Urban Land Institute

Water Wise Development Coalition

Marianne Eppig, Sr. Director of Resilience, ULI

February 11, 2026

Headquartered in Washington, D.C., ULI is an independent and nonpartisan organization singularly focused on impact.

From its establishment in 1936, ULI's fundamental purpose has been to **connect** industry leaders, **inspire** best practices for equitable and sustainable land use, and **lead** in anticipating and addressing challenges facing the urban landscape.

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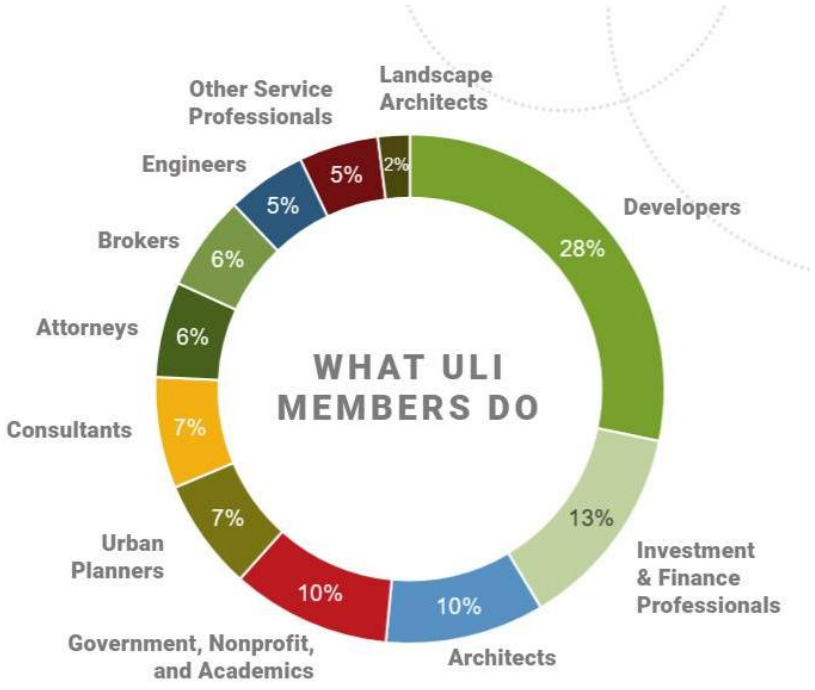
LOCAL IMPACT



70+ District and National Councils worldwide

ULI AMERICAS

58 District Councils

ULI EUROPE

13 National Councils

ULI ASIA PACIFIC

7 National Councils

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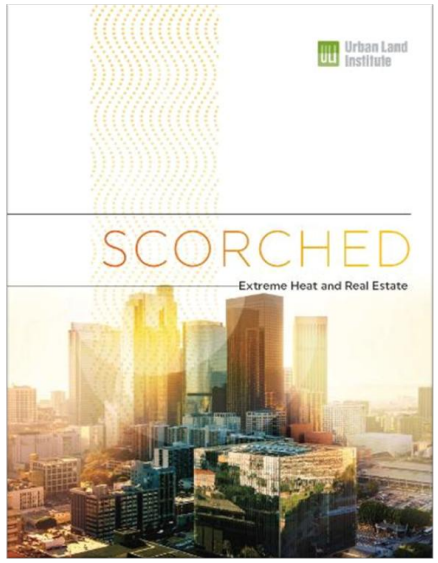
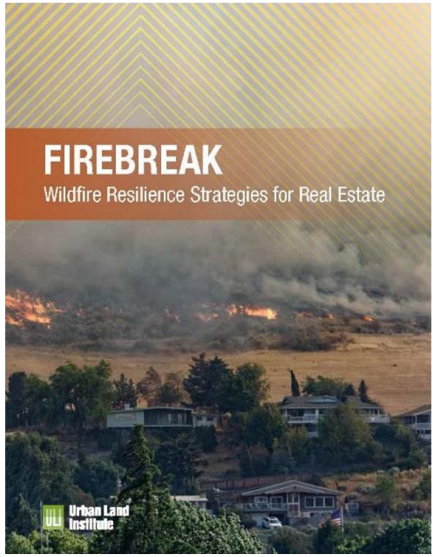
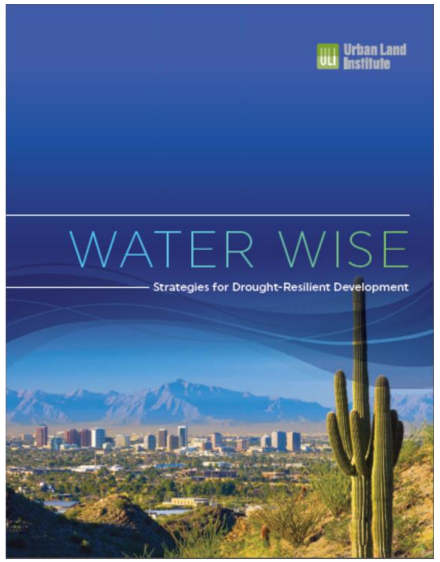
ULI's Urban Resilience Program

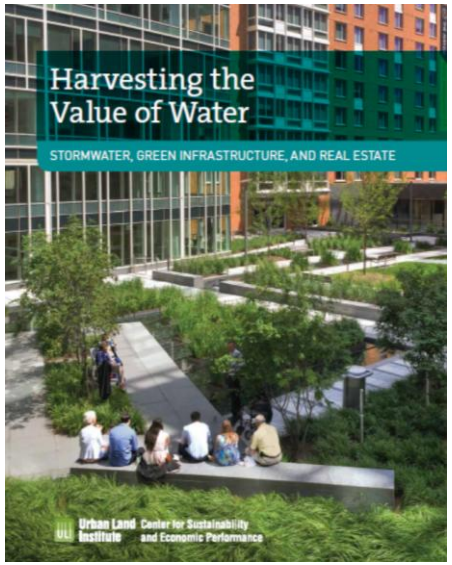
ULI's Urban Resilience program is focused on how buildings, cities, and communities can be more resilient to the impacts of climate change and other environmental vulnerabilities. We do this by:

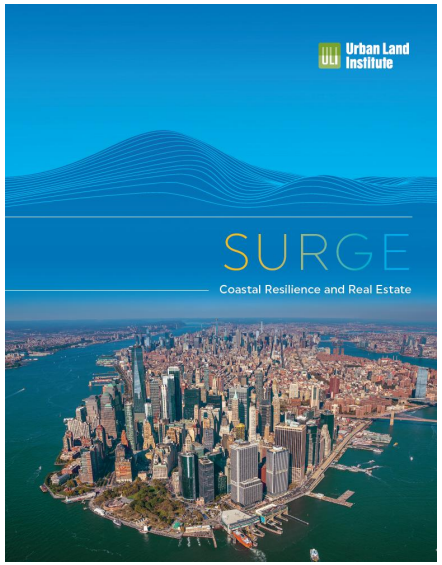
- Advancing industry understanding of resilience
- Cultivating champions for resilience and catalyzing resilience partnerships
- Supporting communities in becoming more climate resilient

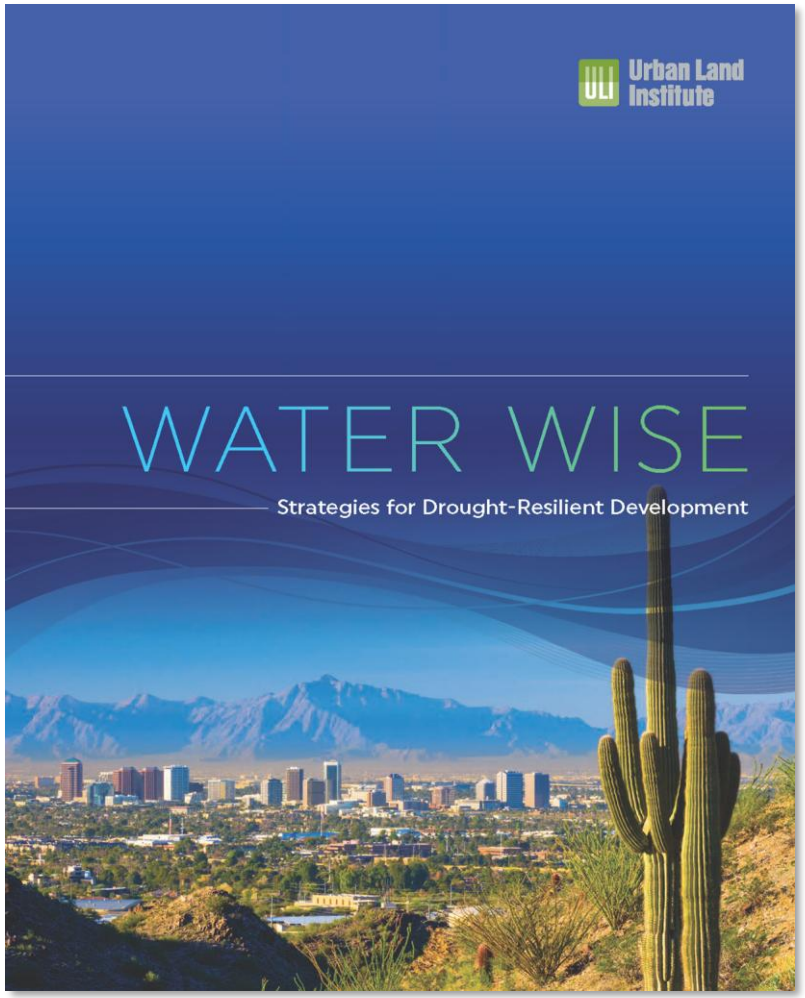












Water Wise Report

From ULI's Urban Resilience Program

Water Wise: Strategies for Drought-Resilient Development introduces the challenges associated with limited freshwater availability and provides best practices for real estate and land use professionals to address them.

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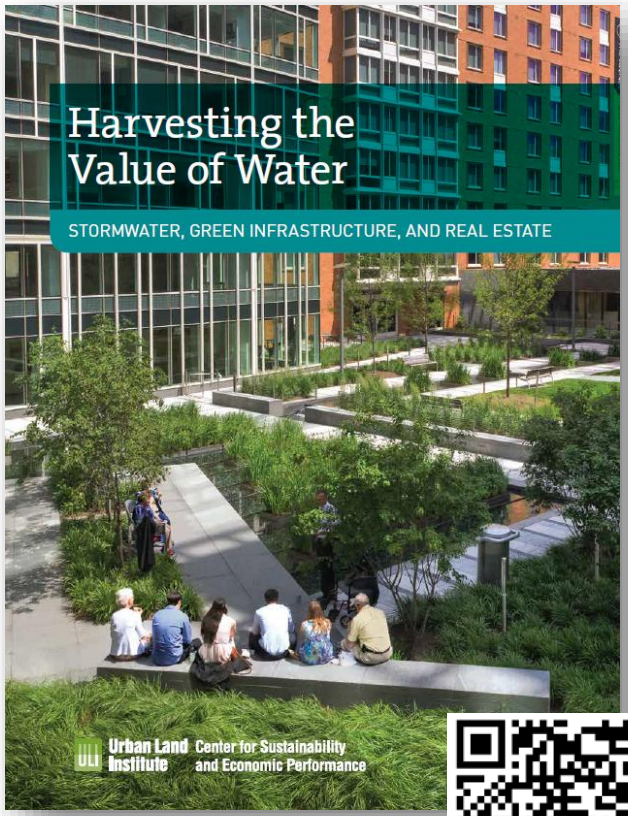
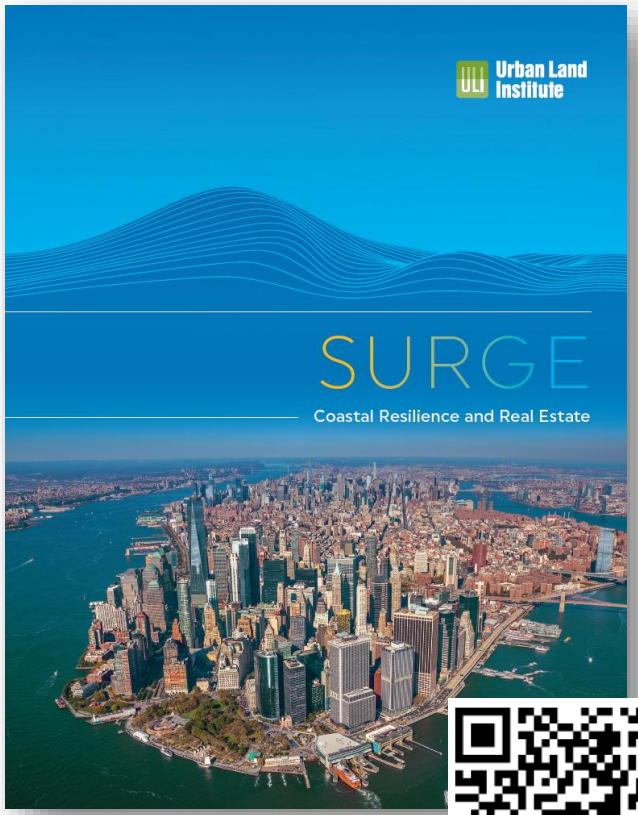
ULI Reports & Resources on Flooding





More ULI resources on flood preparedness:

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Water Wise Development Coalition

Intro for newbies!

- **Who:** ULI, in partnership with the Alliance for Water Efficiency, the Sonoran Institute, and the WaterNow Alliance, is convening land use and real estate professionals with policymakers and decision-makers.
- **What:** Advancing water-smart real estate development and supportive policies.
- **When & Where:** Quarterly virtual meetings.
- **How:** Participants will have a say in meeting topics, speakers, and efforts.

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COLORADO
Colorado Water Conservation Board
Department of Natural Resources

GATES FAMILY FOUNDATION

SONORAN INSTITUTE

Alliance for Water Efficiency

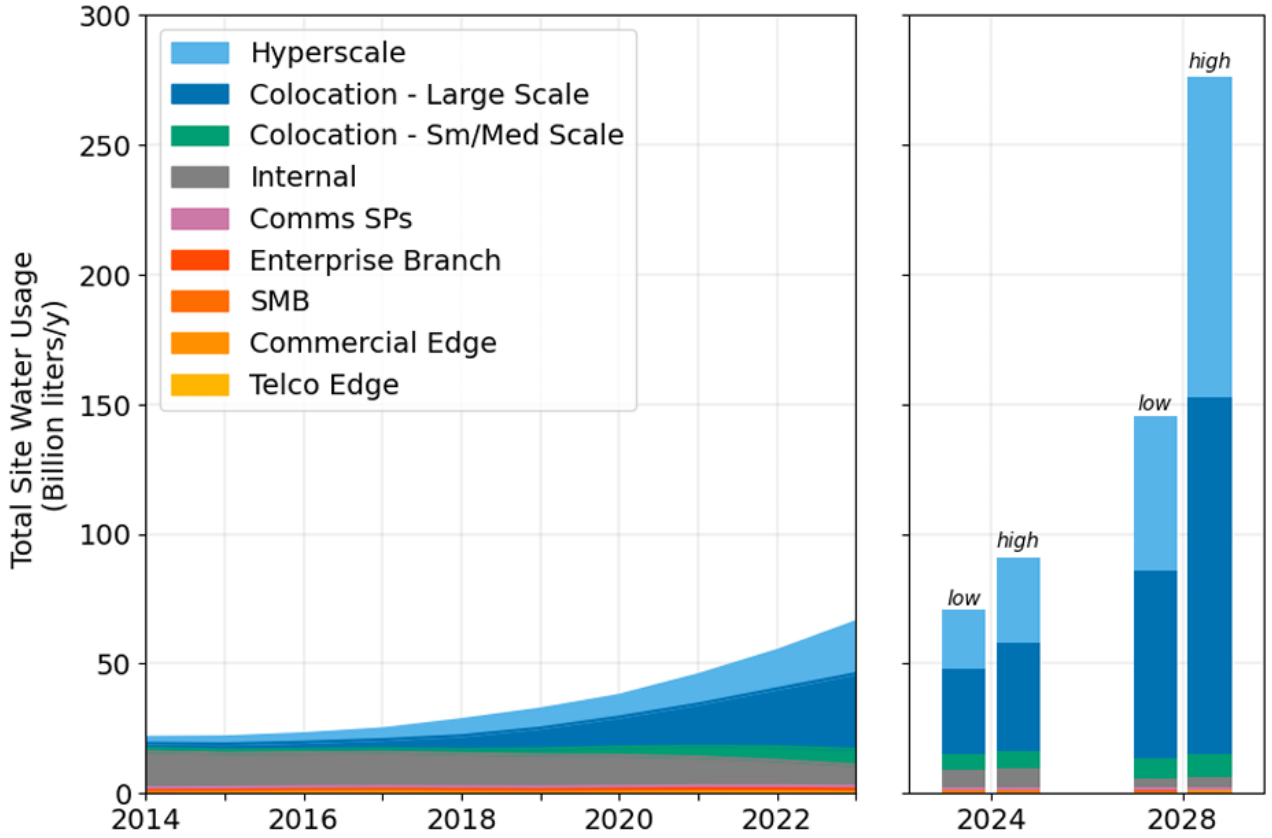
waternow alliance

Data Center Water & Energy Use

- Big investments in data center development are underway to meet growing demand
- Data centers use significant amounts of energy and water

Data Center Water & Energy Use

Historic and Anticipated Water Use by Data Center Type



Source: AWWA report "Cooling the Cloud: Water Utilities in a Data-Driven World"

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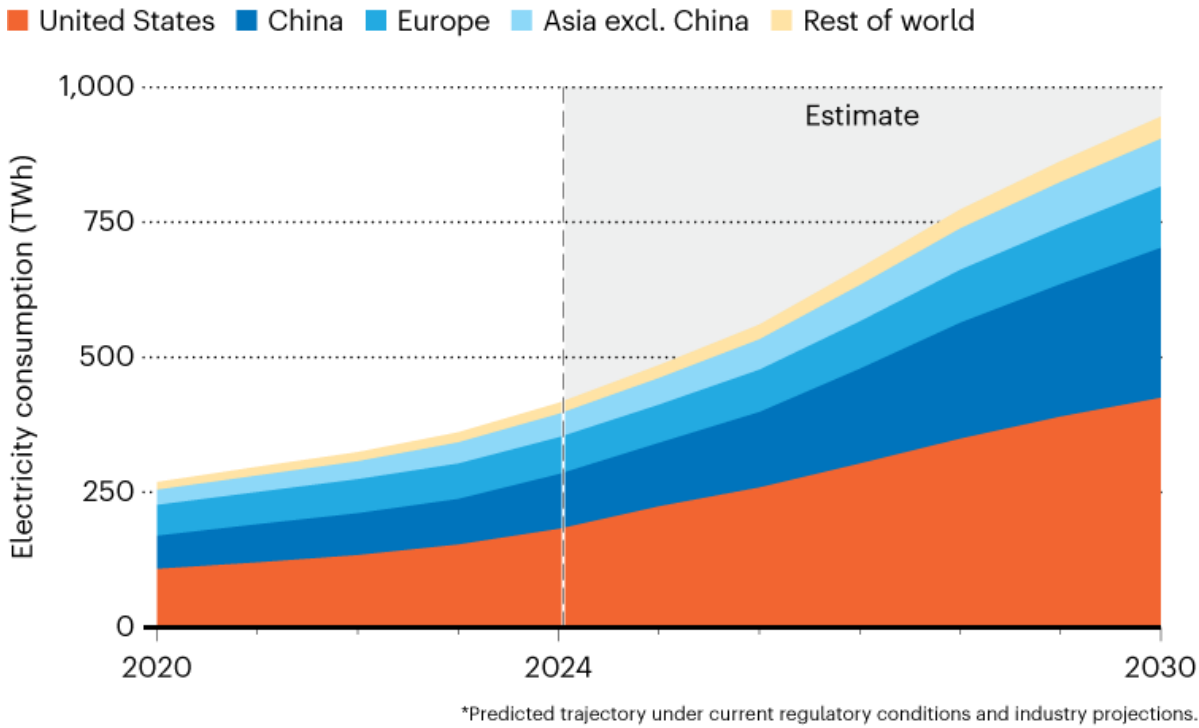
DATA-CENTRE ENERGY GROWTH

China and the United States are predicted to account for nearly 80% of the global growth in electricity consumption by data centres up to 2030*.



©nature

Data Center Water & Energy Use

- Big investments in data center development are underway to meet growing demand
- Data centers use significant amounts of energy and water

> "There are clear trade-offs between energy use and water use. Water-cooled data centers generally use less energy, while data centers that employ water-efficient dry-cooling systems have higher energy demands. Given these trade-offs, the type of cooling system should be evaluated and selected on a case-by-case basis." – Western Resource Advocates

- Communities are afraid and pushing back
- How do we employ best practices to minimize impacts on, and even support, communities that host data centers?

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Agenda

- ULI welcome and introductions (5 minutes)
- Speakers (20 minutes each):
  - **Howard Neukrug** and **Brenton McCloskey** from the Water Center at the University of Pennsylvania, on the **Water-AI Nexus Center of Excellence and principles for sustainable water use by data centers**
  - **Laura Meadors** from Apple **on data center best practices employed by Apple**
  - **Sarah Welton** from the GRESB Foundation on the **iMasons-GRESB Data Centers Working Group and data center standards under development**
- Group discussion and resource sharing (20 minutes)
- ULI wrap up (5 minutes)

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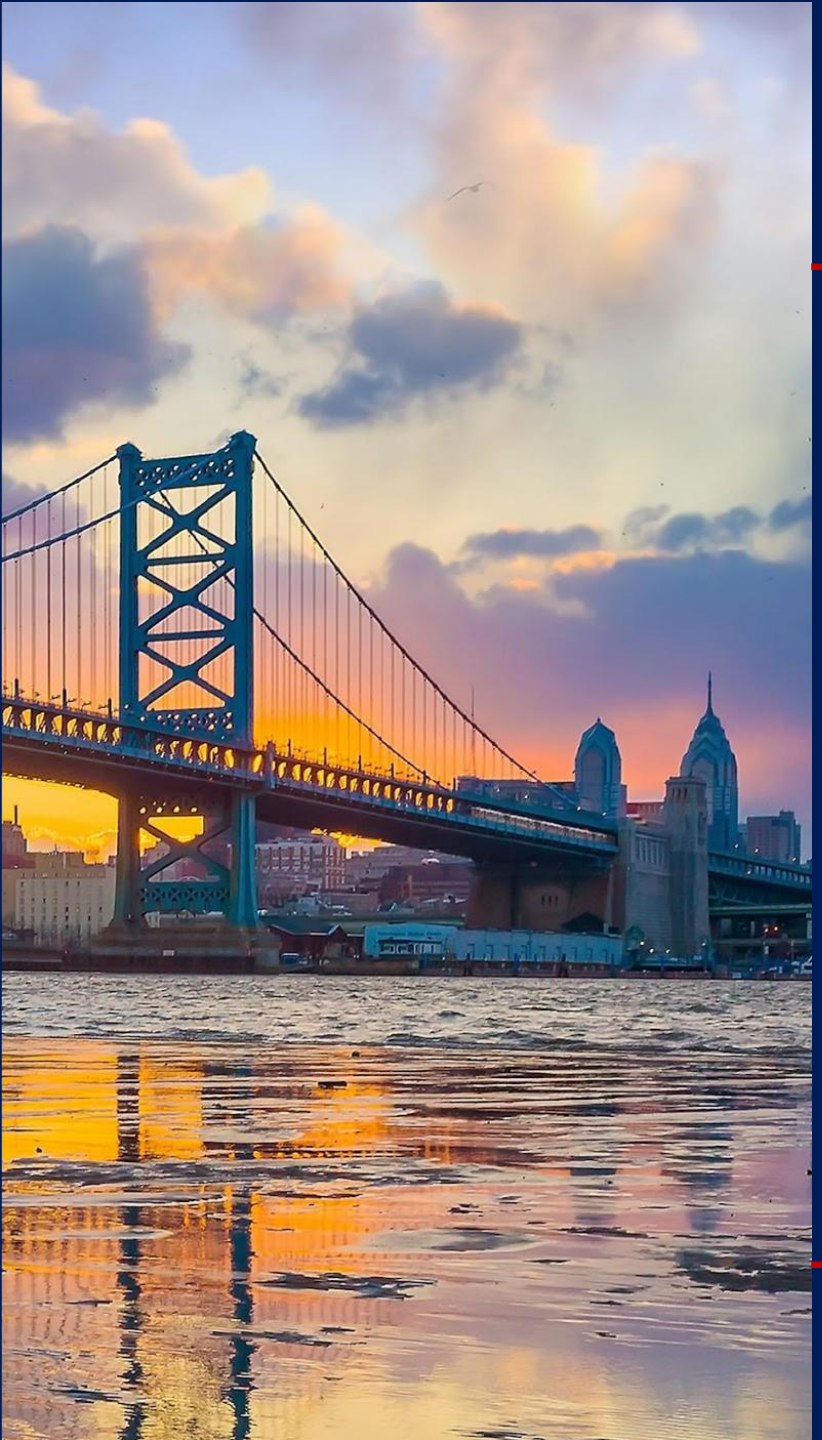


ULI Waterwise Development Coalition Meeting
February 2026

Principles for Sustainable Water Use by Data Centers

Howard Neukrug, PE, BCEE
Executive Director

Brenton McCloskey, *Director, Strategic Development & Communications*

The Water Center
University of Pennsylvania

Penn's Hub for Regional and Global Leadership in Water Research and Policy

"Shaping the Future of Water"

- Designing resiliency into a rapidly changing world
- Advancing technologies, policies, and practices
- Building the next generation of water leadership

The Water Center
University of Pennsylvania

WATER ∞ AI NEXUS™

Water-AI Nexus Center of Excellence

Water Environment Federation

amazon

The Water Center
University of Pennsylvania

LEADING UTILITIES OF THE WORLD

OUR MISSION

We believe that sustainable water management and digital infrastructure can reinforce each other for good. Our focus is a dual mission:

Water for AI

Ensuring AI infrastructure uses water as efficiently as possible

AI for Water

Leveraging AI capabilities to solve pressing water scarcity and management challenges

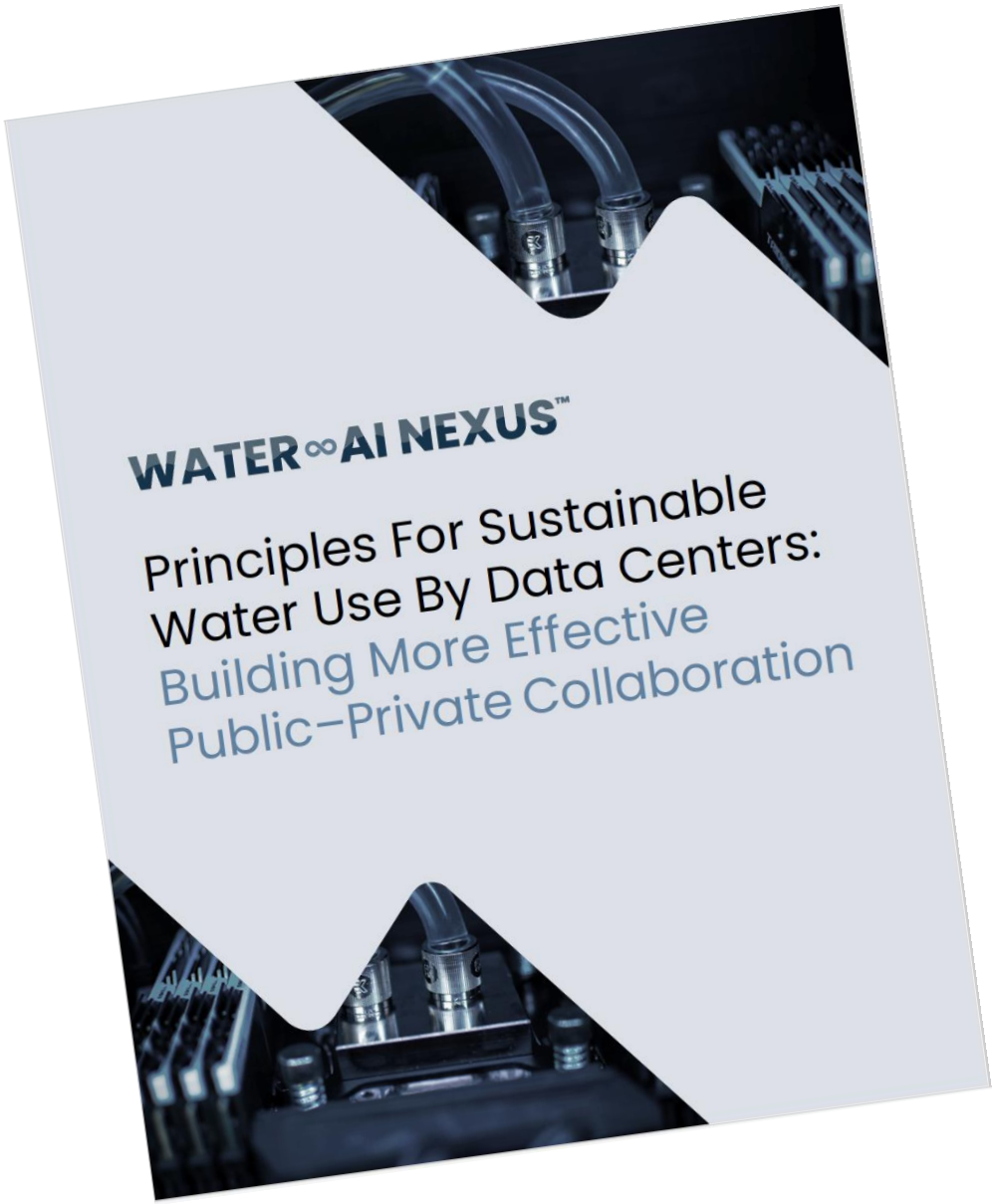
AP Photo/Michael Probst

ULI Waterwise Development Coalition Meeting
February 2026

Water for AI

Brenton McCloskey, *Director, Strategic Development & Communications*

The Water Center
University of Pennsylvania



2025 Insight Report

PRINCIPLE 1:

Improve Design and Siting Practices

PRINCIPLE 2:

Reduce Water Consumption

PRINCIPLE 3:

Reuse and Sustainably Source Water

PRINCIPLE 4:

Engage with Communities

Water Environment Federation

amazon

The Water Center, University of Pennsylvania

Leading Utilities of the World

PRINCIPLE 1:

Improve Design and Siting Practices

This principle isn't just about picking better cooling systems. It's about treating data centers as climate, water, and energy infrastructure.

Plan data centers as part of larger water, energy, and climate systems

Move from Efficiency to Impact

Choose locations for shared value

PRINCIPLE 2:

Reduce Water Consumption

This principle isn't just about using less water in cooling systems. It's about treating water as a strategic input to digital infrastructure.

Manage water like a core performance metric

Design for smart tradeoffs

Set reduction targets to drive innovation at scale

PRINCIPLE 3:

Reuse and Sustainably Source Water

This principle isn't just about finding alternative water sources. It's about keeping water in circulation, designing data centers as closed-loop systems that reuse water multiple times, prioritize non-potable supplies, and treat water as a recoverable resource rather than a single-use input.

Keep water in circulation, not in a straight line

Prioritize non-potable and drought-resilient sources

Cascade water to its next best use

PRINCIPLE 4:

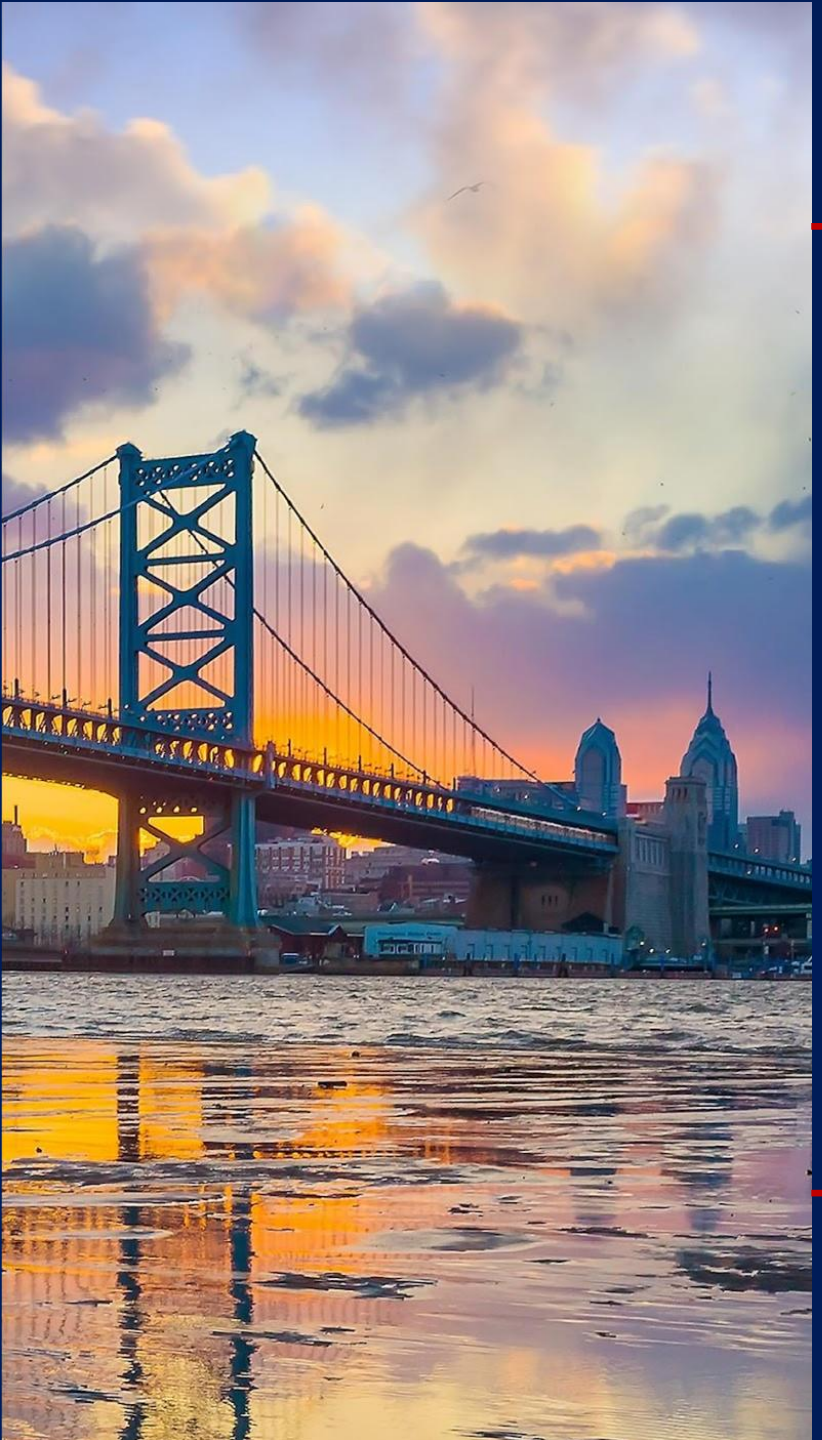
Engage with Communities

This principle isn't just about community relations or offsets. It's about treating data centers as long-term neighbors in a watershed.

Plan with communities and utilities, not around them

Treat replenishment as core infrastructure strategy, not an afterthought

Focus on measurable, durable impact



CONTACT INFORMATION

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Executive Director

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Brenton McCloskey, *Director, Strategic Development & Communications*

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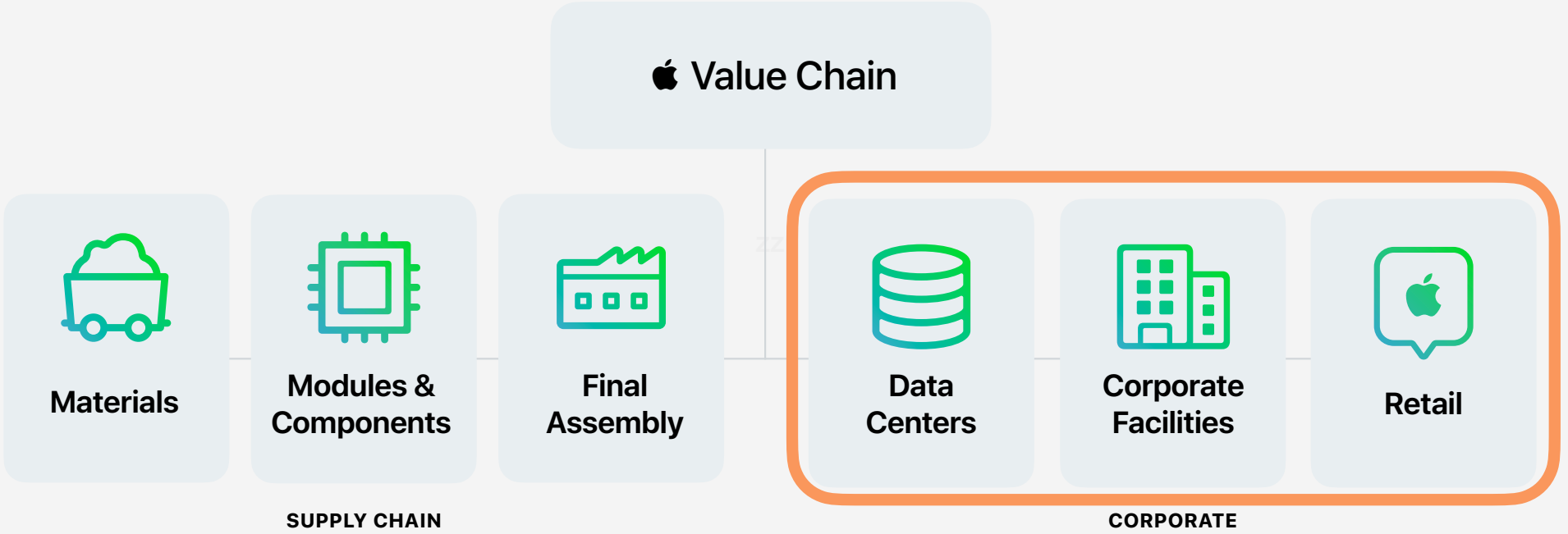
The Water Center
University of Pennsylvania

Advancing Water Stewardship in Data Centers

February 2026

Water is essential to our products and services

...but is used differently throughout the value chain



Our goal is to advance water security in the places we operate, through actions that improve freshwater availability, quality, and access.

Water roadmap | Strategic pillars

Low Water Design

Minimize water impacts in the design of products, services and sites

Site Efficiency & Conservation

Improve performance of existing sites and processes

Site Water Stewardship

Demonstrate responsibility beyond our facilities through watershed level engagement

Replenishment & Nature Based Solutions

Improve water availability, quality and access through regenerative approaches

Leadership & Advocacy

Advance water management through policy, advocacy and technology innovation

Apple’s Water Stewardship Goals

100%

Owned / operated data centers certified to AWS Standard by 2025

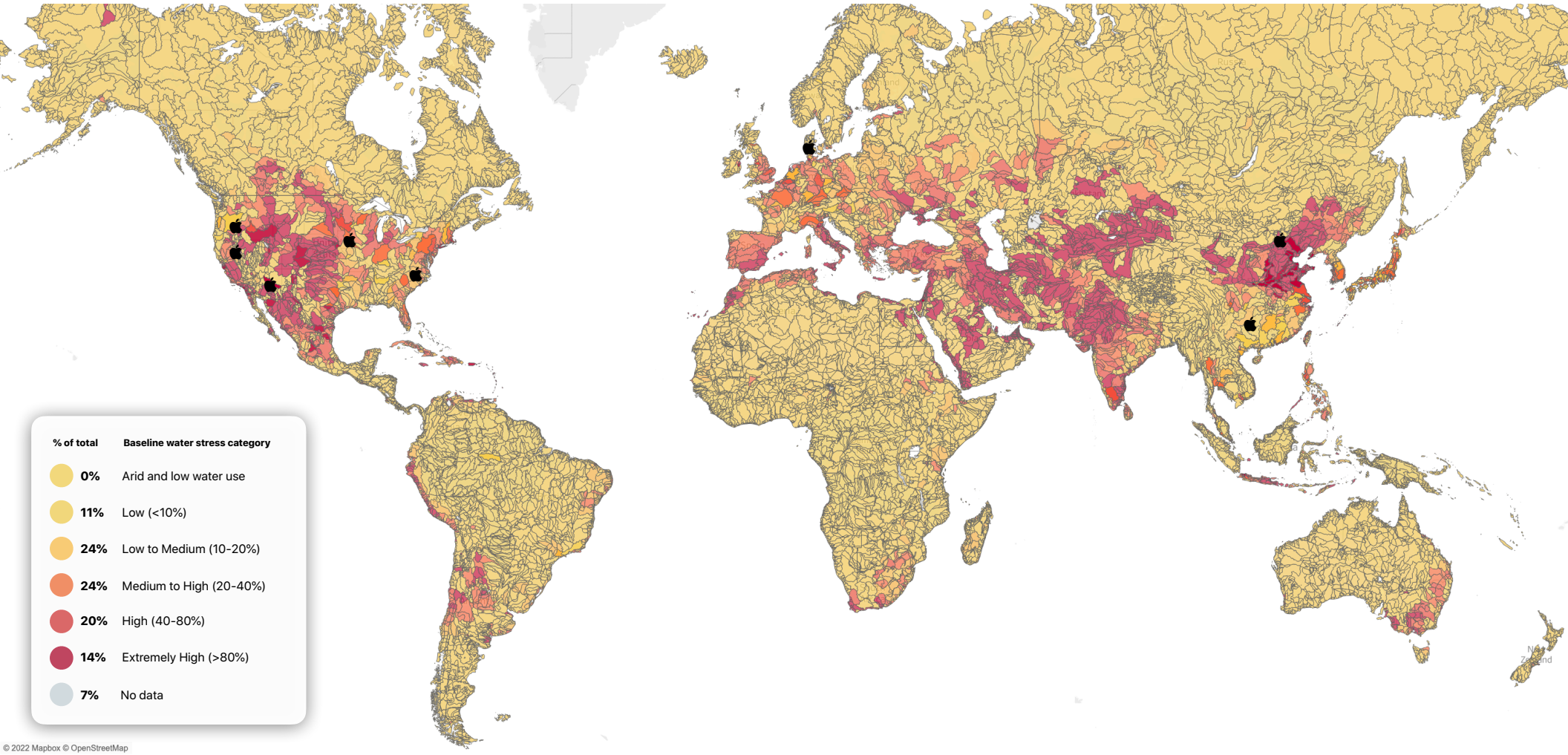
100%

Replenishment of freshwater withdrawals in high stress locations by 2030

50%

Average reuse rate of suppliers in Supplier Clean Water Program by 2030

Data centers in high water stress locations



AWS provided a framework

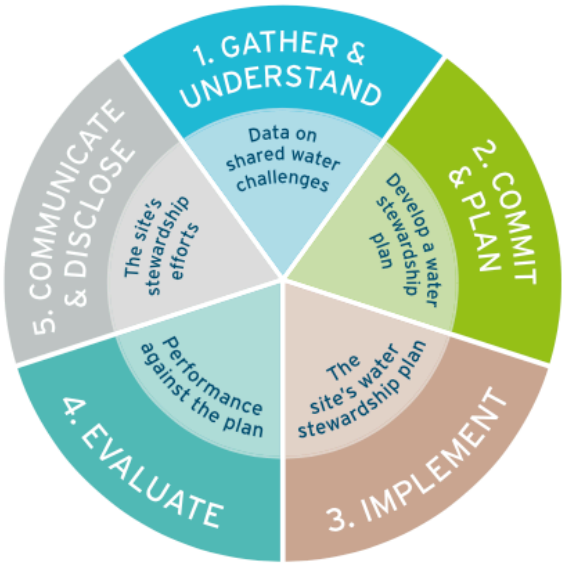
ALLIANCE FOR WATER STEWARDSHIP

STRUCTURE OF THE AWS INTERNATIONAL WATER STEWARDSHIP STANDARD

THE AWS STANDARD FRAMEWORK IS BUILT AROUND FIVE STEPS:

1. GATHER AND UNDERSTAND
2. COMMIT AND PLAN
3. IMPLEMENT
4. EVALUATE
5. COMMUNICATE AND DISCLOSE

Each step consists of a number of criteria to be addressed, each criterion having one or more indicators for compliance. There are 'core' indicators, representing the minimum requirement, and 'advanced' indicators, to achieve higher levels of water stewardship status and to promote continual improvement. The steps are not required to be followed in strict order and although generally the steps are order-dependent, actions associated with specific criteria and indicators may occur in parallel.



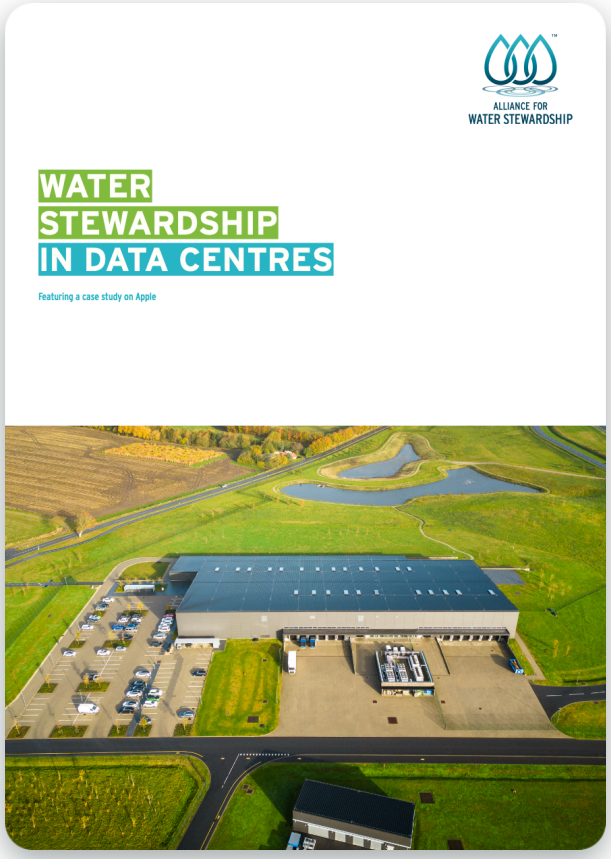
IMPLEMENTATION OF THE STANDARD IS INTENDED TO ACHIEVE FIVE MAIN OUTCOMES FOR THE SITE AND ITS DEFINED PHYSICAL SCOPE:

- GOOD WATER GOVERNANCE
- SUSTAINABLE WATER BALANCE
- GOOD WATER QUALITY STATUS
- IMPORTANT WATER-RELATED AREAS
- SAFE WATER, SANITATION AND HYGIENE FOR ALL (WASH)

Each criterion in the Standard has the associated symbol or symbols representing the outcome to which fulfilment of the criterion will contribute.

AWS Certification Progress

Site	Certification Status	Certification Date
Prineville, OR	✓	Jan 2021
Mesa, AZ	✓	Jan 2023
Reno, NV	✓	Feb 2023
Maiden, NC	✓	June 2023
Viborg, DN	✓	Nov 2023
Gui'an, CN	✓	Dec 2024
Ulanqab, CN	✓	Dec 2024
Waukee, IA	✓	June 2025

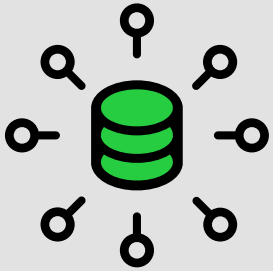


January 2025
https://a4ws.org/resource/water-stewardship-in-data-centres/

Data center water stewardship | Best practices

Assess water risk

Understand the local water balance



Engage stakeholders

Engage with local government, NGOs, water utilities

Develop a water stewardship plan

Develop a plan to address water quantity, quality, WASH, governance, habitat

Evaluate and report

Evaluate progress against water stewardship plan targets and report on progress

Putting stewardship into practice | Maiden DC in Catawba, NC

Onsite water management

- Optimized cooling controls saves 14 Mgal/yr
- Rainwater harvesting used for toilet flushing (2-6 Mgal/yr)
- Moss-based treatment improves water quality while reducing chemical inputs

Strategic Partnerships & Engagement

- Joined Catawba-Wateree Water Management Group (CWWMG) Advisory Committee
- Supported CWWMG Source Water Protection Program to identify watershed protection priorities
- Collaborated with Research Triangle Institute's to translate hydrological modeling into Volumetric Water Benefits
- Grant to Catawba Riverkeepers for insteam water quality monitoring

Impactful water replenishment

- City of Hickory AI-driven Leak Detection & Loss Reduction project
- Contracted two nature-based replenishment projects to address water quality by reduce nutrient loading, sedimentation
- Additional water quality restoration projects planned

Data Centers

February 2026

GRESB

Infrastructure Masons

Outline

This deck provides an update on the new GRESB-iMasons Data Center Standard and assessment:

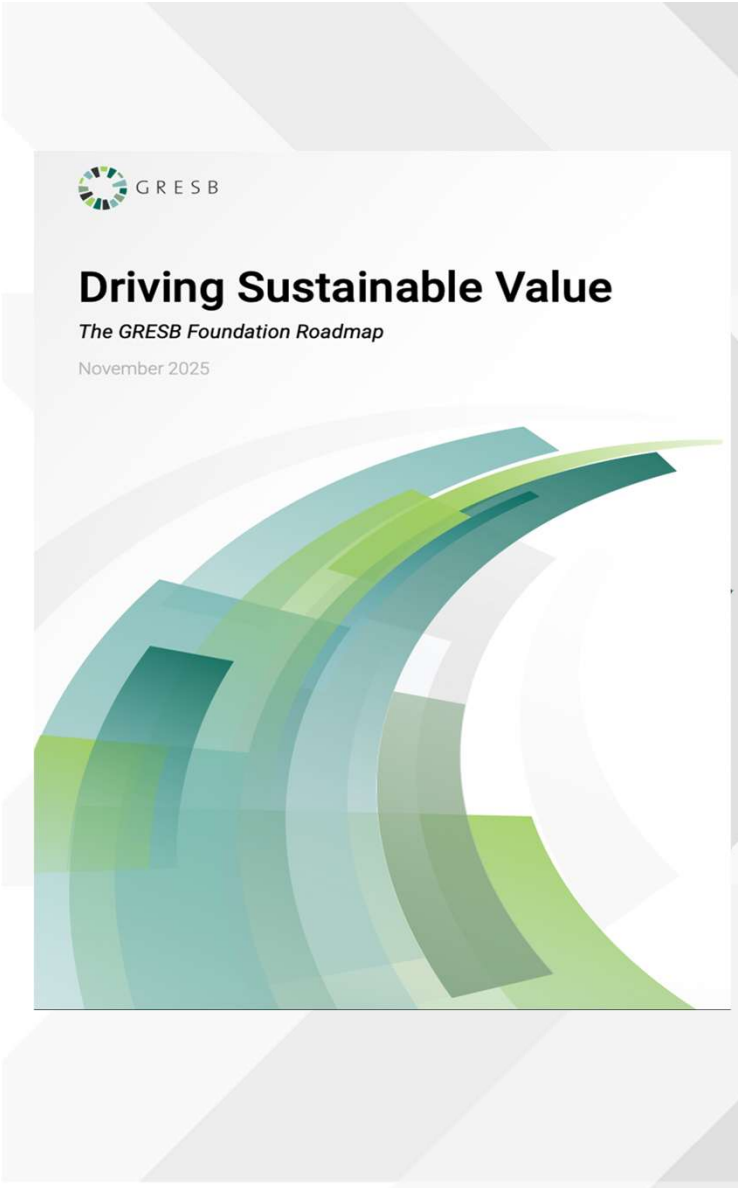
1. **Governance**: GRESB Foundation
2. **Purpose**: Data Center-specific Standard
3. **Future**: Next steps for sustainability

Governance

How can we support data center stakeholders?

GRESB Foundation

- An independent, non-profit organization
- Supports constructive engagement between institutional investors and managers
- Led by real asset investors
- Globally represented by GRESB stakeholders



GRESB Foundation at a glance

Foundation activities

32 Meetings held in a year

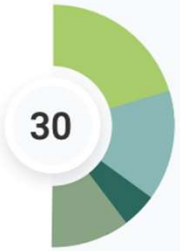
52 Surveys conducted

Foundation communications

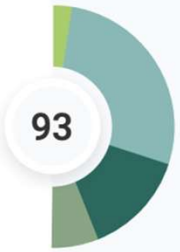
- Monthly newsletter
- GRESB Standards & Reference Guides
- Foundation Town Hall events
- Guidance documents

Members breakdown

10 Foundation Board
- 9 Investors
- 3 Participant
- 0 Partner
- 1 Industry Partner



30 Standards Committees
- 13 Investors
- 10 Participants
- 3 Partners
- 4 Industry Partners



93 ERG members
- 4 Investors
- 57 Participants
- 28 Partners
- 12 Industry Partners

GRESB

Purpose

What problems are we solving?

Problem

1. **Data center managers** want investors to ask better, more relevant questions about sustainability.
2. **Data center investors** want to understand and mitigate sustainability risks.
3. **Both groups** want to use a common language, generate comparable information, and have the option to benchmark performance over time.

Solutions

Investors and managers to have a:

- ✓ **Shared, global language** as the basis for constructive engagement.
- ✓ **Framework for constructive engagement** to create value and mitigate risk and opportunities
- ✓ **Practical tools** to assess, benchmark, and improve performance over time.

Capital Raising
Understand value and risk

Monitoring and Improvement
Annual engagement, cap ex allocation

Insurance & Refinance
Evaluate risk and negotiate coverage

Tenant Engagement
Attract and retain tenants

Sell & Exit
Communicate value

GRESB

Pilot Participation

1. **Investors** provided agree on the core set of material factors
2. **Managers and developers** provided sample responses and indicator-specific feedback
3. **Consultants** commented on emerging issues and implementation considerations

Ada Infrastructure
Affinius Capital
Portus Data Centers
CBRE IM
CIF I & II (CVC DIF)
EcoDataCenter (Areim)
EdgeCore
Etix Everywhere
GI Partners
Goodman Continental Europe
GreenScale Data Centres
Harrison Street
maincubes Holding & Service GmbH
Nuveen
Conapto
UltraEdge
Omnes Capital
PAG
PGIM
PIMCO
Prime Data Centers
Rowan
Sabey Data Centers
STACK Infrastructure
Stream Data Centers

Material Issues

Stakeholders agree on the **core set of material** factors: grid interaction, community benefits/impact, GHG emissions, energy efficiency, health & safety and **water-use efficiency:**

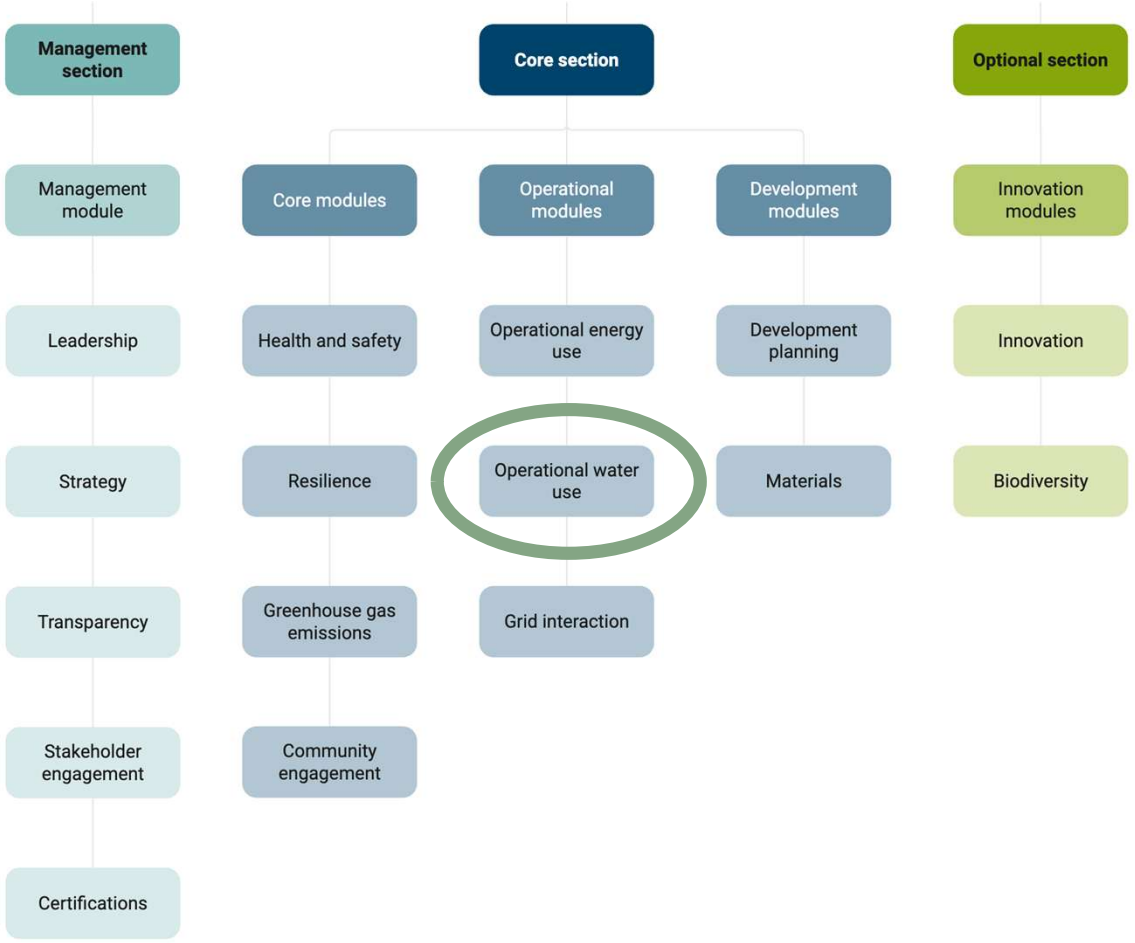
- **Design:** New construction design includes conservation, reuse, reclamation or recycling, and/or surface water /aquatic ecosystem protection
- **Operation:** Water resource context and strategy, management, implementation and performance (reused, replenished, consumption, etc.)

Assessment Structure

Management
Covers the core management practices needed to manage sustainability risks.

Performance
Thematic modules addressing strategy, action, and measured performance.

Innovation
Recognizing industry best-in-class practices, superior performance, and emerging issues.



Next Steps

Where do we go from here?

Standard Development

Under Construction

GRESB development

Development H1 2026

V1 Launch

Launch in **Transparency Mode with Score Report**

Target launch: H1 2026

V1 Ratings

First cohort **Benchmark Report**

Target launch: H2 2026

Under Revision

Governance through **GRESB Foundation**

Target launch: H1 2027

2026 — **2027**

Jan | Feb | Mar | Apr | Oct | Nov | Dec

Pilot Results White Paper | **Website** | **Events**

In case you are interested…

GRESB and iMasons will share detailed results in an **upcoming white paper**, detailing:

- Feedback on individual indicators and metrics
- Additional issues and considerations (e.g., adaptability)
- Changes to assessment strategy and structure
- Changes to indicator language and answer choices
- Changes to scoring strategy (e.g., control)

THANK YOU!

Sarah Welton
s.welton@gresb.com

Resources & Updates

ULI Opportunities

- **Upcoming ULI report on data centers**
- **Convening local roundtables and/or focus groups between public and private sector** land use and water professionals, aimed at supporting water-wise real estate and supportive policies. Reach out if you or someone you know is interested!
- **Documenting the business case for water-wise land uses**. Please let me know if you have case studies that demonstrate the financial ROI for water-wise real estate and built environments!

Interested? Email Marianne.Eppig@uli.org

Generously supported by:

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Urban Land Institute

Programming Brainstorm

Let us know what you want for coalition meetings!

Cohort Programming Agenda	Subject Brainstorm
April/May/June 2026	Water Demand Calculator (IAPMO, Fort Collins)
July/Aug/Sept 2026	Agriculture/development interface? (Robert Sakata, Sonoran Institute/Waverly Klaw on Bridging the Gap)
Oct/Nov/Dec 2026	Development review process and developer/government interface?
Jan/Feb/March 2027	One Water Approach + land use (US Water Alliance, Denver One Water, Tucson)

Urban Land Institute

Lewis Center Exchange

This bi-monthly virtual discussion is designed to promote learning and networking, and spark thought and conversation on topics relating to healthy, resilient, green, and thriving places.

Topics to be explored:

- Sustainable Transportation- **March 12th**
- Data Centers & AI- **May 21st**
- Artist/Developer Collaboration
- Sponge Cities
- Net Zero Imperative

Sign up at uli.org/lcexchange. Email us at sustainability@uli.org with any questions.

AWE ANNOUNCEMENTS

ULI Water Wise Development Coalition Meeting

February 11, 2026

Alliance *for* Water Efficiency

COMING SOON: DATA CENTER PRIMER

- The **Data Center Primer** will help water service providers understand
  - Data center types and functions
  - Cooling technologies
  - How much water is used
  - Community recommendations to ensure water is appropriately considered in data center development.
- Written for local water providers and water utility professionals.
- Planned Completion Date: Spring 2026

SAVE THE DATE FOR AWE'S 4TH ANNUAL *WATER EFFICIENCY & CONSERVATION SYMPOSIUM*

CALL FOR ABSTRACTS

We're seeking actionable research, practical resources, and hands-on learning.

Core topics include:

- Affordability/Equity
- Aging Infrastructure, Leaks, and Water Loss
- Alternative Water Sources
- Conservation & Efficiency Programs
- Corporate Water Stewardship
- Climate Change / Extreme Weather
- Demand Forecasting and Planning
- Drought Planning and Response
- Education, Outreach, and Behavior Change
- Funding Sources / Utility Financial Resilience
- Outdoor Water Use
- Policy (Federal, State, Local)
- High Water Users / Emerging Uses
- Technology and Data Management

Submit your abstract proposal here by March 9

CALL FOR MEMBER-NOMINATED AWARDS

Nominations are officially open for the **2026 AWE Member-Nominated Awards**. We invite you to submit nominations for the following awards:

- Innovation
- Excellence in Equity
- Up & Comer
- Water Star

Winners will be celebrated at the *Water Efficiency & Conservation Symposium* in Chicago, August 4 - 8, 2026. Don’t miss this once-a-year opportunity to honor a leader in the field!

Submit your award nominations here by March 9

UPCOMING WEBINAR: INTEGRATIVE APPROACHES FOR WATER EFFICIENCY AND STORMWATER MANAGEMENT

Join EPA WaterSense and the Alliance for Water Efficiency as we launch our *2026 Outdoor Water Use Webinar Series* with a session exploring the water efficiency and stormwater nexus.

This webinar will feature case examples demonstrating how integrated approaches to outdoor water management can advance both conservation and stormwater goals. Guest speakers include the Municipal Water District of Orange County, presenting its Turf Replacement and RainSmart Rebate Programs collaboration, and the Metropolitan Water Reclamation District of Greater Chicago in partnership with Friends of the Chicago River, highlighting an education campaign that encourages residents to conserve water before, during, and after storm events.

Wednesday, February 18th
1:00 – 2:00 pm (CT)

Register here!

EPA WaterSense

Growing Water Smart Peer Network Webinar: Local Policies for Large Water Users

March 3, 12-1pm MT
Virtual via Zoom

Lindsay Rogers
Policy Manager for Municipal Conservation, Western Resource Advocates

Mary Ann Dickinson
Policy Director, Land and Water
Babbitt Center for Land & Water Policy

Zach Sugg
Associate Director for Research
Babbitt Center for Land & Water Policy

BABBITT CENTER
FOR LAND AND WATER POLICY
A Center of the Lincoln Institute of Land Policy

SONORAN
INSTITUTE

SURVEY

We’d love to hear from you!

Please take 5 minutes to complete the program survey:

- Using the QR code here
- Or using the link: https://urbanlandinstitute.qualtrics.com/jfe/form/SV_cveKlXiIqshnjwy

Impact stories/testimonials may be featured by ULI!

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THANK YOU FOR JOINING US!

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