

Public 'Listening Session'

Priorities for Managing Freshwater Resources in a Changing Climate

September 9, 2015

Climate Change and Water Resources Workgroup

An interagency workgroup of the President's Climate
Preparedness and Resilience Council

Participation Guide

You may email comments until
September 30 to:

Water_Climate_Change@epa.gov

Purpose of Listening Session

- Brief review of progress implementing the **National Action Plan: Priorities for Managing Freshwater Resources in a Changing Climate**
- Describe current plans to update the **National Action Plan**
- Solicit your ideas on what federal priorities should be in the next few years

Next Steps

- Recording of today's webinar will be posted online.
- Anticipate a public comment draft to be available Winter 2015
- Anticipate the final updated NAP to be available Spring 2016
- These will all be posted on ACWI web site

<http://acwi.gov/>

Historical Timeline: Priorities for Managing Freshwater Resources in a Changing Climate

- 2009 Executive Order establishes the *Interagency Adaptation Task Force*
- 2010 Water Workgroup formed
- 2011 National Action Plan (NAP) published
- 2012, 2013, 2014 Progress reports
- 2013 President's Climate Action Plan and Executive Order establishes the *Climate Preparedness and Resilience Council (CPRC)*
- 2015 NAP 'Refresh' under development

2011 NAP:

Six Priority Areas for Taking Action

- ❖ Strengthen Data and Information
- ❖ Provide Tools to Assess Vulnerability
- ❖ Improve Water Use Efficiency
- ❖ Promote Integrated Water Resources Management
- ❖ Increase Knowledge through Education & Training
- ❖ Create a Planning Structure to Facilitate Collaborative Action

Progress

- Most activities identified in 2011 NAP have been done
- Agencies have been undertaking a wide variety of new activities
 - Catalogued in annual progress reports
- Time to take stock and identify focus areas for this workgroup

Recent Developments informing the 'Refresh'

- 2013 Advisory Committee on Water Information (ACWI) establishes a Climate Subcommittee
 - *'Next Steps'* report to the Water Workgroup
- 2014 State, Local, and Tribal Leaders Task Force (SLTLTF)
 - *Recommendations*
- 2014 President's Climate and Natural Resources Workgroup
 - *Priority Agenda*

General Direction

- Consolidate six teams into three:
 - Data/Research/Vulnerability Assessment
 - Policy/Planning/Decision Support
 - Training & Outreach
- Address SLTLTF recommendations
 - 2.3.1: Evaluate long-term risks of climate change on *water resources availability*;
 - 2.3.2: Provide guidance on assessments of *vulnerability of water infrastructure*; and
 - 3.4.3: Promote *integrated watershed management and planning* to protect water quality and quantity.

Team Presentations

- Data/Research/Vulnerability Assessment
 - Julie Kiang, U.S. Geological Survey
- Policy/Planning/Decision Support
 - Rachel GrandPre, U.S. Army Corps of Engineers
- Training & Outreach
 - Nancy Beller-Simms, NOAA

Data, Research and Assessments Team

Julie Kiang, USGS, Chair

David Wells, EPA

Mindy Dalton, USGS

Veronica Blette, EPA

Jared Entin, NASA

Levi Brekke, BuRec

Scope

Data and Science to evaluate and forecast climate change impacts.

Progress on NAP Actions: Data

- Strengthen data for understanding climate change
 - How do we know when this action has been achieved?
- Align 'hydroclimatic' statistics
 - Modernize flow statistics for gaged and ungaged rivers
 - Early work initiated on Atlas 14
- Waterborne disease tracking
 - CDC continues to make progress here
 - EPA advisory for cyanotoxins in finished water
- Provide sea-level rise information to coastal communities
 - LiDAR shoreline mapping
- Develop metrics for water use efficiency in key sectors

Progress: Vulnerability Assessments

- Develop Portal and promote access to information
 - Various sources available
- Climate change vulnerability index
 - Various explorations underway (communities, infrastructure, ecosystems)
- Tools
 - Many!
 - Example: Climate Ready Water Utilities program at EPA
- Assess vulnerability of National Forests and Grasslands

Challenges

More data and more science is always wanted

The amount of information can be overwhelming.

There will always be a certain amount of uncertainty

Moving Forward

- Sustain data networks
- Identify and fill gaps in data
- Make data more readily available
- Embrace Uncertainty!
- Provide better guidance on
 - 1. obtaining and using downscaled results
 - 2. ways to manage risk
- Analyze historical records to understand previous trends and processes

Questions

- Are there particular data types that are lacking?
- Are the materials available through www.data.gov/climate useful? Is it organized in a way that facilitates finding data?
- Does the information contained in the National Climate Assessment meet your needs in terms of:
 - Level of spatial detail
 - Distilling climate science into useable information
 - Other considerations?
- Are there particular aspects of climate science for which additional information or explanation is needed?

Policy/Planning/Decision Support Team

Rachel Grandpre, ACoE, Chair

Kate White, ACoE

Nancy Beller-Simms, NOAA

Karen Metchis, EPA

Mark Kodak, DOD

Laura Montoya, DOD

Richard Volk, USAID

Curt Baranowski, EPA

Scope

Information, tools, and guidance that support planning, policy makers, and decision makers to manage freshwater resources in a changing climate

Scope

- National Action Plan: Priorities for Managing Freshwater Resources in a Changing Climate (2011)
 - Improve Information for Decision Making;
 - Strengthen Vulnerability Assessments;
 - Expand Water Use Efficiency; and
 - Support Integrated Water Resources Management.

www.whitehouse.gov/administration/eop/ceq/initiatives/resilience

Challenges

- Decision makers may not know how to find/understand/correctly select/use the existing tools
- There are lots of tools out there and it can be overwhelming
- Agencies need to improve the curation of tools
- Guidance on use of downscaling AND decision processes that understand and embrace uncertainty

Moving Forward

- **IWRM:**
 - Building X-FAST Partnership
- **Water Use:**
 - Supply chain issues
 - Coordination, planning, education, adaptation practices
 - Collection of information on water use
- **Decision Support Tools including Vulnerability Assessments:**
 - CRAVe - Climate Registry for the Assessment of Vulnerability
 - Forecasting real-time inundation mapping

Questions

- What are the most significant gap areas?
 - What are the subject areas lacking appropriate tools?
 - What are the specific types of users or decision makers that need this information?
- What would be most helpful to help for:
 - your decision making?
 - understanding your vulnerabilities
 - informing your decisions/policies?
- What are the foundations/successes we can build on?
 - Can we incorporate these into our existing processes?
- Are there institutional processes/constraints that need to be changed to adequately address these issues?

Training and Outreach Team

Nancy Beller-Simms, NOAA, Chair

Levi Brekke, BuRec

David Levinson, USFS

Karen Metchis, EPA

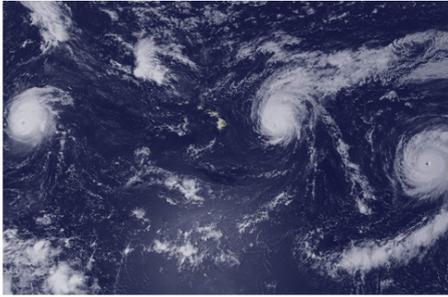
Jeff Peterson, EPA

Accomplishments to Date

Trainings, e.g.,

- NOAA et al. Monthly Webinars
- CCAWWG and UCAR COMET – Technical Professional Development Series (classroom and online)
- EPA Climate Ready Water Utilities
- EPA National Estuary Program *Getting Ready for Climate Change*
- Bureau of Reclamation Regional Training Seminars
- Fish and Wildlife Service *Climate Smart Conservation*
- USDA *ThinkWater* Program

Featured on Climate.gov 1 2 3 4 5



Central Pacific hurricane party: three's company

September 3, 2015

Filed in: [News & Features](#)

An over-active hurricane season in the central/eastern Pacific Ocean went into overdrive as three major hurricanes occurred at the same time.

[read more](#)

Recent Topics



2014 National Climate Assessment Resources for Educators

April 15, 2014

Filed in: [Teaching Climate](#)



U.S. Climate Resilience Toolkit

November 17, 2014

Filed in: [Supporting Decisions](#)



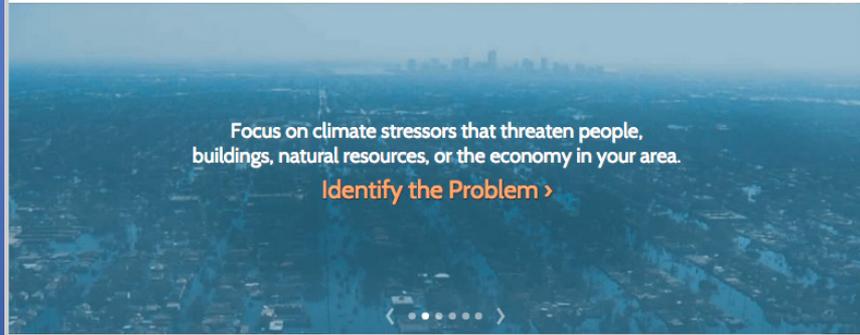
Alaska: A Regional Climate Change Impact Webinar

August 24, 2015

Filed in: [Teaching Climate](#)

• Climate Resilience Toolkit

• NOAA's Redesign of Climate.gov Website



Find Out How People Are Building Resilience



Watching for Wind (0:37)
[Watch video >](#)



Adapting to Climate Change: A Water Utility's Approach (1:27)
[Watch video >](#)



Climate Outlooks Inform Water Management (0:53)
[Watch video >](#)



Building Smart in the Floodplain (1:14)
[Watch video >](#)

Projected Completions

- Continuation of webinars (NOAA et al, EPA).
- Continuation of work on ThinkWater.
- Continuation of EPA Climate Ready Water Utilities Trainings and Technical Assistance.

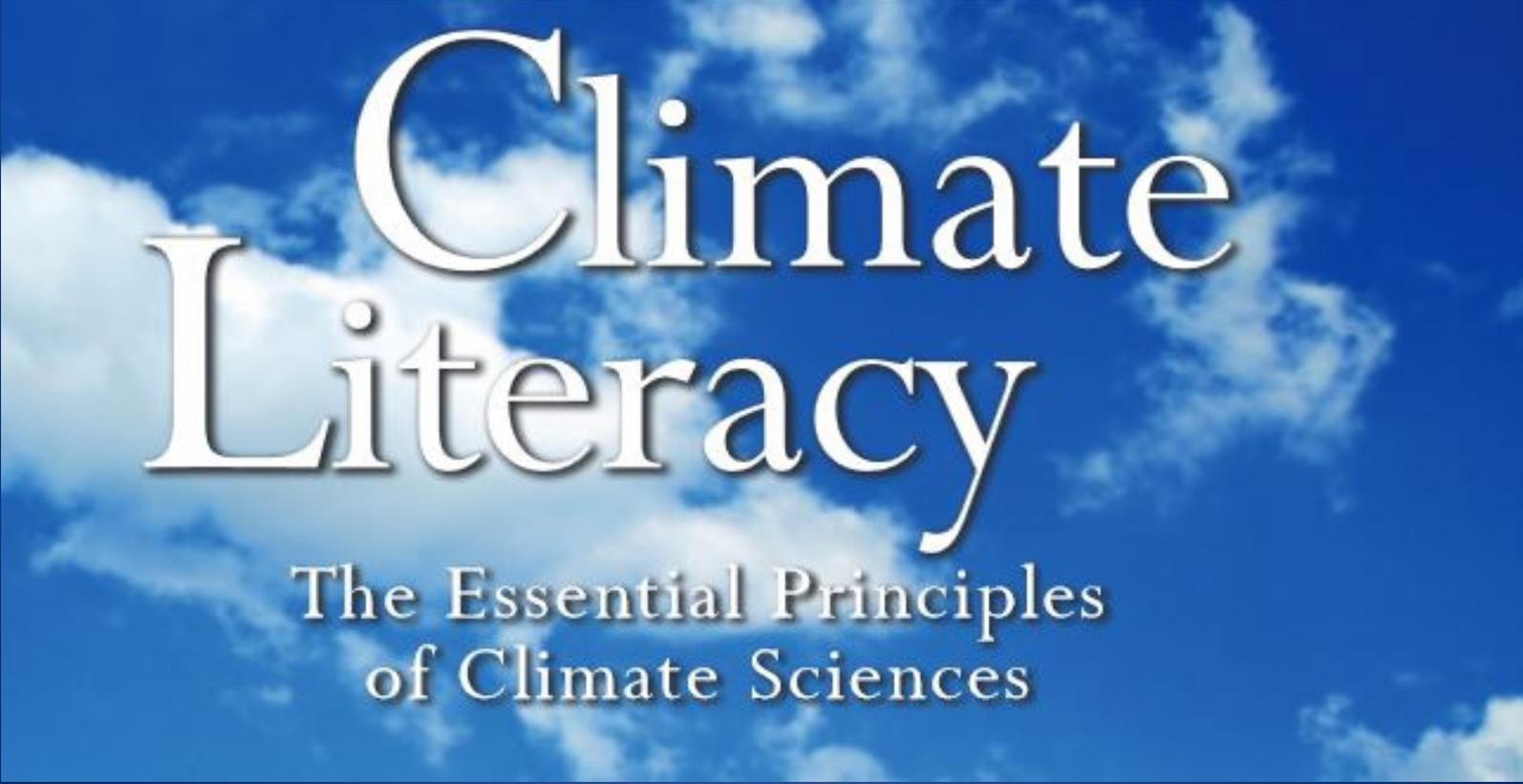


Projected Completions

New training (examples)

- CCAWWG and UCAR COMET
 - Additional Technical Professional Development Series modules
 - Non-technical Principles of Climate Integration into Water Management.
- EPA online Watershed Academy – Water Resources and Climate Change
- FWS National Conservation Training Center – Climate Smart Conservation.
- NPS Natural Resource Career Field Academy online climate change module.

- Interagency federal effort to define a framework for education and training to build climate literacy and capability.

The image shows the cover of a book titled "Climate Literacy: The Essential Principles of Climate Sciences". The title "Climate Literacy" is written in a large, white, serif font with a slight shadow effect, set against a background of a bright blue sky with scattered white clouds. Below the main title, the subtitle "The Essential Principles of Climate Sciences" is written in a smaller, white, serif font, also with a slight shadow effect.

Climate Literacy

The Essential Principles
of Climate Sciences

Proposed New Potential Areas of Focus



- Coordinate outreach and training
- Develop a strategic dissemination plan
- Create documentation on how to use tools
- Address user needs (e.g., asset management)

Questions We have for Future Work



www.playbigonlinemarketing.com

- How do we handle the quantity of available resources?
- How do we develop user-friendly pathways to find applicable user tools?
- How do we assure quality and credibility?
- How do we determine and address specific user needs (e.g., asset management)

Questions We have for Future Work

- How do we keep the website updated?
- Who else should we be partnering with (e.g., ACCO, universities)?
- What is the best way to train senior leaders on topics such as sustainability and climate?
- What are the next steps to assure our efforts are effective?



Your Turn

Please email comments by September
30 to:

Water_Climate_Change@epa.gov

What we would like your comment on, in particular....

- What are the most important issues you are dealing with due to current or anticipated effects of climate change?
- In what way can Federal agencies facilitate your ability to manage water resources in the face of climate change?
- What are your greatest training and outreach needs?
- What are the most important decision support tools that could be provided by Federal agencies?
- What are the most important data gaps or research topics that Federal agencies should be addressing?

Reiteration: Next Steps

- Anticipate a public comment draft to be available Winter 2015
- Anticipate the final updated NAP to be available Spring 2016
- These will all be posted on ACWI web site

<http://acwi.gov/>

Thank you for Participating!

- Army Corps of Engineers
- Centers for Disease Control and Prevention
- Department of Agriculture
- Department of Energy
- Environmental Protection Agency
- National Aeronautics and Space Administration
- U.S. Geological Survey
- Bureau of Reclamation
- Council on Environmental Quality
- Department of the Army
- Department of the Interior
- Forest Service
- National Oceanic and Atmospheric Administration