

Speaker Biographies/Abstracts

The Economics of Groundwater Management



November 13, 2013
Minnesota Ground Water Association
Fall Conference

Bonnie Keeler

Institute on the Environment, University of Minnesota

Presentation:

Linking Water and Well-being: A Framework for Improved Assessment and Valuation of Groundwater-related Ecosystem Services

- Changes in groundwater quantity and quality can affect the delivery of multiple ecosystem services, from recreation to human health.
- Linking groundwater models with changes in ecosystem services can be challenging, but new approaches offer potential to integrate biophysical and economic models.
- Case studies in Minnesota will be used to highlight key groundwater-related services and approaches for estimating economic values of changes in groundwater quality.

Education:

Ph.D. candidate, Natural Resources Science and Management (expected Dec. 2013)

M.S. (ecology), University of Minnesota, 2007

B.A. (biology), The Colorado College, 2001

Experience:

2009 – present, Graduate Research Fellow (IonE) and Researcher with the Natural Capital Project

2008 – 2009, visiting instructor Hamline University

2007 – 2008, Research Associate Heinz Center for Science Economics and the Environment

Affiliations:

Ecological Society of America (ESA)

American Geophysical Union (AGU)

Soil and Water Conservation Society (SWCS)

Ray Wuolo

Barr Engineering Company

Presentation:

Groundwater Models as Inputs into Ecosystem Services Models – Evaluating Uncertainty

- Role of models in decision making process
- Water-supply questions for models
- Sources of model uncertainty
- Quantifying and describing model uncertainty
- Reducing model uncertainty

Education

M.S. (geological engineering), South Dakota School of Mines & Technology, 1986

B.S. (geological engineering), Michigan Tech, 1983

Experience

1988 – present, Barr Engineering (Principal Hydrogeologist, head of Computational Hydrogeologist group)

1986 – 1988, EWA, Inc. (hydrogeologist)

1985 – 1986, USGS Rapid City, SD (hydrologist)

Affiliations

Minnesota Groundwater Association

National Groundwater Association

Professional Engineer and Professional Geologist in several states and Canadian provinces

Regular contributor to Vintage Guitar Magazine

Enrique Valdivia

District 7 Director, Edwards Aquifer Authority

Presentation:

Groundwater Regulation in Texas

- A brief history of groundwater in Texas
- Overview of the Edwards Aquifer Authority
- EAA Litigation: Endangered Species, Takings, Voting Rights
- EAA Habitat Conservation Plan

Background:

Enrique Valdivia is a member of the Edwards Aquifer Authority Board of Directors, representing District 7, which covers a northwest-central portion of Bexar County, Texas. Mr. Valdivia serves on the board's Aquifer Management Planning Committee, Executive Committee, and chairs its Permits/Enforcement Committee. He was elected to the board in 2006 and re-elected in 2010. His current term expires December 1, 2014. Mr. Valdivia, a resident of San Antonio, is a practicing attorney with Texas Rio Grande Legal Aid, Inc.

Education:

He holds a Bachelor of Arts degree in philosophy from Carleton College, and juris doctorate degree from the University of Wisconsin, School of Law.

Mike Strodman/Scott Burlingame

Minnesota Rural Water Association; Park Rapids Public Works

Presentation:

The Search for Clean Groundwater and the Economic Costs Associated

- Partnership with producers and other agencies
- Climbing nitrate levels
- The search for a new source of water
- The need for water treatment

Mike

Education:

M.A. (Urban and Regional Studies with a certificate in City Planning) Minnesota State University, Mankato 2004

B.A. (Geography with a minor in Geographic Information Systems) South Dakota State University 2002

Experience:

2009 - Present Sourcewater Protection Specialist with MN Rural Water Association

2004 - 2009 City Planner for the City of Park Rapids

Scott

Education:

BS degree in business management, Bemidji State University

Experience:

1994 to present: Public Works Supt./Airport Manager/Well Head Manager

1991 - 1994, Anderson Bros. Construction, Quality Control Manager

1990 - 1991, 3M Corporation, Internship

David A. Legvold

Retired educator, Environmental educator, Retired Executive Director-Cannon River Watershed Partnership, Minnesota farmer of 800 acres

Presentation:

NITROGEN: A Challenge for Modern Agriculture. Who Is Responsible? Who Can Help Solve the N Problem?

Major Points:

- The Tale of Two Rivers: A spoken narrative about the Minnesota River and the Des Moines River. Dealing with the NITROGEN and NUTRIENT problem in each watershed.
- Serious problems in Minnesota Agriculture: tillage, erosion, degradation of soil quality, nutrient losses, decreasing soil productivity, a farmer's perspective. What are some alternatives?
- Proving efficient N use on the farm: The On- Farm Network and St. Olaf College model, valuing groundwater quality and economic benefit for agriculture.
- Centralized research versus decentralized research on the farm: Which one will bring about change?
- Conservation Drainage: DAMNED if you do it wrong, DAMMED if you do it right!
- New Methods in Preserving Water Quality On the Land: Great hope for farmers and the environment.

Education:

- B.S. Education, Minnesota State University Mankato 1963
- M.A. Educational Administration 1982, University of Minnesota
- Ph. D. coursework toward Educational Administration and Environmental Education 1988.

Experience:

- Elementary, Middle School, High School teacher Richfield Schools 1963-1998;
- Education Director, Eagle Bluff Environmental Learning Center, Lanesboro, MN 1996-1999;
- Controller, IT systems implementation, Inventory manager, "Rat Killer", John Deere Company 1998-2005;
- Executive Director, Cannon River Watershed Partnership, Northfield, MN 2005- 2009;
- Volunteer Mentor for St. Olaf College Science Research Students 2009-Present.

Affiliations:

- Chief Negotiator, Richfield Education Association
- Treasurer, Richfield Education Association
- Board Member, Eagle Bluff Environmental Education Center, Lanesboro, Board President;
- Board Member, Cannon River Watershed Partnership;
- Board Member, Minnesota Waters
- Board Member, Conservation Minnesota
- St. Olaf College Student Mentor

Jason B. Moeckel

Minnesota Department of Natural Resources

Presentation:

Planning for Groundwater Sustainability in the 21st Century

- Understanding the risk of groundwater overuse and contamination in Minnesota
- Addressing sustainability issues systematically
- Using planning to inform action
- Regulation to stimulate innovation

Education

B.S. Environmental Studies, San Jose State University, 1994

M.S. Resource Conservation, University of Montana, 1998

Experience

2011-present, MN DNR, Manager of Inventory, Monitoring and Analysis Section of the Division of Ecological and Water Resources

2006-2011, MN DNR, Fisheries Operations Manager

2004-2006, MN DNR, Assistant Regional Fisheries Manager

1998-2004, MN DNR, Senior Stream Habitat Specialist