

**Meeting Minutes**  
**Water Resources Adaptation to Climate Change Workgroup of the**  
**Advisory Committee on Water Information**  
**February 26, 2015: 1:00 – 2:30**

**Call in Numbers:**

USGS staff at Headquarters - x4848  
Other USGS offices/DOI locations - 703-648-4848  
Non-USGS locations (toll free) - 1-855-547-8255  
The access code is: 53700#

When it is time to attend the meeting, please visit this link:

<https://usgs.webex.com/usgs/j.php?MTID=m084f119ad3e06790683608f22334db78>

**Attendees:**

Jeff Peterson, Co-chair, EPA	Nathan Bracken, WSWC	Nancy Turyk, NALMS
Paul Freedman, Co-chair, WEF	Marla Stelk, ASWM	Nancy Beller-Simms, NOAA
Paul Wiegand, NCASI	Jeff Manning, ACWA	Brenna Mannion, NACWA
David Fuller, NTWC	Karen Metchis, EPA	Wendy Norton, USGS
Mike Muse, EPA	Noel Gollehon, USDA	
Mary Musick, GWPC	Deirdre Mason, ASDWA	

**Speakers:**

Benjamin Cook, NASA  
Subhrendu Gangopadhyay, BOR  
Mark Spears, BOR  
Karen Metchis, EPA

**Action Items:**

**By March 11, provide comments to Jeff Peterson on two documents:**

- Presentation: DRAFT *2014 Highlights Report and 2015 Workplan* of the interagency Water Resources Workgroup supporting the Council on Climate Change Preparedness and Resilience; Karen Metchis; EPA (draft document available here: [http://acwi.gov/climate\\_wkg/minutes/26\\_feb\\_2015/nap\\_fy14\\_15\\_draft\\_acwi\\_review.pdf](http://acwi.gov/climate_wkg/minutes/26_feb_2015/nap_fy14_15_draft_acwi_review.pdf))
- Proposed Draft Workgroup Comments on Draft *NEPA GHG and Climate Change Guidance* (see draft comments here: [http://acwi.gov/climate\\_wkg/minutes/26\\_feb\\_2015/nepa\\_guidance\\_comments\\_draft\\_1\\_02\\_26\\_15.pdf](http://acwi.gov/climate_wkg/minutes/26_feb_2015/nepa_guidance_comments_draft_1_02_26_15.pdf)); see draft guidance and request for comments: [https://ceq.doe.gov/current\\_developments/CEQ\\_Guidance\\_NEPA-GHG-Climate\\_Revised\\_Guidance.html](https://ceq.doe.gov/current_developments/CEQ_Guidance_NEPA-GHG-Climate_Revised_Guidance.html)

**I) Introductions and Agenda Review**

Jeff Peterson took the roll and started the meeting with a preview of the agenda.

**II) Approval of Notes from Previous Meeting** (see draft notes at [http://acwi.gov/climate\\_wkg/index.html](http://acwi.gov/climate_wkg/index.html))

### III) Presentations: Recent Work on Water and Climate Change in the West

- a. Drought Risk in Southwest: Dr. Benjamin Cook; NASA; see attached article: *Unprecedented 21st century drought risk in the American Southwest and Central Plains*; <http://advances.sciencemag.org/content/1/1/e1400082> and <http://www.scientificamerican.com/article/u-s-droughts-will-be-the-worst-in-1-000-years1/>
- Slides from this presentation are available here: [http://acwi.gov/climate\\_wkg/minutes/26\\_feb\\_2015/cook\\_epa\\_v01\\_feb26\\_2015.pdf](http://acwi.gov/climate_wkg/minutes/26_feb_2015/cook_epa_v01_feb26_2015.pdf)
  - These projections focus on the end of the 21<sup>st</sup> century because that's when the human signal becomes much clearer.
  - Question: What are you doing with this information? Answer: We're distributing the information to the public. We are not recommending any specific adaptation measures at this time, but we hope this information may help people decide what measures to take, if any.
  - Question: How does this compare to the Dustbowl? Answer: Imagine droughts we've had that lasted a few years, and then imagine that lasting for a decade or longer. The droughts of the future are likely to last much longer than historic droughts.
  - Question: Is there a way to express the relative degree of precipitation change and what that means to people on the ground in terms of water supply, utilities, agricultural impacts, etc.? Answer: We expect that the droughts will be more severe, but it's unclear how to translate that into reductions of flow, precipitation, etc.
  - It would be interesting to map this historic drought data against historical events – correlation with disappearance of Anasazi and others.
  - Question: Will there be other agencies using this type of data to create management options that would reduce the impact of these mega-droughts? Answer: We're communicating the information to people outside the direct research community, but there's not a lot of targeted outreach at this point.
- b. **New Report: *Climate Change Impacts on Irrigation Demand and Reservoir Evaporation in the West***; Subhrendu Gangopadhyay, PhD, PE and Mark Spears; **Bureau of Reclamation**; see <http://www.usbr.gov/WaterSMART/wcra/docs/irrigationdemand/WWCRAdemands.pdf> and <http://www.usbr.gov/WaterSMART/wcra/>
- Slides from this presentation are available here [http://acwi.gov/climate\\_wkg/minutes/26\\_feb\\_2015/2015\\_02\\_26\\_acwi\\_presentation\\_reclamation\\_gangopadhyay.pdf](http://acwi.gov/climate_wkg/minutes/26_feb_2015/2015_02_26_acwi_presentation_reclamation_gangopadhyay.pdf)
  - Question: Where is the biggest uncertainty in your estimates? Answer: Precipitation predictions.
  - Question: These two presentations (a & b, above) have very different levels of drama. Why is that? Answer: We were trying to look at the end of the 21<sup>st</sup> century, looking at specific crops to see how each one is going to respond to changes (i.e., how much more water would be required to meet irrigation needs). Basically, the two studies shown in these two presentations focused on different questions. There's still a lot of uncertainty about what the actual impacts of climate changes will be on crops, people, etc.

**IV) Presentation: DRAFT 2014 Highlights Report and 2015 Workplan of the interagency Water Resources Workgroup supporting the Council on Climate Change Preparedness and Resilience;** Karen Metchis; EPA (draft document available here: [http://acwi.gov/climate\\_wkg/minutes/26\\_feb\\_2015/nap\\_fy14\\_15\\_draft\\_acwi\\_review.pdf](http://acwi.gov/climate_wkg/minutes/26_feb_2015/nap_fy14_15_draft_acwi_review.pdf)). The Workgroup has an opportunity to provide comments on this draft interagency workplan, including update of the *National Action Plan*.

- Karen reviewed portions of the draft document. This version of the document includes recommendations and other items that weren't included in the previous version that WRACCW viewed.
- We are hoping to have this done by spring 2016. It will hopefully incorporate the CNRWG and State/local task force into those activities.
- If WRACCW could provide comments on this document by the second week of March, that would be great. (Note: the WRACCW can provide comments, but there is not enough time to get full ACWI approval on the comments by the deadline.)
- ACTION: Provide comments to Jeff Peterson by COB March 11.
- The comments will be discussed during our March meeting and decide whether we're ready to submit them. Comments should address the "2015 Workplan" section of each of the 6 recommendations (pp. 10, 16, 20, 27, 30, and 33 – **use the hot links in the table of contents to navigate to these pages because the MSWord page numbers do not match them [i.e., p. 10 is really p. 13]**).

#### **V) Workgroup Business Items**

- Final *2014 Annual Report* of the Workgroup to the full ACWI (see final report, attached)
- Approval of Final Draft *2015 Workplan* for the Workgroup (see final draft 2015 Workplan, available here: [http://acwi.gov/climate\\_wkg/minutes/26\\_feb\\_2015/2015\\_workplan\\_draft\\_02\\_14\\_redline.pdf](http://acwi.gov/climate_wkg/minutes/26_feb_2015/2015_workplan_draft_02_14_redline.pdf))
  - If the WRACCW approves, we will finalize this version of the document. Hearing no objections, the 2015 workplan is considered final and will be placed on the website in final form.
- Proposed Draft Workgroup Comments on Draft *NEPA GHG and Climate Change Guidance* (see draft comments here: [http://acwi.gov/climate\\_wkg/minutes/26\\_feb\\_2015/nepa\\_guidance\\_comments\\_draft\\_1\\_02\\_26\\_15.pdf](http://acwi.gov/climate_wkg/minutes/26_feb_2015/nepa_guidance_comments_draft_1_02_26_15.pdf)); see draft guidance and request for comments: [https://ceq.doe.gov/current\\_developments/CEQ\\_Guidance\\_NEPA-GHG-Climate\\_Revised\\_Guidance.html](https://ceq.doe.gov/current_developments/CEQ_Guidance_NEPA-GHG-Climate_Revised_Guidance.html))
  - Any further comments can be discussed during our March meeting.
  - ACTION: Provide comments to Jeff Peterson by COB March 11.
- Update of ACWI Website Revision for Climate Workgroup
  - No real progress to report so far because we had some portions of the site crash, but we'll have something ready for the group to review during the March meeting.

#### **VI) Status Report: Major Federal Climate Change Adaptation Initiatives**

- Publication of Executive Order on Floodplain Management <http://www.whitehouse.gov/the-press-office/2015/01/30/executive-order-establishing-federal-flood-risk-management-standard-and-> and request for comment on draft implementing procedures <https://www.fema.gov/federal-flood-risk-management-standard-ffrms>
- Implementation of *Priority Agenda for Enhancing the Climate Resilience of America's Natural Resources* [http://www.whitehouse.gov/sites/default/files/docs/enhancing\\_climate\\_resilience\\_of\\_americas\\_natural\\_resources.pdf](http://www.whitehouse.gov/sites/default/files/docs/enhancing_climate_resilience_of_americas_natural_resources.pdf)

- Implementation of *Recommendations to the President: State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience*  
<http://www.whitehouse.gov/administration/eop/ceq/initiatives/resilience/taskforce>
- Water Resources Principles and Guidelines: Development of Implementation Procedures by Federal Agencies  
[http://www.whitehouse.gov/sites/default/files/docs/prg\\_interagency\\_guidelines\\_12\\_2014.pdf](http://www.whitehouse.gov/sites/default/files/docs/prg_interagency_guidelines_12_2014.pdf)
- NIST Disaster Resilience Initiative; [http://www.nist.gov/el/building\\_materials/resilience/](http://www.nist.gov/el/building_materials/resilience/)

**VII) Round Robin Reports from Workgroup Members (a brief highlight of your organization's activities related to climate change and water)**

- President's *FY 2016 Budget*: Special Topic: Federal Budget Exposure to Climate Risk; p. 353;  
<http://www.whitehouse.gov/sites/default/files/omb/budget/fy2016/assets/spec.pdf>
- Army Corps of Engineers report: *North Atlantic Coast Comprehensive Study: Resilient Adaptation to Increasing Risk*  
[http://www.nad.usace.army.mil/Portals/40/docs/NACCS/NACCS\\_main\\_report.pdf](http://www.nad.usace.army.mil/Portals/40/docs/NACCS/NACCS_main_report.pdf) and website: <http://www.nad.usace.army.mil/compstudy>
- Video on Flooding in Vermont and Use of Wetlands and Floodplains:  
<https://www.youtube.com/watch?v=ucb-Y8iipng&feature=youtu.be>
- Water Environment Research Foundation; Executive Summary: Enhancing Resiliency in the Aftermath of Extreme Events; <http://www.informz.net/werf/data/images/CC7C11ES.pdf>
- Report from NAACP on Issues of Equity in Climate Change Adaptation  
[http://action.naacp.org/page/-/Climate/Equity\\_in\\_Resilience\\_Building\\_Climate\\_Adaptation\\_Indicators\\_FINAL.pdf](http://action.naacp.org/page/-/Climate/Equity_in_Resilience_Building_Climate_Adaptation_Indicators_FINAL.pdf)
- *National Geographic* Article on Climate and Miami:  
<http://ngm.nationalgeographic.com/2015/02/climate-change-economics/parker-text>
- National Adaptation Conference Registration; May 12-14; St. Louis , Mo.:  
<http://nationaladaptationforum.org/>
- AWRA Climate Change Adaptation Specialty Conference:  
<http://awra.org/meetings/NewOrleans2015/>; Registration link:  
<http://awra.org/meetings/NewOrleans2015/registration.html>
- USDA new website describing Climate Change HUBS; <http://climatehubs.oce.usda.gov/> and video; <https://www.youtube.com/watch?v=Zs6UcBKJgrU#t=302>
- EPA release of Stormwater Climate Change Tool:  
<http://nepis.epa.gov/Exe/ZyPDF.cgi/P100KY8L.PDF?Dockey=P100KY8L.PDF> and  
<http://yosemite.epa.gov/opa/admpress.nsf/721aa416060e4eda8525770b006e18b9/fd703e559924638a85257deb005eb701!OpenDocument>
- EPA is working with AWRA and COE to organize a conference on water resources and climate change in New Orleans next June. Links to more information on that meeting are provided under another Round Robin topic, above (AWRA Climate Change Adaptation Specialty Conference). If you want to submit an abstract, do so right away because they will be selecting talks shortly.
- ASWM has been doing lots of work on wetlands and climate change in the last year and has several major reports coming out soon. Work concerns wetland restoration. We also have some climate-related webinars coming up (the next one on March 3). More information is available at [www.aswm.org](http://www.aswm.org).

**VIII) Adjourn**

Next meeting: March 26 at 1:00 p.m. Eastern Time.