LEED O+M: Schools | v4

Indoor water use reduction

Required

Glossary

Intent

To reduce indoor water consumption.

Requirements

Option 1. Calculated Water Use

Establishment

For the indoor plumbing fixtures and fittings listed in Table 1, reduce water consumption to or below the LEED v4 for Existing Buildings: Operations & Maintenance baseline, calculated assuming 100% of the building's indoor plumbing fixtures and fittings meet the flush and flow rates listed in Table 1.

The LEED v4 for Existing Buildings: Operations & Maintenance water use baseline is set depending on the year of building's occupancy, as follows:

- For a building with a certificate of occupancy dated 1995 or later, the baseline is 120% of the water use that would result if all fixtures met the code requirements in Table 1.
- For a building with a certificate of occupancy dated before 1995, the baseline is 150% of the water use that would result if all fixtures met the code requirements in Table 1.

Table 1. Fixture and fitting code requirements

Commercial Fixtures, Fittings, and Appliances	Current Baseline (IP Units)	Current Baseline (SI units)
Water closets (toilets)*	1.6 gallons per flush (gpf)	6 liters per flush (lpf)
Urinal*	1.0 (gpf)	3.8 lpf
Public lavatory (restroom) faucet	0.5 gpm at 60 psi** all others except private applications	1.9 lpm at 415 kPa, all others except private applications
Private lavatory faucet*	2.2 gpm at 60 psi	8.3 lpm at 415 kPa
Kitchen faucet (excluding faucets used exclusively for filling operations)	2.2 gpm at 60 psi	8.3 lpm at 415 kPa
Showerhead*	2.5 gpm at 80 psi per shower stall	9.5 lpm at 550 kPa per shower stall

* WaterSense label available for this product type
gpf = gallons per flush
gpm = gallons per minute
psi = pounds per square inch
lpf = liters per flush
lpm = liters per minute
kPa = kilopascals

If indoor plumbing systems were renovated after initial occupancy of the building, set a whole-building average baseline by prorating the above limits, based on the proportion of plumbing fixtures installed during the plumbing renovations in each period. Pre-1995 buildings that have had only minor fixture retrofits (e.g., aerators, showerheads, flushing valves) but no plumbing renovations in or after 1995 may use the 150% baseline for the whole building.

Calculate fixture and fitting performance to compare the water use of the as-installed fixtures and fittings with the use of Uniform Plumbing Code or International Plumbing Code-compliant (baseline) fixtures and fittings.

Inspect all existing fittings or fixtures to ensure they are operating properly. Make any repairs needed to bring all fixtures into good working order or permanently turn off water supply to nonfunctional units.

Implement a fixture and fitting replacement and retrofit policy specifying that all newly installed toilets, urinals, private lavatory faucets, and showerheads that are eligible for labeling be WaterSense labeled (or a local equivalent for projects outside the U.S.).

Have in place a process and appliance water equipment purchasing policy for the building and site addressing the products listed in Table 2. The policy must cover at least those products purchased within the building and site management's control.

Table 2. Standards for appliances

Appliance	Requirement
Residential clothes washers	ENERGY STAR or performance equivalent
Commercial clothes washers	CEE Tier 3A
Residential dishwashers (standard and compact)	ENERGY STAR or performance equivalent
Prerinse spray valves	≤ 1.3 gpm (4.9 lpm)
Ice machine	ENERGY STAR or performance equivalent and use either air-cooled or closed-loop cooling, such as chilled or condenser water system

gpm = gallons per minute

lpm = liters per minute

Performance

For building water use, confirm that calculations are up to date. Demonstrate that all applicable purchases made during the performance period meet the requirements of the fixture and fitting replacement and retrofit policy.

For appliances, demonstrate that appliances purchased and installed within the building meet the requirements listed in Table 2. Appliances not listed are not subject to any additional requirements.

Option 2. Metered water use

Establishment

Meter fixtures and fittings and record metered data for one year to establish a water-use baseline.

Performance

For projects with at least 80% of fixtures and fittings metered, show that the water-use baseline has been maintained.