

Water Site Assessment Guidelines

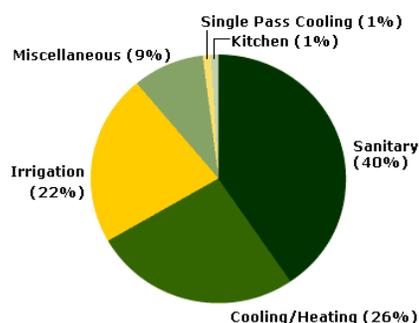
General Water Assessment Procedure:

1. Does the organization have a water management plan and a staff awareness campaign?
 - If yes, how often are the plan and campaign reviewed and renewed?
2. Record water usage from bills (delivered and wastewater).
3. Check the billing rate (\$/unit of water).
4. Locate the water meter and record the meter reading, verifying that the meter reading matches the billing amount.
5. Compile a list of buildings, floor plans, plumbing drawings (where available), operational schedules of employees and number of employees (to predict consumption), an inventory of all water-using equipment, outdoor water usage, and watering schedule.
6. Check all toilets, faucets, showerheads, and urinals for condition and leaks.
 - Toilets should not continue running after the tank has filled.
 - Urinals should shut off after a complete flush cycle.
 - Showerheads and faucets should not drip or leak.
 - Are any low-flow or aerating faucets and showerheads installed?
 - Are there waterless urinals?
 - Are water displacement devices installed in toilet cisterns?
7. Check water-using equipment within processing, cooling towers, boilers, kitchen equipment, etc.
 - Note the manufacturer's flow rate information, along with hours of operation for each piece of equipment to estimate consumption rates.
8. Measure flow rate by using a container (e.g., a gallon bucket) and a stopwatch to determine gallons per minute, or attach a strap-on flowmeter to measure flow rate where equipment information is not available.
9. Determine how much water is used annually per employee or per total floor area of a building in order to create a benchmark across facilities.
 - This will allow a benchmarking exercise to determine whether certain buildings have a higher rate of consumption than other buildings and will assist with prioritizing areas for conservation measures.

Commonly Used Water Units
1 cubic foot (ccf) = 7.48 gallons
1 acre foot = 325,851 gallons
1 million gallons per day = 3.07 acre feet per day

Retrofit and Redesign Issues:

1. A redesign should be considered when:
 - The space is undergoing a major renovation.
 - Existing water-using equipment requires replacement.



Source: EPA

Figure 1. Typical office water use¹

2. Look for opportunities to incorporate low-water design in landscaping, renovation, and new-building projects (including grayscale systems and water-wise planting).
3. Consider porous pavement when resurfacing parking lots and landscaping as this helps prevent flashpoint flooding and allows more dispersed infiltration into groundwater.
4. Consider using rainwater harvesting to water landscaping, but check with state and local regulations to determine whether this is allowed.

5. For retrofit or redesign projects the new design should meet lower levels of water consumption, below traditional usage, while maintaining acceptable performance levels.
 - Reduce losses by fixing leaky faucets and pipes.
 - Reduce use through installation of low-flush toilets, auto faucets, etc.
 - Reuse water that is being discarded to irrigate landscaping.
6. Look for the EPA’s WaterSense Label on equipment. The WaterSense program was designed by the EPA, water utilities, manufacturers, and retailers to set water conservation criteria for equipment and water products. Look for the label and find out more information about product specification at www.epa.gov/watersense or www.epa.gov/watersense/products



Source: EPA

¹“Laboratory Water Use vs. Office Water Use.” *U.S. Environmental Protection Agency*, www.epa.gov/oaintrnt/water/lab_vs_office.htm. Accessed December 13, 2010.