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Conserving Water—What Can You Do?

Poor management of water resources may lead to water pollution or scarcity and negatively impacts a community's ability to thrive, with children being impacted the most. So, what can you do to conserve water at your childcare facility and at home?

- Use water only when necessary.
- Check for and repair plumbing leaks.
- Identify ways water may be wasted in your facility or home and develop a plan to conserve water.
- Teach children the importance of water conservation.
- Run the dishwasher and washing machine less often, and with full loads.
- Replace older appliances with high-efficiency models that use about 30 percent less water and install low-flow plumbing faucet fixtures and aerators.

Celebrate Children's Environmental Health Day!



Children's Environmental Health (CEH) Day takes place on the second Thursday of October each year. This year, it was celebrated on Thursday, October 13, 2022. CEH Day was first initiated by the **Children's Environmental Health Network (CEHN)** with the goal of increasing awareness about children's environmental health issues. By celebrating CEH Day, CEHN seeks to encourage

individuals and organizations to act on behalf of children nationwide. Just like the Division of Environmental Health Epidemiology (DEHE), CEHN believes that all children have the right to healthy environments in which to thrive, and that environmental health for all kids means clean air, clean water, and products free from harmful chemicals. As DEHE celebrated CEH Day, emphasis was placed on the importance of water; especially as it relates to children's development. Importantly, DEHE's focus on equity translates to support for activities that create opportunities for groups traditionally left out of environmental public health activities. DEHE, will continue to encourage water conservation efforts to ensure children's continued access to clean water.

Importance of Water for Children's Development

Water is vital for healthy growth, nutrition, and development. It is needed for transporting nutrients around the body, maintaining body temperature, keeping joints moist, digesting food, and removing waste from the body. Because water has zero calories and no sugar, drinking water instead of sugary drinks may help prevent weight gain and consequently



reduce the risk of diseases associated with childhood obesity, i.e., diabetes.

- Water lawn or garden only when necessary and in the cooler part of the day (evening or morning) and mow grass blades to 2-3 inches high. Longer grass improves moisture retention, and helps grass survive better in drought.
- Sweep your sidewalk, deck, or driveway instead of hosing it off.
- Do not run the faucet while brushing teeth or shaving and limit total shower time.
- Set up a rain barrel to be ready to repurpose rain. [Learn more from the US Environmental Protection Agency \(EPA\).](#)

What is in Your Water?

Water is important to stay alive. Sources of drinking water may include public water systems, private wells, or bottled water. Many communities obtain their drinking water from groundwater. However, the aquifers that provide this water can become contaminated by human activity, i.e., through the current and historical use of PFAS or chemical spills. It is assumed that tap water in America is safe because the EPA regulates the public water system. However, the EPA does not regulate all potentially harmful chemicals that can enter public water supplies, nor does it regulate private water sources. Owners of private wells are responsible for ensuring that their well water is safe from contaminants. A key step to ensuring water quality is regular testing. Common things to test for include total coliforms, fecal coliforms including *E. coli*, pH, contaminants i.e., nitrate, and volatile organic compounds (VOCs). Other naturally occurring contaminants or those produced by commercial or industrial activities (e.g., arsenic, barium, pesticides, etc.) should be tested for

Substituting sugary drinks with water also helps prevent dental cavities. Additionally, it has been reported that drinking water improves cognitive function to allow children to perform better at school.

Water access, quality, and quantity impact children's health. Children, especially babies, drink more fluid per pound of body weight than adults. Children are also more susceptible to disease from contaminants like microbes or pathogens, per- and polyfluoroalkyl substances (PFAS), and lead. Continuous exposure to contaminants (especially high levels) in water may lead to illness or delays in physical or mental development. Notably, it is vital to always use clean drinking water (water that is free from any contaminants) to make formula that is used to nourish [formula-fed infants](#).

Testing your water is one way to ensure its quality and helps keep children safe from waterborne illnesses with symptoms like eye, skin or respiratory problems, diarrhea, and vomiting (which may cause dehydration). Practicing water conservation and pollution prevention helps ensure that water sources are protected.

Ensuring the Safety of Your Private Well Water

Neither the US EPA nor the Pennsylvania Department of Environmental Protection (PA DEP) regulates private water supplies. Consequently, owners are responsible for ensuring the quality and safety of their water. Steps you can take to ensure the safety of your drinking water include:

- Test your water annually for coliform, nitrates, pH, and other contaminants through a [certified laboratory](#). Importantly, test your water if you notice any changes in the smell, taste, or color and following any problems near your well (i.e., flooding or repairs to the well).
- Hire a certified well driller for any new well construction, modification, or abandonment and closure.
- Install a well cap or sanitary seal to prevent unauthorized use of, or entry into, the well and periodically inspect exposed parts of the well.
- Avoid mixing or using pesticides, fertilizers, herbicides, degreasers, fuels, and other pollutants near the well and never dispose of harsh chemicals, solvents, petroleum products, or pesticides in a septic system or dry well.
- Regularly check the integrity of any above ground and underground storage tanks that hold home heating oil, diesel, or gasoline on your property.
- Keep accurate records of well maintenance.
- Finally, check with your local municipality or the DEP to ensure activities and industry on or near your property are set a safe distance from your well.
- If contamination persists, consider installing a water treatment system or using an alternative water source (i.e., bottled water). Some private well owners in PA are eligible to receive free water testing through Penn State Extension's Drinking Water Program. For information on Penn State Extension's well water testing programs, how to collect and submit a water sample, and how to interpret water test results, please visit their [Drinking Water Program website](#), call 814-863-0841, or email: aaslab@psu.edu.

depending on where you live and where your well is located on your property.

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Resources

- <https://www.epa.gov/privatewells>
- <https://www.epa.gov/watersense/start-saving>
- <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>
- <https://www.epa.gov/node/111247/>
- <https://privatewellclass.org/>
- https://www.cdc.gov/healthywater/drinking/public/water_quality.html
- <https://www.epa.gov/privatewells/protect-your-homes-water#preventwellanchor>
- <https://agsci.psu.edu/aasl/water-testing/drinking-water-testing>
- <https://www.cdc.gov/healthywater/drinking/drinking-water-faq.html>
- https://www.cdc.gov/healthywater/drinking/public/understanding_ccr.html
- <https://www.epa.gov/privatewells/protect-your-homes-water>
- <https://extension.psu.edu/common-water-test-parameters-related-to-natural-gas-drilling>

Table: Common conditions associated with well and what to test for.

Conditions or Nearby Activities:	Test for:
Recurring gastro-intestinal illness	Coliform bacteria
Household plumbing or service lines that contain lead	pH, lead, copper
Radon in indoor air or region is radon rich	Radon
Corrosion of pipes, plumbing	Corrosion, pH, lead
Nearby areas of intensive agriculture	Nitrate, nitrite, pesticides, coliform bacteria
Coal or other mining operations nearby	Metals, pH, corrosion
Gas drilling operations nearby	Chloride, sodium, barium, BTEX, bromide, arsenic, strontium
Dump, junkyard, landfill, factory, gas station or dry-cleaning operation nearby	Volatile organic compounds, total dissolved solids, pH, sulfate, chloride, metals
Odor of gasoline or fuel oil, and near gas station or buried fuel tanks	Volatile organic compounds
Objectionable taste or smell	Hydrogen sulfide, corrosion, metals
Stained plumbing fixtures, laundry	Iron, copper, manganese
Salty taste and seawater, or a heavily salted roadway nearby	Chloride, total dissolved solids, sodium
Scaly residues, soaps don't lather	Hardness
Rapid wear of water treatment equipment	pH, corrosion
Water softener needed to treat hardness	Manganese, iron
Water appears cloudy, frothy, or colored	Color, detergents

Table retrieved from: <https://www.epa.gov/privatewells/protect-your-homes-water>

What to Do If You Use the Public Water System

Even though U.S. public tap water supplies are among the safest in the world, water contamination can still occur. In PA, there are many possible sources of contamination, including sewage releases, naturally occurring chemicals and minerals (i.e., arsenic, radon, and uranium), local land use practices (i.e., fertilizers, pesticides, and livestock), manufacturing processes (i.e., heavy metals, cyanide), and malfunctioning on-site wastewater treatment systems (i.e., septic systems). In addition, drinking water that is not properly treated or that travels through a poorly managed distribution system (pipes) may also create conditions that increase risk of contamination. So, what can you do to ensure the safety of the water that you and the children you care for drink?

- Clean drinking water faucets and fountains as needed.
- Clean debris out of all outlet screens or aerators on a regular basis.
- Test your drinking water for lead or other contaminants. If elevated lead levels are found, regularly flush all water outlets used for drinking or food preparation and install point-of-use devices for additional treatment.
- Evaluate your home or facility for the presence of cross-connections and address any issues related to cross-connections.
- Request for a Consumer Confidence Report from your water supply company. This report outlines information on detected contaminants and their possible health effects.