

WE- PR- DESIGN

INTENT

To conserve low cost potable water resources and support water management and identify opportunities for additional water savings by tracking water consumption.

POTENTIAL TECHNOLOGIES & STRATEGIES

One system often subject to gaps between projected and actual performance is water use. As a first step in improving efficiency, the project team must install water metering to track water consumption by both the project building and any associated grounds.

BUILDING-LEVEL WATER METERING

REQUIREMENTS

Install permanent water meters that measure the total potable water use for the building and associated grounds. Meter data must be compiled into monthly and annual summaries; meter readings can be manual or automated. Commit to sharing with USGBC the resulting whole-project water usage data for a five-year period beginning on the date the project accepts LEED certification or typical occupancy, whichever comes first. This commitment must carry forward for five years or until the building changes ownership or lessees.

IMPLEMENTATION

REQUIRED DOCUMENTATION

Documentation	All projects
Meter decision	X
Sharing commitment	X

BEHIND THE INTENT

Disparities often exist between how buildings are designed to operate and how they actually perform. Numerous factors may be responsible: flaws in energy modeling, inadequate commissioning, inaccurate assumptions about occupants' behavior, lack of coordination during the transition from construction to operations, or the everyday operation of the building systems. By collecting and analyzing performance data, USGBC aims to compare building performance across the LEED portfolio to identify common traits among high and low performers, and share these findings to help project teams improve building performance.

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STEP-BY-STEP GUIDANCE

STEP 1: IDENTIFY ALL POTABLE WATER END USES

Identify all end uses of potable water in the project building and on the grounds. These could include water consumption for plumbing fixtures, cooling towers and mechanical equipment, landscape watering, irrigation, and outdoor water features, engine, vehicle cleaning, and manufacturing processes.

Examples of potable water sources that must be metered include the following:

- Public water supply
- On-site well
- On-site landscape water treatment system

STEP 2: DETERMINE SCOPE OF PUBLIC WATER SUPPLY METERING, IF APPLICABLE

If all water comes from public water supply and the project water meter provides accurate consumption data that supports meter needs, the prerequisite requirements are met. However, the project team may have little influence on the location and function of the meter on the building water supply system. The following are the locations where the meter will be located (e.g., inside the building, under or above ground outside):

- Automatically, how the building manager will install the meter
- Reporting how the meter will be installed, manually or via remote transmission

If the public water supplier restricts access to the meter or uses proprietary remote reporting technology, the project team may need the prerequisite requirement by tracking water usage through monthly billing. To collect more frequent or accurate data, the team may elect to install a private meter downstream of the public water supply meter.

STEP 3: DETERMINE NUMBER, LOCATION, AND TYPE OF ALL METERS

If the project is not served by a public water supply, or if the project uses multiple sources of potable water, use or more meters may be required. A single meter installed downstream of multiple potable water supply sources may not yield a full picture of all project water use.

- In some cases, projects may need to use multiple meters to gain additional information on water use, meter location with easy access for reading and maintenance.

There are no requirements for the type of meter except that they be permanent.

Additional meters may be installed to satisfy the requirements for All Potable Water Metering Use.

Readings and All Potable Water Metering Use must be tracked separately.

Prepare a narrative describing the location of the building level water meter(s) serving the project and site, as applicable. If separate water is included in the reported water volume, note this in the narrative and describe how volumes can be managed and tracked separately.

STEP 4: TRACK WATER CONSUMPTION

Begin tracking water use when the project achieves LEED certification or at occupancy, whichever occurs first. To place water use data in the context of building operations, consider tracking building occupancy changes and maintenance activities concurrently. The additional information may help explain fluctuations in usage patterns.

STEP 5: SHARE WATER CONSUMPTION DATA WITH USGBC

Commit to sharing with USGBC the whole-project water usage data acquired from permanent meters installed in accordance with the prerequisite requirements. The project owner must commit to sharing water use data with USGBC for five years in one of two ways:

- USGBC-approved data template
- Third-party data source

To see the most recent list of data-sharing pathways, visit USGBC's credit library, at [usgbc.org/credits](#).

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REQUIRED DOCUMENTATION

Documentation	All projects
Meter declaration	X
Sharing commitment	X



REFERENCED STANDARDS

☒ NONE



CONNECTION TO ONGOING PERFORMANCE



LEED O+M WE credit Water Performance : Installing whole building water meters is a simple yet critical strategy for understanding total water use throughout the building life cycle. Tracking water consumption on a regular basis supports effective water management and provides performance data to help verify that building systems are operating as designed. Projects can submit data via the Arc platform to comply with the prerequisite requirement to share whole-project water usage data with USGBC and get started on the path to recertification.



TERMS AND DEFINITIONS



▣ Potable water water that meets or exceeds U.S. Environmental Protection Agency drinking water quality standards (or a local equivalent outside the U.S.) and is approved for human consumption by the state or local authorities having jurisdiction; it may be supplied from wells or municipal water systems

▣ Private meter a device that measures water flow and is installed downstream from the public water supply meter or as part of an on-site water system maintained by the building management team

▣ Public water supply (PWS) a system for the provision to the public of water for human consumption through pipes or other constructed conveyances. To be considered public, such system must have at least 15 service connections or regularly serve at least 25 individuals. (Adapted from U.S. Environmental Protection Agency)



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