

Annual Drinking Water Quality Report  
ALVIN #1830050

For Period of January 1 to December 31, 2022

This report is intended to provide you with important information about your drinking water and the efforts made by the Village of Alvan Public Water System to provide safe drinking water. The source of drinking water used by the village system is groundwater from the Mahomet Aquifer using 2 wells located 50 feet apart at the water plant.

If you have any questions about this report or concerning your water utility, please contact James Siddens at 217-778-9739. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the First Tuesday of every month at 7:00 P.M. at the Alvin Christian Church community room (109 Center Street).

**Source of Drinking Water**

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater 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.

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 EPA's Safe Drinking Water Hotline at (800) 426-4791.

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.

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 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.

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/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).

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. We 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 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 <http://www.epa.gov/safewater/lead>.

### Source Water Assessment Availability

To determine Alvin's susceptibility to groundwater contamination, a Well Site Survey, published in 1995 by the Illinois EPA, was reviewed. Based on the information contained in this document, three potential sources of groundwater contamination are present that could pose a hazard to groundwater pumped by the Alvin community water supply wells. These include a machine shop/shed, a below ground fuel storage, and a grain elevator.

The Illinois EPA has determined that Alvan Wells #1 and #2 (both located at the treatment plant) are not susceptible to IOC, VOC, or SOC contamination. This determination is based on a number of criteria including: monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and the available hydro geologic data for the wells.

In anticipation of the U.S. EPA's proposed Ground Water Rule, the Illinois EPA has determined that Alvan's community water supply wells are not vulnerable to viral contamination. This determination is based upon evaluation of the following criteria during the Vulnerability Waiver Process: the community's wells are properly constructed with sound integrity and proper site conditions; there is a hydro geologic barrier that restricts pathogen movement; all potential routes and sanitary defects have been mitigated such that the source water is adequately protected; monitoring data did not indicate a history of disease outbreak; and the sanitary survey of the water supply did not indicate a viral contamination threat. However, having stated this, the U.S. EPA is proposing to require states to identify systems in karst, gravel, and fractured rock aquifer systems as sensitive. Water systems utilizing these aquifer types would be required to perform routine source water monitoring. Because the community's wells are constructed in a confined aquifer, which should provide an adequate degree of protection to prevent the movement of pathogens into the wells, well hydraulics were not considered to be a significant factor in the vulnerability determination. The Illinois Environmental Protection Act provides minimum protection zones of 200 feet for the Village of Alvan's wells. These minimum protection zones are regulated by the Illinois EPA.

To further minimize the risk to the village's groundwater supply, the Illinois EPA recommends that four additional activities be assessed. First, the village should develop a source water protection program. An approved program may allow the village to receive a monitoring waiver that will reduce the frequency of VOC and or SOC monitoring. The reduced monitoring frequency may save the village considerable analytical costs. Second, the village may wish to enact a "maximum setback zone" ordinance. These ordinances are authorized by the Illinois Environmental Protection Act and allow county and municipal officials the opportunity to provide additional protection up to a fixed distance, normally 1,000 feet, from their wells. Third, the water supply staff may wish to revisit their contingency planning documents. Contingency planning documents are a primary means to ensure that, through emergency preparedness, a community will minimize their risk of being without safe and adequate water. Finally, the water supply staff is encouraged to review their cross connection control program to ensure that it remains current and viable. Cross connections to either the water treatment plant or in the distribution system may negate all of the source water protection initiatives provided by the community and circumvent the natural protection provided to the aquifer.

### Regulated Contaminants Detected in 2022 (collected in 2022 unless noted)

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

*Parts per million (ppm) or Milligrams per liter (mg/l)* – or one ounce in 7,350 gallons of water

*Parts per billion (ppb) or Micrograms per liter (ug/l)*- or one ounce in 7,350,000 gallons of water

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

*Action Level Goal (ALG)* – the level of a contaminant in drinking water below which there is no known or expected risk to health. ALG's allow for a margin of safety.

*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.

*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.

*Maximum Residual Disinfectant Level (MRDL)*: The highest level of disinfectant allowed in drinking water.

*Maximum Residual Disinfectant Level Goal (MRDLG)*: The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLG's allow for a margin of safety.

*Picocuries per liter (pCi/L)* – Measure of radioactivity

Test Results								
Contaminant	Violation Y/N	Level Detected	Range of detections	Unit Measurement	MCLG	MCL	Date of sample	Likely Source of Contamination
<b>Inorganic Contaminants</b>								
Arsenic – see statement below table for more information.	N	8	5.96-7.7	ppb	0	10	2022	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	n	.209	.209-.209	ppm	2	2	10/19/2020	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	n	.76	.76-.76	ppm	4	4	10/19/2020	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Iron	N	.233	.233-.233	Ppm		1.0	10/19/2020	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Manganese	n	88.3	88.3-88.3	ppb	150	150.00	10/19/2020	Erosion of naturally occurring deposits.
Sodium	N	40.8	40.8-40.8	Ppm			10/19/2020	Erosion from naturally occurring deposits: Used in water softener regeneration.
<b>Disinfectants/Disinfection By-Product</b>								
Chlorine	N	2.2	1-2	ppm	MRDLG=4	MRDL=4	12/31/2022	Water additive used to control microbes.
Haloacetic Acids HAA5	N	4.3	4.3-4.3	Ppb	No goal for total	60	7/31/2020	By-product of drinking water disinfection
Total Trihalomethane TTHM	N	1.6	1.6-1.6	Ppb	No goal for total	80	7/31/2020	By-product of drinking water disinfection.
<b>Radioactive Contaminants</b>								
Combined Radium 226/228	N	2.5	2.5-2.5	PCi/L	0	5	7/14/2020	Erosion of natural deposits.
Gross alpha excluding radon and uranium	N	1.1	1.1-1.1	pCi/L	0	15	7/14/2020	Erosion of natural deposits.
<b>Lead and Copper</b>								
	Violation	Units	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	# Sites over AL		
Copper	N	Ppm	1.3	1.3	.07	0	9/22/2020	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

The above tables identify the highest level of each detected contaminant that is regulated and required to be monitored for. A copy of all contaminants that are monitored for, but not detected can be obtained by contacting James Siddens at 778-9739 or by visiting the Illinois EPA website.

MCL's are set at very stringent levels. 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. MCL statement: The maximum contaminant level (MCL) for TTHM and HAA5 is 80 ppb and 60 ppb respectively and is currently only applicable to surface water supplies that serve 10,000 or more people. The MCLs will

become effective 01/01/2004 for all groundwater supplies and surface supplies serving less than 10,000 people. Until 01/01/2004, surface water supplies serving less than 10,000 people, any size water supply that purchase from a surface water source, and groundwater supplies serving more than 10,000 people must meet a state imposed TTHM MCL of 100 ppm. Some people who drink water containing trihalomethanes in excess of the MCL over many years experience problems with their livers, kidneys, or central nervous systems, and may have increased risk of getting cancer.

There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If the level is greater than 20 mg/l, and you are on a sodium-restricted diet, you should consult a physician

Arsenic – While your drinking water meets EPA standards for arsenic, it does contain low levels of arsenic. EPA’s standard balances the current understanding of arsenics 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 linked to other health effects such as skin damage and circulatory problems.

In 2021, our PWS was sampled as part of the State of Illinois PFAS Statewide Investigation. Eighteen PFAS compounds were sampled, and none were detected in our finished drinking water. For more information about PFAS health advisories <https://www2.illinois.gov/epa/topics/water-quality/pfas/pages/pfas-healthadvisory.aspx>

**2022 Violation Summary:**

No violations in 2022.

**Village of Alvan  
Water Department**

Treatment Plant: 10 South Street      Mailing Address: P.O. Box 169  
Alvin, Illinois 61811

Water Superintendent: James Siddens – IEPA certified A operator  
Water Department Asst: Jeff Lete

We at the Village of Alvan continuously work to provide top quality water to every tap.