

*Doing our part to keep drinking
water safe*



2017 Drinking Water Consumer Confidence Report (CCR) City of Campbell, Ohio

Joseph Tovarnak, Water Facility Superintendent

OUR COMMITMENT TO THE RESIDENTS OF CAMPBELL

Once again we proudly present our annual water quality report. This edition covers all testing completed from January through December 2017. We are pleased to tell you that our compliance with all state and federal drinking water laws remains commendable. As in the past, we are committed to delivering high quality drinking water and remain vigilant in meeting the needs of all users while providing excellent public service and education.

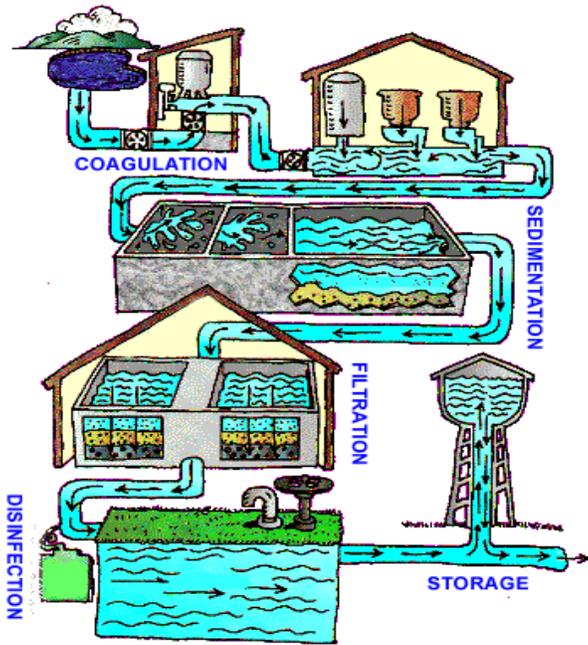
Joseph Tovarnak, Water Facility
Superintendent

2800 Wilson Avenue
Campbell, Ohio 44405

Phone: 330-755-4822
Fax: 330-755-0938
E-mail:
campbell.water@yahoo.com


Campbell Water

The Water Treatment Process



Raw water is gravity fed from the lake through micro strainers to remove large debris prior to the City's water treatment facility. The water entering the facility flows into one of two rapid mix basins, where chemicals are added as the first step in purifying the water. Sodium aluminate is added to the raw water at the rapid mix tanks to cause coagulation. Pebble lime is slaked and also added to remove calcium and magnesium ions that are responsible for water hardness. Flocculation, and sedimentation then occur in the primary clarifier followed by recarbonation to lower the pH level to approximately 9.0. Water then flows through a manifold of dual media filters made up of layers of gravel, sand, and anthracite coal. Chlorine is dosed to disinfect the water and fluoride to protect children's teeth are dosed at the end of the process before water enters an underground storage clearwell.

Source Water

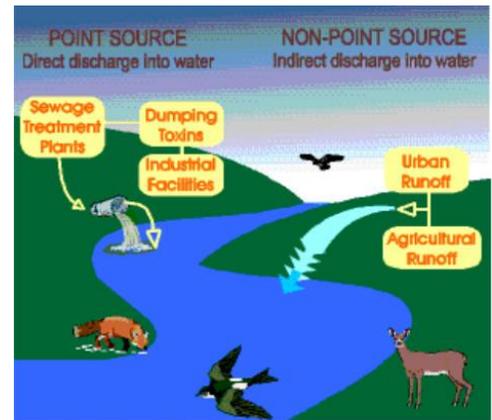
Campbell's water system can draw water from either, Hamilton or McKelvey Lake, which are both *owned and maintained by AQUA America*. Since our source waters are exposed to atmospheric conditions, it is considered to be surface water.

All surface waters are considered to be susceptible to various forms of contamination. The Ohio EPA, with the assistance of the Campbell water facility, completed a source water assessment program in September 2001. The program evaluated the probability of possible contaminants entering into the source water supply. The analysis indicates that the *potential* exists for contaminants such as agricultural runoff, dairy farming, excess sediment transport by the loss of riparian cover, failing septic systems, strip coal mining activities and oil and gas wells to impact the water supply. Although the source water servicing the City of Campbell was determined to be susceptible to contamination, historically, the water treatment plant has effectively treated the source to meet all drinking water quality standards.



Sources of Contamination

The sources of drinking water, both tap water and bottled water, includes rivers, lakes, streams, 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:

- 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 natural-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 runoff, and residential use.
- 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, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's Safe Drinking Water Hotline 1-800-426-4791**.

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. The 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 Campbell's Drinking Water

The EPA requires regular sampling to ensure drinking water safety. The Campbell water facility conducted sampling for bacteria, inorganic, synthetic organic and volatile organic contaminants during 2017. Samples were collected for a total of over 95 different contaminants. Most contaminants were not detected in Campbell's water supply. The Ohio EPA requires the facility to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the following data, though accurate, is more than one year old.

Este informe contiene informacion muy importante sobre su agua para beber. Traduzaclo o hable con alguien que lo entienda bien.

Campbell's drinking water travels through approximately 40 miles of mains, delivering an average, 1.15 MGD (million gallons daily) of water to roughly 8,200 Campbell residents and up to 0.4 MGD of the produced water to AQUA America customers. For 2017: water pump-age totaled 417 million gallons, pH averaged 9.7, the hardness 153 mg/l, and the alkalinity 23 mg/l. Total coliform bacteria was tested for monthly and none was detected. In addition, finished water was tested for microcystin weekly and none was detected.

Listed below is information on the contaminants found in the City of Campbell's drinking water.

2017 Table of Contaminants

Contaminants (Units)	MCLG	MCL	Level Detected	Range of Detection	Violation	Sample Year	Typical source of Contaminants
Microbiological Contaminants							
Turbidity (ntu)	No goal set	TT	1.072	.038-1.072	No	2017	Soil Runoff
Turbidity (% samples meeting standard)	No goal set	TT	97.7%	97.7% - 100%	No	2017	Soil Runoff
Total Coliform	0%	>1	0	0	No	2017	Bacteria present in the environment
Total Organic Carbon (TOC)	No goal set	TT (removal ratio >1)	1.39	1.16-2.52	No	2017	Naturally present in the environment
Inorganic Contaminants							
Fluoride (ppm)	4	4	1.14	.56 - 1.43	No	2017	Water additive - protects teeth
Nitrate (ppm)	10	10	.707	ND-.707	No	2017	Agricultural fertilizer runoff
Barium (ppm)	2	2	.0096	N/A	No	2017	Erosion of natural deposits
Inorganic Contaminants (Regulated at Consumer's Taps)							
Copper (ppm)	1.3	Action level = 1.3	0	N/A	No	2017	Corrosion of household plumbing
Lead (ppb)	0	Action level = 15	0	N/A	No	2017	Corrosion of household plumbing
Volatile Contaminants (Regulated at the Water Facility)							
Chloroform (ppm)	No goal set	No set level	0.0358	N/A	No	2017	By-product of drinking water disinfection
Bromodichloromethane (ppm)	No goal set	No set level	.00318	N/A	No	2017	By-product of drinking water disinfection
Dibromochloromethane (ppm)	No goal set	No set level	.00057	N/A	No	2017	By-product of drinking water disinfection
Volatile Contaminants (Regulated in the Distribution System)							
Total Chlorine (ppm)	4 (MRDLG)	4 (MRDL)	1.04	0.82-1.25	No	2017	Disinfectant
Total Trihalomethanes (ppm) - DS201 / DS202	No goal set	80	78.4 / 72.83	41.33-125.7 / 44.06-114	No	2017	By-product of drinking water disinfection
Total Haloacetic Acids (ppm) - DS201 / DS202	No goal set	60	33.4 / 33.33	9.47-40.8 / 16.0-39.72	No	2017	By-product of drinking water disinfection
Radiological Contaminants (Regulated at the Water Facility)							
Gross Alpha (pCi/L)	N/A	15	9.65	N/A	No	2015	Erosion of natural deposits

Definitions and Terms

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

Contact Time (CT) - The mathematical product of a "residual disinfectant concentration (C), which is determined before or at the first customer, and the corresponding "disinfectant contact time" (T).

Cyanobacteria - Photosynthesizing bacteria, also called blue-green algae, which is naturally occur in marine and freshwater ecosystems, and may produce cyanotoxins, which at sufficiently high concentrations can pose a risk to public health.

Cyanotoxin - Toxin produced by cyanobacteria. These toxins include liver toxins, nerve toxins, and skin toxins. Also sometimes referred to as "algal toxin".

Level 1 Assessment - A study of the water system to identify the potential problems and determine (if possible) why coliform bacteria have been found in the water system.

Level 2 Assessment - A very detailed study of the water system to identify potential problems and determine (if possible) why an E.Coli MCL violation has occurred and/or why total coliform bacteria have been found in the water system on multiple occasions.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water, below which there is no known or expected health risk. 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 MCLG as feasible using the best available treatment technology.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a disinfectant in drinking water, below which there is no known or expected health risk. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Microcystins - Liver toxins produced by a number of cyanobacteria. Total microcystins are the sum of all the variants/congeners (forms) of the cyanotoxin microcystin.

N/A - Not Applicable

ND - Not detected in sample.

Nephelometric Turbidity Unit (NTU) - A measure of particles held in suspension in water)

Parts per Billion (ppb) or Micrograms per Liter (ug/l) - Are units of measurement for concentration of a contaminant. A part per billion corresponds to one second in roughly 31.7 years.

Parts per Million (ppm) or Milligrams per Liter (mg/l) - Are units of measurement for concentration of a contaminant. A part per billion corresponds to one second in roughly 11.5 days.

The ">" symbol - The symbol means "greater than."

The "<" symbol - The symbol means "less than."

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water. *For Total Organic Carbon (TOC) the level must be above 1.*

piC/L - picoCuries per liter. A common measure of radioactivity.



Lead in the Home

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Campbell is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for thirty seconds to two 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 [Environmental Protection Agency's Safe Drinking Water Hotline 1-800-426-4791](https://www.epa.gov/safewater/lead) or at www.epa.gov/safewater/lead. Out of the 20 samples tested for lead and copper in 2017, none were found to be in excess of the lead or copper action level.

The City of Campbell ensures the City's drinking water is lead free by regularly dosing lime which is required during the water softening process. Water sources, such as Hamilton Lake do not contain significant amounts of lead. Lead levels in drinking water exist primarily because of the pipes that brings City water into homes. In Campbell, these pipes are often the service lines that carry the water from water mains under the street or yard and into the water meter or home. Additionally there may be some Campbell residences with lead in their indoor plumbing or fixtures, as well.



In Campbell, lead service lines have been found between the water main and the outside shut off valve or corporation stop and the water meter. Lead service lines have also been found going all the way into some houses. *(Image courtesy Massachusetts Water Resource Authority)*

The OEPA currently requires that no repair work is done on existing lead lines. Any lead line which requires repair is to be removed and replaced with a suitable alternative (either copper or plastic in Campbell).

Residences built before the 1940s are at the highest risk for lead in pipes/drinking water. A significant number of these homes were built with lead service lines or lead pipes as plumbing. Houses constructed from 1940 until about 1990 are at a much lower risk. This time period utilized lead solder with copper piping as plumbing. Homes built after 1990, have the smallest possible risk. These homes were constructed with either lower-lead/lead-free solder or plastic pipes.

To reduce the risk of lead leaching out of any lead pipes or fixtures, Campbell doses lime which functions as a corrosion inhibitor during the treatment process. The lime increases water pH to the point it deposits a protective calcium scale coating on the inner walls of the plumbing. This coating prohibits the drinking waters ability to come in direct contact with any existing lead plumbing. Notable lead levels occurring in drinking water are normally a result of unstable or corrosive water. Water becomes corrosive when water pH is permitted to fall below neutral on the pH scale. This corrosive water attacks the piping material and facilitates lead leaching into the drinking water. Water consumers should always flush any water faucets for 1-2 minutes prior to initially using water from that source for the day. This flushing will flush any lead which may have leached into the water supply throughout the night. For more information on lead in the drinking water please contact the Water Facility at [330-755-4822](tel:330-755-4822).

Turbidity

A measurement of the cloudiness of the water. Turbidity is monitored because it is a good indication of water quality and the effectiveness of the treatment process. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1 NTU at any time. The highest recorded turbidity result at the Campbell Water Facility, in 2017, was 1.072 NTU and the lowest monthly percentage of samples meeting the standard was 97.7%.

Total Organic Carbon

The value reported under "level detected" for Total organic Carbon (TOC) is the lowest running annual average ratio between the percentage of TOC required to be removed. A value of greater than one indicates that the water system is in compliance with TOC removal requirements. A value of less than one indicates a violation of the TOC removal requirements. The value reported under "Range of Detection" for TOC is the lowest monthly ratio to the highest monthly ratio.

Cryptosporidium

The City of Campbell Water Facility monitored for cryptosporidium in the source water in 2017. A total of 9 cryptosporidium oocysts were detected in 2 of 12, 10 liter samples collected from Hamilton Lake raw water. ***Cryptosporidium was not detected in the finished water.*** Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes it, the most commonly used filtration methods cannot guarantee 100% cryptosporidium removal. Monitoring of source water indicates the presence of these organisms. Current test methods do not determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease. However, immuno-compromised people are at greater risk of developing life threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infections. ***Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.***

How to Participate in Decisions Pertaining to Your Drinking Water



Public participation and comments are encouraged at regular meetings of Campbell City Council. Council meetings are conducted on the first and third Wednesday of each month at 7:30 pm. Council meets at Campbell City Hall, 351 Tenney Avenue, Campbell, Ohio, in the public courtroom. Council recesses during the months of July and August; however, information can be obtained through the office of the Honorable Mayor, Nick Phillips, at [330-755-1451](tel:330-755-1451), extension 5.

The City of Campbell has a current, unconditioned license to operate our public water system. The Water Facility operates under OEPA license # OH5000411.



Common Water Quality Concerns

Rusty Water

When rusty water is experienced it normally does not create a health concern but is mostly aesthetically unpleasing. Rusty brown, orange or light yellow water can be attributed to a number of circumstances including: water main or service line breaks, fire fighting, hydrant flushing, construction work, system depressurization or pipe corrosion. On average rusty water conditions dissipate in 1-3 hours but may last longer depending on water demand on the system. In the event, rusty water lasts for more than 24 hours please notify the water facility at [330-755-4822](tel:330-755-4822).



Chlorine Taste and Odor

The City of Campbell has efficiently and effectively reduced the bacteria content in the drinking water by dosing chlorine. The water facility Operators routinely analyze the chlorine content at various sites with in the City daily to insure proper disinfection. The disinfection process must be maintained to thwart the potential for bacterial growth.

To eliminate this objectionable chlorine condition, fill a jug with tap water and put it in the refrigerator without a lid for 24 hours the chlorine taste will dissipate.

Cloudy or Milky White Water

Air bubbles can form naturally in water and can be created during the pumping of water. The cloudy or white water is a result of air bubbles in the water. This cloudy water is completely harmless and usually originate when it is very cold outside and air gets mixed with the water supply. To clear the cloudy let the open container of water sit until the water becomes clear.



Musty Taste and Odor

Certain times of the year Campbell's water may have an earthy, musty or fishy taste or odor resulting from the occurrence of certain algal blooms or the seasonal turnover of Hamilton Lake. These algae responsible for the taste and odor events pose no health concerns, and powdered activated carbon is applied to the water to reduce the compounds



red
alga



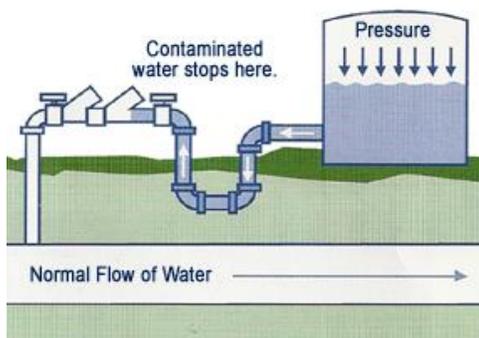
brown
alga



green
alga

Protecting Your Home Against Backflow and Cross Connections

Backflow can be defined as water flowing in the opposite direction from its normal flow. A Backflow condition allows contaminants to enter the drinking water system through a cross connection during a change in pressure.

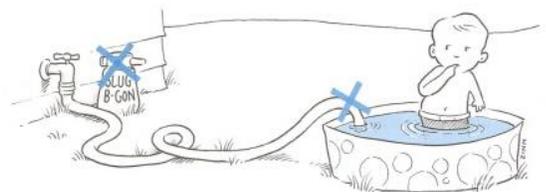


A potentially hazardous cross connection occurs every time someone uses a garden hose sprayer to apply herbicides or insecticides to their lawn. Another cross connection occurs when someone uses their garden hose to clear a stoppage in their sewer line.

Without a backflow prevention device between the hose and hose bibb, the contents of the hose and anything it is connected to can backflow into the piping system and contaminate your drinking water.

Backflows due to cross connections are serious plumbing problems. They can cause sickness and even death. However, they can be avoided by the use of proper protection devices. Each spigot at your home should have a hose bib vacuum breaker installed.

This is a simple inexpensive device which can be purchased at any plumbing or hardware store. Installation is as easy as attaching your garden hose to a spigot. (*Data courtesy Gainesville Regional Utilities*)



Prevent Water Backflow

For more information on cross connection control and backflow prevention for your home or business, please contact the City of Campbell Backflow Prevention Operator at [330-755-4822](tel:330-755-4822).

Water Conservation Tips

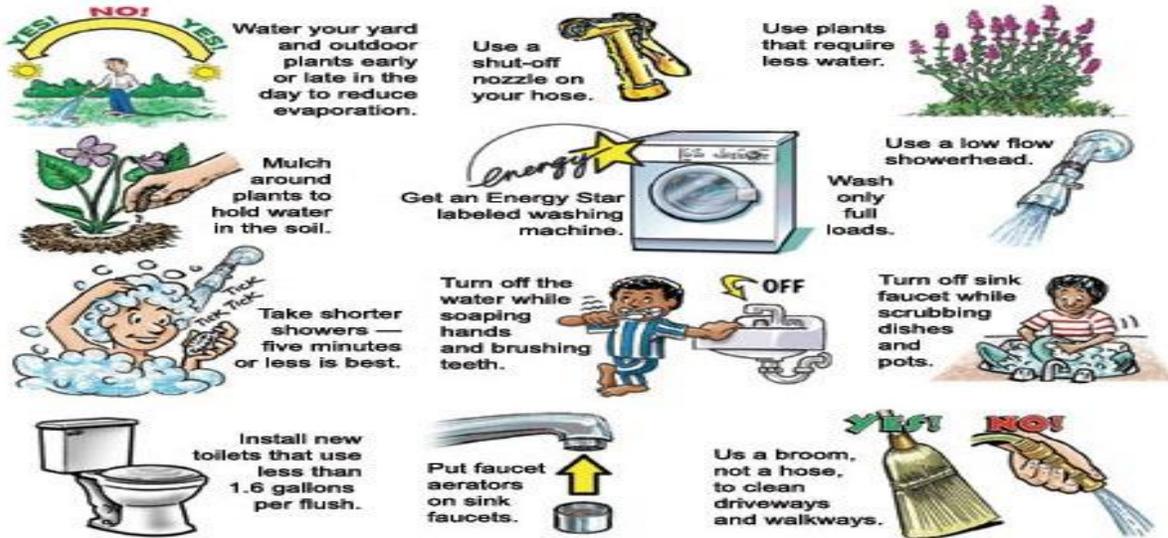
Water conservation, using water efficiently and avoiding waste, is essential to ensure that we have adequate water today and into the future even in places where water is abundant. In 1990, 30 states in the U.S. reported "water - stress" conditions. In 2000, the number of states reporting water - stress rose to 40. In 2009, the number rose to 45. There is a worsening trend in water supply nationwide. It is up to all of us to use the water we have wisely, and it is as simple as each of us making small changes. Make conserving water a daily part of your life. And remember when you save water, you save energy and money!



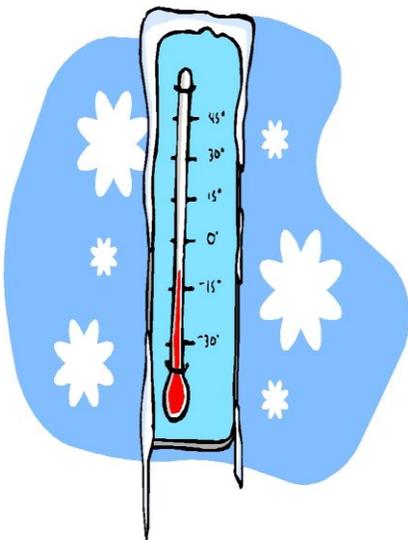
**Water is
wealth**
It's time to save!



Below are several ways to reduce water usage and help conserve water.



Winter Water Line Freeze Precautions

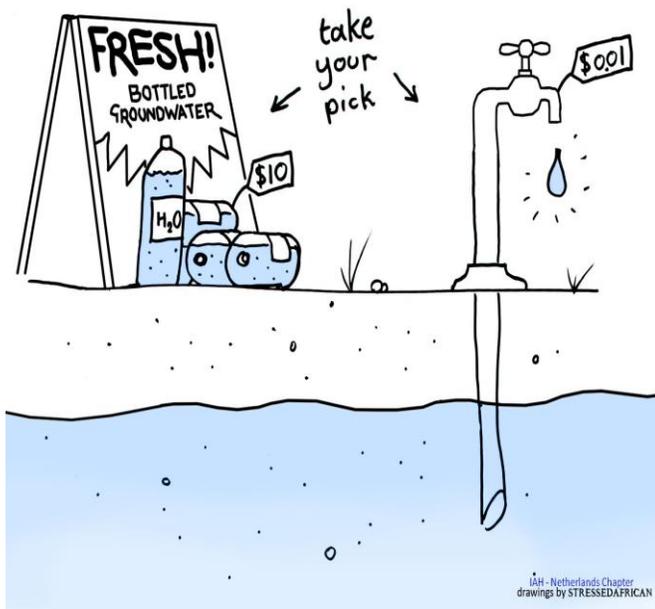


While the average winter temperature for Campbell and the surrounding area averages above freezing, there are occasions when the temperature drops below freezing. With freezing temperatures there is a high potential of unprotected residential water pipes to freeze. When this happens, some water customers may experience only the annoyance of interrupted water service until the water in the pipes thaw. Unfortunately, for a few, the water line may rupture and cause property damage and require plumbing repairs.

There are several preventative measures that can reduce the chances of having your water lines freeze.

- Disconnect all garden hoses from outside hose bibs and shut off all indoor valves leading water outside. If possible, subsequent to closing the valves, drain all the lines leading outside through an open faucet.
- Open kitchen and bathroom cabinet doors under sinks to allow heat from the room to circulate around un-insulated pipes.
- Heat unused rooms with plumbing, especially if the plumbing is in a north or west wall.
- Insulate all pipes in areas where there is no heat, such as the garage or crawl space. Apply heat tape or thermostat-controlled heat cables around pipes that are exposed to the weather and prone to freeze. You can purchase a variety of insulating and heating devices to install on both inside and outside plumbing. Check with your local plumbing supplier for details.
- Seal any air leaks around doors and windows to reduce cold air penetration.
- During extremely cold periods, allow a trickle of hot and cold water to drip through the night. The cost of the wasted water is small compared to the damage from frozen pipes.

If you experience a freezing pipe condition and need our assistance, please call us at **330-755-3396**, during normal business hours or **330-755-4822** in case of an after hour emergency.



What's it take to bring water to a consumers tap?

Miles of regularly upgraded and repaired pipelines. Continuous analyzing and treating of water at all stages of production and distribution. Employees working around the clock ensuring water is meeting treatment standards and is reaching all consumers

supplied by the system. *At about a penny per gallon, water is a tremendous value in the City of Campbell.*

Contact Information

In compliance with the safe water drinking act, the City of Campbell water facility has prepared this report to provide information to you , the consumer, on the quality of our drinking water. Included in the report is general health information, water quality test results, how to participate in decisions concerning your drinking water and system.

Joseph Tovarnak is the Campbell Water Facility Superintendent and is available to answer questions regarding this report during the hours of 7:00 am to 3:00 pm at phone number [330-755-4822](tel:330-755-4822).

Additional information can be obtained through our website address www.campbellohio.gov, and through the EPA website address www.epa.gov/safewater.