

# Climate Change and Water Working Group (CCAWWG) Update for 2011

*Jeff Arnold, Rolf Olsen, Kate White*

*US Army Corps of Engineers / Institute for Water Resources*

USACE USGS Joint Headquarters Meeting

US Army Corps of Engineers Headquarters

4 February 2011



US Army Corps of Engineers  
**BUILDING STRONG®**

# CCAWWG is USGS, Reclamation, USACE, NOAA, & Others

The two chief US water management agencies

USACE & Bureau of Reclamation

joined with

USGS

Objectives

1- Evaluate

incorporate

activities rela

2- Provide a fir

methods, resea

for water resou

CWTS 10-02

## Abstract

This document describes the water management community's needs for climate change information and tools to support long-term planning. Reclamation and the U.S. Army Corps of Engineers (USACE) technical specialists and program managers have worked with their planners, water operators, and environmental compliance managers to identify the information and tools most relevant to their programs. Reclamation and USACE also have engaged and consulted with other Federal, State, and local agencies and stakeholder groups that have a role in water and water-related resource management to identify complementary priorities and individual perspectives. This document is meant to help focus research and technology efforts to address information and tools gaps relevant to the water management user community.

Technical climate change information may be incorporated into longer-term water resources planning using various methods. In this report, eight technical steps representative of these various methods are used to categorize tools and information needs (i.e., gaps): 1. Summarize Relevant Literature; 2. Obtain Climate Change Information; 3. Make Decisions About How To Use the Climate Change Information; 4. Assess Natural Systems Response; 5. Assess Socioeconomic and Institutional Response; 6. Assess System Risks and Evaluate Alternatives; 7. Assess and Characterize Uncertainties; and 8. Communicating Results and Uncertainties to Decisionmakers.

## Addressing Climate Change in Long-Term Water Resources Planning and Management

User Needs for Improving Tools and Information

U.S. Army Corps of Engineers Civil Works Technical Series CWTS-10-02

Leif D. Brekke, Bureau of Reclamation, Technical Service Center, Lead Author

Contributing Authors, U.S. Army Corps of Engineers  
Kathleen White and J. Rolf Olsen, Institute for Water Resources  
Edwin Townsley, South Pacific Division  
David Williams, Tulsa District  
Fauwaz Harbali, Hydrologic Engineering Center

Contributing Authors, Bureau of Reclamation  
Chuck Hewitt and Curt Brown, Research and Development Office  
David Rafi, Policy and Administration  
Rod Witter, Multi-Pacific Region

Prepared by and for:  
U.S. Army Corps of Engineers  
Washington, DC

U.S. Department of the Interior  
Bureau of Reclamation  
Washington, DC

Coeditor: USACE Campaign Planning Unit and Bureau of Reclamation Science and Technology Program  
Mentored by: USACE Senior Executive Service Leader James Deaton, PE,  
and  
Bureau of Reclamation Senior Executive Service Leader Norman Kasabian, PE.



December 2010



# CCAWWG is USGS, Reclamation, USACE, NOAA, & Others

Practitioner Needs of Highest Concern

Workshop on Nonstationary  
Analysis / Boulder, Jan

Proceedings completed  
underway

Workshop on Good Practice  
Using Climate Change Informa

Brief summary completed; pr  
for Distribution

0940 Information Needs Growing Several Spatiotemporal Scales  
Robert Webb | NOAA

1000 Weather and Hydrologic Extremes in a Nonstationary Climate  
Auroop Ganguly | DOE Oak Ridge National Lab

1020 Break

1025 Panel 1.1 – Additional Perspectives from Federal Resource  
might Guidelines for Best Practices be Structured? (10 min)

Panelists (all invited):  
Terry Fulp and Levi Beutke | US Bureau of Reclamation  
Karen Melchis | EPA  
Lisa Crocker | NOAA NMFS  
Leigh Walling | RPS  
Dan Lechelsky | BLM  
Polly Hays | USGS Forest Service  
Rolf Olsen and Seuku Vadey | USACE  
Nancy Steinberger | FEMA

Discussion

1240 Lunch (on your own – list of nearby options to be made available)

1400 Panel 1.2 – Perspectives from Climate and Water Science  
Panelists (all invited): (10 min / 2 slides each)  
Mike Alexander | NOAA  
Mike Dettlinger | USGS  
David Yates | NCAR  
Bradley Horton | NASA GISS & NE RISA  
Auroop Ganguly | DOE Oak Ridge National Lab

0920 Examples of

Session 5 – Review, Summarize, Conclude | Moderators: Curt Brown and Jeff Arnold

1540 Review and Revise Results from Day One Break-out and Day Two Discussions  
What are the Important Choice-points for Water Resource Agencies Producing and Using Climate Change Information? How can Best Practice Guidelines Be Structured to Support Decisions?

Discussion

Synthesis and Next Steps | Moderators: Kate White and Roger Pulwarty

Discussion

Depiction of potential steps in assessing climate change information to support adaptation decisions for water resources management planning and operations.

Colorado State University  
ologic Frequency  
ent

USGS  
science for a changing world

