Building Resilience to a Changing Climate:

A Technical Training in Water Sector Utility Decision Support

WUCA
Water Utility Climate Alliance

Welcoming Remarks and Agenda Review

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Austin, TX

Water Utility Climate Alliance

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

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U.S. Climate Resilience Toolkit

Steps to Resilience | Case Studies | Tools | Expertise | Regions | Topics

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.

Thank you to our Austin Training Sponsors!

Winning Climate Resilience

Austin Water

Climate Hero

Freese and Nichols

Clever Adaptor

HDR

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
8:30-9:30 a.m.	Welcome, Agenda Review, and Introductions
9:30-10:45 a.m.	Group Exercise: Decisions for the Decades: Understanding Deep Uncertainty
10:45-11:00 a.m.	Break
11:00-11:30 a.m.	Decision-Making in the Face of Uncertainty: Austin Water Case Study
11:30-11:45 p.m.	Practical Considerations for Climate Analysis and Adaptation
11:45-12:15 p.m.	Climate Science for Water Sector Professionals
12:15-12:25 p.m.	Models 101
12:25-1:15 p.m.	Lunch (Sponsored by Freese and Nichols and WUCA)
1:15-1:30 p.m.	Refresher Activity
1:30-1:45 p.m.	Climate Modeling for Water Sector Professionals
1:45-2:30 p.m.	A Practical Look at Downscaling, Bias Correction, and Translating Climate Science into Hydrology
2:30-3:15 p.m.	Tarrant Regional Water District Case Study
3:15-3:30 p.m.	Break
3:30-4:25 p.m.	Guiding Principles for Adaptation and Resilience Planning
4:25-4:55 p.m.	Houston Case Study
4:55-5:00 p.m.	Key Takeaways from Day 1
5:00 p.m.	Adjourn

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Training Participant Experience and Challenges

Participant Overview

- Participants cover a variety of backgrounds including:
  - Government (Local, State, Federal) (37%)
  - NGOs (26%)
  - Drinking Water Utility (21%)
  - Consultants (5%)
  - Combined Utility (5%)
  - Academia (5%)

- *NOTE: Based on 19 responses out of 35 participants as of Nov. 18.*

Pre-Training Survey: Group Composition

- Primary Job Responsibilities:
  - 47% responsible for water resources/long-term planning
  - 32% responsible for water demand/conservation
  - 21% responsible for climate adaptation planning

- Other Significant Job responsibilities:
  - Environmental planning
  - Engineering capital projects
  - Public relations/communications
  - Research
  - Advocacy/policy
  - Sustainability/climate mitigation
  - Operations and maintenance

Pre-Training Survey: Science Use & Challenges

- Use of climate projections or climate change assessment information:
  - ~63% currently use some form of climate data
  - ~26% do not use climate data currently, but may in the future
  - No participants indicated their organization does not use climate information and will likely not in the future

- Challenges integrating climate information into work:
  - ~42% identified lack of training or understanding of climate data
  - ~37% identified other utility priorities taking precedent
  - Other key challenges:

Pre-Training Survey: Science Use & Challenges

Other challenges integrating climate information into work:

- Organization not supportive of integrating climate info (21%)
- Organization does not plan for long-term (16%)
- Funding for climate adaptation evaluations $ investments (16%)
- Internal utility communications (16%)
- External public communications (16%)
- Lack of data and stakeholder buy-in

Pre-Training Survey: Most Important Learning Goals

- **Climate Science & Modeling:**
  - How to communicate about the complex uncertainty inherent in climate adaptation (63%)
  - How to identify the best information for use in utility planning (58%)
- **Uncertainty Planning Methods:**
  - A better understanding of robust decision making approaches (58%)
  - Learning about tools to adapt to climate change (47%)
  - A basic understanding of approaches to planning and decision making within a highly uncertain context (32% somewhat or most)
- **Communicating Climate Science**
  - A basic understanding of climate science comms best practices (53%)
  - Comms best practices for integrating climate science into utility planning operations 47%)
  - Other: balancing urban/human and environmental water needs

Pre-Training Survey: Most Important Learning Goals

- **Other skills or information:**
  - How to communicate about the complex uncertainty inherent in climate adaptation (63%)

Introductions

- Name
- Title
- Affiliation
- One thing you're hoping to take away from this training

Logistical Items

- Restrooms
- Audio/microphones
- Please silence cell phones
- Food and beverages
- Feedback forms
- Parking discount tickets
- Poll Everywhere