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ONLINE TRAINING BY KRISHNAJI PAWAR
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MODULE 11

# Water Efficiency

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# LEED GREEN ASSOCIATE EXAM REFRESHER

This chapter discusses the Water Efficiency (WE) strategies and technologies in the LEED rating systems, focusing on reducing water consumption. With increasing demand and decreasing supplies, municipalities face challenges in meeting demand.

# Learning Objectives +

- Water efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality
- Innovation and Regional Priority
- Project Surroundings and Public Outreach
- Summary and Resources
- LEED GA : Practice test

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# INTRODUCTION +

- The chapter discusses the Water Efficiency (WE) category of LEED rating systems and methods to reduce water consumption.
- The increasing demand for water and decreasing supplies pose challenges for municipalities.
- Groundwater is being used faster than it can be replenished in 60% of European cities with over 100,000 people.
- Buildings account for 12% of total water use in the U.S.
- Potable water is used for various purposes, including toilets, urinals, sinks, showers, drinking, irrigation, and equipment use.



# WATER EFFICIENCY +



- Overflow from overflow can pollute nearby water bodies, requiring more treatment facilities.
- Green building project teams are encouraged to start with an "efficiency first" approach in designing water conservation strategies.
- Rainwater-harvesting technologies are recommended to capture nonpotable water for multiple applications.

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# GREEN BUILDING WATER EFFICIENCY

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- Building and site designs can reduce water usage and wastewater.
- Water efficiency addresses indoor and outdoor water use.
- Reduction in water treatment, heating, cooling, and distribution reduces energy and costs.
- Utility meters don't capture energy needed for water treatment and distribution.



# WATER EFFICIENCY +






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# CROSS-CUTTING ISSUES

- Components: Indoor water, irrigation water, and water metering.
- Documentation: Site plans, fixture cutsheets, alternative water sources, occupancy calculations.
- Site plans document location and size of vegetated areas, meters, and submeters.
- Alternative water sources: Graywater reuse, rainwater harvesting, municipally supplied wastewater, or other reused sources.
- Occupancy calculations: Project projections based on occupants' usage.
- Location and Transportation and Sustainable Sites categories also use project occupancy calculations.





# WATER EFFICIENCY STRATEGIES



- Implement native and adapted plants for minimal maintenance.
- Use xeriscaping for native planting and efficient irrigation systems.
- Specify high-efficiency irrigation systems with moisture sensors.
- Use nonpotable water for irrigation, including captured rainwater, graywater, and municipal reclaimed water.
- Install submeters for consumption tracking and leakage monitoring.

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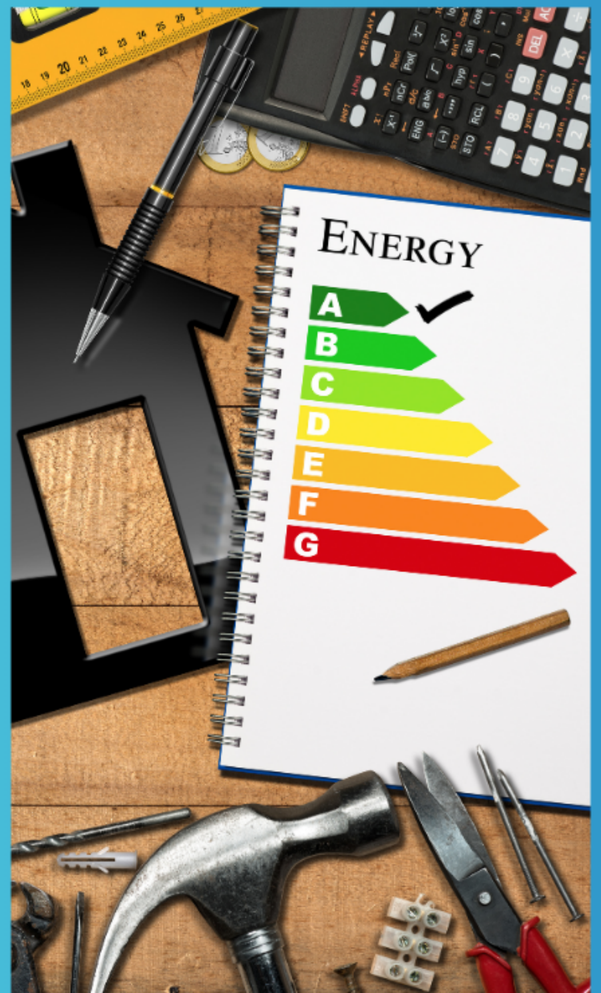
# OUTDOOR WATER USE

- Irrigation is the primary outdoor water use in green buildings.
- Site design with native and adaptive plants can significantly reduce irrigation needs.
- Implementing high-efficiency irrigation systems can significantly reduce water usage.
- Green building projects can also incorporate sustainable options like rainwater capture for irrigation and indoor water flush functions.





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# THANK YOU

