

Fight Leaks and Water Waste in your Facility with WaterSense

Did You Know?

At around 6 percent of water use, leaks can be the greatest source of water waste within a facility. Leaks and continuously running water may not always be visible, but they can add up quickly and become a major cost in water and energy bills.

Most plumbing fixtures and water-using equipment have physical components including valves, flappers, and gaskets that can break down over time. Broken parts may not always stop the water from flowing, but they can reduce efficiency or cause leaks. Equipment malfunctions can cause water to run continuously instead of shutting off. Often these kinds of "leaks" go undetected for long periods because they are not causing any damage or disruption to daily operations.

Other types of leaks may seem insignificant, but can cause damage inside walls, under floors, and outdoors for a long time before they are discovered. All leaks add up fast, so water use needs to be periodically verified at the end use to make sure the fixture is still performing correctly. Get a handle on your facility's water use to identify and fix leaks before they become a big problem.

EPA WaterSense

Start by Gathering Information

1 Track your water and energy usage

Compile your water and energy bills from at least the last 12 months. Compare readings to previous ones to spot trends or inconsistencies. Use ENERGY STAR®'s Portfolio Manager® or another utility management system to track water and energy over time. [Note: Portfolio Manager now also provides users the ability to track waste and materials.]

2 Don't wait for the bill to see you have a problem

Read your water meter and submeters to identify problems and usage spikes. Read water meters during off-peak hours when water use is lower. If the meter continues to show high use, there may be a leak. Submeters and temporary flow meters can closely monitor specific areas or pieces of equipment to detect problems quickly.

NOTE: Submeters and temporary flow meters do NOT need to be on separate utility accounts; they can just be used internally to pinpoint issues.

3 Set up alerts

Install leak detection and failure abatement devices on all major water-using equipment such as cooling towers and boiler systems. Failure abatement devices sense if equipment is malfunctioning or potentially leaking by detecting abnormal increases in water flow. The devices can alert staff if an issue is detected or automatically turn off the water supply.

4 Add leak detection to daily facility rounds

Listen and look for unexpected water use indoors and outdoors, such as running water, unanticipated discharge to floor drains, or wet spots and puddling water on floors or on the grounds. Put up signs in restrooms, kitchens, and other high-traffic areas where water is used to instruct employees, tenants, and visitors to report leaks to maintenance staff for repair.

Dive into your water use by walking around your facility with the checklist on the next page to see if you can chase down any other water wasters.

Checklist for Spotting Water Waste

Here are some of the places leaks may be hiding in your facility. Some leaks require a simple fix like tightening a loose connection, but other equipment malfunctions may require a licensed plumber or facility maintenance professional. Take a quick inventory of potential water waste in your facility:

Throughout the facility:

- [ ] Check for pooling water, rust, or other signs of leakage under pipe connections and near floor drains. Look for signs of moisture or mold on your walls, ceilings, or floors.
- [ ] Routinely check equipment cooling water lines for leaks and corrosion.
- [ ] Inspect shutoff valves and sensors to ensure they stop continuously running water.
- [ ] Encourage employees to report leaks and broken/loose parts.

In the restroom:

- [ ] Automatic sensors: Check and adjust sensors regularly to avoid double flushing or continuously running water.
- [ ] Toilets and Urinals: Listen for running water and time the flush cycle. Regularly inspect and replace worn diaphragm or piston valves. Test tank-type toilets for worn flappers and other leaks with food coloring.
- [ ] Faucets: Check for drips and verify that faucet aerators are still properly installed.
- [ ] Showerheads: Look for drips or stray sprays, signs of scale buildup or other malfunctions restricting flow.

In the mechanical spaces:

- [ ] Equipment with single-pass cooling: Check system specifications to use the minimum water flow rate required for cooling. Regularly check solenoid valves to make sure water is only flowing when needed.
- [ ] Boiler and steam systems: Regularly check steam traps and steam and hot water lines for leaks.
- [ ] Cooling towers: Read the conductivity meter and the make-up and blowdown flow meters regularly and log readings. Check the make-up and blowdown valves to make sure they cut off the flow of water cleanly.

Outdoors:

- [ ] Visually inspect the landscape for water pooling or puddling to prevent damage to hardscapes and overwatering plants.
- [ ] Irrigation systems: Repair broken sprinkler heads and nozzles spraying in the wrong direction. Consult an irrigation auditor certified by a WaterSense labeled program to improve system efficiency.
- [ ] Pools and Spas: Check water levels. A loss of more than 2” per week in the water level may mean a leak.

In the kitchen:

- [ ] All equipment: Shut down or use standby mode for all continuous flow equipment between uses. Inspect shutoff valves to ensure they are working properly.
- [ ] Pre-rinse spray valves: Clean openings as needed for smooth spray. Train employees to use always-on clamps only when necessary.
- [ ] Dishwashers: Manual fill valves should close completely after the wash tank is full. Inspect and repair valves and rinse nozzles.
- [ ] Steam equipment: Inspect and replace gaskets and tighten hinges on doors to retain heat or steam.
- [ ] Food disposal systems: Turn off water to disposals during idle periods. Train users to manually scrape as much food waste as possible first.

Find more information about water-efficient best practices, tools, and case studies on the WaterSense website https://www.epa.gov/watersense/commercial-buildings.

Remember to look for the WaterSense label when purchasing plumbing products. WaterSense labeled products are independently certified to use at least 20 percent less water and perform as well or better than standard models.

Fixing leaks at your workplace is important, but so is fixing leaks in your household. For more information on fixing leaks wherever they are, visit https://www.epa.gov/watersense/fix-leak-week.



epa.gov/watersense