



# Climate Ready Water Utilities Working Group

## Meeting #4 Summary (DRAFT)

July 8 & 9, 2010

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The following is a recap of the fourth meeting of the Climate Ready Water Utilities (CRWU) Working Group. The meeting took place in Boulder, Colorado on July 8 & 9, 2010. The substance of the Working Group's discussions will be captured in updates to the draft Working Group Report. All meeting materials are available on the CRWU public website at:

<http://water.epa.gov/aboutow/ogwdw/ndwac/climatechange/index.cfm>.

### Welcome, Overview, and Introductions

- Lauren Wisnewski, EPA's Designated Federal Official for this process, opened the meeting.
- Paul Fleming and Olga Morales-Sanchez, Working Group Co-Chairs, and Rob Greenwood, Lead Facilitator, provided an overview of the meeting agenda and objectives.

### Background Presentations

#### Brad Udall

Mr. Udall presented on ways current times are connected to water and actions needed with regards to water resources, independent from climate change. Mr. Udall noted that these are not normal times in which we live and some would even say these are dangerous times. Four ways these times connect to water are: 1) population – there is projected to be a 40% growth by 2050 in the U.S.; 2) the carbon-cycle – CO<sub>2</sub> levels are up by 30+%; 3) the water cycle – including dams, drained wetlands, moving massive amounts of water, extracted groundwater, and water quality; and 4) the nitrogen cycle. We need to think very differently about solving today's problems and the only way to do this is with the concept of robustness. Planning outside of the 100-year event is something we will have to do, partially because we do not know which event that is anymore. Big problems are often tackled by diversifying risk as economics is important to achieving resiliency and redundancy. In this vein, the water sector should, share today's risk with other sectors as the problems are too big for the water sector to take on alone. The energy sector in the west is a good place to start.

Mr. Udall provided information from a number of different sources. From Thomas Homer Dixon's *The Upside of Down* – There are five big stresses today: population, energy, environment, climate, and economy. We have taken many of the redundancies out of our systems, so when things fail they fail in ways we have not seen before. Examples of this include the Gulf oil spill and the current economic meltdown. From Nassim Taleb's *The Black Swan: The Impact of the Highly Improbable* – Events that are outliers, or are out of the realm of normal expectations, have an extreme impact. These events are often believed to have been predictable after the fact (for example, 9-11). Ordinary events are mostly inconsequential. From an article by Casey Brown in Journal of Water Resources Planning Management titled "The End of Reliability" – In order to deal with the current state of affairs, future plans need to be made robust and must include "on-demand" components that can be called on when needed. There must be means to move beyond traditional infrastructure, including things such as innovation, economic mechanisms, flexibility, and multi-disciplinary integration. From *Resilience Thinking: Sustaining Ecosystems and People in a Changing World* by Brian Walker and David Salt – Adaptive systems go through phased cycles of growth, conservation, and reorganization. There is a need to understand these basic principles of resiliency and where the cycles break down.

## Tools Presentations

David Travers, EPA; Dean Moss, Beaufort-Jasper, Water and Sewer Authority; and Steve Fries, Computer Science Corporation (CSC), presented on EPA's Climate Resilience Evaluation and Awareness Tool (CREAT). Paul Wagner, USACOE, gave a presentation on the Army Corps Watershed Investment Decision Tool. Levi Brekke, Bureau of Reclamation, presented on high level technical guidance options for incorporating information on climate change the Bureau is developing, additional tool development activities, and development of internal capacities.

## **Meeting Discussions**

The majority of the meeting focused on further refining the draft Finding Statements, Adaptive Response Framework, and Enabling Environment Recommendations that were extensively updated after the third meeting. On the first day, the Working Group discussed a comprehensive set of detailed comments provided by Working Group members during their review of the redrafted materials prior to the meeting. Comments were walked through one-by-one with further discussion and refinement occurring on Day 2, based on Day 1 discussions and overnight work by the facilitation team. All final decisions will be incorporated into the full draft of the Working Group report, shown in tracked changes, to be distributed to the Working Group for fatal flaw review prior to the last meeting.

The Working Group also discussed at length on both days the draft Incentives and Tools sections developed via Task Team work between the third and fourth meetings and identified modifications needed to these sections. Based on the discussion, the Incentives section will be restructured, the focus clarified, additional "other" incentives added along with the concept of creating a climate ready community membership opportunity, and language drafted to tie this section to the Recommendations. Updates to the Tools section will include the addition of ten existing and five needed tools, minor clarifications, two substantive changes, and the building out of six areas. Specific changes and comprehensive discussions on both the Incentives and Tools sections will be incorporated into the draft Working Group Report.

By the end of the meeting all but two of the key issues identified prior to the meeting were stable. Those two issues will be further worked through between the fourth and fifth meetings, with final discussion and decision at the fifth meeting. At the end of the second day, the facilitation team conducted a round-robin consensus check with Working Group members to see where they stood regarding support of the Working Group report as it moves towards finalization. The results were as follows:

- Support: 12
- Strongly Support: 0
- No Support: 0
- Absent: 8 (note the majority of these members left earlier in the day)

## **Next Steps**

- Prepare the meeting summary and develop the meeting discussions into a reworked draft Final Working Group Report. Obtain feedback and information from Working Group members as part of the rewriting process, and distribute the updated draft Final Report to the full Working Group and Federal Partners for review prior to the fifth and final meeting.
- Check-in with working group members who were unable to attend the meeting or had to leave early to ensure they are fully informed of the working group's progress.

## **Public Comments and Closing**

- Carol Russell, EPA Region 8, provided the following comment: Thank you for all the time the Working Group is putting in to this. It is an amazing effort and everyone involved is doing an amazing job. In

addition, placing adaptation first is great. It would be even better if in the end there is more about what would it really take to be climate ready and how best to serve your customers.

- John F. Henz, C.C.M. Innovative Solutions for Science and Engineering, Certified Consultant and Meteorologist said that it is important with modeling processes and availability of data that someone pays attention to how technical tools are used. All of the issues Mr. Henz saw, the Working Group discussed at this meeting which is great. The climate drivers in a community might be energy, politicians, the public, air quality, or others – all of which need to be included. Where you take the time to forge relationships with all parties, it really does work. Mr. Henz really like what he heard, and felt the Working Group is headed in the right direction. He also said it is very enlightening to see what the Working Group is developing.
- Written comments are welcome throughout the process and should be sent to Ms. Wisnewski. In addition, all face-to-face meetings will include time for public comment. The following public website includes all meeting agendas and summaries, and additional information:  
<http://water.epa.gov/aboutow/ogwdw/ndwac/climatechange/index.cfm>.
- Ms. Wisnewski, adjourned the meeting at 2:00pm Mountain Time.

## Attendees

Working Group Members		Federal Partners
Matt Appelbaum	Tony Quintanilla	Joan Brunkard, CDC
Katherine Baer	Sri Rangarajan	Hiba Ernst, EPA
Jeff Cooley	Steve Schmitt	Juliette Hayes, FEMA
George Crombie	Marcia St. Martin	Roger Pulwarty, NOAA
Pat Davis	Michael Wallis	David Travers, EPA
Paul Fleming	Rebecca Weidman	Paul Wagner, Army Corps
Cindy Forbes	Rebecca West	
Gregory McKnight	Paul Whittemore	
Olga Morales-Sanchez	Doug Yoder	
Pat Mulroy*		

\*Richard Holmes, Ms. Mulroy's alternate, was present.