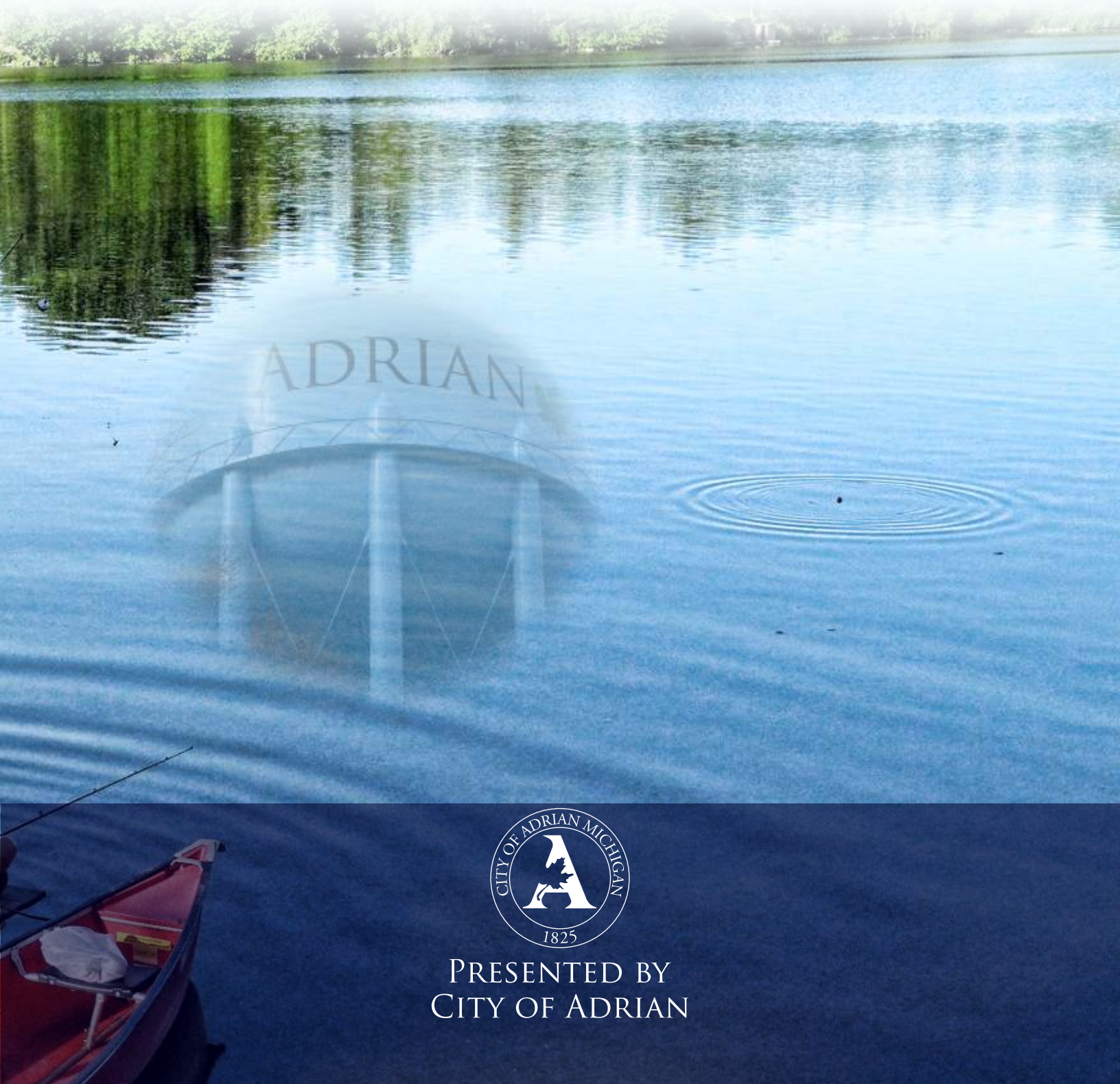
City of Adrian

Water Quality Report

Annual Water Testing Performed in 2012



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Presented by
City of Adrian

Continuing Our Commitment

The City of Adrian Utilities Department is once again proud to present our annual water quality report. This report details testing completed during the 2012 calendar year. This annual report is a result of the Federal regulation passed as part of the 1996 Safe Drinking Water Act Amendments, requiring that all community water systems provide their customers with an annual report. This report will provide an overview of water sampling results, an explanation of the sources of our water, and the steps involved in our treatment process. The City of Adrian Utilities Department is committed to providing safe, dependable, high quality drinking water.

We are pleased to inform you that our drinking water met and surpassed every Federal and State requirements in 2012.

Our water Treatment Process

The treatment process consists of a series of steps:

- **First, surface water is drawn from Lake Adrian where it is mixed with ground water from the Westside Wellfield and Maple Avenue Wells.**
- **Second, Ferric Sulfate, (coagulant), and Calcium Oxide, (softening), are added to the water. The addition of these causes small particles to form and adhere to one another, (called floc), making them heavy enough to settle into a basin from which sediment is removed.**
- **Third, Carbon Dioxide is added to lower the pH, (from softening), to levels which will not corrode the pipes in the distribution system.**
- **Next the water is filtered through layers of fine coal and sand. As smaller, suspended particles are removed, turbidity disappears and clear water emerges.**
- **Chlorine is added after filtration to destroy any harmful bacteria that may be present. We carefully monitor the amount of Chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.**
- **Finally, Fluoride, (used to prevent tooth decay), and a corrosion inhibitor, (used to protect distribution pipes), are added before the water is pumped to underground reservoirs, to water towers, and finally into your home or business.**

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

- Take short showers – a 5 minute shower uses 4-5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead and save up to 750 gallons a month.
- Run you 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.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it & 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.

Where does my water come from?

The city of Adrian uses a blend of surface water from Lake Adrian and ground water from the Westside Well Field as its main sources of drinking water. Wolf Creek is fed by a 65-square-mile watershed. Lake Adrian covers 86 acres and contains up to 300 million gallons of water. The City also has a ground water supply from a well on Maple Avenue that is capable of producing approximately 3.2 million gallons of water per day. The well supply is blended with the surface water to improve our source water quality.

The City of Adrian Water Plant was constructed in 1944 and provides roughly 1.5 billion gallons of clean drinking water every year. The plant is staffed 24 hours a day, seven days a week by a dedicated crew that is committed to their profession.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Tim Ritchie, Water Plant Superintendent, at (517) 264-4828.

For Emergency Situations call (517)264-4820.

Spanish (Espanol)

Este informe contiene informacion muy importante sobre su agua potable.
Traduzcalo o hable con alguien que lo entienda bien.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants.

The tables show only those contaminants that were detected in the water.

The state requires us to monitor for certain substances less often than once per year because the concentration of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

Regulated Substances

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION
Arsenic (ppb)	2011	10	0	1.3	1.3-1.3	No
Typical Source: Erosion of natural deposits; Runoff from Orchards; Runoff from glass and electronics production wastes						
Chlorine (ppm)	2012	4	4	2.1	1.3-2.1	No
Typical Source: Water additive used to control microbes						
Fluoride (ppm)	2012	4	4	0.89	0.39-0.89	No
Typical Source: Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories						
Haloacetic Acids [HAAs] (ppb)	2012	60	NA	10	3.5-10	No
Typical Source: By-product of drinking water disinfection						
Nitrate (ppm)	2012	10	10	0.7	ND-0.7	No
Typical Source: Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits						
Sodium	2012	0	0	26.5	18-32	No
Typical Source: Erosion of natural deposits						
TTHMs (ppb) [Total Trihalomethanes]	2012	80	NA	41	17-41	No
Typical Source: By-product of drinking water disinfection						
Total Organic Carbon (ppm)	2012	TT	NA	2.8	<0.5-2.8	No
Typical Source: Naturally present in the environment						
Turbidity[1] (NTU)	2012	0.3	NA	0.22	0.05-0.22	No
Typical Source: Soil runoff						
Turbidity (Lowest monthly percent of samples meeting limit)	2012	TT	NA	100	NA	No
Typical Source: Soil runoff						

[1]Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirement's that a water system must follow.

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.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or exceeded risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfection Goal): 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.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

Source Water Assessment

The Michigan Department of Environmental Quality has performed an assessment of our source water to determine the susceptibility or the relative potential of contamination. The susceptibility rating is in a six-tiered scale from "very low" to "high", based primarily on geographical sensitivity, water chemistry and contamination sources. The susceptibility of our source has been rated as "high". Significant sources of contamination include listed potential contamination sources, plus urban and agricultural runoff from the River Raisin watershed above Adrian.

We are making efforts to protect our source water by controlling access, performing routine sample analysis and making frequent patrols on and around the watershed.

Tap Water Samples

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED 90TH % tile	SITES ABOVE AL/ Total Sites	VIOLATION
Copper (ppm)	2011	1.3	1.3	0.021	0	No
Typical Source: Corrosion of household plumbing systems; Erosion of natural deposits						
Lead (ppb)	2011	15	0	0	0	No
Typical Source: Corrosion of household plumbing systems; Erosion of natural deposits						

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, 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 or http://water.epa.gov/drink/hotline.

Additional Information for 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. City of Adrian Water Treatment Faculty is responsible for providing high quality drinking water, but cannot control the variety of material 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, 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.

Substances that could be in the water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides & Herbicides, which may come from a variety of sources such as agricultural, 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 may also come from gas stations, urban stormwater runoff, and septic systems;

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

For 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).

135 E. Maumee St., Adrian, MI Questions? Contact (517) 264-4828
For Emergency Situations call (517)264-4820

Get Involved!

The Adrian City Commission meets at 7 p.m. on the first and third Mondays of each month at the City Chambers at 159 E. Maumee Street. Please come participate and voice any concerns you may have about your drinking water. For further information, check out the City of Adrian's website at www.adrianmi.gov