

**2016 Annual Report
of the
Water Resources Adaptation to Climate Change Workgroup
to the
Advisory Committee on Water Information
Adopted January 11, 2016**

The Water Resources Adaptation to Climate Change Workgroup (WRACCW) provides this *2016 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 *2016 Workplan* to guide its activities for the year (available at: http://acwi.gov/climate_wkg/acwi_climate_2016_workplan_2_29_16.pdf). The *Workplan* notes that the 2016 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 2016 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agencies as they respond to the President's Executive Order 13653 addressing preparedness for climate change, including draft guidance related to the National Environmental Policy Act (NEPA) and climate change;
- advising and commenting on actions by Federal agencies to implement the 2011 *National Action Plan: Priorities for Managing Freshwater Resources in a Changing Climate*, including providing comments on the draft 2016 workplan for this Federal interagency effort and the revision of the *National Action Plan* published in late 2016; 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 in-person meetings, 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 8 meetings in 2016 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 14 presentations and 104 brief "round robin" links to projects or initiatives of interest to the Workgroup members.

The Workgroup met on the following dates in 2016, by conference call unless otherwise noted:

- January 14, including presentations on lake temperature and stream temperature monitoring as well as review of the 2016 workplan for the Workgroup and the 2015 Workgroup report to the full Advisory Committee on Water Information;
- March 3, including presentations reporting on the International Water and Climate Forum held in San Diego the previous December and the draft

workplan for the interagency and State effort to implement the National Fish, Wildlife and Plants Climate Adaptation Strategy;

- April 21, including a presentation from the National Fish and Wildlife Foundation concerning their work to respond to Hurricane Sandy and to develop climate resilience HUBs;
- June 16, focused on review and discussion of the proposed key elements of the report *Looking Forward: Managing Freshwater Resources in a Change Climate*;
- July 14, including a presentation by the US Army on Net Zero program elements and the EPA on work to implement the Montana drought Demonstration project;
- October 13, including a presentation by EPA on the newly released Climate Resilience Evaluation and Awareness Tool (CREAT) to assist water utilities in responding to climate change and a review of the report of the National Infrastructure Advisory Council on Water Sector Resilience;
- November 17, including presentations from CEO on new reports on climate resilience and the new Resilience Dialogues program; and
- December 8, including presentations from the American Fisheries Society on a report to the next Administration concerning fisheries issues, including climate change issues, and a review of the final report of the Federal interagency workgroup addressing climate change and water resources issues titled *Looking Forward*.

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 2016 membership of the WRACCW includes a total of about 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_03_20_2015.pdf).

New members joining the Workgroup in 2016 included:

- Stacey Archfield; US Geological Survey;
- Keely Brooks; Water Utility Climate Alliance;
- Heather Cooley and Jason Morrison; the Pacific Institute
- Charles Kovatch; White House Council on Environmental Quality;
- Eric Loucks; American Society of Civil Engineers;
- Radhika Fox; US Water Alliance;
- John McShane and Shana Udvardy; Association of State Floodplain Managers;
- Rob Moore; Natural Resources Defense Council;
- Jimmy Hague; the Nature Conservancy;
- Melissa Samet; National Wildlife Federation; and
- Karen Yacos and Anisha Anantapadmanabhan; CERES.

In 2016, the Workgroup was co-chaired by Paul Freedman, representing the Water Environment Federation and Jeff Peterson, representing the Environmental Protection Agency.

4) Key Workgroup Products: 2016

The Workgroup generated several products in 2016 including:

- *2015 Annual Report* of the Workgroup to the full ACWI;
- *2016 Workplan* for the Workgroup; and
- Comments on *Looking Forward: Priorities for Managing Freshwater Resources in a Changing Climate*.

Each of these products is summarized briefly below.

➤ 2015 Annual Report of the Workgroup to the full ACWI:

This report to the full Advisory Committee on Water Information, submitted on March 3, 2016, summarized the work of the Water Resources Adaptation to Climate Change Workgroup in 2015 (see http://acwi.gov/climate_wkg/workgroup_2015_annual_report_adopted_march_3_2016.pdf).

➤ 2016 Workplan for the Workgroup:

This Workplan, adopted on March 3, 2016, outlined the key activities and actions that the Workgroup planned to undertake in 2016, including continued coordination among Federal agencies and stakeholders and the development of recommendations on key climate change and water resources policy topics (see: http://acwi.gov/climate_wkg/acwi_climate_2016_workplan_2_29_16.pdf).

➤ *Comments on Looking Forward: Priorities for Managing Freshwater Resources in a Changing Climate:*

On July 14, 2016, the Workgroup submitted a comment memorandum to the Interagency Water Resources and Climate Change Workgroup on the draft *Looking Forward: Managing Freshwater Resources in a Changing Climate* (see http://acwi.gov/climate_wkg/iwrcc/refresh_comment_memo_v3_07142016_final.pdf). This report is intended to “refresh” the 2011 *National Action Plan: Priorities for Managing Water Resources in a Changing Climate*.

Finally, during the several months at the end of 2016, the Workgroup developed an agenda for an in-person meeting scheduled for January 10-11 in the Washington, D.C. area. The meeting is designed to result in a report making recommendations to the new administration concerning responding to the challenges that a changing climate poses for water resources managers.

Key policy challenges related to climate change and water resources considered at the meeting included:

1. Promoting Climate Resilience of New Federal Water Infrastructure Investments
2. Defining Incentives and Support for Corporate Water Resilience
3. Strengthening Local Flood Reduction Planning, Practices and Measures
4. Promoting State Water Resources Planning for Climate Resilience
5. Improving Planning and Financing of Natural Infrastructure for Climate Resilience

The report resulting from this meeting will be submitted to the full ACWI.

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This *2016 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.

/s/

Paul Freedman
Non-Federal Co-chair
Water Environment Federation
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/s/

Jeff Peterson
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Office of Water
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DATE: January 11, 2017