Climate Ready Water Utilities Working Group

Meeting #3 Summary (DRAFT)

May 5 & 6, 2010

The following is a recap of the third meeting of the Climate Ready Water Utilities (CRWU) Working Group. The meeting took place in Chicago, Illinois on May 5 & 6, 2010. The substance of the Working Group's discussion is captured below. All meeting materials are available on the CRWU public website at: http://www.epa.gov/safewater/ndwac/#current.

Welcome, Overview, and Introductions

- Lauren Wisnewski, EPA's Designated Federal Official for this process, opened the meeting and noted that Working Group Member Rex Kontx, representing the Tribal community, has not been able to participate in this process.
- 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

Based on suggestions from Working Group members, two outside presenters gave background presentations. Below are highlights from those presentations and the discussion that followed.

Randy Blankenhorn

Mr. Blankenhorn presented on the Chicago Metropolitan Agency for Planning (CMAP). CMAP, now four years old, is a combination of two agencies that came together when a need to think about the region in a different way—as one economic entity—became evident. CMAP was created to integrate planning for land use and transportation in the seven counties of northeastern Illinois and is overseen by a 15-member appointed board, half elected officials and half from the business and civic communities. CMAP acts as a convener and coordinator of approximately 300 local entities, most of which are independently operated. CMAP's initial charge was to create the region's first comprehensive regional plan, called GO TO 2040, to be implemented starting in fall 2010. Although there are not imminent water issues in the region, CMAP was also charged with developing a regional water-supply plan (the plan), which recognizes the need for a new way of thinking in order to prepare for and prevent future problems. The plan, due to be released in October 2010, was developed during a three-year process run through the Regional Water Supply Planning Group (RWSPG), a multi-stakeholder, 35-member committee.

The RWSPG began by building a foundational understanding of the issues facing northern Illinois from a watershed perspective, using scientific demand and supply data. When funding for this research stopped after two years, the local governments, realizing the importance of science in selling the plan to residents, came together and continued the funding. The impacts of climate change on water supply were some of the most controversial discussions the RWSPG had. The conclusion they came to was to deal with the topic indirectly, less as a goal and more as a measure, by ensuring the plan focuses on conservation of both water and energy, how to price and fund infrastructure improvements, and how and when to consider water reuse. The RWSPG also discussed full cost pricing and decoupling pricing and use, but determined it was too political of an issue to deal with in this venue; however, the plan does contain a large public outreach component and speaks to the need to improve metering. The plan also recognizes the direct tie between water usage and regional growth patterns, and the need to ensure water availability is one of the criteria used when looking at where growth will happen and how investments are made. Overall, everyone generally agreed to what the problems are; however there were significantly different

points of view as to what the solutions should be. In the end, the plan was passed unanimously, with many details to be worked out in smaller groups during implementation at the local and utility levels.

Another activity CMAP has undertaken is the Indicators Project. This is a performance measurement exercise looking at 280 different measures most related to natural resources and the environment, including a number of water quality indicators, to help the agency determine if the decisions they are making are really driving the results wanted and if not, why not. The indicators, rolled out in November 2009, took three years to develop and were based on regularly available data at a large regional scale as well as drilled down to local and neighborhood levels. The agency will spend the most time and effort on 40 "key" indictors, and will rely on other sources to track and analyze the remaining indicators. The agency also coordinated standardized reporting between all of the regional water utilities, as well as the creation of three sub-regional groups to focus on common issues.

Steve Moddemeyer

Mr. Moddemeyer presented on long-term solutions to potential climate change impacts, focusing on the relationship between reliability and resilience. He noted that in the face of climate change, water system reliability based on the historical weather record may no longer be accurate. It is a shift from a predictable to unpredictable operating climate. Resilience is one strategy to address this unreliability, anchored on looking at what is the appropriate scale of protection to build into a system so that the system can operate outside of the normal range of variability—which may end up as the new "steady state." Ways to add resiliency are to include a portfolio/range of options in the utility planning process, ensure efficiency over time by building in flexibility, and creating linkages (e.g., between water, energy, and land use).

Mr. Moddemeyer explained that different techniques make sense at different scales in a regional plan. One forward-thinking activity is to reestablish the connection of water to people and make this connection part of the urban aesthetic. Another option is to move from discrete to integrated systems, under the notion it is not just about water anymore—rather the issues and solutions span water, energy, land, and resource use. There is a need to shift from defining water too narrowly, as a broader view can be used as a tool to think about redesigning and reshaping cities and changing land use patterns. It is really about creating a new market and rethinking how a utility does business and stays relevant in a changing world by undergoing a strategic reorientation. The path forward is to work with innovators and early adopters to create prototypes and develop a new normal by convincing the public that these things are possible and save energy and money. It is about tying big policy issues together, thus leading to political support.

Examples of cities that have put the above principles into action include a brownfield development in Stockholm where water and energy are intertwined, projects in China to develop "eco" or super blocks for 5,000 people per 20 acres, Dockside Green in Victoria B.C., Sonoma Village, and Yesler Terrace in Seattle. Technologies used in these projects include rain water harvest and water reuse for non-potable purposes, membrane bioreactors to refresh cooling towers and flush toilets, sewer heat recovery, geothermal heating, and anaerobic digesters to fire energy-creating turbines. The cost of emerging technologies is going down, with a crossover already occurring where some of this distributed technology is less expensive than traditional technology.

Meeting Discussions

The majority of the meeting focused on refining the draft Finding Statements, Adaptive Response Framework, and Enabling Environment Recommendations that were extensively redrafted after the second meeting. On the first day, the Working Group discussed the comprehensive set of comments provided by Working Group members during their review of the redrafted materials prior to the meeting. The Working Group identified final modifications needed and reached general agreement and stability on

the content of the Findings Statements and Adaptive Response Framework. On the second day, the Working Group continued its discussion on review comments regarding a summary table included in the Adaptive Response Framework section, as well the Enabling Environment Recommendations. The second day ended with initial discussion on incentives and integration into existing programs, as well as continued (from Meeting 2) discussion on tools. Following is a summary of the path forward identified for each of the topics discussed. Specific changes and comprehensive discussions will be incorporated into the draft Working Group Report.

Day 1 Discussion Highlights

Finding Statements

General Comments

General comments are those that apply to the overall structure and content of the document. The Working Group provided the following feedback regarding the set of general review comments.

- Bring acknowledgment of potential secondary effects of climate change on a water supply (e.g. migration) into the document, while considering the overlap with how utilities already deal with those issues today. Link this with acknowledgement of interdependencies and connection to the broader world, and move it forward in the finding list.
- Position the document so that it does not imply no action is a viable action – reflect in the introductory piece that action today, at a certain level, makes sense. Strengthen the wording so that it clearly articulates this is about how to make decisions in the light of uncertainty, and avoid repetition to ensure crisper positioning of the overall message.
- More clearly articulate the descriptions of basic and focused engagement.
- Call out the distinction between emergency management planning and climate ready planning and the link between the two.
- Outreach to communities around planning for climate change should occur in the context of problems (impacts) and solutions (changes in operational strategies) rather than “climate change” specifically.
- The notion of being climate ready is currently positioned as an add-on; however it needs to be thought of as integrated into overall effective utility management. Acknowledge, potentially in the Finding on the need for support, the fear that pushing the concept of “climate readiness” forward may divert attention away from basic needs. Also acknowledge that what it means to be climate ready will be different for individual utilities.
- Include the need to look at the broader impacts within a region.
- Look across the finding statements to rebalance around and stress adaptation in multiple realms, not just structural and financial.
- Include a positive aspect about many utilities being motivated to make changes.

Editorial Comments

Editorial comments are those that improve clarity and readability of the document. All editorial comments submitted will be incorporated into the next version, and due to their nature were not discussed individually at the meeting. Additional editorial comments by Working Group members included:

- Create crisper headlines for the Finding Statements;
- Develop better linkages between the Findings and Recommendations;
- Create subsections for basic and focused engagement; and
- Pursue getting more on-the-ground examples from Working Group members and pull the examples into sidebars so as not to detract from the body of the document.

Substantive Comments

Substantive comments suggest enhancements or refinements needed to specific content. The Working Group provided the following direction regarding the set of substantive review comments.

- Finding 2: Retool to talk more about utilities taking a range of actions, dependent on a range of drivers, and note that a large segment of utilities remain inactive for specific reasons.
- Finding 3: Mention, either here or under Finding 6, financial planning models.
- Finding 4: Incorporate the fact that new, traditional infrastructure will be needed; existing infrastructure may need to be used in new ways; and opportunities for creating synergistic uses of current infrastructure will need to be identified. Talk about the notion of balanced, upfront consideration of a full range of traditional and non-traditional approaches.
- Finding 5: Change resource "allocation" to "management," build in public service commission/ rate approving boards, and rework the Finding so it is clearer.
- Finding 6: Rework, starting with the third sentence.
- Finding 7: Rework to stress better integration of climate adaptation with other critical priorities and the need for special focused efforts. Add language about the need for a proactive stance to inform local public and decision makers about potential climate impacts, and the important role for all federal agencies in this regard. Position this statement along the lines of "continue and enhance" and see if it can be linked with Finding 6.
- Finding 8: Rebalance the text to better address water quantity and water rights aspects of the challenge. Reframe to describe EPA a partner (regulator as opposed to enforcer) in the context of the regulatory framework and make it more explicit that statutory laws are in play when considering changes that could be made.
- Finding 9: Replace "can" with "will" as a statement of a fact of where the sector is at and is headed. Remove the final paragraph or otherwise make the finding shorter, consistent with the other findings.
- Finding 10: Consider the linkage between Findings 10 and 7 and completely rewrite Finding 10 to include a statement about the fact that the sector is under financial pressure and there is an incremental cost to being climate ready and that exacerbates this pressure. Remove the notion that this sets up a trade-off, rather there are strategies that alleviate some of the pressure and allow utilities to move forward, even with the acknowledgement that financial pressures exist. Acknowledge the importance aligning available funding consistently with climate concerns.
- Proposed new finding statement: A finding is needed that signals the federal family to identify who is involved, what they are doing, and opportunities for cohesion.
- Proposed new finding statement: A finding is needed that articulates the needs of the water sector so those needs can be reflected in the types of research pursued and funded (e.g., there is a need for the water sector to be involved in developing the research agenda).

Consensus Check

After discussing the draft Finding Statements, the facilitation team conducted a round-robin consensus check with Working Group members to see where they stood regarding support of the Finding Statements (with the assumption that the changes noted will be built into the revised statements). The results were as follows:

- Support: 15
- Strongly Support: 3
- No Support: 0
- Absent: 2

Adaptive Response Framework

The Working Group provided the following direction regarding review comments on the Adaptive Response Framework.

- Include at the front end of the climate ready utilities portion of the text language that embraces the reality of the challenge that exists and describes the current thinking in how utilities can address that challenge.
- Section 1.1.: Identify sensitivity analysis as important.
- Section 1.5: Broaden the framing and speak to leveraging cooperation.
- Switch 2.3 and 2.1
- Section 2.1: Reframe to say that at the basic level, a utility would first look to have awareness of local climate impacts, giving it the capability to message within that context. Second, at the basic level, a utility would tailor messages with respect to the community's interest/ engagement in climate change issues. More focused engagement would be when a utility knows it is leading and shaping the agenda with regards to how the community currently views climate change.
- Section 2.2: Reframe the basic engagement piece so that it does not limit the conversation to water resource management and includes adaptation and resilience.

Consensus Check

After discussing the draft Adaptive Response Framework, the facilitation team conducted a round-robin consensus check with Working Group members to see where they stood regarding support of the Framework (with the assumption that the changes noted will be built into the revised document). The results were as follows:

- Support: 19
- Strongly Support: 0
- No Support: 0
- Absent: 1

Day 2 Discussion Highlights

Adaptive Response Framework Table

The Working Group was asked to consider overnight (between Days 1 and 2) whether the current tone of the document was setting the bar too high or too low. Overall the Working Group agreed that the basic level of engagement as articulated in the draft was too passive and had very limited expectations. The interest of the group was to alter the basic engagement level to be more active with an increase in expectations, while acknowledging the difficulty this could represent for many utilities. They noted that a balance is needed between utilities that need more help to implement climate ready actions and those that are already intimately involved and should be reaching for a more aspirational set of goals. Specific changes to the table suggested are as follows:

- Ensure there is a sense of continuum and make it clear that utilities can align along that continuum as needed, undertaking basic engagement in some areas and more focused engagement in others.
- Include a couple of introductory sentences to set the tone and provide a general description, via a series of bullet points, of the two levels of engagement.
- Include the need for national agenda engagement.
- Frame the summary table as an example list of actions utilities could undertake.
- Articulate some place in the document why it is important to be climate ready.
- Potentially include two more columns for tools to support the actions and areas of needed federal support.

- Describe basic engagement as a utility integrating climate change as a part of all their business a usual (e.g., capital and emergency planning) practices.

Enabling Environment Recommendations

The Working Group provided the following direction regarding review comments on the draft Recommendations.

- Recommendation (Recc) 1: Weave in local government (consider a separate recommendation to speak to this).
- Recc 2: Completely reposition, anchored in the notion of leveraging existing concepts of regional cooperative networks and mechanisms (e.g., WaterISAC) to share information, especially with utilities just beginning to consider potential climate change impacts.
- Recc 3: Include the need for the water sector to help define the research agenda; an additional area of research regarding no regrets options and their associated costs and benefits; and to look for opportunities to work with universities.
- Recc 4: Shift from "education" to the term "knowledge," but keep the information sharing aspect. Enhance the piece on fostering partnerships with interdependent sectors.
- Recc 5: Modify to explain this is about both data collection and distribution striving for local relevance, and that the downscaling piece is currently only doable in a limited manner. Connect this recommendation with the one on the need to inform the research agenda; include case studies; and check overlap with other recommendations.
- Recc 6: Ensure this recommendation ties to one of the findings (potentially Finding 3).
- Recc 7: Rework to provide better focus and clarity and include specific examples of regulatory obstacles and support needed, including non-conventional/ alternative options, so that the recommendation is actionable.
- Recc 8: Review Recommendation 8 in conjunction with Recommendations 7 and 10, and possibly combine these recommendations. Fold in the overall anchor concept of Recommendation 8 – the need for an integrated management approach yielding better decisions – into the other recommendations. Encourage looking at ways to work within the existing framework, as well as opportunities to encourage more holistic integration.
- Recc 10: Make this recommendation more inclusive, and tie to the need to bring focus and better cooperation within the federal family and with other organizations (e.g., NGO's).
- Potential New Recommendations: Based on Day 1's discussion, the facilitation team proposed three new recommendation areas, which the Working Group supported and thus, will be drafted as part of the reworked document.

Incentives

The Working Group reviewed information on related incentive programs (EPA's Sustainable Water Leadership Program; the National Association of Clean Water Agencies Peak Performance and National Environmental Achievement Awards and Excellence in Management Recognition Program; and the Association of Metropolitan Water Agencies Utility Performance and Service Awards) and had a brief discussion on the topic, focused on providing direction to a Task Team, which would conduct additional post meeting work in this area. The direction provided is as follows:

- Per the Charge, the scope is limited to leadership and recognition programs; however consideration within that scope should be broad.
- Partnership for Safe Water might be another related program for consideration.
- Consider avenues of motivation for utilities not part of larger organizations, such as a regional/state awards program or Energy Star-type program, and ensure a continuum of programs (or within one program) for utilities engaged in climate ready actions at all levels.

- Tie programs to overall corporate responsibility and incentivize connecting high capability systems with low capability systems to share information.
- Set a low threshold for the level of effort needed to apply to a program(s).
- Consider private sector support (capital financing), non-competitive incentives such as demonstration projects, and connection to State Revolving Funds (SRF).
- Ensure that any programs recommended support the Working Group's overall recommendations and occur on a continual basis (e.g., are not one-time only).
- Be cautious about connecting to compliance-type programs and programs that result in some sort of regulatory relief.

Integrating Climate Change Activities into Existing Programs

The Working Group had an introductory discussion on opportunities for integrating the Working Group's recommendations into existing programs. Suggestions spanned integration into existing EPA programs (Effective Utility Management and Climate Ready Estuaries), into existing utility planning, via interagency agreements, via EPA guidance for states to work with utilities, and through other organizations' relevant efforts (e.g., U.S. Green Building Council). As the scope of these suggestions were very broad, the next step identified was for EPA and the Working Group Co-Chairs to meet prior to the next meeting to identify a feasible scope and path forward for this area of the Working Group's Charge.

Tools

The Working Group reviewed the draft Tools list compiled at the last meeting and agreed the list should include currently available tools, needed tools, and existing tools that could be repurposed. The Working Group suggested the following Tools be added to the current list for discussion by a Task Team, which would conduct additional post meeting work in this area.

- Existing tools: EPA's vulnerability assessment tool based on the VSAT framework; University of Southern Maine's Environmental Finance Center tools to help communities determine costs of climate change; relevant US Army Corps models; Water Evaluation and Planning System (WEAP) model; and tools referenced in the Water Research Foundation (WRF) Climate Research Clearinghouse.
- Needed tools: State availability and demand and supply forecasting and hydrological system characterization.

The Working Group also suggested that the Research Bibliography developed at the outset of this process be included as an Appendix to the final Working Group Report in order to capture the tools and references included in those documents.

Next Steps

- ➔ Prepare the meeting summary and develop the meeting discussions into a reworked, formatted draft Final Working Group Report. Obtain feedback and information from Working Group members as part of the rewriting process, and distribute the draft Final Report to the full Working Group and Federal Partners for review prior to the fourth meeting.
- ➔ Schedule and conduct at a minimum one call of each of the two Task Teams (Tools and Incentives) to discuss and further refine the draft product and complete additional work prior to the fourth meeting.
- ➔ Work with EPA and the Working Group Co-Chairs to further define the scope and path forward on integration of climate ready activities into existing programs.
- ➔ Collect suggestions from Working Group members for expert presenters at the fourth meeting and secure appropriate representatives.

- 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

- One member of the public provided the following comment: Erica Brown, Director of Regulatory Affairs at the Association of Metropolitan Water Agencies (AMWA), spoke on behalf of AMWA and commended the Working Group for its work thus far and noted it is fitting for EPA to provide guidance to utilities on planning for climate change. Ms. Brown also noted that the enabling environment recommendations are a key piece of the Working Group's Final Report, especially those encouraging coordination and leadership among federal agencies to approach climate change in a holistic manner, thus better enabling communities and utilities to adapt to climate change. To support these comments, Ms. Brown distributed a document from AMWA titled "Principles of Water Utility Adaptation to Climate Change."
- Before ending the meeting on Day 1, Working Group members expressed their approval of where the Working Group is currently at in their discussions and work to-date relative to the Working Group's charge, and agreed everything is on track for finalization in September.
- The goal for Meeting 4 is to discuss a complete set of recommendations and reach closure on as much of the content of the draft Final Report as possible.
- 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://www.epa.gov/safewater/ndwac/#current.
- Ms. Wisnewski, adjourned the meeting at 3:00pm Central Time.

Attendees

Working Group Members		**Federal Partners**
Matt Appelbaum	Tony Quintanilla	Veronica Blette, EPA
Katherine Baer	Sri Rangarajan	Joan Brunkard, CDC
Jeff Cooley	Steve Schmitt	Kim Fox, EPA
George Crombie	Lisa Sparrow	Juliette Hayes, FEMA
Pat Davis	Marcia St. Martin	Marty Savoie, Army Corps
Paul Fleming	Michael Wallis	Richard Scholze, Army Corps
Cindy Forbes	Rebecca Weidman	David Travers, EPA
Gregory McKnight	Rebecca West	Paul Wagner, Army Corps
Olga Morales-Sanchez	Paul Whittemore	
Pat Mulroy*	Doug Yoder	

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