

SESSION 1A

- 8:40 *Pilot Study to Integrate Existing Karst Flow Data for Kentucky in the National Hydrography Dataset Created by the U.S. Geological Survey*, Rob Blair and others, KY DOW
- 9:00 *An Evaluation of Physical and Chemical Discharge Parameters from a Spring that Drains the Epikarst*, David Jackson, KY DOW
- 9:20 *Characterizing Health Risks in Privately Supplied Drinking Water Due to Agricultural Practices in Rural Western Kentucky, Leading to an Intervention Study*, Karen Card and E. Glynn Beck, Dept of Epidemiology and KGS, UK
- 9:40 *Associated Aqueous Geochemistry of a CO₂-Enhanced Oil Recovery Project in the Sugar Creek Oil Field, Hopkins County, Kentucky*, Kathryn Takacs and others, KGS

10:00 **Break**

SESSION 1B

- 10:20 *Land-Use, Stream Channel Dynamics, and Macroinvertebrate Community Responses: A Northern Kentucky Case Study*, Bob Hawley and others, Sustainable Streams, LLC
- 10:40 *Kentucky LiDAR Meets NAIP Multispectral Imagery: Toward Data Fusion in the Assessment of Watershed Change*, Demetrio Zourarakis, Kentucky Division of Geographic Information, Frankfort, KY
- 11:00 *Seasonal Variation in Water Quality and Dissolved Methane of Barren River Lake*, John Loughrin and Carl Bolster, USDA-ARS, AWMRU, Bowling Green, KY
- 11:20 *Water Quality Investigation in the Eastern Kentucky Coal-fields*, Lisa Underwood and Lisa Hicks, USACE and KY DOW

SESSION 2A

- Pollutant Removal Effectiveness of the McConnell Springs Stormwater Quality Wetland Pond and the Gainesway Pond Retrofit Project, Lexington, KY*, David Price and Susan Plueger, LFUCG Division of Water
- Combined Sewer Separation: A Constructed Wetland Approach*, Jonathan Nieman, CDP Engineers Inc., Lexington, KY
- Water Quality Retrofit Basin Selection Process in Louisville Kentucky*, Eric Senn Land Design and Development, Louisville KY
- Live Green Lexington: Water Partner Program*, Darcy Everett and Joanna Isaacs, Bluegrass PRIDE

10:00 **Break**

SESSION 2B

- Building Support for Protecting and Restoring Plain, Frumpy, Dowdy Streams*, Barry Tinning, Tetra Tech, Mt. Sterling, KY
- Monitoring Water Quality in Hinkston Creek: Providing Information for Action*, Brian Reeder and April Haight, Center for Environmental Education, Morehead State University
- The Story of the Hinkston Creek Watershed Data*, Gregory Sousa and others, Tetra Tech
- Implementation of Watershed Based Plans in the Dix River Watershed*, Caroline Walz and Malissa McAlister, OSM/VISTA Dix River Watershed Coordinator

11:40 Awards Luncheon (Awards for Outstanding Contributions Related to Water Resources)

SESSION 1C

- 1:00 *Bush Honeysuckle Induced Aquatic Hypoxia*, Stephanie Hayes and Richard Durtsche, Dept of Biological Sciences, NKU
- 1:20 *A Laboratory Scale, Continuous Flow Bioreactor for the Removal of Manganese in Water Supplies*, Michael Snyder and Y.T. Wang, Dept of Civil Engineering, UK
- 1:40 *Flood Impact Due to Dam Failure: An Assessment of Current Studies and the Appropriateness of the Methodologies Applied to the Dix Dam*, Allen Cantrell and Scott Yost, Dept of Civil Engineering, UK
- 2:00 *Development of a Comprehensive Sediment Transport Method in First Order Watersheds with Contour Coal Mining*, Darren Martin and Jimmy Fox, Dept of Civil Engineering, UK
- 2:20 **Break**
- 2:30 **Poster Session**

SESSION 1D

- 3:40 *The Carboxylic Acid-Bound Iodine Layer – Towards an Anti-Fouling Coating for Water Sensors and Water Treatment Facilities*, Lingbo Lu and Yuguang Cai, Dept of Chemistry, UK
- 4:00 *Aqueous Arsenic Removal by Thiol-Containing Filtration Columns*, Partha Jana and David Atwood, Dept of Chemistry, UK
- 4:20 *Green Construction in an Urban Landscape*, Elizabeth Bullock and others, CDP Engineers, Lexington, KY
- 4:40 *Developing a Storm Water Management Plan in the Jackson Ditch Watershed, City of Trenton, Butler County, Ohio*, Erman Caudill, Stantec Consulting Services, Lexington, KY

SESSION 2C

- Comparing the Kentucky Phosphorus Index with the P Loss Calculated with a Process-Based Model*, Carl Bolster, USDA-ARS, AWMRU, Bowling Green, KY
- Kentucky Nutrient Criteria Development and Reduction Strategy*, Clark Dorman, Water Quality Branch, KY DOW
- Genotypic Diversity of *Escherichia coli* Isolates from Environmental Sources and the Influence on Transport Behavior*, Kimberly Cook and others, USDA-ARS, AWMRU, Bowling Green, KY
- A Multiparameter Approach for the Identification of Leaking and Overflowing Sanitary Sewers in the Wolf Run Watershed*, Tricia Coakley and Gail Brion, Depts. of Earth and Environmental Sciences and Civil Engineering, UK
- Break**
- Poster Session**

SESSION 2D

- Water Quality Credit Trading Feasibilities for Kentucky*, Marie Pelton and others, Dept of Agricultural Economics, UK
- Participation in Agricultural Governmental Cost Share Programs in the Kentucky River Watershed in the Context of Water Quality Trading*, Pedro Fernandes da Costa and others, Dept of Agricultural Economics, UK
- Point Source Polluters in the Kentucky River Watershed and the Potential for Water Quality Trading*, Ron Childress and others, Dept of Agricultural Economics, UK
- Nonpoint Source Abatement Costs in the Kentucky River Watershed*, Zheng Liu and others, Dept of Agricultural Economics, UK

Poster Presentations

Fate of Stable Isotope Label During Predation of ¹⁵N-Tagged Wild-Type Escherichia coli by Protozoa, Ashley Barton and Alan Fryar, Dept Earth and Environmental Sciences, UK

Cane Run Watershed Assessment and Restoration – Phase One Accomplishments, Amanda Gumbert and others, UK Cooperative Extension Service

Improving Water Quality: Riparian Edge versus River Channel, Renee Kirtman and Kristy Hopfensperger, Biological Sciences, Northern Kentucky University

Microscopic Population Dynamics and their Relationships to the Activated Sludge Process in a 30 MGD Wastewater Treatment Plant, Maria Lundin and David Price, LFUCG Division of Water Quality

Southern Region Down-Well Camera Project, Glynn Beck and others, Kentucky Geological Survey

Escherichia coli Contamination of the Triplett Creek Watershed, Rowan County, Kentucky, Geoffrey Gearer and others, Dept of Biology and Chemistry, Morehead State University

An Overview of the Paducah Gaseous Diffusion Plant Sitewide Groundwater Flow and Transport Model, Junfeng Zhu and others, KGS

Differential Gene Expression in Zebrafish and Native Sunfish Following Exposure to Gaseous Diffusion Plant Effluent, Ben Brammell and others, Dept Natural Sciences, Asbury University

Patterns of Heavy Metal Concentration in Core Sediments, Wilgreen Lake, Madison County, Kentucky, Clint McMaine and Walter Borowski, Dept Geography and Geology, EKU

Concentration of Heavy Metals in the Waters and Surface Sediments of Wilgreen Lake, Madison County, Kentucky: An Evaluation of Plausible Sources, Chad Von Gruenigen and Walter Borowski, Dept Geography and Geology, EKU

Assessing Short-Term Changes to Headwater Stream Structure and Function Following Alternative Forest Harvesting Practices in a Cumberland Plateau Watershed, Chad Bergenson and Scott Grubbs, Dept Biology and Center for Biodiversity Studies, WKU

Cattle and Karst: Source Tracking Assessment & Biological Indicators in a Nutrient-Polluted Watershed, Srikanth Vangapandu and others, Eastern Kentucky Environmental Research Institute, EKU

Real-Time Continuous Observations from Sensors and Long-Term Monitoring of Water Quality Allow Increased Understanding of Biological and Hydrological Processes in a Reservoir, Kentucky Lake (USA), Susan Hendricks & others, Hancock Biological Station, Murray State University

Development of New Sensors for Monitoring Velocity and Sediment Discharge in a Watershed, Robert Stewart and others, Dept of Civil Engineering, UK

Variability of Particulate Organic Carbon Flux with Mining in Small Appalachian Watersheds, Nathaniel Adams and others, Dept Civil Engineering, UK

Long Term Estimates of Soil Organic Carbon and Nutrient Dynamics in Reclaimed Appalachian Mine Soil, Peter Acton and Jimmy Fox, Dept of Civil Engineering, UK

Integrated Modeling Approach to Particulate Organic Carbon Estimates on a Regional Scale Basin, William Ford and Jimmy Fox, Dept of Civil Engineering, UK

Determination of Caffeine as a Marker for Septic Tank Contamination of Wilgreen Lake, Rosemary Onjiko and Susan Godbey, Dept of Chemistry, EKU

A Stormwater Course for General Education, Rebecca Kelley and Christopher Thorpe, Dept of Biological Sciences, NKU

Hydrological Modeling of Hart Ditch, A Tributary to Little Calumet River, Indiana Using HEC HMS and Radar Data, Vujadin Petovic and others, Purdue University Calumet

Baseflow Trends in Northwest Indiana, Lisander Vaniko and others, Purdue University Calumet

Analysis of Long-Term Trends in Environmental Conditions at a Gaseous Diffusion Plant Using Multiple Data Sources, Andrew Wigginton and others, Dept Civil Engineering, UK

Estimating Impacts of Land Use Management on Soil Structure, Sleem Kreba and others, Dept of Plant and Soil Sciences, UK

Kentucky Water Resources Annual Symposium

March 21, 2011

Griffin Gate Marriott Resort
Lexington, Kentucky



UK UNIVERSITY OF KENTUCKY
Kentucky Water Resources Research Institute