WICP Water Information Coordination Program

ACWI Advisory Committee on Water Information

2014 Annual Report of the Water Resources Adaptation to Climate Change Workgroup to the Advisory Committee on Water Information

The Water Resources Adaptation to Climate Change Workgroup (WRACCW) provides this *2014 Annual Report* to the Chair and Members of the Advisory Committee on Water Information (ACWI).

The WRACCW was established as a subgroup of ACWI on July 10, 2012. The Workgroup's purpose is to promote, support, and provide information for effective management and protection of water resources in the United States as the climate changes and to advise Federal agencies on water policy as it relates to climate change adaptation. The Workgroup also serves as a public forum for Federal, State, Tribal, and local government organizations and public interest and professional organizations to exchange information, views, and ideas, and to connect efforts concerning adapting water resources to a changing climate. WRACCW operates under Terms of Reference approved by ACWI and available on the Internet at http://acwi.gov/climate_wkg/index.html.

The WRACCW adopted a *2014 Workplan* to guide its activities for the year (available at: http://acwi.gov/climate_wkg/2014_workplan_final_3-21-14a.pdf. The *Workplan* notes that the 2014 priorities for the Workgroup were to continue work to inform Workgroup members and to coordinate Federal and non-Federal climate and water policies but give increased attention to commenting on draft plans and policies and recommending needed policy changes.

Specifically, in 2014 the Workgroup focused primarily on:

- sharing information on new plans and projects related to water resources adaptation to climate change among Workgroup members;
- providing input to Federal agencies as they respond to the President's Executive Order 13653 addressing preparedness for climate change, with special attention to

input on recommendations developed under section 3 of the Order concerning natural resources;

- advising and commenting on actions by Federal agencies to implement the *National Action Plan: Priorities for Managing Freshwater Resources in a Changing Climate* and implement the agency specific climate adaptation plans now under development; and

- responding to specific requests for input and comment from Federal agencies on issues or products related to climate change and water resources.

In general, the co-chairs and members believe that the Workgroup substantially accomplished these objectives and contributed to national discussions concerning adaptation of water resources to a changing climate.

Given the constraints around scheduling an in-person meeting, the Workgroup's focus on building a common base of understanding sets a strong foundation for collaboration on issues and development of constructive recommendations that take into consideration a comprehensive breadth of knowledge by all members. It not only facilitates dissemination of knowledge but also will improve the effectiveness and efficiency of the Workgroup activities.

Some highlights of activities to implement this *Workplan* are described briefly below.

1) **Hold Meetings of the Workgroup:** The Workgroup held 9 meetings in 2014 to both share information and conduct Workgroup organizational business.

   A key purpose of the Workgroup is to disseminate information and thereby facilitate coordination of key players in the field of water resources adaptation to climate change and ensure that all players are aware of important information and ongoing programs. Workgroup meetings included 21 presentations and 45 brief "round robin" links to projects or initiatives of interest to the Workgroup members.

   The Workgroup met on the following dates in 2014, by conference call unless otherwise noted:

   - January 9, including a presentation on an EPA *Workbook for Developing Risk-Based Climate Change Adaptation Plans;*

   - February 6, including a presentation on the National Stormwater Calculator by Rachael Novak (EPA, Water) and Lew Rossman (EPA, ORD);

   - February 19-20, in-person meeting in Arlington, VA, with an agenda that included briefing by diverse Federal agencies and work by teams of Workgroup members to develop ideas and recommendations for next steps

for advancing climate change adaptation of water resources (see below for more information);

- March 20, including discussion of a draft report by the Workgroup to the Council on Environmental Quality on next steps to improve climate change adaptation for water resources;

- April 10, including wrap up of the Workgroup to the Council on Environmental Quality on next steps to improve climate change adaptation for water resources, a report on a report on a Water Utility Climate Resilience Summit, and review of implementation actions under the President's *Climate Action Plan*;

- June 12, including a presentation on the water related findings of the third National Climate Assessment, including presentation by water chapter authors;

- July 10, including presentations on using State Revolving Funds to build climate resilient communities and issues being considered by the State, Tribal and Local Leaders Task Force on Climate Preparedness and Resilience;

- September 11, including presentations on the work of the Joint Implementation Working Group implementing the National Fish, Wildlife and Plants Climate Adaptation Strategy and the Climate Change Viewer developed by USGS;

- October 9, including a presentation on the Priority Agenda for Enhancing Climate Resilience of America's Natural Resources; and

- November 20, including presentations on the final Report of the State, Local, Tribal Task Force on Climate Change Adaptation and on the report titled *Navigating to New Shores: Seizing the Future for Sustainable and Resilient U.S. Freshwater Resources.*

Most meetings included Workgroup business and administrative topics as well as round robin reports of climate change adaptation actions of Workgroup members. Agendas and supporting materials for these meetings are available on the Internet at: http://acwi.gov/climate_wkg/minutes/index.html.

2) **Continue to Develop Background Information Database on Climate Change and Water:** The Workgroup continued the development of an electronic database of reports and studies on topic of water resources and climate change. This database was organized by a Subcommittee of members chaired by Carol Collier. The database includes a diverse range of carefully selected documents and has been made available to Workgroup members. This work is posted on the WRACCW website at: http://acwi.gov/climate_wkg/index.html.

3) **Maintain Workgroup Membership:** The 2014 membership of the WRACCW includes a total of 40 representatives of Federal agencies, State, Tribal, and local government organizations, and non-profit organizations representing diverse interests (see attached and http://acwi.gov/climate_wkg/WRACCW_Members_11_22_2013.pdf).

New members joining the Workgroup in 2014 included:

- Gary Belan, American Rivers;
- Peter Colohan, Office of Science and Technology Policy;
- Colby Duran, National Congress of American Indians;
- Patrick McCarthy, The Nature Conservancy;
- Sascha Petersen, American Society of Adaptation Professionals; and
- Ellen Tarquinio, Council on Environmental Quality.

In 2014, the Workgroup was co-chaired by Paul Freedman, representing the Water Environment Federation and Jeff Peterson, representing the Environmental Protection Agency.

4) **Conduct Two Day In-Person Meeting:** The Workgroup held its first in-person meeting in February 2014 in Arlington, VA. The objectives of the meeting were to:

- Review key elements of the President's *Climate Action Plan* and the Executive Order on Climate Change Preparedness and their implementation related to water resources;

- Develop options and recommendations for key actions needed to improve adaptation of water resources to a changing climate in response to Section 3 of the Executive Order;

- Educate members about Workgroup mission and climate change interests and activities of member organizations and nonmembers;

- Provide current information on Federal agency activities related to climate change and water and exchange practical information on key water and climate change adaptation challenges; and

- Engage members in the mission and activities of the Workgroup and establish relationships among members.

In addition to reviewing work by Federal agencies to respond to the threats posed to water resources in a changing climate, the Workgroup decided to use the meeting to develop ideas and recommendations to provide to Federal interagency groups implementing the President's Executive Order on Climate Change Preparedness and Resilience.

Five teams were organized addressing the key topics of recommendations in *the National Action Plan: Priorities for Managing Freshwater Resources in a Changing Climate*. These teams were:

- Data and Information;
- Assessing Vulnerability;
- Water Use Efficiency;
- Integrated Water Resources Management; and
- Training and Capacity Building.

The findings and recommendations developed at the meeting by each team during the meeting were collected into a report titled: *Next Steps for Managing Freshwater Resources in a Changing Climate*. The report is available at: http://acwi.gov/climate_wkg/Climate_water_recommendations_rpt-april_21_2014_final_draft.pdf.

5) **Publish Report on Next Steps for Managing Water Resources in a Changing Climate:** The Workgroup developed a report titled: *Next Steps for Managing Freshwater Resources in a Changing Climate* (http://acwi.gov/climate_wkg/Climate_water_recommendations_rpt-april_21_2014_final_draft.pdf.)

The report summarizes recommendations of teams of Workgroup members developed at the two-day in-person meeting in February. This report was reviewed and revised at several subsequent meetings of the Workgroup and presented to the full ACWI at its meeting in August. Recommendations include:

Water Data and Information:

- Ensure continuity and viability of long-term hydro-climate observations and data management systems by establishing a coordinated process in which each Federal agency develops a plan and budget for its key observing system(s) showing how that agency will dedicate resources to evaluate data and information adequacy and then sustain and upgrade its system(s) to meet those needs.

- Enhance data access and interoperability of data systems, including encouraging the Subcommittee on Water Availability and Quality to develop and oversee implementation of a plan for improved water data access and interoperability across agency boundaries. This includes the development of an integrative tool to assist in the access to data and information from multiple sources.

- Bolster critical data sets, including those related to groundwater, stream/river flow, health data (waterborne disease), water use, and paleoclimate reconstruction.

Assessment of Vulnerability:

- Develop guidance for, and provide assistance to, communities and water utilities of all sizes on how to use existing climate and extreme weather data, information, and tools in order to build capacity for assessing vulnerability and implementing responses to increase resilience.

- Create a strategic plan for engagement and collaboration with non-Federal water institutions or partners to enhance messaging, improve the use of climate information, and cultivate a collaboration to inform and improve future climate tool development.

Water Use Efficiency:

- Agriculture should be prioritized for development of "nationally consistent metrics for water use efficiency," a recommendation contained in the *National Action Plan*.

- The Department of Energy should update Federal efficiency standards for showerheads, faucets, toilets, and urinals and consider incorporating a performance standard for products.

- The Federal government should promote programs and legislation to develop a national funding program for water efficiency and reuse/reclamation that would mirror but not replace existing programs managed in western States by the Bureau of Reclamation.

Integrated Water Resources Management:

- Facilitate Federal agency coordination to achieve Integrated Water Resources Management and climate resiliency by:

  - considering the reestablishment of an interagency Water Resources Council, such as authorized by the Water Resources Planning Act of 1965;

  - creating a Federal Water Coordinator with authority at the Executive Office of the President; or

  - creating regional Federal Agency Support Teams consisting of Federal agencies with water resources responsibilities to facilitate collaboration between the states and Federal government regarding water and climate issues, using the Western States Federal Agency Support Team (WestFAST) as a possible template and model.

- Expand existing programs and create new incentives to empower State, interstate, local and tribal governments to assess and plan on a watershed or aquifer basis for preparedness and resilience of their water resources.

- Incentivize use and protection of ecosystem services (i.e., natural capital) by expanding and coordinating existing efforts, including adapting or creating new funding programs to promote planning and implementation.

Training and Capacity Building:

- Identify the information sharing needs for *National Action Plan* actions, and develop mechanisms to facilitate sharing, such as expanding the role and resources of Water Resources Research Institutes at State Land Grant Colleges to include both research and capacity building for climate change adaptation.

- Support education and training to build response capability, including expanding existing workforce training and college traineeships, requiring training of technical service providers, such as planners, engineers and consultants, and highlighting existing layperson training on climate change.

Additional Recommendations Derived from February Workgroup Meeting:

- Consider establishing a Natural Infrastructure State Revolving Loan Fund or other programs to enable State planning and investment in natural system infrastructure to adapt to more extreme weather and a changing climate.

- Consider promoting "premium sharing" with local governments by the National Flood Insurance Program to strengthen community-wide, preventative actions to reduce flood risks and the economic and human costs of flooding.

- Consider supporting a nonprofit organization to promote integrated water resources management professional training/accreditation and project recognition on a voluntary basis.

This 2014 Annual Report is submitted to the Advisory Committee on Water Information on behalf of the members of the Water Resources Climate Change Adaptation Workgroup by the co-chairs:

Paul Freedman
Water Environment Federation

Jeff Peterson
Environmental Protection Agency

January 23, 2015

ATTACHMENT 1: Water Resources and Climate Change Adaptation Workgroup Members

ACWI WRACC WORKING GROUP - MEMBERSHIP LIST AS OF 1/12/15		
Federal Agencies	**Representative**	**Alternate**
Army Corps of Engineers, Institute for Water Resources	Rolf Olsen	
Centers for Disease Control	Joan Brunkard	
Council on Environmental Quality	Ellen Tarquinio	
Department of Agriculture, Natural Resources Conservation Service	Noel Gollehon	
Department of Agriculture, Forest Service	Chris Carlson	
Department of Energy	Craig Zamuda	
Department of Homeland Security, Federal Emergency Management Agency	Doug Bellomo	Mark Crowell Paul Huang
Department of Interior, U.S. Geological Survey	Jerad Bales	Bill Werkheiser
Department of Interior, Bureau of Reclamation	Levi Brekke	
Department of Interior, U.S. Fish and Wildlife Service	John Schmerfeld	
Environmental Protection Agency	Jeff Peterson Federal Co-Chair	Karen Metchis
National Oceanic and Atmospheric Administration; National Weather Service	Ernie Wells	Chris Bunner
National Oceanic and Atmospheric Administration; Climate Program Office	Nancy Beller-Simms	
Office of Science and Technology Policy	Peter Collohan	

State, Tribal, and Local Government Organizations	Representative	Alternate
Association of Clean Water Administrators	Jeff Manning	
Association of Metropolitan Water Agencies	Erica Brown	
Association of State Drinking Water Administrators	Brandon Kernen	Dierdre Mason
Association of State Floodplain Managers	Dave Carlton	
Association of State Wetland Managers	Peg Bostwick	Jeanne Christie
Ground Water Protection Council	Mike Paque	Mary Musick
Interstate Council on Water Policy	Peter Evans	
National Association of Clean Water Agencies	Peter Ruffier	Cynthia A. Finley, Ph.D.
National Association of County Planners	Judy Francis, AICP	
National Congress of American Indians	Colby Duran	Brian Howard
National Tribal Water Council	Dave Fuller	
Water Utility Climate Alliance	Paul Fleming	
Western States Water Council	Jeanine Jones	Nathan Bracken

Public and Academic Organizations	Representative	Alternate
American Rivers	Gary Belan	Fay Augustyn
American Society of Civil Engineers	Casey Brown	
American Water Resources Association	Carol R. Collier	Richard A. Engberg
American Water Works Association	Adam Carpenter	
The Nature Conservancy	Patrick McCarthy	
American Society of Adaptation Professionals	Sascha Petersen	
National Council for Air and Stream Improvement	Paul Wiegand	Douglas McLaughlin
National Ground Water Association	Michael Block	
Natural Resources Defense Council	Ben H. Chou	
National Institutes for Water Research	Dr. Aris Georgakakos	Dr. Reagan Waskom
North American Lake Management Society	Nancy Turyk	Dennis McCauley
US Water Alliance	Ben Grumbles	
Water Environment Federation	Paul L. Freedman, Non-Federal Co-Chair	