

## **TRANSFORMATIONAL SOLUTIONS FOR WATER IN THE WEST**

**Thursday • September 5, 2013 • 7:00 a.m. – 5:30 p.m.**

**University of New Mexico • Albuquerque, New Mexico**

**7:00 - 8:30 POSTER MOUNTING AND CONTINENTAL BREAKFAST**

**8:30 - 9:00 WELCOMING REMARKS**

**Rob Leland**, *Director, Climate Security Program & Director, Computing Research Center*, Sandia National Laboratories

**Marianne Walck**, *Director, Geosciences, Climate, and Consequence Effects Center & Deputy Director, Climate Security Program*, Sandia National Laboratories

**John Lyman**, *Director, Energy and Environment Program*, Atlantic Council

**Sam Fernald**, *Director*, New Mexico Water Resources Research Institute

**Keynote Introduction:**

**Richard Berry**, Mayor of Albuquerque

**Framing the Discussion:**

**Howard Passell**, *Ecologist*, Sandia National Laboratories

**9:00 - 12:45 SESSION I: TRANSFORMATIONAL SOLUTIONS**

**Moderators:**

**Marianne Walck & Robert Leland**, Sandia National Laboratories

**URBAN SOLUTIONS**

**Paradigm Shift: Rethinking Water Supplies in an Age of Scarcity** (15 minutes)  
**John Entsminger**, *Senior Deputy General Manager*, Southern Nevada Water Authority

**Q&A Discussion (5 minutes)**

**The Role of Potable Reuse as a Sustainable Water Supply Alternative** (15 minutes)  
**Jeff Mosher**, *Executive Director*, National Water Research Institute

**Q&A Discussion (5 minutes)**

**Integrated Water Management Strategies for the City of El Paso, Texas** (15 minutes)  
**Hector Gonzalez**, *Government Affairs Manager*, El Paso Water Utilities

**Q&A Discussion (5 minutes)**

**Water Resources Management in the 21<sup>st</sup> Century** (15 minutes)  
**John Stomp**, *Chief Operating Officer*, Albuquerque/Bernalillo County Water Utility Authority

**Q&A Discussion (5 minutes)**

**GOVERNANCE SOLUTIONS**

**The Train Wreck that Didn't Happen, and You Never Heard About: The Anatomy of a Shortage Sharing Agreement on the San Juan River** (15 minutes)

John Leeper, *Professional Engineer*, AMEC Environment and Infrastructure, Inc.

**Q&A Discussion (5 minutes)**

**Resilience in Water Governance: Building Adaptive Capacity within Socio-ecological Systems Facing Climate Change** (15 minutes)

Melinda Benson, *Assistant Professor, Department of Geography and Environmental Studies*, University of New Mexico

Barbara Cosens, *Professor*, University of Idaho College of Law

**Q&A Discussion (5 minutes)**

**Sustainable Water Management Profile** (15 minutes)

Mike Myatt, California Water Foundation

**Q&A Discussion (5 minutes)**

**The Traveler's Dilemma: Logic and Illogic in New Mexico's Water Laws** (15 minutes)

Max Yeh, *Principal Researcher*, Percha/Animas Watershed Association

**Q&A Discussion (5 minutes)**

**Challenges, Constraints and Opportunities Associated with the Development of a Watershed-Based Stormwater Permit in the Middle Rio Grande, New Mexico** (15 minutes)

Molly Blumhoefer et al., *Geography Instructor, School of Math, Science and Engineering*, Central New Mexico Community College

**Q&A Discussion (5 minutes)**

**General Discussion (40 minutes)**

12:45 - 1:30

**LUNCH AND POSTER SESSION**

**Presenters:**

**New Mexico Scientific Laboratories – Environmental Testing Clients at the Scientific Laboratory Division**

Phillip Adams, *Chemistry Bureau Chief, Scientific Laboratory Division*, New Mexico Department of Health

**Baseline Polychlorinated Biphenyls (PCBs) on the Pajarito Plateau in Northern New Mexico**

Armand Groffman, *Surface Water Program*, Los Alamos National Laboratory

**When, Where, and How Much Water Evaporates at the Land Surface**

Jan Hendrickx & Michael Wine, *Department of Earth and Environmental Science*, New Mexico Institute of Mining and Technology

**Testing the Effect of Heat and Drought on Plant Mortality and Survival**

Nate McDowell, Los Alamos National Laboratory

**Presented by: Cathy Wilson**, *Atmosphere, Climate & Ecosystem Sciences Team Leader, Earth and Environmental Sciences Division*, Los Alamos National Laboratory

**Satellite Observations of Water in New Mexico**

Tom Schmutge, Sam Fernald, & Steve Walker, Water Resources Research Institute

**Future Trends, Real-Time Water Management**

Dan Townsend, *Retired*, Federal Aviation Administration

**Solid and Dissolved Phase Aluminum in Stormwater Runoff on the Pajarito Plateau**

Amanda White, *Surface Water Program*, Los Alamos National Laboratory

**Temperature as a Potent Driver of Regional Forest Drought Stress and Tree Mortality**

Park Williams, Los Alamos National Laboratory

**Presented by: Andy Wolfsberg**, *Deputy Division Leader, Earth and Environmental Sciences*, Los Alamos National Laboratory

**Managing Water for Energy: San Juan Decision Tools**

Cathy Wilson, *Atmosphere, Climate & Ecosystem Sciences Team Leader, Earth and Environmental Sciences Division*, Los Alamos National Laboratory

**Water Supply Reliability for Energy Development Demands: Adaptation for Potential Climate Change**

Andy Wolfsberg, Richard Middleton, Dan Levitt, & Cathy Wilson, Los Alamos National Laboratory

**Background Metals and Radioactivity in Stormwater Chemistry on the Pajarito Plateau**

Steve Veenis, *Surface Water Program*, Los Alamos National Laboratory

1:30 - 2:00 **KEYNOTE SPEAKER: Senator Tom Udall**

**Introduction:**

Paul Hommert, *President and Laboratories Director*, Sandia National Laboratories

2:00 - 3:00 **SESSION II: TRANSFORMING NEW IDEAS INTO POLICY: CHALLENGES AND OPPORTUNITIES**

**Moderator:**

Senator Tom Udall

**Strong Medicine: Considering a Greater Federal Role in Water Management** (15 minutes)  
Reed Benson, *Chair, Natural Resources Committee*, University of New Mexico Law School

**Q&A Discussion (5 minutes)**

**Where Will the Water Come From? Review of Water Availability in the West** (15 minutes)  
Vincent Tidwell et al., *Distinguished Member, Technical Staff*, Sandia National Laboratories

**Q&A Discussion (5 minutes)**

**Water Resource Impacts Embedded in the Western US Electrical Energy Trade; Current Patterns and Adaptation to Future Drought** (15 minutes)

Benjamin Ruddell, *Assistant Professor, CTI Department of Engineering & Senior Sustainability Scientist*, GIOS, Arizona State University

**Q&A Discussion (5 minutes)**

3:00 - 4:45 **SESSION III: TRANSFORMATIONAL SOLUTIONS (CONTINUED)**

**Keynote Remarks:**

Scott Verhines, *New Mexico State Engineer*

**Moderators:**

Rob Leland & Marianne Walck, *Sandia National Laboratories*

**MANAGEMENT AND RESEARCH SOLUTIONS**

**Water Transfers in the West: Projects, Trends, and Leading Practices in Voluntary Water Trading** (15 minutes)

Carlee Brown, *Policy Manager, Water and Wildlife*, The Western Governors' Association

**Q&A Discussion (5 minutes)**

**Responding to Projected Water Resource Scarcity in the Upper Rio Grande Basin** (15 minutes)  
Jesse Roach et al., *Hydrologist, Earth Systems Analysis*, Sandia National Laboratories

**Q&A Discussion (5 minutes)**

**Transformational Management of Forest Ecosystems to Improve Water Availability and Ecological Resilience in the West** (15 minutes)

Michael Hightower et al., *Distinguished Member of the Technical Staff*, Sandia National Laboratories

**Q&A Discussion (5 minutes)**

**Computational Model for Water Governance Reform** (15 minutes)  
Michael Agar, *Professor Emeritus*, University of Maryland

**Q&A Discussion (5 minutes)**

**The Role of Research in Developing and Implementing Transformational Solutions for Water Sustainability** (15 minutes)

Arnim Wiek et al., *Associate Professor, Decision Center for a Desert City*, Arizona State University

**Q&A Discussion (5 minutes)**

**General Discussion and Next Steps (30 minutes)**

5:15 - 5:30 **CLOSING REMARKS**