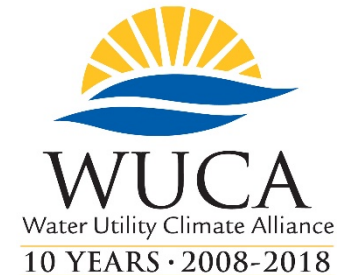


**Building Resilience to a Changing Climate:
A Technical Training in Water Sector
Utility Decision Support**



Welcoming Remarks and Agenda Review

**Jeff Kightlinger, General Manager, Metropolitan Water District of
Southern California**

**Lurna Kaatz, Climate Program Director, Denver Water and Chair,
Water Utility Climate Alliance**

**Brad Spangler, Senior Mediator and Program Manager, Meridian
Institute**

August 8, 2018

**Metropolitan Water District of Southern California
Los Angeles, CA**

Water Utility Climate Alliance



WUCA
Water Utility Climate Alliance
10 YEARS • 2008-2018



<http://www.wucaonline.org/>

Vision: Climate-resilient water utilities, thriving communities

Mission: Collaboratively advance water utility climate change adaptation

Introduction

Climate change is here and now...
AND it's deeply uncertain



Training Vision

WUCA's Vision:

- Foster smart translation and use of climate information
- Encourage action on adaptation and resilience planning under conditions of **deep uncertainty**
- Effectively communicate

This training is about:

- State of the science: climate, applied, decision, communication
- Long-term focus
- Adaptation and resilience

Acknowledgements

- LA Planning and Training Team Members
 - Ashley Greene, Steve Fries, Brad Spangler, Joel Smith, Robert Lempert, Lurna Kaatz, Brandon Goshi, Jenny McCarthy, Julie Vano, Heidi Roop, Neil Berg, Alan Butler, Peggy Nguyen, Seevani Bista, Keely Brooks, Edward Gardiner
- Extensive Material Review by:
 - Paul Fleming, Shannon Halley, David Behar, Jenny McCarthy, Kavita Heyn, Julia Rockwell, Sebastian Malter (WUCA)
 - Kenan Ozekin (Water Research Foundation)
 - Adam Carpenter (American Water Works Association)
 - Erica Brown (Association of Metropolitan Water Agencies)
 - Ken Nowak, Rebecca Smith (US Bureau of Reclamation)
 - Jeff Lukas (Western Water Assessment, University of Colorado)
 - Ben Harding (Lynker Technologies)
- Concept Review and Outreach Partners:
 - AGCI, The Kresge Foundation, NAWC, NACWA, WEF, WRA, WERF, Black&Veatch, MWH, and others!



Climate Resilience Evaluation & Awareness Tool (CREAT)

Owners and operators of drinking water and wastewater utilities can use this web-based tool to assess potential climate change threats and evaluate adaption options at their sites.

Downscaled CMIP3 and CMIP5 Climate and Hydrology Projections

Access an archive of statistically downscaled versions of daily and monthly temperature and precipitation projections. The archive also includes monthly hydrology projections.

Training Objectives

- Enhance understanding of the capabilities and limitations of climate science and learn best practices for using it in long-term water, wastewater and stormwater utility planning;
- Learn about planning methods for addressing uncertainty when incorporating climate science into utility decision-making processes; and
- Learn communication strategies to address institutional barriers and generate engagement around utility climate adaptation and resilience building.



Training Agenda Overview – Day 1

Time	Session
8:30-9:00 a.m.	Welcome and Agenda Review
9:00-10:15 a.m.	Group Exercise: Decisions for the Decades: Understanding Deep Uncertainty
10:15-10:30 a.m.	Break
10:30-11:00 a.m.	Decision-Making in the Face of Uncertainty: Colorado River Case Study
11:00 a.m.-12:00 p.m.	Training Participant Experience and Challenges
12:00-12:45 p.m.	Lunch (Sponsored by WUCA)
12:45-1:00 p.m.	Practical Considerations for Climate Analysis and Adaptation
1:00-1:45 p.m.	Climate Science and Modeling for Water Sector Professionals
1:45-2:15 p.m.	A Practical Look at Downscaling and Bias Correcting Climate Projections
2:15-2:45 p.m.	Meeting Water Utility Needs: Translating Climate Science into Hydrology
2:45-3:00 p.m.	Break
3:00-3:15 p.m.	Dos and Don'ts for Using Climate Change Information for Water Planning
3:15-4:45 p.m.	Guiding Principles for Adaptation and Resilience Planning
4:45-5:00 p.m.	Key Takeaways from Day 1
5:00 p.m.	Adjourn

Logistical Items

- Restrooms
- Audio/microphones
- Please silence cell phones
- Food and beverages
- Evacuation procedures
- Feedback forms