

LEED v4 Building Design and Construction

Quiz #5

WE

1. What resource is used to calculate a project's landscape water requirement (LWR) for WE Prerequisite Outdoor Water Use Reduction?
 - A. ENERGY STAR
 - B. California 2011 Water Efficiency for Commercial Projects
 - C. EPA WaterSense Water Budget Data Finder
 - D. CEE Tier 3A
 - E. NPDES
2. For WE Prerequisite Outdoor Water Use Reduction what information is needed to calculate a project's baseline landscape water requirement (LWR) to determine the site's potential irrigation needs? [Choose three]
 - A. Average monthly precipitation data
 - B. Zip Code where the project is located
 - C. Average monthly evapotranspiration rates (ET_o)
 - D. Landscaped area (sq ft) of each plant type or feature
 - E. Average Relative Humidity (RH)
 - F. Average monthly temperatures
3. For outdoor water use what is the best strategy for selecting plant types and coverage to balance water use efficiency with the area's intended function?
 - A. Using turf for groundcover
 - B. Using Native and adaptive plants
 - C. Using more trees than shrubs
 - D. Planting a food garden
 - E. Open-grid pavers for walkways and parking lots
4. The landscape water allowance for a project was calculated to be 43,980 gallons per month. What is the maximum total water the project could use for landscape irrigation and achieve the requirement for WE Prerequisite Outdoor Water use Reduction?
 - A. 35,184 gallons per month
 - B. 30,786 gallons per month
 - C. 21,990 gallons per month
 - D. 15,939 gallons per month
5. For WE Prerequisite Indoor Water use Reduction what is the baseline water consumption for water closets and urinals?
 - A. 1.28 gpf and 0.5 gpf
 - B. 0.8 gpf and 0.5 gpf
 - C. 1.6 gpf and 1.0 gpf
 - D. 1.6 gpf and 0.8 gpf
6. For WE Prerequisite Indoor Water use Reduction what is the baseline water consumption for public lavatory (restroom) faucets?
 - A. 1.0 gpm
 - B. 2.2 gpm
 - C. 0.5 gpm
 - D. 2.5 gpm

7. For WE Prerequisite Indoor Water use Reduction residential clothes washers and dishwashers must meet what standard?
 - A. WaterSense
 - B. CEE Tier 3A
 - C. ENERGY STAR
 - D. ASHRAE

8. For WE Prerequisite Indoor Water use Reduction LEED BD+C: Schools what kitchen equipment must comply with the standards? [Choose three]
 - A. Dishwasher
 - B. Food Steamer
 - C. Combination Oven
 - D. Food waste disposer

9. Which of these fixture types are not labeled by WaterSense? [Choose two]
 - A. Private lavatory faucet
 - B. Waterless urinal
 - C. Public lavatory faucet
 - D. Showerhead
 - E. Tank-type toilet

10. For WE Prerequisite Indoor Water Use Reduction Compliance Path 1 Prescriptive achievement what is the maximum installed flush rate for toilets and urinals?
 - A. 1.6 gpf and 1.0 gpf
 - B. 1.28 gpf and 0.5 gpf
 - C. 1.6 gpf and 0.8 gpf
 - D. 1.5 gpf and 0.4 gpf

11. A project following WE Prerequisite Indoor Water Use Reduction Compliance Path 2 Usage-Based Calculation what information is required for the indoor water use calculator? [Choose four]
 - A. Fixture types in the project
 - B. Project occupancy
 - C. Gender Ratio
 - D. Project location
 - E. Days of operation

12. A project has an annual baseline indoor volume potable water consumption of 213,525 gallons and an annual design case water consumption of 152,753 gallons. The project has designed a rainwater capture system to use to supplement the water used for toilet and urinal flushing that will reduce the annual design case water consumption an additional 38,690 gallons. What is the percentage indoor water-use reduction achieved for WE Prerequisite Indoor Water Use Reduction?
 - A. 47%
 - B. 20%
 - C. 28%
 - D. 72%

13. How must lavatory faucets be classified? [Choose two]
 - A. ENERGY STAR
 - B. WaterSense
 - C. Low Flow
 - D. Public
 - E. Private

14. What is the federal standard flow rate for a public lavatory faucet at 60 pounds per square inch?
- A. 1.28 gpm
 - B. 1.0 gpm
 - C. 2.2 gpm
 - D. 0.5 gpm
15. What is the federal standard flow rate for a private lavatory faucet at 60 pounds per square inch?
- A. 1.28 gpm
 - B. 1.0 gpm
 - C. 2.2 gpm
 - D. 0.5 gpm
16. A LEED BD+C: Core and Shell project has not installed any eligible plumbing fixtures, appliances, or process water equipment. Which of these applies to the project for WE Prerequisite Indoor Water Use Reduction?
- A. Project team must estimate the design case indoor water use
 - B. Project is ineligible for LEED certification
 - C. Project must submit an alternative compliance narrative
 - D. Project automatically achieves the prerequisite
17. To comply with WE Prerequisite Building-Level Water Metering how often must the total potable water use of the building be measured and complied?
- A. Daily
 - B. Monthly
 - C. Annually
 - D. Monthly and Annual Summaries
 - E. Every Five Years
18. A LEED BD+C: Retail project is designing the landscape irrigation to achieve WE Credit Outdoor Water Use Reduction. After meeting WE Prerequisite Outdoor Water Use Reduction what additional strategies could help them to achieve the credit? [Choose two]
- A. Alternative water sources
 - B. Smart scheduling technologies
 - C. Native and Adaptive vegetation
 - D. Minimize turf areas
19. A project has installed irrigation controls whose smart-sensor technology meets the credit criteria. What additional percentage reduction can the project team take from the baseline for WE Credit Outdoor Water Use Reduction?
- A. 15% of baseline LWR
 - B. 15% of design LWR
 - C. 5% of baseline LWR
 - D. 5% of design LWR
20. Which of these alternative water sources may contain salinity levels precluding use for irrigation? [Choose two]
- A. Steam system condensate
 - B. Fire pump test water
 - C. Ice machine condensate
 - D. Cooling tower condensate
 - E. Blowdown

21. The landscape water allowance for a project was calculated to be 43,980 gallons per month. The total LWR for the site's design is 15,939 gallons. How many points does the project earn for WE Credit Outdoor Water use Reduction?
- A. 0
 - B. 1 point
 - C. 2 points
 - D. 2 points - 1 for the credit and 1 exemplary performance point
22. A LEED BD+C: Data Centers project has further reduced fixture and fitting water use by 48% from the calculated baseline in WE Prerequisite Indoor Water Use Reduction. 12% of the water savings was accomplished using automatic sensors on lavatory faucets and 36% from a graywater system for toilet and urinal flushing. How many points does the project earn for WE Credit Indoor Water Use Reduction?
- A. 1 point
 - B. 2 points
 - C. 3 points
 - D. 4 points
 - E. 5 points
 - F. 6 points
 - G. 7 – 6 points for the credit and 1 exemplary performance point
23. How can a LEED BD+C: Core and Shell project earn WE Credit Indoor Water Use Reduction for the efficiency of not-yet-installed future plumbing fixtures?
- A. Legally binding tenant sales or lease agreement signed by the owner
 - B. Legally binding tenant sales or lease agreement signed by the owner and tenant
 - C. Legally binding tenant sales or lease agreement signed by the owner and tenant, stating maximum flush and flow rates and WaterSense label as required by the credit
 - D. Legally binding tenant sales or lease agreement signed by the owner and tenant, stating maximum flush and flow rates and WaterSense label as required by the credit and a fully executed lease agreement
24. What percentage reduction must LEED BD+C projects achieve in order to earn exemplary performance for WE Credit Indoor Water Use Reduction?
- A. 45%
 - B. 50%
 - C. 55%
 - D. 60%
 - E. 100%
25. What is IgCC?
- A. Rejected water from reverse osmosis systems
 - B. International Green Construction Code
 - C. Cooling tower blowdown water
 - D. Collected and Captured Rainwater
26. Which of these parameters must be tested for cooling towers and evaporative condensers for WE Credit Cooling Tower Water Use? [Choose two]
- A. VOC
 - B. PPM
 - C. Ca
 - D. Total Alkalinity
 - E. CO

27. What is the maximum number of cooling tower cycles allowed to earn WE Credit Cooling Tower Water use?
- A. 0
 - B. 5
 - C. 10
 - D. 20
28. What is the purpose of a cooling tower blowdown?
- A. Prevent heat loss
 - B. Prevent buildup of deposits
 - C. Increase energy efficiency
 - D. Reduce potable water use
29. What is cooling tower scaling?
- A. Chloride ions
 - B. Total Dissolved Solids (TDS)
 - C. Mineral-laden water
 - D. Size of the evaporator needed for cooling the building
 - E. Deposits that reduce the efficiency
 - F. Height of the cooling tower
30. Which of these alternative water sources have a lower mineral content making them more suitable for use in a cooling tower? [Choose two]
- A. Runoff from roof gutters
 - B. Graywater from laundry
 - C. Air-conditioning condensate
 - D. Stormwater runoff from the ground
31. A LEED BD+C: New Construction project would like to earn WE Credit Water Metering. Which of these strategies could help the project to earn the credit? [Choose two]
- A. 80% of the irrigated landscaped area has a permanent water meter for the irrigation water
 - B. 80% of the irrigated landscaped area has a permanent water meter for the irrigation water and a permanent water meter is installed to meter 50% of domestic hot water use.
 - C. 80% of the irrigated landscaped area has a permanent water meter for the irrigation water and a permanent water meter is installed to meter all reclaimed water.
 - D. 80% of the irrigated landscaped area has a permanent water meter for the irrigation water and a permanent water meter is installed to meter all cooling tower potable water use
32. Which of these are subsystems that use process water? [Choose two]
- A. Irrigation
 - B. Domestic Hot Water
 - C. Swimming pools
 - D. Clothes washers