

RECLAMATION

Managing Water in the West

Climate Change and Water Working Group (CCAWWG)

**Addressing Climate Change in Long-Term
Water Resources Planning and Management:
User Needs for Improving Tools and
Information**



U.S. Department of the Interior
Bureau of Reclamation

Climate Change and Water Working Group (C-CAWWG)

Goal:

*Provide Scientific Collaborations in
Support of Water Management as
Climate Changes*

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C-CAWWG Participants and Roles

Defining Needs

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Managing Water in the West

*Water Supply,
Hydropower,
Ecosystem Needs,
Recreation, Etc.*



*Flood Risk Mgmt,
Navigation,
Hydropower,
Ecosystem, Recreation
Etc.*

Developing Research Strategies



*Climate Change and
Variability, Climate
and Weather
Predictability*

USGS

*Surface Water,
Groundwater,
Ecosystems, Etc.*

Future Participation from other Fed, State, Local agencies...

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C-CAWWG “User Needs” Project

Create a living document.....

**Addressing Climate Change in Long-Term Water
Resources Planning and Management:
User Needs for Improving Tools and Information**

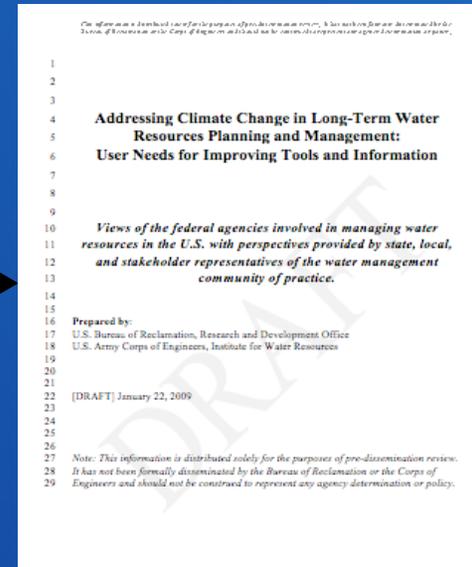
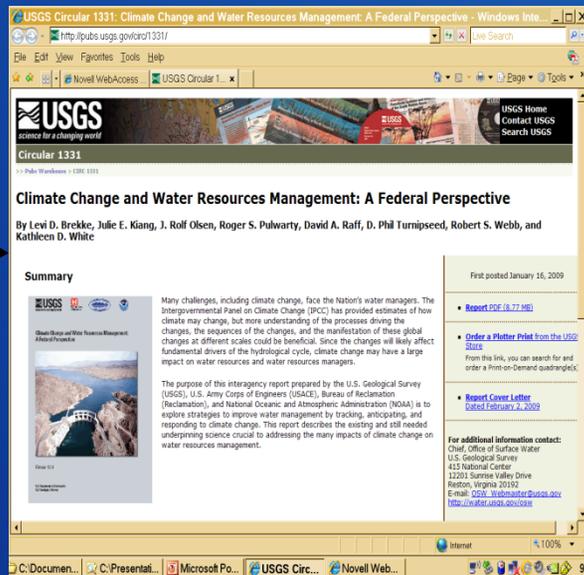
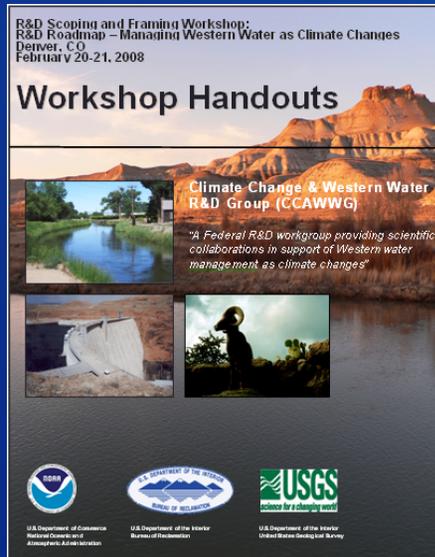
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Purpose

- Build on the foundation established by USGS Circular 1331
- Collaborative forum to better define the critical capability gaps that face the water management community

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User Needs Document Pedigree



-CCAWWG-
February 2008
Workshop

USGS Circular
1331
January 2009

CCAWWG Climate
Change User
Needs Document

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C-CAWWG “User Needs” Document

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“User Needs” Assessment

Two Parts

- **Part I - Addressing Climate Change in Long-Term Water Resources Planning and Management**
 - **Part 1-A:** Needs Assessment (Reclamation and USACE leads)
 - **Part I-B:** Research Strategy to address User Needs (NOAA and USGS leads)

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“User Needs” Assessment

Two Parts

Part II - Addressing Climate Variability in Short-Term Water Resources Planning and Management

- **Part II-A:** Needs Assessment (Reclamation and USACE leads)
- **Part II-B:** Research Strategy to address User Needs (NOAA and USGS leads)

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Process and Status

- **Part I – Addressing Climate Change in Long-Term Water Resources Planning and Management**
 - **Part I-A:**
 - draft report released **Winter 2010** for internal/external review and to invite initial round of perspectives from water management community
 - final report to be issued **Spring/Summer 2010**, along with website to facilitate continual gathering of perspectives
 - **Part I-B:**
 - To begin **Winter 2010**, in parallel with gathering of perspectives
- **Part II – Addressing Climate Change in Short-Term Water Resources Planning and Management**
 - **Part II-A:**
 - draft report development, review **Spring 2010**, final report **Summer 2010**
 - **Part II-B:**
 - to begin **Spring 2010**

C-CAWWG “User Needs” Document

Outline:

Executive Summary

1.0 Introduction

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C-CAWWG “User Needs” Document

Outline:

- **Section 2.1-** Summary of longer-term planning evaluations regularly carried out by Reclamation and USACE
- **Section 2.2 -** Role of climate in making planning assumptions for two types of studies:
 1. water resource management studies
 2. infrastructure safety and flood risk reduction

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C-CAWWG “User Needs” Document

Outline:

- **Section 2.3** - Approaches for considering climate change information in longer-term planning, with approaches varying from qualitative to quantitative.

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Outline:

Section 2.4 - Capability Assessment

- Desired capabilities
- Current capabilities
- Capability gaps (i.e. knowledge, methods, tools)

... *Report adopts an outline of **Eight Planning Steps** for the purpose of outlining gaps.*

Eight Planning Study Steps

(39 specific gaps)

Getting Ready

1. Summarize Relevant Literature (2 gaps)
2. Obtaining Climate Projections Data (5 gaps)

Making Planning Assumptions

3. Make Decisions about How to Relate Climate Projections Data to Planning (6 gaps)
4. Assess Natural Systems Response (13 gaps)
5. Assess Socioeconomic and Institutional Response (3 gaps)

Conducting Planning Evaluations and Supporting Decisions

6. Assess Systems Risk and Evaluate Alternatives (3 gaps)
7. Assess and Characterize Uncertainties (5 gaps)
8. Communicate Results and Uncertainties to Decision-Makers (2 gaps)

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Outline:

3.0 Perspectives from Other Water Management Organizations

- 3.1 List of Entities Providing Perspectives
- 3.2 Process for Gathering Perspectives
- 3.3 Summary of Messages Heard

Appendix B: Record of Perspectives Contributed by Other Organizations

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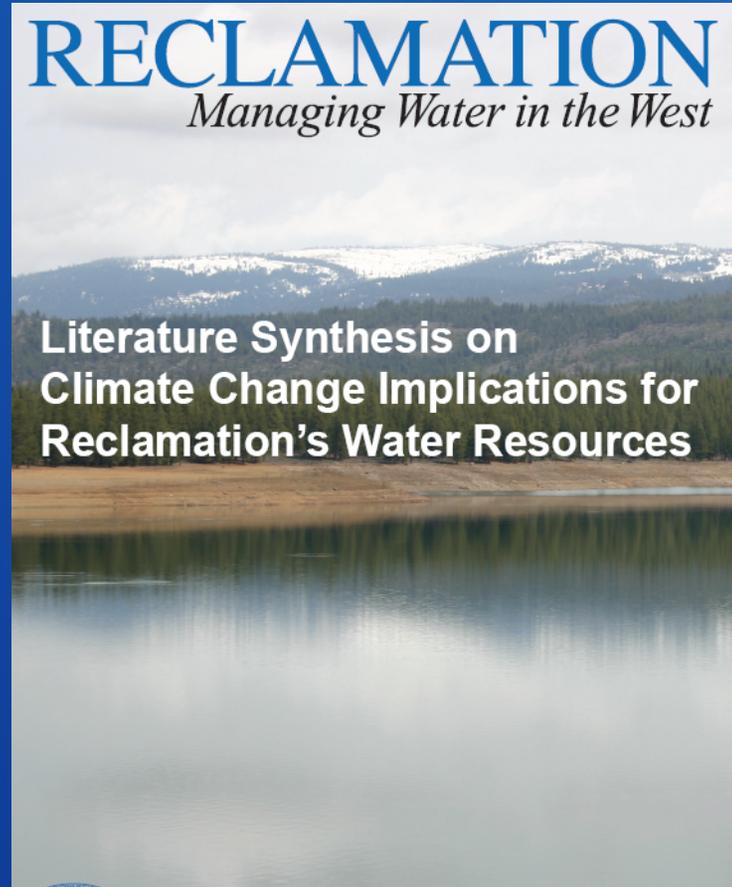
Access to Document and Perspective Gathering
www.usbr.gov/climate/userneeds

Questions? Call Levi Brekke
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Example R&D, Addressing Gap 1.1: Regional Literature Syntheses

- Description
 - FY2009 Reclamation Activity
 - Region-specific
 - **“boiler plate” narratives** for planning documentation
 - **graphic resources** for summarizing current climate projection information
- Review
 - Internal: five regions
 - External: five NOAA-RISAs
- Future Updates
 - Living document
 - Address “weak spots” (climate change and ecosystems, water demands, etc)



<http://www.usbr.gov/research/docs/climatechangelitsynthesis.pdf>

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