

American Water Resources Association
2009 SPRING SPECIALTY CONFERENCE
Managing Water Resources Development in a Changing Climate
May 4-6, 2009
Anchorage, AK

Monday, May 4

1:30 PM – 2:00 PM

Session 5: Policy and Management I

1. Climate change, water resources management, and planning: A federal, interagency collaboration
- **Julie Kiang**, U.S. Geological Survey, Reston, VA (co-authors: J. Rolf Olsen, Kathleen White, Levi Brekke, Roger Pulwarty, David Raff, D. Phil Turnipseed, Robert Webb)

This presentation discusses a federal perspective on managing water resources in the face of climate change. The U.S. Geological Survey, U.S. Army Corps of Engineers, Bureau of Reclamation, and National Oceanic and Atmospheric Administration have collaboratively managed data and information concerning water resources for many years. In 2007, these agencies formed a workgroup to discuss and report on approaches for utilizing climate change information in the management of the Nation's water resources. The potential for climate change increases uncertainty in long-term water resources planning, but options to manage for that uncertainty exist and can be considered now. The interagency workgroup identified a number of key points for federal water managers that reflect the need for continued and expanded monitoring, the value of incorporating additional sources of information when developing planning scenarios beyond the observational record, and the advantages of incorporating flexibility into the decision making processes.

2. Engaging Water Resource Managers in the Policy Dialogue on Aquatic Invasive Species - Jennifer Conner, The Nature Conservancy, Hobe Sound, FL

Water resource managers have a valuable voice in the dialogue of aquatic invasive species policy at the local, regional, and federal level. This interactive session will provide an update on federal invasive species legislation and also provide a regional example from south Florida of a cooperative effort involving conservation organizations and state water resources managers to affect national policy. While land clearing and conversion is the number one threat to biodiversity, invasive species and climate change are increasingly recognized for their potential impacts on ecosystems and species alike. While destructive in their own right, these two threats should not be regarded in isolation. Climate change and the movement and spread of invasive species will likely interact synergistically and compound each other. Understanding these changes and related water management challenges will be increasingly important; legislation to prevent these invaders should be a national priority for water resource managers. Invasive species can cause considerable damages and costs for eradication and control for water managers; however, the full extent of the costs of damages caused by pest incursions has only recently received greater appreciation. Water systems can be affected when pests clog rivers, irrigation systems, and shorelines. The most well-known aquatic invasive species is the Zebra mussel, introduced into Lake St. Clair in ballast water discharges; they now infest waters from Vermont to Oklahoma and Ontario to the Gulf of Mexico. Great Lakes water users spend \$30 million annually to monitor and control zebra mussels. In partnership with conservation organizations and other stakeholders, The Nature Conservancy is working to help enact legislation to prevent the introduction and spread of invasive species from ships, the biggest pathway for the introduction of invasive species. . Legislation passed the House last year with an overwhelming majority, but failed in the Senate by 1 vote. Passage of national legislation next year will be a key priority in the fight against aquatic invasive species, and it will only be possible with the support of a diverse group of stakeholders throughout the country.

3. Saving All the Pieces, Staying Grounded (Climate, Water, Soil, Cities) - John Wiener, University of Colorado, and National Center for Atmospheric Research, Boulder, CO

The rapid pace of agriculture-to-urban water transfers will very likely accelerate with increasing climate destabilization, and there are significant uncertainties concerning the outcomes for almost all of the interests affected. Urban transferees are financially so capable that their access to adequate supply is not at risk, but perhaps every other interest is inadequately characterized, and in much of the Western U.S., inadequately represented. Future conditions are not adequately understood and are certainly not adequately represented.

Aldo Leopold's intelligent tinker, who would save all the pieces, is not apparently in the picture. But, despite the wide range of uncertainties, reduction of both known adverse impacts and presently unforeseeable impacts and consequences may be pursued by taking advantage of the dense linkages which characterize water issues. This presentation will offer a synthesis of approaches to biological, soil loss, and socio-economic problems of water transfers (with reference to published and posted sources;) and note the congruence of solutions with the interests of many of the urban constituents on whose behalf the damage is being done. Obstacles and identified costs and issues will be noted, based on a decade of observation, interviews, and participation in Colorado water issues.

4. Reducing our carbon footprint one step at a time - a municipal prospective - Wendy Kemp,
Regional Municipality of York, Newmarket , ON, Canada

Located in the heart of Ontario, the Regional Municipality of York is one of the fastest growing municipalities in North America. York Region will face a number of important issues as growth projections are estimated to increase from ~1 million to 1.5 million residents by 2031. As York Region plans for this growth, coordination to integrate global issues into decisions was recognized as an important practice in order to strengthen the environment, economy and communities. York Region's Sustainability Strategy provides the framework to foster innovation, leadership and action in themed areas across the organization. Action areas include corporate culture, healthy communities, economic vitality, natural environment, education and engagement and monitoring. In the Environmental Services Department, particular focus in recent years has been on the natural environment, monitoring and engagement. Key program areas like water conservation, infiltration and inflow management, energy conservation, watershed planning, water resources monitoring and public engagement has led to a reduction in our carbon footprint.