

# 2018 WATER UTILITY CLIMATE ALLIANCE ANNUAL REPORT



San Francisco, Calif. (Credit: National Park Service)

October

## Summary of activities

This report documents the Water Utility Climate Alliance's 2018 Work Plan progress and provides a list of next steps.

# 2018 Water Utility Climate Alliance Annual Report

## MESSAGE FROM THE CHAIR



As 2018 comes to a close, and with it Denver Water’s first year as Chair and Executive Chair, I’m happy to report many significant achievements for WUCA during our tenth anniversary.

During 2018, WUCA undertook projects to identify best practices in climate resilience, map climate risks and impacts to utility business functions, explore new partnership opportunities with other climate-, adaptation-, and water-focused groups, and learn from engineers within WUCA utilities about obstacles encountered in adopting climate change in practice. We also built on previous accomplishments as we hosted two additional technical trainings in Los Angeles and Portland, which focused on how to plan for deep uncertainty. Many WUCA staff members were also able to showcase their experiences with developing climate resilience as panelists in Austin Water’s May forum, *Creating Resilient Cities: Water Utilities and Climate Change*.

We, the staff, appreciate your continued support for WUCA, and we look forward to highlighting our 2018 accomplishments and presenting our plans for 2019 at this year’s GM Retreat.

Laurina Kaatz  
Chair, WUCA  
Climate Program Manager, Denver Water

## SUMMARY OF ACTIVITIES

### INTRODUCTION

Each year the Water Utility Climate Alliance (WUCA) develops a list of projects that will help meet priorities outlined in its [2017-2021 Strategic Plan](#). A project description and budget is developed for the highest ranked projects based on how well they address the Alliance’s current priorities, value added to individual WUCA utilities, and staff time available to execute the project. This forms the annual work plan and budget presented to WUCA executives each year at the General Managers’ Retreat in October. The 2018 Work Plan

and Budget (henceforth the Work Plan), outlines ten projects, including four new technical projects, three projects supporting the administration of the Alliance, two staff education and planning initiatives, and one emerging opportunity initiative. All projects are executed using a committee process made up of three or more WUCA staff contributors and one staff member taking the lead to manage each project. The total budget for 2018 activities was \$198,000, but because of unspent funds from 2017 activities rolled over to 2018, the total for each of the then 11 member agencies was only \$11,480. This report documents WUCA's 2018 accomplishments and next steps, organized by the approved Work Plan.

## 2018 ACCOMPLISHMENTS AND NEXT STEPS

### Austin Forum (Daryl Slusher)

The Austin Forum, "Creating Resilient Cities: Water Utilities and Climate Change" was held in May 2018. Representatives of eleven of the nation's largest water utilities gathered in Austin to discuss the challenges climate change is bringing to water utilities and what utilities are doing to address these challenges. Numerous Austin residents and stakeholders turned out to participate in the forum.

The program began with a keynote from Dr. Katherine Hayhoe highlighting her work with Austin and other cities to quantify the potential impacts and plan for our future. Panel discussions which followed included:

- The Other Colorado River: Leveraging Partnerships to Share Shortage.
- Incorporating Climate Information into Water Utility Planning, Engineering and Operations.
- Resilient Utilities in the Face of Extremes.



In conjunction with the forum, Austin's mayor hosted a panel at Austin's Metropolitan Breakfast Club.

### Communication (Kavita Heyn)

In 2018, WUCA and the Communications Science Lead from University of Washington Climate Impacts Group (CIG) gathered input from engineers in five utilities (Austin, New York, Philadelphia, Portland, Southern Nevada) to understand if and how engineers access and use climate change information in their work. These climate conversations solicited meaningful information for WUCA about how climate change resources can be more effectively provided to and applied by engineers.

Common themes emerged among utilities. First, engineers across utilities emphasized that WUCA climate staff are credible, vital sources of climate information in the utilities. Second, most engineers want to be part of ongoing climate conversations and work within their water utilities. Third, engineers often do not know how or when to use climate change information in their work, and sometimes do not apply it as a

result. This could potentially limit climate adaptation opportunities within these utilities. Fourth, engineers seek practical case studies from their peers in the water sector, and want to visualize how climate data are translated into metrics that can be integrated into design standards or long-range planning. Additional takeaways emerged that will be available in a project summary report on WUCA's website.

This project has enabled several WUCA utility engineers to engage in climate change discourse and to offer their critical perspectives on how climate information could be better mainstreamed into utility practices and operations. WUCA will leverage these insights in Phase 2 of the project in 2019, with the goal of developing visually compelling climate change and engineering case studies that serve as examples for WUCA engineers on how climate change information is being used in a range of engineering roles.



### **Business Function Mapping (Laurna Kaatz)**

This investigation examines how individual and cascading climate risks may affect, and should inform, business practices throughout water utilities, such as water use and supply planning, capital investment decisions, purchasing and supply chain issues, asset management programs, employee and customer service issues, emergency management, and others. The goal of this project is to conduct a robust decision mapping process resulting in the development, testing, and communication of a replicable Water Utility Business Resilience Framework that WUCA utilities and others can use to create an enterprise-wide understanding and prioritization of the exposure, sensitivities, and opportunities that utility business functions face in a changing climate. This framework will allow utilities to accelerate the incorporation of climate considerations into everyday utility management.

The Water Research Foundation (WRF) equally matched WUCA funding and we are collaboratively executing this work. Additional benefits from WUCA's collaboration with WRF include a built-in peer review process, publication, and widespread dissemination of the final report.

### **Network Strategy (David Behar)**

This project executed a two-part, integrated work plan consisting of: 1) an assessment of WUCA's network health, stage of development, and impact from a WUCA staff perspective, and 2) an assessment of the climate adaptation field organizational landscape to contextualize WUCA's work and focus in its Strategic Plan, and to identify potential partners for future collaboration. A consultant team from Ullman Consultants produced several analyses, managed by the Networking Committee. Final documents were delivered in September that will be used to guide the next phase of this project. A survey of WUCA staff (N=17) was designed, implemented, and summarized to discern internal perceptions of WUCA strengths and potential areas for improvement. The survey also identified areas of highest priority for WUCA activities going forward. A landscape assessment evaluated activities and potential partnership opportunities for 20 selected entities focused on climate adaptation nationally and, to a lesser extent, internationally. And

finally, a set of recommendations based on all the above work was developed. These products, and next steps, are being evaluated by WUCA staff now.

### Training Workshop with EPA (Laurna Kaatz)

Following a highly successful pilot training event in September of 2017, the EPA Water Security Division and WUCA refined and hosted a second technical training on planning for climate change uncertainty for water sector professionals in L.A. at the Metropolitan Water District of Southern California office. This year, additional funding and technical support was provided by NOAA’s Climate Program Office. A second two-day training is scheduled to occur in Portland, OR in early December. This initiative is a **Knowledge Transfer** strategic priority, and meets the “create effective mechanisms for information sharing among WUCA members and collaborators” objective. The three training objectives included:

- Enhance understanding of the capabilities and limitations of climate science and learn best practices for using it in water and wastewater utility adaptation planning and decision making.
- Learn about methods for addressing uncertainty when incorporating climate science into decision-making processes.
- Gain communication skills needed to generate buy-in for investments in climate adaptation and resilience building activities.

#### 2018 Accomplishments:

- Held training event in L.A., CA on August 8<sup>th</sup>-9<sup>th</sup>
- 40 participants attended the training.
- The 16 members of the training team, which included four WUCA staff, are considered international experts in the field of climate science, water resource planning, and communication.
- Developed new and refined existing training agenda, materials, and logistics within four months.



#### Next Steps:

- Refine agenda and materials for upcoming training in Portland.
- Survey participants from the first and second events to track training effectiveness.
- Seek funding partners to hold two or more trainings a year.

### Member Utility and Climate Practitioner Presentations (Rachel Pence)

This Work Plan item helps fill the **Knowledge Generation** strategic priority and the ‘Stay abreast of current and emergent trends’ strategic objective. Through this Work Plan item, we hear what others in the sector are doing to address and adapt to climate change. It is also an opportunity to share how member utilities and practitioners are applying climate change information, to stimulate progress amongst member

agencies, beyond just the staff directly engaged with WUCA. These learning opportunities are an important part of staying current on emerging science and continuing to be the leaders in climate adaptation and planning.

**2018 Accomplishments:**

- Coordinated with presenters and AMWA to arrange bimonthly presentations to WUCA.
- Covered a wide breath of topics with speakers from climate scientists, national agencies, and member utilities.
- Fostered relationships with climate professionals and provided a forum to learn and ask questions from experts.
- Kept an archive on Basecamp of presentation PowerPoints, videos, and associated documents for later reference.
- Kept a running list of potential presenters.

**Next Steps:**

- Continue to bring in a variety of experts for WUCA to learn from.
- Develop a plan for coordination with the WUCA affiliates program.
- Complete similar activities in 2019.

**Website (Keely Brooks)**

WUCA continues to improve public outreach through its website, [wucaonline.org](http://wucaonline.org). The WUCA website, hosted by the Southern Nevada Water Authority, was redesigned in 2017, has a fresh new look and is easier to modify. WUCA makes regular updates to the site, informing our audience about recent activities and spotlights one of the twelve members monthly. The new website also links to useful resources, including climate change related member publications. Visitation statistics are tracked on a monthly basis. This initiative addresses the **Knowledge Transfer** strategic priority and meets the “maintain an up-to-date website and explore social media presence” objective.



In addition to managing WUCA’s website, the Southern Nevada Water Authority maintains a drive sharing application called Basecamp, which enables WUCA members and collaborators to share information. This capability meets the “create effective mechanisms for information sharing among WUCA members and our collaborators”, an objective within the **Knowledge Transfer** strategic priority.

**Best Practices in Climate Adaptation (Laurna Kaatz)**

This project is gathering and sharing WUCA’s experiences to help encourage and adopt climate change adaptation strategies and actions more effectively. This is being done through developing a set of Best Practices that are grounded in WUCA work products and WUCA member’s experiences and collected

through an iterative process. We have defined a spectrum of what climate adaptation entails and are working to further refine it. Each WUCA utility is having one-on-one conversations with principal investigator Julie Vano to share insights to incorporate and enrich this work with diverse perspectives and concrete examples. From these conversations, a draft structure for a living document is being developed which will be further defined and detailed in the next few months. To date, this work has spurred conversations both within and across utilities on what climate adaptation is, what WUCA members have learned through experience, and what are innovations that should be shared across utilities. Plans are also in place for this work to be shared at several National meetings this coming year – the American Geophysical Union annual meeting, the National Climate Adaptation Forum, and AWWA conferences. This will provide an opportunity to showcase WUCA’s efforts and gain additional perspectives within the adaptation community.

### WUCA In Review (Sebastian Malter)

WUCA members developed and tested a broad range of practical solutions to support climate change adaptation for utilities over the last 10 years and as a result have generated vast knowledge from the lessons learned and experiences. The network’s collective and diverse portfolio goes beyond purely technical solutions as it also developed support tools such as climate change communication. Such multi-faceted approaches are needed to mainstream and operationalize climate change adaptation on a water sector-wide scale in a sustainable manner. The anniversary provided an opportunity to not only present and promote member benefits but also to review and highlight the influences the network had over the last 10 years to its members and beyond. In this context, WUCA member and WUCA alumni surveys were carried out to identify and highlight the benefits and influences the alliance had over the last decade.

Members reported that WUCA:

1. Serves as a knowledge hub of tested climate adaptation planning solutions and best practices (e.g. applied climate science, decision-making under deep uncertainty approaches, climate communications, etc.).
2. Provides access to credible and up-to-date information and knowledge. WUCA staff combines vast experience and expertise in the climate adaptation—urban water management nexus. WUCA’s findings are perceived as credible and trustworthy.
3. Leverages expertise, exchanges information and co-produces knowledge among individuals and organizations.
4. Provides opportunities to pool and mobilize resources for projects individual organizations would not have completed independently, such as the Business Function Mapping project. WUCA also enables coordination of efforts on such items as comment letters about climate science reports.

The project also revealed that the alliance was instrumental in increasing the ability of its members to better adapt to climate change. In many cases, WUCA served as a catalyst to initiate climate action. For example, WUCA stimulated the needed cultural change from a traditional planning approach to planning under an uncertain future with climate change. Also, influences of WUCA reached far beyond the alliance’s boundaries. For example, WUCA advocated the need for actionable climate science in the water utility sector and served as a knowledge broker between producers of climate science and end-users of climate information. As a direct result climate science research groups started adopting their research agendas to be able to better meet the end user needs.

Several other benefits and influences were identified which will be made available in a project summary report.

### Next steps

- Finalize project summary report and adopt findings into the Best Practices project.
- Share results with other ongoing initiatives (the project directly informs the Best Practices and Networking Project).

## Midyear Retreat (Laurna Kaatz, Mohammed Mahmoud, AMWA)

Every year WUCA staff meets during the summer to update each other on Work Plan progress and respective utility activities and to begin discussing the next year's Work Plan. In 2018, WUCA staff coordinated the midyear retreat with Austin Water's conference on climate change and resilience. This annual activity addresses the ***Sustain the Coalition*** strategic priority.



### 2018 Accomplishments

- Featured presentation by newest member Philadelphia Water Department.
- Identified potential items for 2019 Work Plan.

### Next Steps

- Coordinate logistics with the 2019 National Adaptation Forum Committee. Event will be held in Madison, Wisconsin towards the end of April.
- Finalize Midyear Retreat date and agenda.

## CONCLUSION

WUCA marked its ten-year anniversary with a slate of ambitious projects, including the Creating Resilient Cities forum in Austin. WUCA will build on the progress of this year's projects, begin examining the cost of climate adaptation investments, and continue to develop relationships with other climate-focused organizations to further its mission. WUCA will also continue to improve and refine its practices to ensure it is most efficiently and effectively meeting goals and working together as an alliance. As it enters its second decade, WUCA looks forward to furthering its vision of building resilient utilities and thriving communities.