

# Speaker Biographies/Abstracts

## Hydrogeology and Public Health Connecting Science, Education and Policy



April 24, 2013  
Minnesota Ground Water Association  
Spring Conference

**Mark Borchardt**, U.S. Department of Agriculture - Agricultural Research Service

**Presentation:** *Viruses in Groundwater: From Disease Outbreaks to Sporadic Illness*

- Virus types and frequency of occurrence in groundwater
- Association of virus concentrations in non-disinfected tap water from groundwater sources with community rates of acute gastrointestinal illness
- Description of large ground waterborne outbreak in Door County, Wisconsin

### Education

Post-doc (microbial food webs) Stroud Water Research Center, 1993

Ph.D. (aquatic ecology), University of Vermont, 1991

B.S. (horticulture), University of Wisconsin – Madison, 1980

### Experience

2010-present, USDA-ARS (research microbiologist) and USGS Wisconsin Water Science Center

1994-2010, Marshfield Clinic Research Foundation (research scientist)

1993-1994, University of Wisconsin – Eau Claire (lecturer)

1980-1984, University of Wisconsin – Madison, Department of Hematology (research technician)

### Affiliations

American Society for Microbiology

**Patricia Toccalino**, U.S. Geological Survey - California Water Science Center

**Presentation:** *Chemical Mixtures and Water Quality in Public-Supply Wells in the U.S.*

- Study approach
- Occurrence and distribution of chemical mixtures
- Composition of most frequently occurring mixtures
- Potential toxicity of mixtures

### Education

Ph.D. (Environmental Science and Engineering), Oregon Graduate Institute, 1992

B.S. (Environmental Health, Toxic Substance Control, Chemistry), Oakland University, 1987

### Experience

2005-present, U.S. Geological Survey (Hydrologist)

1998-2005, Oregon Health & Science University (Assistant Professor)

1996-1997, Parsons Brinckerhoff Energy Services (Environmental Scientist)

1994-1996, The Evergreen State College (Faculty)  
1993-1994, Portland Community College (Adjunct Professor)  
1993-1994, Oregon Graduate Institute (Postdoctoral Research Associate)  
1992-1993, Chester Environmental (Senior Scientist)  
1987-1988, Chrysler Motors (Industrial Hygienist)

**Affiliations**

Society for Risk Analysis (SRA)  
American Chemical Society (ACS)

**Pete Moulton, Water Utilities Superintendent, City of St. Peter, Minnesota**

***Presentation: Water Treatment Cost and a Growing Community***

- Community history and preparation are not always indicators of where your Utility is going.
- The business of municipal water is important to each community's success.
- Public acceptance of capital improvement projects can be achieved to benefit a community.

**Education:** Bachelors of Science in Public Administration from Minnesota State University (2004)

**Experience:** Saint Peter Utilities (1987 to present)  
Brookings SD. Utilities (1979 to 1987)

**Affiliations:**

- Minnesota Section of the American Water Works Association (MnAWWA)  
(Past Board member and Section Chair)
- Minnesota Water and Wastewater Agency Response Network (MnWARN)  
(Currently Chair of Minnesota Section)
- Water Environment Federation (WEF)  
(Currently the federal legislative liaison)

**Karla Peterson, Minnesota Department of Health**

***Presentation: Unregulated Contaminants and Statewide Groundwater Sampling***

Karla is the supervisor of the Community Water Supply Unit at the Minnesota Department of Health, where she has worked since 1994. She has a bachelor's degree in Civil Engineering from the University of Minnesota, and a master's degree in Public Administration from Hamline University. Karla is chairperson for the Minnesota Section of the AWWA.

**Todd Johnson, Minnesota Department of Health**

***Presentation: Unregulated Contaminants - The Long Road to Becoming Regulated***

- *B.S. in Chemistry and M.S. in Environmental Engineering - both from NDSU*
- *5 years as a consulting engineer, primarily in environmental - Superfund, landfills, petroleum site remediation*
- *15 years as district engineer in the drinking water protection section at MDH*
- *Recently had "Contaminants of emerging concern" engineer to my title to be the lead person on emerging issues in drinking water*

## **Tannie Eshenaur, Minnesota Department of Health**

### ***Presentation: Making the Invisible Visible: Groundwater, Public Health and People's Perception***

Tannie Eshenaur is a planning director working with Clean Water Legacy activities for the Minnesota Department of Health's Drinking Water Protection and Environmental Surveillance and Assessment sections. Tannie specializes in risk communication for communities affected by environmental exposures to hazardous substances. Tannie has been with the Minnesota Department of Health since 2001. Prior to that she and her family spent 13 years in Ethiopia, where Tannie provided health education about water and sanitation as part of a village water supply project.

## **Mindy Erickson, U.S. Geological Survey - Minnesota Water Science Center**

### ***Presentation: Arsenic in Minnesota groundwater - Update on our state-of-understanding***

Co-authors: Brandy Toner, Assistant Professor and Sarah Nicholas, Ph.D. Candidate, University of Minnesota Department of Soil, Water, and Climate

- Arsenic in groundwater continues to be a widespread, naturally-occurring contaminant of concern to Minnesota's private well owners, public water systems, and public health officials
- Several new, relevant geochemical and geological studies are underway
  - Arsenic measurements in all new potable wells (ongoing since 2008)
  - Comprehensive raw water chemistry from 1,000+ PWS wells throughout state (to be completed late in 2013)
  - New county atlases, including MGS interpretation of glacial geology (plus GIS shapefiles) and DNR hydrogeologic interpretation and geochemical analyses (ongoing)
  - New geochemistry of glacial sediments (ongoing)
  - New chemical mapping of glacial sediments (ongoing)
- Relevant historic data sets also exist
  - CWI
  - MGS interpretation of glacial geology (plus GIS shapefiles) and DNR hydrogeologic interpretation and geochemical analyses, in many Minnesota counties
  - Historic groundwater and sediment geochemistry
- Next step: compilation and comprehensive analysis of these new studies would provide a new opportunity for developing effective arsenic guidance/predictive models

### **Education**

Ph.D. (Water Resources Science) University of Minnesota, 2005

M.S. (Civil Engineering) University of Minnesota, 1992

B.S. (Geological Engineering) University of Minnesota, 1990

### **Experience**

2009-present	U.S. Geological Survey, Hydrologist and Groundwater Specialist
2007-present	University of Minnesota, adjunct faculty member, Bioproducts and Biosystems Engineering, and Water Resources Science
2006-2009	MPCA, Environmental Research Scientist
2005-2006	Mn/DOT, GIS Specialist
2001-2005	University of Minnesota, Research Assistant (Dissertation title: Arsenic in Upper Midwest Ground Water: Occurrence and Geochemical Mobilization Mechanisms)
1998-2000	MDH, Hydrologist (Primary project: Minnesota Arsenic Study)
1992-1997	Remediation Technologies, Inc. (RETEC), Geological Engineer

**Amanda Strommer:** Environmental Health Program Manager, Washington County  
Department of Public Health and Environment

***Presentation:*** *Communication and Public Outreach about Emerging Contaminants in Drinking Water Supplies in Minnesota*

- Amanda Strommer is an Environmental Health Program Manager for the Washington County Department of Public Health & Environment in Stillwater, MN. She is a Registered Environmental Health Specialist and has been with Washington County for 11 years. Five of those years were spent as the county water planner. Amanda manages the Water Resources, Septic, Food/Beverage/Lodging, Pool, and Public Health Nuisance Programs for Washington County.
- Amanda received her Bachelors of Science in Environmental Science with a minor in Geography from Southwest Minnesota State University. She recently received her master's degree in Water Resource Science from the University of Minnesota. Amanda also serves as Secretary of the MGWA Foundation and is on the scholarship subcommittee.