

# LANCASTER DIVISION OF WATER

## Drinking Water Consumer Confidence Report

### For year ending 2017

#### *Introduction*

The City of Lancaster Water Treatment Division 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. This report was prepared in accordance with the US EPA's National Primary Drinking Water Regulation for Consumer Confidence Reports. Additional reports are available upon request.

Public participation and comment are encouraged at regular meetings of City Council which meets the 2nd and 4th Monday of every month beginning at 7:00 P.M. at the Lancaster Education Center. For more information on your drinking water contact the Superintendent, Mike Nixon (740) 687-6664, or Plant Managers, Darren Drumm, at (740) 746-2027 (South Plant) or Michael Wickham, at (740) 687-6631 (North Plant). Written suggestions or comments can be sent to: City of Lancaster, Division of Water 225 North Memorial Drive, Lancaster, Ohio 43130.

#### *License to Operate*

We have a current, unconditional license to operate our water system. This means there are no ongoing conditions or violations we are required to address in order to operate.

#### *Important Contact Information*

[www.ci.lancaster.oh.us/268/Water](http://www.ci.lancaster.oh.us/268/Water)

North Plant – 225 North Memorial Drive  
Office – (740) 687-6631  
Meter Shop – (740) 687-6635

South Plant – 4600 Sugar Grove Road  
Office – (740) 746-2027  
Safe Drinking Water Hotline – (800) 426-4791

#### *Water Usage*

Toilet flushing is by far the largest single use of water in your home. Standard toilets use 1.6 gallons per flush, while older models can use as much as 3 ½ to 7 gallons per flush. Here are the percentages of water use for a typical family of four:

Toilet flushing – 26.7%	Faucet – 15.7%	Clothes Washer—21.7 %
Leaks – 13.7%	Shower – 16.8%	Other – 5.3%

#### *Source Water Protection Plan*

Lancaster's Source Water Protection Plan (SWPP) is dedicated to providing our community with a clean and safe drinking water supply. Community efforts in water conservation and pollution prevention will assist in achieving that goal. If you have questions concerning the program please contact the North Plant at (740) 687-6631.

Based on the potential for contamination, the City of Lancaster has placed a priority on protecting its groundwater sources through a combination of public education, routine groundwater monitoring, a pollution source inventory, contingency and emergency planning, and zoning ordinances. The city has been administering the Source Water Protection Plan since 1996 to ensure the safety of the community's water supply. The city received full endorsement from Ohio EPA for our SWPP for both the North and South Wellfields.

Protecting our drinking water source from contamination is the responsibility of all area residents. Please dispose of hazardous chemicals in the proper manner and report polluters to the appropriate authorities. Only by working together can we ensure an adequate safe supply of water for future generations.

The City of Lancaster has devoted considerable time and expense in developing, implementing, and managing its SWPP to ensure the integrity of its water supply. More information about the source water assessment and what consumers can do to help protect the aquifer is available by calling (740) 687-6631.

#### *Source Water Information*

The City of Lancaster Water Treatment Plants receive their drinking water from wells located adjacent to the Water Treatment Plants. Water is drawn out of the Hocking River Valley Aquifer by 12 separate wells situated in the Miller Park Well Field for the North Plant. The South Water Treatment Plant draws water from 4 wells in the South Well Field near the South Plant from the same aquifer.

#### *Source Water Assessment*

The Ohio EPA has completed a study of the City of Lancaster's drinking water source to determine its susceptibility to contamination. The City's present groundwater is located within the Hocking River Valley Aquifer. This extensive system is comprised of vast quantities of subsurface sand and gravel deposits. The North Wellfield has been operational since 1932 and has continued to be a reliable and clean source of drinking water for Lancaster's residents.

The City of Lancaster's additional wellfield and treatment plant south of Lancaster is located within the same Hocking River Valley Aquifer as the North Wellfield, and will provide for Lancaster's water supply needs well into the future.

Based upon known hydro-geological conditions and from information gathered during the development of the Wellhead Protection Program, the City of Lancaster's source water is considered to have a high susceptibility to contamination. The susceptibility rating means that under existing conditions, the likelihood of the aquifer becoming contaminated is relatively high. At this time there is no evidence indicating the quality of water provided by the City of Lancaster has been impacted by contaminants.

#### *General Health Information*

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 (1-800-426-4791). Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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 Water Drinking Hotline.

If present, elevated levels of lead can cause serious health problems, especially for pregnant and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. City of Lancaster Division of Water 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 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

{Alpha emitters} Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer. {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.

# What's in my Water?

## Water Monitoring

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. It can also 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, 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; and *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 the water provided by public water systems. The Federal Drug Administration (FDA) has established limits for contaminants in bottled water which must provide the same protection for public health.

The EPA requires regular sampling to ensure drinking water safety. Samples are collected and analyzed for many different contaminants. The monitoring frequency requirement for some contaminants is less than once per year because the concentrations of these contaminants do not normally change. Some of our data, though accurate, may be more than one year old.

## Frequently Asked Questions

**What causes dark stains on bathroom fixtures?** Manganese is a naturally occurring mineral found in rocks, soil, and some drinking water supplies. Manganese is an essential trace element for humans. The main problem with manganese in drinking water has to do with black staining of bathroom fixtures. Buildup of manganese in distribution lines, customer plumbing, and water heaters may slough off and be broken up by the movement of water, causing it to be seen pouring from customer's taps. Although Lancaster water routinely monitors manganese and consistently keeps the manganese level well below the EPA secondary maximum containment level of 0.05 mg/L, there may be an occasional black residue on plumbing fixtures.

**What is the white stuff in my coffee pot?** Minerals dissolved in water tend to settle out when water is heated. These minerals are white and accumulate in coffee pots, water heaters, and on shower heads, and glass doors. These minerals are necessary to meet other standards set forth by the EPA.

**What causes discolored water?** Routine hydrant flushing or plumbing changes in your home can stir up material that has settled. This can give your water a temporary "sandy" appearance. The best way to solve this problem is to verify with your water supplier that there is no break in the system, and if there is none, flush your home pipes by running cold water for a while through your largest faucet, probably the bathtub.

**Sulfurous (rotten egg) odor?** The most likely cause of a sulfurous or "rotten egg" odor is from the water trap below the sink (i.e. the "P-Trap"). If the trap is dry or if organic material settles in the water trap beneath the sink a sulfurous, or rotten egg smell is often mistakenly perceived as coming from the water. Cleaning the trap or filling it with water and allowing it to sit overnight should help relieve the problem.

CONTAMINANTS	Units	MCLG (1)	MCL (2)	Amount Detected	Range of Detection	Violation	Sample Year	Typical Source of Contamination
<b>NORTH PLANT</b>								
<b>Inorganic Contaminants</b>								
Barium	ppm	2	2	0.0489	N/A	NO	2017	Erosion of natural deposits
Flouride	ppm	4	4	0.24	N/A	NO	2017	Erosion of natural deposits
Nitrate	ppm	10	10	0.17	N/A	NO	2017	Run off from fertilizer use, erosion of natural deposits
<b>Radiological</b>								
Gross Alpha	pCi/L	0	15	8.4	N/A	NO	2017	Erosion of natural deposits
Combined Radium	pCi/L	0	5	BDL	N/A	NO	2017	Erosion of natural deposits
<b>SOUTH PLANT</b>								
<b>Inorganic Contaminants</b>								
Barium	ppm	2	2	0.0322	N/A	NO	2017	Erosion of natural deposits
<b>Radiological</b>								
Gross Alpha	pCi/L	0	15.0	4.0	N/A	NO	2017	Erosion of natural deposits
<b>DISTRIBUTION</b>								
<b>Volatile Organic Compounds</b>								
* TTHM	ppb	N/A	80	36.8	7.50 to 36.80	NO	2017	By-product of drinking water chlorination
* HAA5	ppb	N/A	60	7.02	1.705 to 7.02	NO	2017	By-product of drinking water chlorination
* Compliance of TTHM's and HAA5 and based on a running annual average, not individual sample values								
<b>Lead and Copper</b>								
* Lead	ppb	0	AL=15	BDL	BDL	NO	2017	Corrosion of household plumbing
* Copper	ppm	1.36	AL=1.3	0.726	BDL TO 0.726	NO	2017	Corrosion of household plumbing
* 0 out of 30 distribution samples were found to have levels that exceeded the action level of 15 ppb lead								
<b>Residual Disinfectant</b>								
CONTAMINANT	Units	MRDLG (3)	MRDL (4)	Amount Detected	Range Det.	Violation	Sample Yr.	Typical Source of Contamination
Total Chlorine	ppm	4	4	1.03	0.93 to 1.04	NO	2017	By-product of drinking water chlorination

### Table Definitions

- (1) 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 safety margin.
- (2) 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 treatment technology.
- (3) 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.
- (4) 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.
- Parts Per Million (PPM) - One part per million (or milligrams per liter) corresponds to one penny in \$10,000.
- Parts Per Billion (PPB) - One part per billion (or micrograms per liter) corresponds to one penny in \$10,000,000.
- Picocuries per liter (pCi/L) - A common measure of radioactivity.
- Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a system must follow.
- Center for Disease Control (CDC), Million Gallons (MG), Not Regulated (NR), Not Applicable (NA), Below detection Limit BDL
- \*\*90th Percentile - The 90th percentile value is calculated by placing all sample results in order from the lowest to the highest concentration. Number each sample starting with 1 for the lowest up to the highest concentration. Then multiply the total number of samples collected by 0.9, the number corresponding to the calculated value is the 90th percentile.

### Unregulated Contaminants (UCMR3) (5)

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

CONTAMINANT	Units	MCLG (1)	MCL (2)	Amount Detected	Range Det.	Violation	Year	Typical Source of Contamination
<b>NORTH PLANT</b>								
Molybdenum	ppb	N/R	N/R	8.6	N/A	NO	2014	Erosion of natural deposits
Strontium	ppb	N/R	N/R	175	N/A	NO	2014	Erosion of natural deposits
<b>SOUTH PLANT</b>								
Molybdenum	ppb	N/R	N/R	1.8	N/A	NO	2014	Erosion of natural deposits
Strontium	ppb	N/R	N/R	88.5	N/A	NO	2014	Erosion of natural deposits
1,4-Dioxane	ppb	N/R	N/R	0.04	N/A	NO	2014	Chemical solvent
<b>DISTRIBUTION</b>								
Molybdenum	ppb	N/R	N/R	9.65	N/A	NO	2014	Erosion of natural deposits
Strontium	ppb	N/R	N/R	200	N/A	NO	2014	Erosion of natural deposits

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- Parts Per Billion (PPB) - One part per billion (or micrograms per liter) corresponds to one penny in \$10,000,000.
- Center for Disease Control (CDC), Million Gallons (MG), Not Regulated (NR), Not Applicable (NA), Below detection Limit BDL