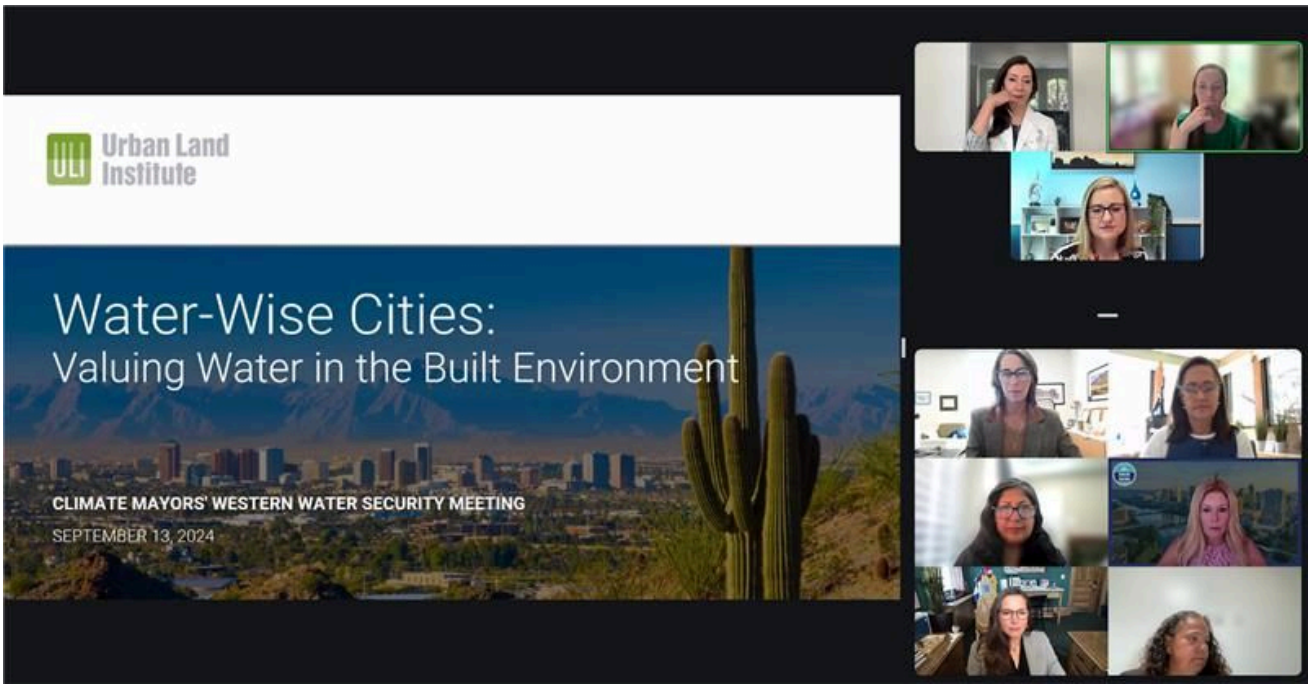
Climate Mayors' Western Water Security Second Cohort Meeting: Housing-Water Nexus

13 September 2024 | 10:30 am - 12:00 pm PT



OVERVIEW

On September 13, 2024, mayors and staff held the second Western Water Security (WWS) meeting. The WWS meeting included presentations from the Urban Land Institute and Berkeley Lab for a discussion on the housing-water nexus and addressing water, energy, housing, and homelessness challenges with systemic policy solutions. Mayors collaborated on successes and challenges on housing as well as discussing city policies and priorities on the water-housing nexus.

CONTENTS OF REPORT

1. ATTENDEES

Mayors

- Mayor Kate Gallego, Phoenix, AZ
- Mayor Erin Mendenhall, Salt Lake City, UT
- Mayor Farrah Khan, City of Irvine, CA
- Mayor Becky Daggett, Flagstaff, AZ
- Mayor Jeni Ardnt, Fort Collins, CO
- Mayor Kelly Owens, Town of Breckenridge
- Deputy Mayor Suttley, Los Angeles, CA

Experts

- Marta Sanches, Urban Land Institute
- Newsha Ajami, Berkeley Lab

Staff

- Climate Mayors Staff
- Virginia Wei, Los Angeles, CA
- Laura Briefer, Salt Lake City, UT
- Debbie Lyons, Salt Lake City, UT
- Cynthia Campbell, Phoenix, AZ
- Kathy Macdonald, Mesa, AZ

Technical Advisory Committee

- Renee Willette, US Water Alliance

2. SUMMARY OF DISCUSSION

During the WWS meeting, a few key policies and strategies were highlighted as effective in balancing urban population growth and water conservation for long-term urban water security.

- **Demand management strategies** like water conservation, efficiency, and on-site reuse systems can be effective tools for urban water user reuse and conservation strategies. Some example policies include:
    - Rebates and incentives for residents and businesses to install water-efficient fixtures and appliances, convert to drought-tolerant landscaping, and implement on-site water recycling.
    - Regulations and building codes requiring water-efficient features in new developments.
- **Integrating land use and water sustainability policies**, for example as Salt Lake City is doing with their Water Smart initiative. This involves aligning zoning, development, and water management to enable growth in a more water-conscious way.
- **Pricing water appropriately to incentivize conservation**, while ensuring affordability, especially for low-income communities. This includes tiered water rates that increase as usage goes up.
- **Public-private partnerships and collaboration**, such as the work Procter & Gamble is doing with Phoenix on leak detection and water savings programs.
- **Leveraging federal funding and policies** to support municipal water infrastructure and conservation efforts, though more is needed in some areas.

Strategic housing-water nexus policies appear to be a multi-pronged approach that focuses on both demand-side and supply-side strategies, while aligning land use, water management, and affordability considerations. Ongoing stakeholder engagement and policy innovation will be critical for balancing urban population growth and long-term urban water security.

3. OUTLINE OF DISCUSSION

Introductions – Phoenix and Salt Lake City Discuss Challenges and Opportunities for Housing-Water Nexus

Mayor Gallego Introductions

- Mayor Gallego discusses the concept of "growth pays for growth" in Phoenix, where impact fees on new housing units help fund police and water services.
- The fees are heavily driven by water fees, making housing more expensive but seen as necessary for sustainable growth.
- Mayor Gallego emphasized the importance of municipal leadership on conservation and security, mentioning EPA WaterSense certification and federal funding for water projects.
- Mayor Gallego also highlighted the need for continued federal funding for water projects, noting that Phoenix has not seen as much federal support as hoped.
- Private partnerships with companies like Procter and Gamble are mentioned, focusing on water savings through leak detection devices in public housing.

Mayor Mendenhall Introductions

- Mayor Erin Mendenhall noted that the Great Salt Lake is threatened by shrinking water levels, posing significant risks to the health, economy, and air quality of the region. She added that Salt Lake City has seen significant population growth, doubling its downtown population, while reducing water consumption by nearly 30% over the past two decades.
- The Mayor also mentioned the city's Water Smart initiative, aiming to merge land use policy with water sustainability policy to better manage growth and water resources. The initiative involves integrating zoning and water management to absorb growth in a sustainable manner.

Water Infrastructure Challenges

Presentation by Newsha Ajami

- Newsha Ajami, PhD, Chief Strategy and Development Officer for Research at the Berkeley Lab, begins her presentation by highlighting the disconnect between 19th and 20th-century water laws and 21st-century challenges.
- Newsha discussed the traditional division of water into supply, wastewater, and drainage systems, noting its limitations in addressing modern water issues.
- She also examined the concept of abundance in water infrastructure, with a focus on the high costs and environmental impacts of centralized, linear systems.

- She also emphasizes the importance of public awareness and engagement in water management, along with the need for more decentralized, flexible water systems.

Decentralized Water Management and Demand Management Strategies

- Newsha discussed the potential for decentralized water management, including demand management and distributed solutions (e.g.demand management strategies, rainwater capture, leak detection, and small on-site reuse systems).
    - The benefits of these decentralized systems include reduced demand, lower infrastructure costs, and increased affordability for low-income communities.
- Newsha highlights the importance of integrating demand management into supply planning to avoid oversized, underutilized infrastructure. As well as the role of financial incentives and policy changes in encouraging decentralized water management.

Water-Efficient Development and Public-Private Collaboration

- Newsha continued to discuss the importance of water-efficient development and the role of the private sector in implementing water-smart strategies.
    - Examples of water-efficient developments, such as the "double zero house" by KB Homes, were discussed, showcasing the potential for significant water savings.
- Newsha emphasized the need for public-private collaboration to scale up water-smart development practices.
- Additionally, the role of policy in encouraging water-efficient development, with a focus on demand-side strategies and the importance of sustainable water use in land use planning are vital to addressing the housing-water challenges for cities in the West.
- Newsha highlighted the success of Albuquerque's water conservation program in halting the depletion of its aquifer and maintaining both population growth and water sustainability.

Water-Wise Strategies and Best Practices for Drought Resilient Development

Presentation by Martha Shantz

- Martha Shantz, Co-Executive Director of the ULI Randall Lewis Center for Sustainability in Real Estate, introduces the ULI Water Wise report.
- The report focuses on water-wise strategies for drought resilient development, providing best practices for real estate and land use professionals. As well as the importance of demand-side strategies, such as water-efficient appliances and landscaping, in reducing water use
- Martha also discussed the role of policy in encouraging water-smart development with a focus on the need for sustainable water use in land use planning.

Mayoral Updates on Housing-Water Nexus Policies

- Mayor Khan of Irvine provided an update on the city's water management efforts, including the use of recycled water for irrigation and landscaping.
    - The city has implemented a turf replacement program and offers rebates to residents and businesses to encourage water conservation.
    - The importance of energy-efficient appliances and landscaping in new developments is emphasized.
    - Mayor also highlighted the city's efforts to balance growth with water conservation and the role of the Irvine Ranch Water District in supporting these initiatives.
- Mayor Ardnt of Fort Collins discusses the challenges of water management in Fort Collins, including the need for infrastructure upgrades and the impact of development fees on housing affordability.
    - The Mayor highlighted the importance of zoning reform and density in addressing water management and housing needs, as well as the role of the federal government in incentivizing water conservation and the land-water nexus.
    - The Mayor also emphasized the need for a comprehensive approach to water management, including policy changes and public-private collaboration.
- The importance of addressing the business model for water utilities and the need for sustainable water use in land use planning is also highlighted.
- Deputy Mayor Suttley provided an update on Los Angeles' water conservation efforts, including the successful turf changeover program and state-mandated water conservation requirements.
    - The city's focus on outdoor water use and the importance of water-efficient landscaping are discussed.
    - The Deputy Mayor highlighted the excess capacity in the city's wastewater system due to water conservation efforts.
    - The role of the Metropolitan Water District in regional water management and the importance of recycled water projects are discussed.
    - The Deputy Mayor also emphasized the need for continued water conservation efforts and the importance of sustainable water use in new developments.

Final Thoughts and Future Topics

- Mayor Gallego thanked the participants for their insights and contributions to the discussion on housing-water nexus and encouraged further collaboration and discussion on future topics, including net-zero water and nature-based solutions. Mayors identified future topics such as “water as a human right” and the water-energy nexus.
- Mayors discussed holding a Western Water Security Cohort meeting in January during the U.S. Conference of Mayors.
- The meeting concludes with a commitment to ongoing efforts to address water security and sustainability in municipal planning.

4. SPEAKER BACKGROUND

 **Marta Schantz** ***Co-Executive Director, ULI Randall Lewis Center for Sustainability in Real Estate***	Marta Schantz is the Co-Executive Director of the Randall Lewis Center for Sustainability in Real Estate at the Urban Land Institute (ULI), which leads the global real estate industry in creating buildings and places where people and the environment thrive. Marta brings deep experience in the real estate sustainability market to lead and collaborate across organizations and stakeholders to achieve program goals and successes. Recent focus areas range from Building Electrification, to City/Real Estate Partnerships for Climate Policy, to Net Zero Buildings. Prior to this role, Marta was the Senior Vice President for the Greenprint Center for Building Performance at ULI, a research center and worldwide alliance of leading real estate leaders committed to improving the environmental performance of the global real estate industry – reducing carbon emissions, and increasing building value. Before her time at ULI, Marta worked at Waypoint Energy providing energy efficiency services to utilities and real estate, at Booz Allen Hamilton on the federal energy consulting team, and at the US Department of Energy's Office of Cost Analysis. Marta is a LEED Green Associate and a Fitwel Ambassador. She serves on the Advisory Board for the Carbon Leadership Forum and is a Commissioner on the Alexandria VA Environmental Policy Commission. Marta has been recognized as an Energy + Environmental Leader 100, as well as an Association of Energy Services Professionals "One to Watch." She holds a B.S. in Biological Engineering with a minor in Science Policy from Massachusetts Institute of Technology.
	Newsha K. Ajami, is the Chief Development Officer for Research at EESA. A leading expert in sustainable water resource management, smart cities, and the water-energy-food nexus, she uses data science principles to study the human and policy dimensions of urban water and hydrologic systems. In her role at LBL, she is focused on developing and leading strategic and impact-focused research initiatives at the nexus of water, energy, and carbon.

Newsha Ajami, PhD ***Chief Strategy and Development Officer for Research, Berkeley Lab***	Dr. Ajami served as a gubernatorial appointee to the Bay Area Regional Water Quality Control Board for two terms and is currently a mayoral appointee to the San Francisco Public Utilities Commission. She is a member of the National Academies Board on Water Science and Technology and serves as a Nonresident Senior Fellow at the Brookings Institute. Dr. Ajami also serves on several state-level and national advisory boards. Before joining LBL she served as the founding director of the Stanford Urban Water Policy program and a senior research scholar at the Stanford Woods Institute for the Environment. Earlier in her career, she also served as a Science and Technology fellow at the California State Senate's Natural Resources and Water Committee where she worked on various water and energy-related legislation.

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5. BACKGROUND ON HOUSING WATER NEXUS:

Secure water access is a fundamental human right and is critical for sustainable and healthy communities. The housing-water nexus reveals the disparities in piped water access in urban areas and the need for best practices for addressing water scarcity through water-smart development, housing and new construction policies, and other urban water-user solutions.

The aridification of the western United States is forcing local water districts to take serious measures to conserve water. For example, banning some water uses, such as outdoor irrigation; halting new development that requires hookups to the local water system; and requiring water conservation and efficiency measures for new and renovated properties. The cost of water is also rising.

The housing-water nexus can be a challenge for creating more affordable housing, which the western United States sorely needs as populations in urban centers across Arizona, Colorado, and Utah continue to soar. In the long term, the measures taken to temporarily ban new development will impact real estate markets and affordability. Many areas already face a housing affordability crisis. Without the ability to build more, housing prices will continue to rise, causing cascading negative effects on the local economy. (Water Wise).

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

- The science behind the increasing prevalence of drought and its impacts;
- The business case for water-smart real estate development and landscaping;

- Strategies and best practices for addressing water scarcity through water-smart development and landscaping;
- Public-sector policies and practices that can support responsible water use; and
- Profiles of water-smart developments and their outcomes.

Additionally, studies from Lawrence Berkley's National Lab identify that widespread urbanization has led to diverse patterns of residential development, which are linked to different resource consumption patterns, including water demand. Newsha's research looks at classifying neighborhoods based on urban form and sociodemographic features which can provide an avenue for understanding community water use behaviors associated with housing alternatives and different residential populations.

Urban leaders are at the center of providing solutions to the housing-water nexus. Below are some additional resources from experts that participate in the Western Water Security Technical Advisory Committee.

Housing-Water Expert Speaker Resources:

- *Water Wise: Strategies for Drought-Resilient Development- Urban Land Institute*
- *Lawrence Berkeley National Lab Academic Article Publications – Newsha Ajami*
- *Diverse paradigms of residential development inform water use and drought-related conservation behavior*

Water Efficiency and Affordability Resources

- *Kly Center for Water Policy* – *Untangling Housing Affordability & Groundwater Regulation*
- *Policy White Paper on creating a federal Plumbing Repair and Efficiency Assistance Program* **–** This proposed program is similar to DOE's successful Weatherization Program that supports energy efficiency improvements in low income households.
- *The Economic Value of Efficiency for California Water Service: Lower Water Bills* – This is the most recent analysis, among other AWE studies, that shows water efficiency saves water and money for both utilities and their customers compared to what costs and associated bills would have been without efficiency.
- *An Assessment of Water Affordability and Conservation Potential in the City of Santa Barbara* –This is the most recent in a series of AWE studies that help local water providers identify their most economically burdened customers and that evaluates how water conservation and efficiency helps to lower water bills for low-income customers.

Water and Land Use Planning/Development Resources

- *Policy Brief on creating a federal tax credit for WaterSense labeled homes.*
- *Net Blue model ordinance and supporting materials for water-neutral growth*
- *Drought Ready Construction: Model Ordinance*

- *Examining the Water and Land Use Connection in Water Utility Planning Requirements: An Inventory of the Laws of all 50 States*
- *Integrating Water Efficiency into Land Use Planning: A Guidebook for Local Planners* – *Western Resource Advocates*