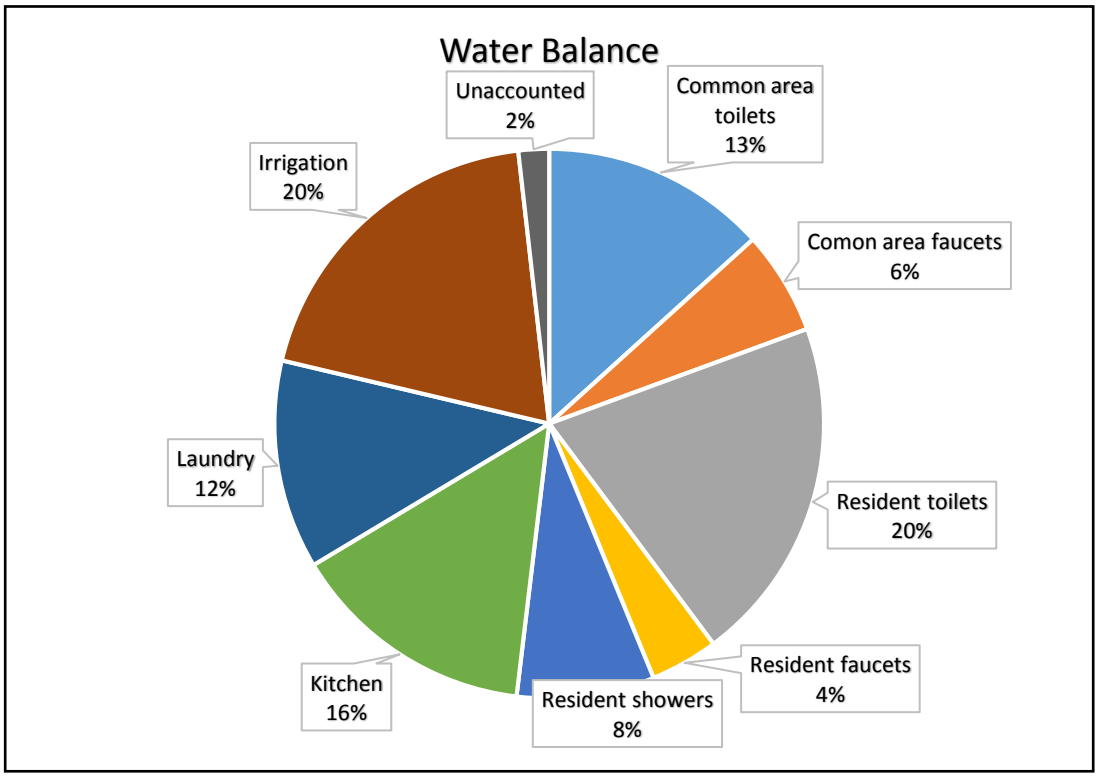
How to Conserve Water at Skilled Nursing & Senior Living Facilities

Sustainability Checklist

Nursing homes and assisted living facilities tend to have higher water demands than most other facilities because water is needed to provide residents with a variety of services, including cooking, laundry, showers, cleaning, and general patient care. Just one room at a senior facility could use over 200 gallons of water per day. Other estimates range from 40,000 gallons/bed and up used annually! This intensive water use can put a real strain on your operating costs and local water resources.

Fortunately, there are a variety of ways to save water and cut costs while still providing residents with the care and services needed. Significant savings can result from making changes to toilets, irrigation and in kitchens, which may account for 70% of water use at a facility. The pie chart below provides a sample breakdown of water usage at a senior living facility in CT.

Example of water usage at a senior living facility in CT



This checklist provides some actions that can be taken to reduce your facility's water usage and help with tracking progress.

Nursing homes, senior and assisted living facilities and medical facilities need to pay particular attention to reducing the risk of legionellosis in water systems. The Center for Disease Control has information and FAQs on the new ASHRAE Standard 188 aimed at preventing the growth and spread of *Legionella*.

Check any state and federal regulations that may apply to your facility before making changes, including but not limited to Connecticut State Public Health, Building and Fire Safety Codes.

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Take Action!	☑ Already Done	☑ In Progress	☑ Completed
Understand your water use. • Review water bills for the past year to get an idea of your usage and costs. Quarterly billing will be less informative than monthly. • Check your meter - if it's running continuously, there may be a leak. Smart meters provide volume of water used at the time-of-use, so you can better identify how much is used for dishwashing, outdoor watering, etc. Your water utility may be able to provide this device. • Do a **water audit** to find out how much water your facility is using and where it might be used in excess – you may be able to cut your water use by 30%. Sample self-audit forms can be found on-line at a number of sites, such as Aquarion and Environmental Defense Fund along with free tools to evaluate water usage.	☐	☐	☐
Do some research. A helpful resource is *WaterSense at Work: Best Management Practices for Commercial & Institutional Facilities*, a free guidebook that has general instructions for water efficiency at all sorts of commercial and medical facilities that are similar to skilled nursing and senior living facilities. This publication can provide a good understanding of the fixtures and equipment you have on-site, replacement/retrofit options, and ways to calculate usage, savings and pay-back.	☐	☐	☐
Fix Leaks ASAP! A leaky faucet that drips at the rate of one drip per second can waste 3,000 gallons/yr. That's enough water for 180 showers! Also check for leaky showers and running toilets. Set up a schedule to check each fixture annually (or more frequently if necessary or required). **Leaks** in the irrigations system, cooling tower and boiler can easily go unnoticed.	☐	☐	☐
Lawns and gardens can use up a surprising amount of water. Watering earlier in the day and applying mulch each spring can minimize the amount of water lost to evaporation. CT DEEP's website has tips for sustainable lawn care practices. Consider growing drought-tolerant plants to minimize the amount of water that needs to be drawn for landscaping purposes.	☐	☐	☐
If you're using an **automatic watering system for lawns** and gardens be sure it has a moisture sensor so lawns are getting watered only when needed. Check the irrigation system on a regular basis for leaks.	☐	☐	☐

Consider using foaming soaps in restrooms, they are dispensed as a lather which reduces the amount of water needed for hand washing. A study by GOJO Industries found foam soap reduced water usage by 9.7% compared with liquid soap.	☐	☐	☐
Use microfiber cloths and mops for cleaning; they are more effective and reduce the amount of water and chemicals needed.	☐	☐	☐
Change older, standard toilets to low flow ones in patient rooms and public restrooms and save 3.5 gallons with each flush. Older toilets can use as much as 5 gallons per flush (gpf). Newer ones are mandated to use a maximum of 1.6 gallons. Low-flow or dual flush toilets use no more than 1.28 gpf. Switching to WaterSense labeled flushometer valve toilets can have significant savings. If you've got urinals at your facility, they can also be upgraded and result in significant water savings. Some older urinals use as much as 5 gpf; WaterSense labeled ones use 0.5 gpf.	☐	☐	☐
Switch to low-flow shower heads and faucets. These shower heads use no more than 2 gallons of water per minute while standard ones use 2.5 gpm; Low flow faucets use no more than 1.5 gpm. You'll need to include regular preventive maintenance to periodically clean aerators to reduce biofilm accumulating and the risk of legionellosis. Using laminar flow devices instead of aerators might lower the risk of bacteria since these devices do not draw air from the room into the water stream and come in a variety of gpm flows.	☐	☐	☐
Ice making uses large amounts of water, depending upon the type of machine and ice being made. If you need to replace an ice machine choose an EnergyStar certified product, they are more water and energy efficient than standard models. Ice machines use either water or air to remove waste heat; air cooled ones use less water. Also, cubed ice uses more water than flaked or nugget ice. Clean and maintain in accordance with manufacturers recommendations, including keeping the coils dust-free so it runs efficiently.	☐	☐	☐
To **save water during dishwashing**, scrape food from plates, pots and pans and pre-soak if possible before spraying and putting in the dishwasher. Periodically check sprayer for leaks. A WaterSense labeled pre-rinse spray valve uses 20% less water than standard ones and could save 7,000 gallons of water a year, as well as reducing energy costs from hot water usage.	☐	☐	☐

Choose an EnergyStar certified dishwasher when replacing one since they can be 40% more energy and water efficient. Learn more about high efficiency equipment.			
Save in the Laundry Room by replacing conventional washers with water-efficiency technologies. Low-temperature ozone systems save water and reduce detergents and hot water needed as stated in a 2014 U.S. Dept. of Energy study. An ozone machine manufacturer has case studies from nursing facilities. According to the Centers for Medicare and Medicaid Services with the CDC, ozone cleaning systems are acceptable methods for laundry at nursing facilities.	☐	☐	☐

Next Steps

- Contact your water utility to see if they do on-site audits or ask to have water included in an Energize CT energy audit along with available incentives and rebates. If you are already using ENERGY STAR Portfolio Manager to track energy usage, keep in mind that it also has tools to help you track water usage.

- Use the WaterSense product search or the Alliance for Water Efficiency to find replacement products, and case studies for what's worked in other facilities.

- Develop a water conservation policy that clearly states your goal of conserving water use. Work with key staff to gather suggestions regarding what to include in the policy, how it will be implemented and financed if necessary and who will oversee/enforce it. Distribute to all staff so they can participate.

Resources

- The Alliance for Water Efficiency has many resources, including:
  - *Tips for Commercial & Industrial water conservation* - http://www.allianceforwaterefficiency.org/CII-tips.aspx
  - Research and documents for medical and health care systems, including data from 15 skilled nursing homes in CA that were retrofitted and replaced plumbing fixtures - http://www.allianceforwaterefficiency.org/Medical_and_Health_Care_Systems_Introduction.aspx

- Use EPA WaterSense® to better understand water usage at a facility type similar to nursing homes such as hospitals, or for other information on commercial and industrial water use.

- A study done in Colorado on water use includes data from skilled nursing facilities (see pg 18).

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Want to track your water and cost savings?

CT DEEP can help you with that! Print the form below, fill it out and fax (860-424-4059) or email it to connie.mendolia@ct.gov. We'll help monitor the progress your facility has been making toward reducing water usage.

Name of facility: _____

Town facility is located in: _____

Number of beds: _____

From recent water bill:

Gallons used: _____

Date (month/year): _____

Toilets/Urinals:

# Standard toilets (>1.6 gpf):	# high efficiency (less than 1.6gpf)
# standard Urinals	# high efficiency urinals (.05 – 1.0 gpf)

Faucets/Shower heads:

# Standard faucets (>1.5 gpm):	# high efficiency faucets (less than 1.5gmp)
# standard shower heads (>2 gpm):	# high efficiency shower heads (less than 2 gpm)

Kitchen & Laundry:

EnergyStar dishwasher: Yes _____ No _____ Don't know _____

Ozone washing machine: Yes _____ No _____ Don't know _____

Lawns /gardens:

Automatic water system has moisture sensor: Yes _____ No _____ Don't know _____

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