



TRIDENT SUSTAINABILITY GROUP

LEED Water Efficiency – A 30% Reduction Story

Earning water use reduction credits in LEED v2.2 used to be the easiest 2 points you could pick up (even easier than bike racks!). With the rollout of LEED v2009, two things happened. First, there is a prerequisite requiring a minimum water use reduction of 20% - which under the old system was a breeze. The second change was an updated methodology for water use on the commercial side – basically, reducing the baseline faucet water use from 2.5 GPM to the more realistic 0.5 GPM – a huge reduction! This change alone has made it significantly more challenging to earn points under LEED v2009, which now offers points for a 30%, 35%, and 40% reduction in water use (2-4 points total). Fortunately, Trident Sustainability Group has earned these credits on every single project we've worked on. Here, in a nutshell, is how to hit the 30% threshold (and up to 40%!) in a typical commercial building.

The Baseline Building

The baseline building looks at three primary fixtures: toilets/urinals, lavatory faucets, and showerheads. The flowrates are as follows:

- Toilets – 1.6 GPF
- Urinals – 1.0 GPF
- Faucets – 0.5 GPM
- Showerheads – 2.5 GPM

The Proposed Building

This proposed building shows a few (and certainly not all) strategies to help you reduce water consumption by over 30%.

- Toilets: 1.28 GPF
- Urinals – 0.125 GPF
- Faucets – 0.5 GPM
- Showerheads – 1.75 GPM

Based on occupancy of 100 people (assuming all bathrooms have urinals), this combination results in a reduction of 32% - meeting the prerequisite and earning 2 points. Note: If your building does not have urinals, using dual flush toilets with 0.8/1.6 gpf flush rates still earns a 30% reduction (barely!). IF YOU JUST INSTALL 1.28 GPF TOILETS AND DO NOT HAVE URINALS, YOU WILL NOT ACHIEVE A 30% REDUCTION. You will meet the prerequisite, but not earn any points, and you will have to pursue some of the strategies listed below.

The 40% Reduction

Much tougher to achieve, the 40% reduction can be achieved by incorporating a mix of a few different strategies – some of which are not possible for every project type.

- Toilets – 1.0 GPF (available for tank-type toilets only. Multiple pressure assist toilets are available that use 1.0 GPF)
- Urinals – waterless
- Faucets – 0.5 GPM metering faucets. The LEED metering faucet range is 30 seconds per cycle. Purchasing a metering faucet with a 10 second cycle contributes greatly to cutting water use
- Showerheads – 1.5 GPM