

***Assessing a Portfolio of Approaches for
Producing Climate Change
Information to Support Adaptation Decisions***

**A Climate Change and Water Working Group
(CCAWWG) Workshop**

Kate White, PhD, PE USACE
USGS – USACE HQ Meeting
May 22nd, 2010



Workshop Pedigree

USGS
United States Geological Survey
Climate Change and Water Resources Management: A Federal Perspective



Circular 1331

U.S. Department of the Interior
U.S. Geological Survey

Advanced Climate Modeling and Decision-Making Support of Climate Services

20 September - 24 September 2009

Workshop Chair(s):

Roger Pulwarty

Thomas Wilbanks



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

Views of the federal agencies involved in managing water resources in the U.S. with perspectives provided by state, local, and stakeholder representatives of the water management community of practice.

Prepared by:
U.S. Bureau of Reclamation, Research and Development Office
U.S. Army Corps of Engineers, Institute for Water Resources

[DRAFT] January 22, 2009

Note: This information is distributed solely for the purposes of pre-dissemination review. It has not been formally disseminated by the Bureau of Reclamation or the Corps of Engineers and should not be construed to represent any agency determination or policy.



Workshop on Nonstationarity, Hydrologic Frequency Analysis, and Water Management

January 13-15, 2010

Millennium Harvest House, Boulder, Colorado

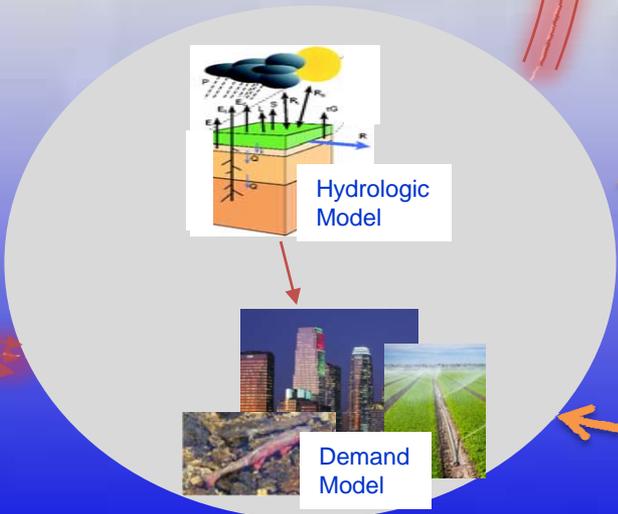
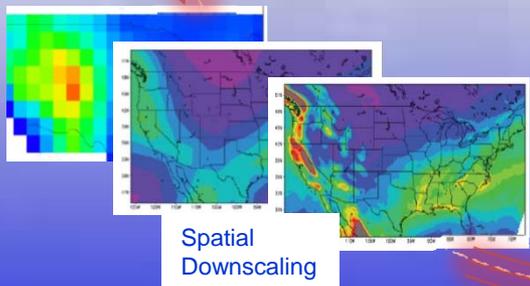
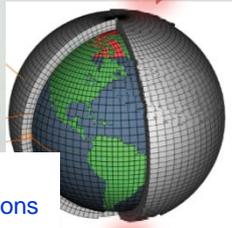
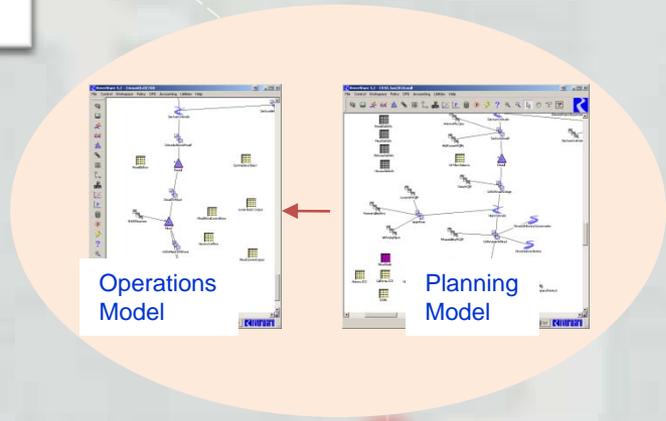
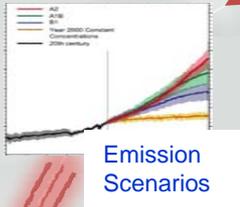
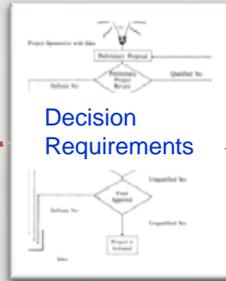


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Decisions Drive the Pathways

- Decisions about climate change adaptation measures to enhance the resilience of the infrastructure, planning, and operation of water-related resources in the US require reliable information about the **variability and uncertainty** of probable climate change effects **at the spatiotemporal scales of the decisions**
- A large portfolio of possible approaches to produce and apply climate change information for water resource issues has been developed





Workshop Topics

- The choice of native-resolution climate data, which models and which scenarios
- The spatiotemporal downscaling methods with their limits and uncertainties
- The temporal and political constraints on the various water-related planning and operating missions of diverse Federal agencies



Workshop Products

- A more comprehensive description of the sensitivity of the portrayal of these complex systems and related decisions to the early-stage choices of approaches and techniques
- Better knowledge for delineating a consistent means to develop the decision-scale climate information needed for adaptation across the portfolio of approaches and techniques
- Principles and guidelines for assessing approaches in the portfolio, together with the range and influence of their variability and uncertainty, for their utility and reliability to support water resource adaptation



Workshop Details

- 2-5 Aug 2010
- National Conservation Training Center
- Shepherdstown, West Virginia
- Results in special issue of J. American Water Resources Association

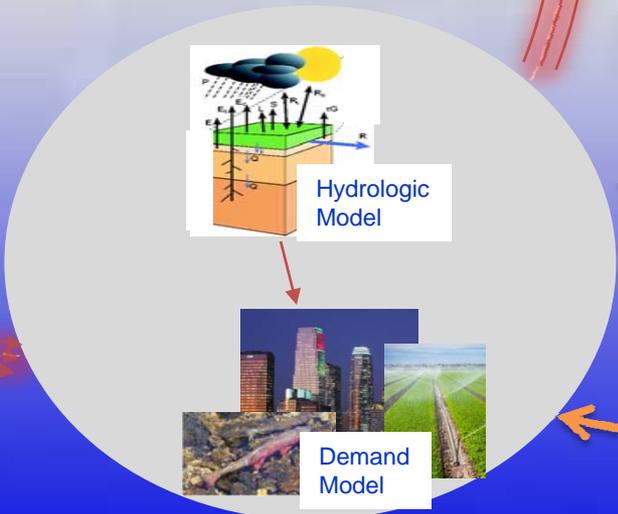
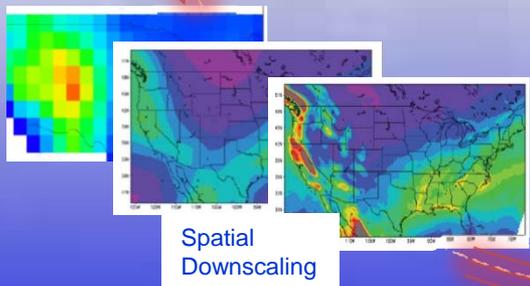
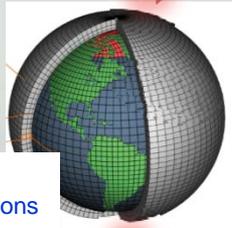
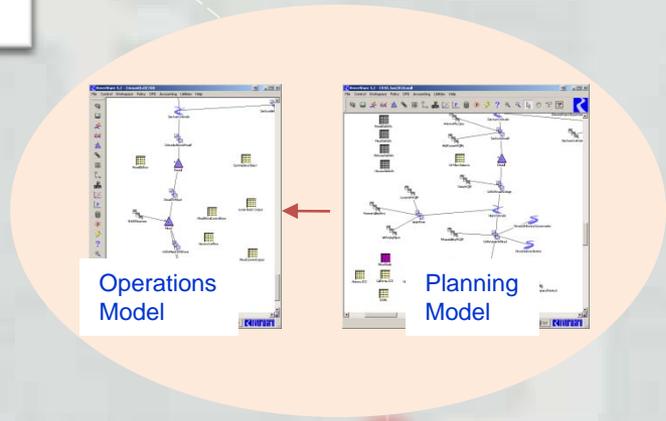
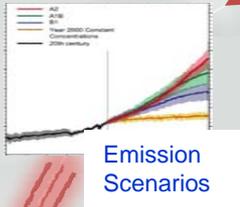
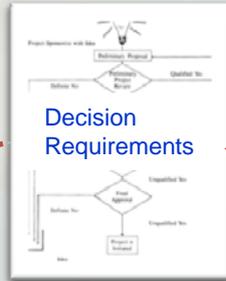


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RECLAMATION



Questions?



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RECLAMATION

- Each method or analytical technique in this portfolio
 - brings a set of uncertainties and particular deficiencies, some of which are large or only partly characterized and poorly quantified
 - For example the spatiotemporal scales natively available from most climate model projections may be too coarse to be usefully mapped to the scales of some of these adaptation decisions



- Federal agencies charged with water resource planning and operating missions must address whether and how to develop guidelines and principles for producing climate change information that will support their variously scaled decisions on adaptation measures

