Wastewater management

WE4 | Possible point

Glossary

Intent

To reduce wastewater generation and potable water demand while increasing the local aquifer recharge.

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Reduce the generation of wastewater and potable water demand, while increasing the local aquifer recharge.

To reduce potable water consumption for cooling tower equipment through effective water management and/or use of nonpotable makeup water.

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To reduce potable water consumption for cooling tower equipment through effective water management and/or use of nonpotable makeup water.

To reduce pollution from wastewater and encourage water reuse.

To reduce wastewater generation and potable water demand while increasing the local aquifer recharge.

Requirements

Option 1

Reduce potable water use for building sewage conveyance by 50% through the use of water-conserving fixtures (e.g., water closets, urinals) or nonpotable water (e.g., captured rainwater, recycled graywater, on-site or municipally treated wastewater).

OR

OPTION 2

Treat 50% of wastewater on-site to tertiary standards. Treated water must be infiltrated or used on-site.

FOR PROJECTS THAT ARE PART OF A MULTITENANT COMPLEX
A multitenant complex is a site that was master-planned for the development of stores, restaurants, and other businesses; retailers may share one or more services and/or common areas.

In multitenant complex, a weighted average of the site buildings, based on square footage, can be used to meet the requirements of the credit. This method ensures that each building generally meets the performance requirements.

Economies of scale may also allow more effective use of rainwater harvesting or innovative and economical waste treatment technologies on the site. Options include packaged biological nutrient removal systems, constructed wetlands, and high-efficiency filtration systems.

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- **WE Credit 4.1** (1 point): Chemical Management
  Develop and implement a water management plan for the cooling tower that addresses chemical treatment, bleed-off, biological control and staff training as it relates to cooling tower maintenance.

  Improve water efficiency by installing and/or maintaining a conductivity meter and automatic controls to adjust the bleed rate and maintain proper concentration at all times.

- **WE Credit 4.2** (1 point): Nonpotable Water Source Use
  Use makeup water that consists of at least 50% nonpotable water, such as harvested rainwater, harvested stormwater, air-conditioner condensate, swimming pool filter backwash water, cooling tower blowdown, pass-through (once-through) cooling water, recycled treated wastewater for toilet and urinal flushing, foundation drain water, municipally reclaimed water or any other appropriate on-site water source that is not naturally occurring groundwater or surface water.

  Have a measurement program in place that verifies makeup water quantities used from nonpotable sources. Meters must be calibrated within the manufacturer's recommended interval if the building owner, management organization or tenant owns the meter. Meters owned by third parties (e.g., utilities or governments) are exempt.

Potable water is defined as water that is suitable for drinking and is supplied from wells or municipal water systems.

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OR

Option 2

Treat 50% of wastewater on-site to tertiary standards. Treated water must be infiltrated or used on-site.

Reduce the use of municipally provided potable water for building sewage conveyance by a minimum of 50%, OR treat 100% of wastewater on site to tertiary standards.

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Design and construct the project to retain on-site at least 25% of the average annual wastewater generated by the project (excluding any existing buildings), and reuse that wastewater to replace potable water. Provide on-site treatment to a quality required by state and local regulations for the proposed reuse, whichever is more stringent. Calculate the percentage of wastewater diverted and reused by determining the total wastewater flow, using the design case from GIB Prerequisite Indoor Water Use Reduction and adding wastewater flow from residential buildings, then determining how much of that volume is reused on site.

Table 1. Points for reusing wastewater

Percentage of wastewater reused	Points
25%	1
50%	2

OPTION 1 (1 point):

Treat 100% of wastewater on-site to tertiary standards. Treated water must be used on-site

AND/OR

OPTION 2 (1 point):

Use treated wastewater or captured rain water, to reduce potable water consumption for air- conditioning make-up by 50% (if the project uses water-cooled chillers); **(AND)** Reduce potable water use for building sewage conveyance by 50% through the use of non-potable water (e.g., treated wastewater, municipally treated wastewater, captured rainwater).