

Candlewood Knolls Water Authority

Consumer Confidence Report 2022

Is my water safe?

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

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).

Where does my water come from?

The Candlewood Knolls water system is 40 years old. We provide both seasonal and year-round water to subscribers in accordance with State regulations. All the main water distribution lines are laid below the frost line. We currently have 3 active wells. Two wells are located on the ballfield, and one well is located at Camp Arden on the tank site. The Camp Arden well was approved by the State DPH in 2022 and turned on for use in January 2023. Our water source is basically ground water and comes from the Watershed west of Candlewood Lake in the Town of New Fairfield and extends to the New York State line.

Source water assessment and its availability

The CT Department of Public Health (DPH) Drinking Water section has a program in place for Water Quality Monitoring and Compliance. The CKWA follows this program for water testing monthly, annually, and other monitoring period requirements. We collect water samples from the distribution system and the active wells monthly and have them tested by an independent laboratory. The lab reports all the results to us and to the State to maintain compliance. Some tests are not required every year so you may see different contaminant results in each of these

annual reports. The CT DPH also periodically assesses our performance with site visits and evaluations. All of our water quality test reports are available upon request.

Why are there contaminants in my drinking water?

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

How can I get involved?

The Candlewood Knolls Water Authority (CKWA) is a group of your neighbors who volunteer to oversee and administer the community water system. You can be involved by attending annual community meetings and participating in discussions of the water system.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- Take short showers - a 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.

- Shut off water while brushing your teeth, washing your hair, and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure the future generation uses water wisely.
- Visit www.epa.gov/watersense for more information.

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Do not dump anything into storm drains as they drain directly into our lake.

Results of voluntary monitoring

The CK water system has never tested for the presence of PFAs before 2022 because testing only applied to systems serving more than 10,000 individuals. The CT DPH required us to test for PFAs in 2022 due to our request to activate the Camp Arden well. Minor amounts of PFAs were found in the Camp Arden well water sample so the State DPH required us to also test the two Ballfield wells. Minor amounts of PFAs were also found in those wells. We are considerably below the current acceptable levels of PFAs in drinking water and will continue to monitor this contaminant over time per CT DPH requirements. We have attached PFA information to the end of this CCR report.

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. Candlewood Knolls Water Authority is responsible for providing high quality drinking water but cannot control the variety of materials used in your home 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 from your own faucet. 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 <http://www.epa.gov/safewater/lead>. The CKWA tests for the presence of lead in our water system per CT DPH requirements. To date we have had an absence of lead in our water.

Water Quality Data Table

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of contaminants in water provided by public/private water systems. The table below lists all the drinking water contaminants that we detected during the 2022 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. All the data presented in this table is from testing done in the calendar year of the report. The EPA or the State does not require us to monitor for certain contaminants every 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. 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	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Inorganic Contaminants								
Nitrate [measured as Nitrogen] (ppm)	10	10	2.9	1.6	2.9	2022	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Microbiological Contaminants								
Turbidity (NTU)	NA	5	0.5	NA	NA	2022	No	Soil runoff
Radioactive Contaminants								
Radium (combined 226/228) (pCi/L)	0	5	1.135	0.182	1.135	2022	No	Erosion of natural deposits
Uranium (ug/L)	0	30	0.168	ND	0.168	2022	No	Erosion of natural deposits
Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source	
Inorganic Contaminants								
Copper - action level at consumer taps (ppm)	1.3	1.3	0.03	2022	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	

Additional Monitoring

As part of the new Camp Arden well activation, the CT DPH has required us to monitor some additional contaminants/chemicals. Information collected through the monitoring of these contaminants/chemicals will help to ensure that future decisions on drinking water standards are based on sound science.

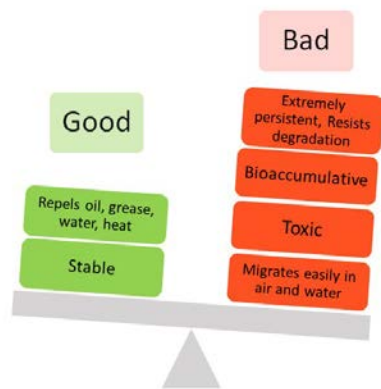
Name	Reported Level	Range	
		Low	High
perfluorohexanesulfonic acid (PFHxS) (ppt) Limit= 49 ppt	2.03	1.79	2.26
perfluorooctanesulfonic acid (PFOS) (ppt) Limit= 10 ppt	6.59	5.12	8.06
perfluorooctanoic acid (PFOA) (ppt) Limit = 16 ppt	4.03	2.62	5.44

Unit Descriptions	
Term	Definition
ug/L	ug/L : Number of micrograms of substance in one liter of water
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
NTU	NTU: Nephelometric Turbidity Units. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
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

For more information please contact:

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What are PFAS?

Per- and Polyfluoroalkyl Substances

- Developed in the 1940s
- Group of more than 5,000 man-made chemicals with many useful properties including the ability to repel water, prevent staining, and increase heat resistance.
- PFAS have many industrial and consumer uses including fabric, carpet, electrical wire and non-stick coatings, food packaging, and firefighting foam used to extinguish petroleum fires.
- Persistent and can remain in the environment for long periods of time.
- Commonly found in environment including waters of Connecticut.
- Toxic – Exposure to elevated level of some PFAS may increase the risk of developing a variety of health effects (see DPH PFAS information page for additional details).

Resources

Connecticut Department of Public Health (CT DPH)'s PFAS Information Webpage:

<https://portal.ct.gov/DPH/Environmental-Health/PFAS/PFAS>

Public Water Supply:

Please contact your local water utility to learn more about your drinking water and to see whether they have monitoring data for PFAS or can provide any specific recommendations for your community.

Local Health Department:

To find contact information for your local health department, please visit: www.ct.gov/dph and click on "Find your Local Health Department."

CT DPH – Emerging Contaminant Unit:

Phone: 860-509-7356

Email: DPH.EmergingContaminants@ct.gov

CT DPH– Private Well Program

Phone: 860-509-8401

Email: dph.privatewellprogram@ct.gov

CT DPH – Environmental & Occupational Health Assessment Program:

Phone: (860) 509-7740

Email: DPH.EOHA@ct.gov

Connecticut Department of Energy and Environmental Protection PFAS Information Webpage:

<https://portal.ct.gov/DEEP/Remediation--Site-Clean-Up/Contaminants-of-Emerging-Concern/Per--and-Polyfluoroalkyl-Substances>

Per- and Polyfluoroalkyl Substances (PFAS)

Basic Information about drinking water



Connecticut Department of Public Health (CT DPH)
Environmental Health and Drinking Water Branch
Emerging Contaminant Unit
410 Capitol Avenue MS#12DWS
Hartford, CT 06134



PFAS Name	CT Drinking Water Action Level (ppt)
Perfluorooctane sulfonic acid (PFOS)	10
Perfluorononanoic acid (PFNA)	12
Perfluorooctanoic acid (PFOA)	16
Perfluorohexane sulfonic acid (PFHxS)	49

ppt – parts per trillion

Connecticut Drinking Water Action Level

- Groundwater and surface water in Connecticut can be affected by chemical contamination from recent or historic releases.
- An **Action Level** is the concentration of a chemical in drinking water that requires further actions once exceeded. Action levels are set to protect the public health. Drinking water with PFAS at or below their action levels is not expected to pose a health risk.
- June 15, 2022, DPH established Action Levels for four PFAS chemicals – PFOS, PFOA, PFNA, and PFHxS.
- Individual levels reflect evolving scientific research on their toxicity.
- PFAS Action Levels are calculated to be protective of human health. The safe level is above the laboratory detection limit and treatment feasibility.

Is My Water Safe to Drink?

- These PFAS Action Levels represent the best studied and most commonly found PFAS chemicals in the CT environment.
- An Action Level provides protection to all the public including sensitive populations such as babies or pregnant women. Multiple safety factors are used in the Action Level calculation.
- Action Levels consider a lifetime of exposure and consider PFAS exposure from sources outside of drinking water.
- Consuming water above CT's Drinking Water Action Levels over a long period of time may increase the risk of developing some health effects for some people. It does not necessarily mean that you WILL develop health effects.
- DPH expects that public water systems that detect PFAS will inform their customers and evaluate actions to reduce exposures.
- Wherever feasible we should take steps to reduce exposure to PFAS from all potential sources (e.g., drinking water, food, consumer products). Lower exposure means lower risk, and the less exposure the better.

PFAS Treatment for Drinking Water

- Activated carbon, ion exchange and high-pressure membranes (e.g., reverse osmosis) have all been demonstrated to remove PFAS from drinking water systems.
- Treatment targeted for one PFAS chemical will reduce the concentration for multiple PFAS chemicals in the water.
- PFAS treatment is scalable from a point of use system on the kitchen sink to a system that treats all the water use in a home to a public water treatment system.
- Home treatment options are certified by the National Sanitation Foundation to treat PFOS and PFOA to below 70 ppt. Currently, no certification exists for removal of target PFAS to below laboratory detection limits.
- The best available treatment option depends on many factors, including water chemistry, PFAS concentration and compound, and water usage.
- Carbon filters being installed at homes in CT are achieving treatment of PFAS, PFOS and PFOA contamination, to below the action level.
- Please visit the DPH PFAS webpage for additional information on PFAS Removal