Water Management – Interior

All ECM content was independently developed and reviewed to be vendor, product and service provider neutral.

Description

Best practices for managing water consumption inside the facility. A proper management system provides a method to utilize water efficiently and minimize waste. Water is utilized in many different ways in a health care environment; it is critical to understand the sources and track consumption.

Project Talking Points

- Water is everywhere around us, but only 0.5% of the Earth's water is readily available fresh water.

- Water is used everywhere inside the facility, including for cleaning, drinking, cooking and HVAC. This creates several areas for optimization, which creates the need for a proper water management plan.

- Water is a natural resource. With growing demand and reducing supply, efficient use will become important and challenging in the future.

- Water costs typically involve sewer costs to drain the water. Some utilities allow for deduct meters, which do not reduce water consumption but can save budget on sewer costs.

- The EPA created WaterSense to label products that utilize water efficiently.

- Based on 2012 CBECs data, inpatient health care is the most intensive water user among large commercial buildings. As a big user, health care facilities have the opportunity for large impacts in water reductions.

- Setting baselines, goals and strategies to reduce water consumption gives an organization the structure for success.

Benefits

- **Cost benefits:** A reduction of water can be directly reflected on the water bill. Saving water reduces both water and sewer costs on the bill, and sewer costs are often higher than water costs. Additionally, sewer deduct meters can help save sewer costs when water is used but not drained out of the facility.

- **Environmental benefits:** As we reduce the amount of fresh water available, it becomes more vital to efficiently utilize water. This will help ensure future generations have access to clean water.

- **Social benefits:** Developing a water management program within your facility shows staff, patients and the public that you are committed to reducing your impact on the community's environment by operating more efficiently. Implementing a program like this improves your public image as a health care organization and, more importantly, improves public health by saving water. As a community leader, health care organizations implementing these program can inspire others to do their part at home.

Purchasing Considerations

- Use cost-effective tools like Microsoft Excel or ENERGY STAR Portfolio Manager to track water consumption.

- Identify WaterSense labeled products ensure an organization is purchasing water-efficient products.

- Install submeters in areas to isolate water use of major equipment to better understand where water is being consumed.

How-To

1. Determine which department or team is going to handle overall water management. Appropriate departments include environmental services, purchasing or facility management.

2. Gain leadership commitment to a water management program that can collaborate with your designated team.

3. Inventory all sources of water consumption in your facility and approximate share of water bill for major sources.

   - Drinking water
   - Kitchen
   - Restrooms
   - Showers
   - Laundry rooms (if applicable)
   - Cooling systems
   - Others

4. Track water consumption as granularly as the information allows. Utility bills are a great place to start to track water coming in to each meter. Submeters can allow breakouts of larger consumption sources such as kitchens, cooling systems or other areas.

5. Identify opportunities to reduce interior water use:

   - In kitchens, avoid letting the water run during the entire dishwashing process or when thawing food. Run the dishwasher when fully loaded. Scrape plates clean rather than rinsing them before putting them in the dishwasher.

   - In restrooms, utilize WaterSense fixtures with low-flow flush valves. Waterless urinals are available but do require additional maintenance. Motion sensors can also control how long sinks run and prevent them from being left on.

   - In showers, utilize WaterSense low-flow shower heads.

   - In laundry rooms, try to wash full loads to reduce the number of cycles required.

   - In cooling systems, remove any one-pass cooling system. If allowed by your service area, add a deduct meter for cooling tower makeup water to reduce sewer costs.

   - In all areas, simple signage can remind staff and visitors to use water efficiently.

6. Monitor water consumption numbers to track savings from initiatives and to identify increases that need investigated.

7. Create a plan for identifying potential leaks in the water system. This can be through increases in the utility consumption or during site walkthroughs. Even small leaks add up to significant water waste over time.

8. Develop goals for the water management program that are specific, measurable, achievable, realistic and timely.

9. Track your progress against a baseline to report on water and cost reductions.

10. Celebrate the success of your water management program and share results with staff and your community.

Energy Conservation Measures Synergies

- Greenhouse Gas Emissions – Scope 3
- Selecting the "Right" Sustainability KPIs
- Water Management – Exterior

Resources

- [EPA WaterSense main page](#) with access to WaterSense labeled products.
- [ENERGY STAR water consumption trends](#).
- [Energy STAR Water Metric FAQs](#) for helping benchmark water in Portfolio Manager.
- [Examples of signage](#) that can be posted to help remind staff and visitors to avoid water waste
- [EIA consumption reports.](#)
- [*National Geographic*](#) article about potential concerns of limited water supply in the future.
- [ASHRAE guidance to help minimize the risk of legionellosis](#).