

Building Resilience to a Changing Climate:

A Technical Training in Water Sector
Utility Decision Support



Date & Time: Tuesday, September 26, 2017, 8:00am – 4:30pm
Wednesday, September 27, 2017, 8:00am – 5:00pm

Location: UCAR Center Green Campus
Building CG1, Room 1212
3080 Center Green Drive
Boulder, CO 80301

Training Objectives

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

Agenda – September 26, 2017

| Time | Item |
|------------|--|
| 8:00 a.m. | Registration & Coffee Available |
| 8:30 a.m. | Welcome, Agenda Review, and Participant Introductions <i>Keely Brooks, Climate Science and Adaptation Lead, Southern Nevada Water Authority and Laurna Kaatz, Climate Program Director, Denver Water</i> <i>Brad Spangler, Senior Mediator and Program Manager, Meridian Institute</i> Welcoming remarks from the Chair and Vice-Chair of the Water Utility Climate Alliance (WUCA), review of the training agenda, and participant introductions. |
| 9:15 a.m. | Group Exercise: Decisions for the Decades: Understanding Deep Uncertainty <i>Robert Lempert, Principal Researcher, RAND Corporation</i> Interactive game-based exercise on decision-making under conditions of deep uncertainty followed by facilitated group discussion about how uncertainty affects the types of long-term planning decisions participants are supporting utilities in making. |
| 10:30 a.m. | Break |

| Time | Item |
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| 10:45 a.m. | <p>Decision-Making in the Face of Uncertainty at Denver Water</p> <p><i>Laurina Kaatz, Denver Water / WUCA</i></p> <p>Case study presentation focused on how Denver Water integrates climate considerations and associated data into planning and other utility business decisions, and how that work is communicated to key audiences.</p> |
| 11:15 a.m. | <p>Introduction to Conquering Climate Change Communications Challenges</p> <p><i>Keely Brooks, Southern Nevada Water Authority / WUCA and Karen Raucher, Policy/Communications Strategist, Corona Environmental Consulting</i></p> <p>This session will include a case example from the experience of Southern Nevada Water Authority about applied communications challenges, and introduce key communications issues to consider in preparation for an exercise on Day 2.</p> |
| 11:45 a.m. | <p>Facilitated Discussion: Training Participant Experience and Challenges</p> <p><i>Brad Spangler, Meridian Institute</i></p> <p>This facilitated discussion will provide an opportunity for training participants to share information about the types of long-term planning and adaptation decisions for which they are providing technical support to water sector utilities, and the challenges they are facing in that work.</p> |
| 12:30 p.m. | <p>Lunch (Sponsored by WUCA)</p> |
| 1:15 p.m. | <p>Translating Actionable Information</p> <p><i>Laurina Kaatz, Denver Water / WUCA and Keely Brooks, Southern Nevada Water Authority / WUCA</i></p> <p>This session will introduce important questions planners and consultants need to consider when preparing to complete climate assessments and adaptation planning.</p> |
| 1:30 p.m. | <p>Climate Science for Water Sector Professionals</p> <p><i>Joel Smith, Principal Associate, Environment and Natural Resources, Abt Associates</i></p> <p>Discussion of the capabilities and limitations of climate models and climate projections for applied decision making. The session will include a discussion of what information climate science is currently capable of providing to support decision making at a local and regional scale. Time will be reserved for questions and answers.</p> |
| 2:15 p.m. | <p>Break</p> |
| 2:30 p.m. | <p>Using Climate Change Projections to Understand Uncertainty</p> <p><i>Ethan Gutmann, Project Scientist II, National Center for Atmospheric Research</i></p> <p>This session will review potential applications and limitations of using projections of future climate change at different scales and in hydrologic evaluations. Time will be reserved for questions and answers.</p> |

| Time | Item |
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| 3:15 p.m. | <p>Water Utility Climate Adaptation and Resilience Planning</p> <p><i>Joel Smith, Abt Associates</i></p> <p>Overview of approaches for evaluating the potential resilience-building value of adaptation options in the face of uncertainty. This presentation will contrast cutting-edge climate vulnerability assessment and long-term climate adaptation planning methods with traditional risk assessment and planning methods.</p> |
| 4:00 p.m. | <p>Key Takeaways from Day 1</p> <p><i>Brad Spangler, Meridian Institute</i></p> <p>Review key takeaways regarding the state of climate science, sources of uncertainty and what it means for utility decision making. Participants will also be asked to complete an evaluation of the Day 1 sessions.</p> |
| 4:30 p.m. | <p>Adjourn</p> |

Agenda – September 27, 2017

| Time | Item |
|------------|--|
| 8:00 a.m. | <p>Coffee Available</p> |
| 8:30 a.m. | <p>Reflections on Day 1 and Review of Day 2 Agenda</p> <p><i>Brad Spangler, Meridian Institute</i></p> <p>Participant reflections on Day 1 of the training and review of the agenda for Day 2.</p> |
| 8:45 a.m. | <p>Methods for Decision-Making Under Deep Uncertainty</p> <p><i>Robert Lempert, RAND Corporation</i></p> <p>Overview and comparison of innovative methodologies for decision-making under deep uncertainty. This session will provide a unique opportunity for participants to examine and understand the challenges of deep uncertainty.</p> |
| 10:15 a.m. | <p>Break</p> |
| 10:30 a.m. | <p>Facilitated Discussion: Methods for Decision-Making Under Deep Uncertainty</p> <p><i>Robert Lempert, RAND Corporation and Lurna Kaatz, Denver Water / WUCA</i></p> <p>Facilitated discussion about the methodologies for decision-making under deep uncertainty presented in the previous session.</p> |

| Time | Item |
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| 11:00 a.m. | <p>Adaptation Decision Making at Metropolitan Water District of Southern California</p> <p><i>Brandon Goshi, Manager of Water Policy and Strategy, Metropolitan Water District of Southern California</i></p> <p>Case study presentation focused on how Metropolitan Water District of Southern California is using new decision-making methods to address uncertainty in their long-term water resources and climate adaptation planning and decision-making.</p> |
| 11:30 p.m. | <p>Lunch (Sponsored by WUCA)</p> |
| 12:15 p.m. | <p>Group Exercise: Scenario Design (Accelerated Introduction to Scenario Planning)</p> <p><i>Laura Kaatz, Denver Water / WUCA and Keely Brooks, Southern Nevada Water Authority / WUCA</i></p> <p>This group exercise will focus on identifying and prioritizing external factors – of which climate change is one among many – that introduce uncertainty and influence long-term utility planning contexts.</p> |
| 1:45 p.m. | <p>Break</p> |
| 2:00 p.m. | <p>Conquering Climate Change Communications Challenges</p> <p><i>Karen Raucher, Corona Environmental Consulting</i></p> <p>Participants will learn about key concepts and practice skills to strengthen their ability to devise communications strategies and messages that generate buy-in around altering planning methods and taking action on climate adaptation and resilience building. This session will consist of a combination of presentation and interactive elements.</p> |
| 4:30 p.m. | <p>Key Takeaways, Reflections and Wrap-Up</p> <p><i>Brad Spangler, Meridian Institute</i></p> <p>Review key takeaways from the training and participants share reflections on how they intend to apply what they have learned during the training. Participants will also be asked to complete an evaluation of the Day 2 sessions.</p> |
| 5:00 p.m. | <p>Adjourn</p> |