



## Consumer Confidence Report

Kirtland Community College is pleased to present our 2019 Annual Consumer Confidence Report on Water Quality as required by the Safe Drinking Water Act (SDWA). Kirtland Community College meets or surpasses all federal and state drinking water standards mandated by the Environmental Protection Agency (EPA) and the State of Michigan's Department of Environment, Great Lakes, and Energy (EGLE).

This report is a snapshot of last year's water quality and is designed to provide details about where your water comes from, what it contains, and how it compares to standards set forth by the regulatory agencies. We are committed to providing you with information because informed customers are our best allies.

### **About our system**

The Kirtland Community College's Roscommon campus utilizes 2 six-inch wells to draw quality water from an aquifer approximately 130' deep. We use 2 Variable Frequency Drives (VFD's) on our pumps to provide water throughout our distribution system. We also have 12 fire hydrants at various locations in our system for emergency access and to provide us with points to routinely flush our system as required. Our constant goal is to provide you with a safe and dependable supply of water.

### **Source water assessment and its availability**

At least once every five years a sanitary survey-source water assessment is conducted for each community water supply by the state or local health department. A sanitary survey is a comprehensive inspection of the well, pumping equipment, distribution, and any treatment equipment to assess the potential for contamination to enter the water system. A written report is provided and if deficiencies are found, a compliance schedule is worked out with the owner to correct the problems. Sampling requirements may be increased in the interim.

In conjunction with the sanitary survey, information is collected to determine the relative potential for contamination of the source water. This process is called a source water assessment. The following is a general list of the items evaluated:

- Geologic Sensitivity
- Physical Properties of the Well
- Water Quality History
- Contaminant Sources

### **Per- and Polyfluoroalkyl Substances (PFAS)**

Per- and polyfluoroalkyl substances (PFAS), sometimes called PFCs, are a group of chemicals that are resistant to heat, water, and oil. PFAS have been classified by the United States Environmental Protection Agency as an emerging contaminant on the national landscape. For decades, they have

been used in many industrial applications and consumer products such as carpeting, waterproof clothing, upholstery, food paper wrappings, fire-fighting foams, and metal plating. They are still used today. PFAs have been found at low levels both in the environment and in blood samples from the general U.S. population.

These chemicals are persistent, which means that they do not break down in the environment. They are also bioaccumulate, meaning that over time, the amount builds up in the blood and organs. Elevated levels of PFAs have the potential to cause increased cholesterol, changes in the body's hormones and immune system, decreased fertility, and increased risk of certain cancers.

The EPA has set a lifetime health advisory (LHA) level in drinking water for two PFAs: perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). The PFOA and PFOS LHA is the level, or amount, *below which no harm is expected from these chemicals*. The LHA level is 70 parts per trillion (ppt) for PFOA and 70 ppt for PFOS. If both PFOA and PFOS are present, the LHA is 70 ppt for the combined concentration. For more information on PFOA and PFOS, contact the State of Michigan Assistance Center at 800-662-9278 Monday through Friday, 8:00 am to 4:30 pm.

EGLE has coordinated a statewide initiative to test drinking water from all schools that use well water, and community water supplies, for PFAs. EGLE is taking the precautionary step of testing these drinking water sources to determine if public health actions are needed.

*There were no detectable levels of PFOA and PFOS in the samples taken from the well tap at our pump house.*

## **Why are there contaminants in my drinking water?**

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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity:

- microbial contaminants, such as viruses and bacteria, that 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 that 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 for public health.

## **Do I need 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 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).

## **Cross Connection Control Survey**

In accordance to the requirements set forth by the Michigan Department of Environment, Great Lakes, and Energy, Kirtland Community College has officially adopted the state of Michigan Cross Connection rules to protect the public water supply system. The purpose of this survey is to avoid contamination of the public water supply by preventing and eliminating cross connections. A cross connection is defined as a connection or arrangement of piping or appurtenances through which a backflow could occur. Backflow is defined as the undesirable reversal of flow of water of questionable quality, wastes or other contaminants into a public water supply. A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter the system. We are responsible for enforcing cross-connection control regulations and insuring that no contaminants can, under any flow conditions, enter the distribution system. A copy of Kirtland Community College's Cross Connection Program is available at: <http://www.kirtland.edu/health-and-safety/campusdrinking-water-and-waste-water>

## **Description of Water Treatment Process**

Your water is treated by disinfection which is considered to be one of the major public health advances of the 20th century. Disinfection at Kirtland Community College involves the addition of 0.5 ppm of hypochlorite to kill dangerous bacteria and microorganisms that may be in the water. The Safe Drinking Water Act's (SDWA) Maximum Contaminant Level (MCL) for Hypochlorite is 25 ppm. Since adding this small amount of chlorine to our water system in September 2013, Total Coliform has not been detected in our system.

## **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. Kirtland Community College 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 website <http://www.epa.gov/safewater/lead>.

## Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
<b>Microbiological Contaminants</b>								
Fecal coliform/E. coli - in the distribution system (positive samples)	0	0	0	NA		2019	No	Human and animal fecal waste
A violation occurs when a routine sample and a repeat sample, in any given month, are total coliform positive, and one is also fecal coliform or E. coli positive.								
Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source	
<b>Inorganic Contaminants</b>								
Copper - action level at consumer taps (ppb)	1300	1300	80	8/2/2018	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	
<b>Inorganic Contaminants</b>								
Lead - action level at consumer taps (ppb)	0	15	3	8/2/2018	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	

Per the EGLE sampling plan, our next required lead and copper sampling is scheduled for 2021.

## Additional Contaminants

In an effort to insure the safest water possible the State has required us to monitor some contaminants not required by Federal regulations. Of those contaminants only the ones listed below were found in your water.

Contaminants	State MCL	Your Water	Violation	Explanation and Comment
Sulfate	250 ppm	15 ppm	No	N/A

## Undetected Contaminants

The following contaminants were monitored for, but not detected, in your water.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Violation	Typical Source
Fluoride (ppm)	4	4	ND	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	ND	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite [measured as Nitrogen] (ppm)	1	1	ND	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (optional) (ppm)	MNR	250	ND	No	Erosion of natural deposits; leaching

Unit Descriptions	
Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.
positive samples	positive samples/year: The number of positive samples taken that year

<b>Important Drinking Water Definitions</b>	
<b>Term</b>	<b>Definition</b>
MCLG	MCLG: 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.
MCL	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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.
MRDL	MRDL: Maximum residual disinfectant level. 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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

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