

# LEETONIA PUBLIC WORKS

## 2014 ANNUAL DRINKING WATER REPORT

The Village of Leetonia 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.

### WATER SOURCE

The Village of Leetonia started receiving all its drinking water from the City of Salem, Ohio, on August 18, 2008 which is treated surface water from Cold Run Creek, Salem East Cold Run Reservoir, Spring Valley Reservoir and three ground water wells. Our drinking water is purchased on a daily basis through a master meter located at the intersection of Butcher Road and Lisbon Canfield Road.

For the purpose of source water assessments, in Ohio all surface waters are considered to be susceptible to contamination. By their nature, surface waters are readily accessible and can be contaminated by chemicals and pathogens which may rapidly arrive at the public drinking water intakes with little warning or time to prepare. Potential contamination sources within the City of Salem's protection areas include agricultural runoff, cattle grazing with direct access to the surface waters, failing on-site septic systems, wastewater treatment plant discharge, oil/gas production activities, and commercial sites. In addition, the source water is susceptible to contamination through motor vehicle accidents or spills at sites where streams are crossed by roads. The City of Salem Public Water System treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect our water sources.

The Village of Leetonia, Ohio Public Water Supply meets or exceeds established "Water Qualities Standards" of the federal Safe Drinking Water Act (SDWA) requirements for "Consumer Confidence Reports" and the report contains information on the source of our water, its constituents, and the public health risks associated with the constituents if found in violation of the federal and state standards as mandated by the Safe Drinking Water Act (SDWA). Safe water is vital to our community. Please read this report carefully and if you have any questions, call the person(s) at the numbers listed below.

### What are sources of contamination to drinking water?

The sources of drinking water both tap water and bottled water includes 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: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife; (B) 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; (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; (D) 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; (E) 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 Environmental Protection Agency 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. The **Village of Leetonia** conducted sampling for *bacteria, total chlorine, trihalomethanes, and haloacetic acids* during 2014. Samples were collected for a total of 4 different contaminants most of which were not detected in the Leetonia 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

In 2014, the Village of Leetonia public water system was in violation of Ohio Administrative Code (OAC) Rule 3745-81-24 (D)(21)(a) for failing to submit an Operational Evaluation Level (OEL) Report on time during the 3<sup>rd</sup> Quarter of 2014 for TTHM's.

The Village of Leetonia public water system had a MCL violation for Total Trihalomethanes during the 1<sup>st</sup> Quarter (January – March), 2<sup>nd</sup> Quarter (April – June) and 3<sup>rd</sup> Quarter (July – September) of 2014. This violation was for exceeding the maximum contaminant level (MCL) standard of 0.080 mg/L as established in the Ohio Administrative Code (OAC) section 3745-81-12 for TTHM. The annual average for Leetonia's TTHM during the 1<sup>st</sup> Quarter was 0.104 mg/L, 2<sup>nd</sup> Quarter was 0.096 mg/L, and 3<sup>rd</sup> Quarter was 0.082 mg/L. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. Leetonia Water System is taking the following steps to correct this violation and prevent future violations from occurring:

The Village of Leetonia has obtained grants and loans to put in an aeration mixing system in our main storage tank to reduce the trihalomethane levels. In 2014, all the engineering was completed and all the OEPA approval was obtained and the project was put out to bid. Installation will be completed in the Summer of 2015.

### Description of Water Treatment Process

Your water is treated in a "treatment train" (a series of processes applied in a sequence) that includes coagulation, flocculation, sedimentation, filtration, and disinfection. Coagulation removes dirt and other particles suspended in the source water by adding chemicals (coagulants) to form tiny sticky particles called "floc", which attract the dirt particles. Flocculation (the formation of larger flocs from smaller flocs) is achieved using gentle, constant mixing. The heavy particles settle naturally out of the water in a sedimentation basin. The clear water then moves to the filtration process where the water passes through sand, gravel, charcoal or other filters that remove even smaller particles. A small amount of chlorine or other disinfection method is used to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water before water is stored and distributed to homes and businesses in the community.

Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 5 NTU at any time. As reported above the Salem Water Plant highest recorded turbidity result for 2013 was 0.075 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.

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. The Leetonia Water Dept. 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 800-426-4791 or 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).

## LT2 RULE

The U.S. EPA has created the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) for the sole purpose of reducing illness linked with the contaminant Cryptosporidium and other disease-causing microorganisms in drinking water. The rule will bolster existing regulations and provide a higher level of protection of your drinking water supply.

Sampling of our water source has shown the following:

Cryptosporidium: 0-2 oocysts/Liter

Giardia lamblia: 0-10 oocysts/Liter E.Coli: 6-649 MPN/100 Milliliters

**It is important to note that these results are from our raw water source only and not our treated drinking water supply. For more information, contact U.S. EPA'S Safe Drinking Water Hotline at (800) 426-4791.**

We have a current, unconditioned license to operate our water system from OEPA. Our PWS ID number is OH 1501412.

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

Public participation and comment are encouraged at regular meetings of Village Council which meets the **first** and **third Wednesday** every month. For more information on your drinking water contact **Butch Donnalley at 330-427-8087**.

### **Definitions of some terms contained within this report.**

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 contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Parts per Million (ppm) or Milligrams per Liter (mg/L) are units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.

Parts per Billion (ppb) or Micrograms per Liter ( $\mu\text{g/L}$ ) are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of 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.

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.

Removal Ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

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.

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

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

Listed in the following table is information on those contaminants that were found in the **Leetonia/Salem** drinking water.

## TABLE OF DETECTED CONTAMINANTS

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
<b>Bacteriological Samples taken by Leetonia Water Department in Leetonia Distribution System</b>							
Total Coliform Bacteria (# of positive samples)	0	1 positive sample	0	0	No	2014	Naturally present in the environment
<b>Inorganic Contaminants Samples Taken at Salem Water Plant by Salem</b>							
Antimony (ppb)	6	6	3.5	3.5 - 3.5	No	2014	Typical source of contaminants = "Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder"
Barium (ppm)	2	2	0.0172	0.0172 - 0.0172	No	2014	Typical source of contaminants="Discharge of drilling wastes; discharge from ,metal refineries; erosion of natural deposits."
Nitrate (ppm)	10	10	1.51	0.153 - 1.51	No	2014	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Fluoride	4	4	1.06	0.84 - 1.19	No	2014	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Filtration Samples taken at Salem Water Plant by Salem</b>							
Turbidity (NTU)	N/A	0.3	100%	N/A	No	2014	Soil Runoff
Turbidity (lowest monthly % of samples meeting limits)	N/A	0.3	0.3	100%	No	2014	Soil Runoff
Total Organic Carbon [TOC] (removal ration)	N/A	TT	1.63	1.18 - 2.39	No	2014	Naturally present in the environment
<b>Radioactive Contaminants taken at Salem Water Distribution by Salem</b>							
Gross Alpha (pCi/l)	0	15	4.29	4.29 - 4.29	No	2014	Typical source of contaminants = "Erosion of natural deposits"
<b>Volitile Organic Contaminants taken at Salem Water Plant by Salem</b>							
Bromodichloromethane (ppb)	None at this time	None at this time	7.95	7.95 - 7.95	No	2014	Typical source of contaminants = "Byproduct of drinking water chlorination"
Chloroform (ppb)	None at this time	None at this time	20.4	20.4 - 20.4	No	2014	Typical source of contaminants = "Byproduct of drinking water chlorination"
Dibromochloromethane (ppb)	None at this time	None at this time	1.54	1.54 - 1.54	No	2014	Typical source of contaminants = "Byproduct of drinking water chlorination"
<b>Samples taken in Leetonia Distribution by Leetonia</b>							
Total Trihalomethanes [TTHM] (ppb)	N/A	80	103.9	47.5 - 105.0	Yes	2014	By-product of drinking water disinfection
Haloacetic Acids [HAA5](ppb)	N/A	60	58	9.5 - 80.8	No	2014	By-product of drinking water disinfection
<b>Residual Disinfectants Sample taken in Leetonia Distribution by Leetonia</b>							
Chlorine (ppm)	[4]	[4]	1.7	0.2 - 2.2	No	2014	Water additive used to control microbes
<b>Inorganic Contaminants taken in Leetonia Distribution by Leetonia</b>							
Lead (ppb)	0	15	2	Sites above Action Level 0 of 10 Sites	No	2013	Corrosion of household plumbing systems, erosion of natural deposits
Copper (ppb)	1350	1350	137	0 of 10 Sites	No	2013	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives