

2014 ND Water Quality Monitoring Conference

March 4-6, 2014

Bismarck State College
National Energy Center of Excellence
Bismarck, North Dakota

Agenda

Tuesday, March 4, 2014

11:00 am **REGISTRATION & CHECK-IN** | *Foyer, 4th floor,
National Energy Center of Excellence*

EXHIBITOR SHOWCASE | *Bavendick Stateroom*

1:00 pm **WELCOME** | *Bavendick Stateroom*
Dave Clark, Interim President, Bismarck State College
Dennis Fewless, North Dakota Dept. of Health (conference co-chair)
Gregg Wiche, U.S. Geological Survey (conference co-chair)

Estrogenic Hormones in the Environment
Dr. Frank Casey, Ph.D, North Dakota State University

2:00 pm **EMERGING WATER QUALITY CONTAMINANTS AND ISSUES**

Moderator: Gregg Wiche, U.S. Geological Survey

- *Under the Radar: Nanoparticles and Rare Earth Elements as Emerging Pollutants*
Marinus Otte, Ph.D. and Donna Jacob, Ph.D., North Dakota State University
- *2013 Pesticide Surface Water Monitoring Results*
Jerry Sauter, North Dakota Dept. of Agriculture
- *Modeled Sulfate Concentrations Based on Spatial Basin Characteristics in North Dakota Streams*
Joel Galloway, U.S. Geological Survey

3:00 pm **BREAK** | *Bavendick Stateroom, Foyer*

3:30 pm **STREAM GEOMORPHOLOGY AND ECOLOGY**

Moderator: Sarah Braaten, Red River Regional Council

- *Sheyenne River Comprehensive Bank Stability and Restoration Study - Valley City, ND*
Abby Korte, URS Corporation
- *Biological Community Response to Environmental Stressors in the Midwestern Streams*
Joe Nett, North Dakota Dept. of Health
- *Effects of the Devils Lake East End Outlet on Mussels in the Sheyenne River*
Andre DeLorme, Ph.D., Valley City State University
- *Assessment of the Fish Assemblage and Habitat Quality in the Red River of the North, 2010*
Aaron Larsen, North Dakota Dept. of Health

5:00 pm **WRAP-UP**

6:00 pm to 8:00 pm **POSTER Reception** | *Bavendick Stateroom*

8:00 am Modeling Pesticide Concentrations in Surface Water: with Special Emphasis on Results for the Corn-Belt Region of the United States and the Missouri and Red River Basins

Karen Ryberg and Aldo (Skip) Vecchia, U.S. Geological Survey

8:40 am **WATERSHED PLANNING AND ASSESSMENT**

Moderator: Greg Sandness, ND Dept. of Health

- What, When, and Where in Studying the Best Management Practices (BMPs) in Grand Forks, North Dakota
Yeo Howe Lim, Ph.D., PE, University of North Dakota
- Methods for Developing Enhanced Geo-Spatial Water Quality Data Products for Prioritizing Subwatersheds and Catchments for the Placement of Conservation and Best Management Practices and Targeting Fields for Implementation
Zach Herrmann, Houston Engineering, Inc.
- Using Enhanced Geo-Spatial Water Quality Data Products for Prioritizing Sub-watersheds and Catchments for the Placement of Conservation and Best Management Practices and Targeting Fields for Implementation
Charles Fritz, International Water Institute
- Incorporating Adaptive Management and Translational Ecology into the North Dakota Total Maximum Daily Load Program
Michael Hargiss, North Dakota Dept. of Health

10:00 am **BREAK** | **Bavendick Stateroom, Foyer**

10:30 am **WATER QUALITY EDUCATION**

Moderator: Andre Delorme, Valley City State University

- River Watch Program in Minnesota
Charles Fritz, International Water Institute
- River Watch on the Sheyenne River in West Fargo
Sara Forness - West Fargo High School
- The Intricacies of the Goose River
Dean Strand, Mayville-Portland-Clifford Galesburg High School and Prairie Waters Education and Research Center
- Tile Drainage and the Wild Rice
Kenan Layden, Sargent Central High School and Prairie Waters Education and Research Center
- SEPUP: Groundwater Contamination: Trouble in Fruitvale
Gary Ketterling, Ph.D., Valley City State University
- Watershed Education in the Red River Basin, a Multi-state Analysis
David DeMuth, Ph.D., Valley City State University

12:00 pm **LUNCH WITH KEYNOTE PRESENTATION** | **Modeling vs Monitoring—What's Really Happening in the Chesapeake Bay?**

Dana D. York, Green Earth Connection



Dana D. York
President
Green Earth
Connection, LLC

Dana York retired from the USDA, Natural Resource Conservation Service in January 2011 after a 34-year career with the Agency. She has formed a consulting group, Green Earth Connection LLC to bring her expertise to the agricultural and environmental communities. Her expertise includes: training and implementing BMP Identification projects, nutrient management, nutrient trading, the EPA Chesapeake Bay model and partnership building. She specializes in dynamic field based training course development and presentation, technical research and much more.

Prior to her retirement, she was the Director of the Watershed and Landscape Programs Division, NRCS, in January 2010, where she directed the NRCS Watershed, Conservation Technical Assistance and Conservation Initiatives Programs. She also coordinated the Agency's targeted efforts in large watersheds such as the Chesapeake Bay, Great Lakes and Upper Mississippi River Basin. Prior to returning to Washington, she was the Senior Advisor to the Chesapeake Bay Program in Annapolis, MD.

York is a native of Tennessee. She received a Bachelor of Science degree in Agricultural Science from Tennessee Technological University and a Master's degree in Industrial/Organizational Psychology from Middle Tennessee State University with an emphasis in organizational design and measurement, business planning and leading organizations and employees through change. Dana currently splits her time between a historic home built in 1860 that she has renovated on the Eastern Shore of Maryland and running a farm in eastern TN.

Wednesday, March 5, 2014, *continued*

1:30 pm **ENERGY DEVELOPMENT AND GROUND WATER ASSESSMENT**

Moderator: Kris Jensen, U.S. Environmental Protection Agency

- EPA's Study of Hydraulic Fracturing and Its Potential Impact on Drinking Water Resources
Jeanne Briskin, U.S. Environmental Protection Agency
- Williston Basin Baseline Groundwater-Quality Assessment, 2013
Joel Galloway, U.S. Geological Survey
- North Dakota Dept. of Health Western Ambient Ground Water Program
Chris Simmons, North Dakota Dept. of Health
- Prioritizing Aquifer Monitoring in North Dakota: Geochemistry is Important Too
Scott F. Korom, Ph.D., University of North Dakota
William Schuh, ND State Water Commission

3:00 pm **BREAK** | *Bavendick Stateroom, Foyer*

3:30 pm **AGRICULTURE AND WATER QUALITY**

Moderator: Mike Ell, ND Dept. of Health

- Monitoring and Modeling Wetland Chloride Concentrations in Relationship to Oil and Gas Development
Max Post van der Burg, Ph.D., Northern Prairie Wildlife Research Center
- The Impact of Increased Road Use and Dust on Wetlands in Western North Dakota
Jessica Creuzer, North Dakota State University
- Plant Phosphorus, Nitrogen, and Carbon and Soil Phosphorus in North Dakota Wetlands
Lindsey Meyers, Ph.D., URS Corporation
- The National Wetland Condition Assessment in North Dakota: Preliminary Results
Shawn DeKeyser, Ph.D., North Dakota State University
- Three Discovery Farms...Three Unique Water Quality Stories
Rochelle Nustad, U.S. Geological Survey

5:10 pm **WRAP-UP**

Evening (on your own)

8:00 am NRCS's Edge of Field Monitoring Program and Ag Water Drainage Management Opportunities

Craig Goodwin, Natural Resource Conservation Service

8:40 am **AGRICULTURAL RUNOFF AND DRAINAGE**

Moderator: Ted Alme, Natural Resources Conservation Service

- Remediation of Nutrients from Feedlot Runoff by Plants
Arjun Thapa, North Dakota State University
- Agricultural Subsoil Tile Drainage in the Dakotas: Potential Effects on Wetland Hydrology
Ray Finocchiaro, Ph.D., Northern Prairie Wildlife Res. Center
- Monitoring tile drainage and sub-irrigation water quality using electrical conductivity
Xinhua Jia, Ph.D., North Dakota State University
- Nitrate-Nitrogen in Soil Water as Affected by Nitrogen Management in Sugar beet under Subsurface Drainage Condition
Rakesh Awale, North Dakota State University

10:00 am **BREAK** | *Bavendick Stateroom, Foyer*

10:30 am **WATER QUALITY ASSESSMENT**

Moderator: Jessica Johnson, U.S. Fish and Wildlife Service

- Limits, Levels and Choices ... Oh My!
Cynthia Auen, North Dakota Dept. of Health-Laboratory Services
- Monitoring water quality in Devils Lake in real time
Xiaodong Zhang, Ph.D., University of North Dakota
- Assessment of water-quality data from Long Lake National Wildlife Refuge, ND: 2008 through 2012
Charlie Dahl, Ph.D., and Ray Finocchiaro, Ph.D., Northern Prairie Wildlife Res. Center
- Wasteload Allocation Modeling of an Intermittent Stream
Jayme Klecker, AE2S
Hans Holmberg, LimnoTech
- Continuous Water-Quality Monitoring for Estimating Constituent Concentrations and Loads in the Red River of the North
Joel Galloway, U.S. Geological Survey

12:00 pm **Closing** | *Bavendick Stateroom*



Conference Partners

