

THE 2009 NEW HAMPSHIRE JOINT WATER AND WATERSHED CONFERENCE

Friday and Saturday, November 20-21, 2009

7:45 AM - 3:30 PM

Grappone Conference Center

70 Constitution Avenue • Concord, New Hampshire

FRIDAY, NOVEMBER 20, 2009

- 7:45 AM - 8:15 AM **Display Set Up – Granite Ballroom and Prefunction Area**
- 8:15 AM - 8:45 AM **Registration and Refreshments – Prefunction Area**
- 8:45 AM - 9:00 AM **Introduction and Welcome – Granite Ballroom**
- 9:00 AM - 10:00 AM **Plenary Session: Headwaters – Developing a Collaborative Conservation Approach to Support Land Use Decision-Making, Dr. Christine Feurt**
- 10:10 AM - 10:30 AM **Session I-A**
A. New Hampshire Stressed Basins Project - Overview and Extended Data Uses
B. Stormwater Management Strategies for Reduction of Nitrogen and Phosphorus Loading to Surface Waters (10:10-10:40)
C. The EPA on Climate Change: the “State of Knowledge” and the Office of Water: “Response to Climate Change” (10:10-10:40)
D. A River Runs Through It...Once Again! (10:10-11:10)
E. Nitrogen - The 21st Century Coastal Watershed Challenge (10:10-10:40)
F. Build-out Analysis and Density Transfer Credits to Manage Growth in the Bow Bog Brook Watershed (10:10-10:40)
- 10:30 AM - 10:50 AM **Session I-B**
A. Hydrologic Application of LIDAR Data: Case Study at the UNH Burley-Demeritt Farm
B. Nutrient Removal Mechanisms in a Cold Climate Gravel Wetland (10:40-11:10)
C. Greenhouse Gas Emissions from Wastewater Treatment and Biosolids Management (10:40-11:10)
D. Spatial and Temporal Variability in Nitrogen Concentrations, Export and Retention in the Lamprey River Basin (10:40-11:10)
E. Recreational Trails and Water Quality: Are Recreational Trails Degrading Stream Quality? (10:40-11:10)
- 10:50 AM – 11:10 AM **Session I-C**
A. A Tool for Estimating Flood Flow Frequency on Ungaged, Unregulated, Rural Streams in NH
- 11:10 AM - 11:30 AM **Break and Display Session – Granite Ballroom and Prefunction Area**

- 11:30 AM - 12:00 PM **Session II-A**
- A. GIS to Google: Sharing Interactive GIS Maps Online Using Google Earth and Google Maps (11:30-12:30)
 - B. Pervious Concrete: When it Rains, It Drains! (11:30-12:30)
 - C. The Northeast Climate Impacts Assessments and What it Means to Public Works (11:30-12:30)
 - D. Water Supply Aid in Central NH - An Evaluation of Water System Interconnections
 - E. Temperature Regime Characteristics of High-Quality Coldwater NH and MA Streams
 - F. DES's Innovative Permitting and Technical Assistance Initiative: Introduction and Discussion (11:30-12:30)
- 12:00 PM - 12:30 PM **Session II-B**
- A. Wastewater Nutrient Control
 - B. Identification and Assessment of NH Fish Assemblages
- 12:30 PM - 1:30 PM **Lunch – Granite Ballroom**
- 1:30 PM - 2:00 PM **Workshop I-A**
- A. The Habitat Priority Planner: A GIS-Based Tool to Help Focus Financial and Community Resources on Critical Habitat Areas (1:30-3:30) (add \$20 fee)
 - B. Stormwater Management in NH: What Is and What Should Be (1:30-3:30)
 - C. LID Practices as a Means of Resilience and Short-Term Adaptation to Climate Change (1:30-2:30)
 - D. Developing a Water Resources Plan for NH: An Opportunity to Participate in the Planning Process (1:30-3:30)
 - E. Recent Improvements to the US Geological Survey Streamgaging Program
 - F. Environmental Characteristics Zoning: Let's Get Ready for Town Meeting 2010 and Beyond! (1:30-3:30)
- 2:00 PM - 2:30 PM **Workshop I-B**
- A. The Other Half of the Protected Instream Flow Pilot Program: Water Management Plans
- 2:30 PM - 3:00 PM **Workshop I-C**
- A. Stream Temperature and the Hyporheic Zone—Implications for Stream Protection and Restoration
 - B. Raising the Profile of Watershed Management: Contoocook and North Branch Rivers Management Plan Update
- 3:00 PM - 3:30 PM **Workshop I-D**
- A. Climate Change and Simulated Groundwater Availability in the Seacoast Region of NH
 - B. Shoreland Buffer Protection Analysis and Implementation along the Upper Merrimack River
- 6:00 PM – 9:00 PM **Wild and Scenic Film Festival – Red River Theaters, 11 South Main St., Concord, NH**
- Tickets \$10/person or become a NH Rivers Council member for \$30, includes two free tickets to the Film Festival, and live blues music and refreshments. Doors open at 4:45 pm.

ABOUT THE PLENARY...

Headwaters - Developing a Collaborative Conservation Approach to Support Land Use Decision-Making

Coastal watersheds in southern Maine connect coastal and inland communities where diverse land use practices and land conservation strategies create a complex mosaic of policies affecting water quality and quantity. This presentation shares lessons learned from a project designed to improve land use decision making and overcome barriers to implementing a watershed approach in southern Maine watersheds.

The watershed approach mirrors the principles and practices of community-based ecosystem management. This project integrated Collaborative Learning and land use planning tools developed by the Ecosystem Based Management Network to connect the practice of ecosystem management to municipal land use decision-making. Desire to incorporate water quality and habitat protection into economic development strategies motivated the town of Sanford, Maine to examine existing resource conditions, ordinances, and Comprehensive Plan priorities. In addition, Sanford's five watersheds drain to significant coastal areas including two National Estuarine Research Reserves, one National Wildlife Refuge and the area included in a National Estuary Partnership.

This project used the Collaborative Learning approach to guide stakeholder engagement and use of geospatial tools and Community Viz technology to develop a Conservation Plan for Sanford that considered the value of headwater streams, aquifers and riparian buffers for water quality and quantity protection. Watershed values were considered along with habitat, recreation and land productivity values.

This presentation will address challenges and successes associated with the application of land use technology tools to improve decision making at the watershed scale, including stakeholder identification and engagement, techniques to enhance public participation, developing priorities for watershed management and linking land conservation goals with water quality protection goals.

Dr. Christine Feurt, Coastal Training Program Coordinator, Wells National Estuarine Research Reserve in Wells, Maine and the Director of the Center for Sustainable Communities, Department of Environmental Studies at the University of New England in Biddeford, Maine

PLENARY SPEAKER PROFILE

Christine Fuert, Coastal Training Program Coordinator and Director of the Center for Sustainable Communities in the Department of Environmental Studies
Wells National Estuarine Research Reserve and the University of New England in Biddeford, Maine

Chris has worked for over four decades as an environmental scientist and educator navigating the interface between science and management. She holds an undergraduate degree in Zoology

from the University of Maryland, a Masters in coastal ecology from the College of William and Mary and a PhD in Environmental Studies from Antioch University New England. Her current work and research focuses on the practice and potential of ecosystem management and the processes that support the translation of interdisciplinary research to management and policy. The most fun she has had this year is traveling around Newfoundland.

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- 8:15 AM - 8:45 AM **Registration and Refreshments – Prefunction Area**
- 8:45 AM - 9:00 AM **Introduction and Welcome – Granite Ballroom**
- 9:00 AM - 10:00 AM **Plenary Session: Treading Lightly on the Land: How Growth and
Development Can Protect Water Quality, Governor Parris N. Glendening**
- 10:10 AM - 10:40 AM **Session I-A**
A. GIS on Pennies a Day: GIS Software Everyone Can Afford (10:10-11:10)
B. Fond of Our Lawns (10:10-11:10)
C. LID Practices as a Means of Resilience and Short-Term Adaptation to Climate
Change (10:10-11:10)
D. America's Next Top Volunteer (10:10-11:10)
E. The Newfound Watershed Master Plan – Science-based Policy for Environmental
Economic Sustainability
F. Stream Ecosystems and their Restoration (10:10-11:10)
- 10:40 AM - 11:10 AM **Session I-B**
A. Acton Wakefield Watersheds Alliance Bi-State Watershed Based Management
Plan
- 11:10 AM - 11:30 AM **Break and Display Session – Granite Ballroom and Prefunction Area**
- 11:30 AM - 12:30 PM **Session II-A**
A. Learning to Google Your Watershed: An Overview of Google Tools for Creating
Interactive Maps
B. Stormwater Management in NH: What Is and What Should Be
C. Climate Change Adaptation for a NH Coastal Watershed: Identifying Risk and
Costs for Culvert Infrastructure
D. Framing the Issue: How Science Leads to Watershed-Friendly Changes in the
Law
E. Merrimack River Watershed Wetland Restoration Strategy
F. The Use of Log Jams in Bank Stabilization Efforts in Colebrook, NH
- 12:30 PM - 1:30 PM **Lunch – Granite Ballroom**

- 1:30 PM - 2:00 PM **Workshop I-A**
- A. Bringing GPS into Maps: Free Tools to Put Points on the Map (1:30-3:30) (add \$20 fee)
 - B. Low Impact Development Applications in NH: From Retrofit Case Studies to Everything You Wanted to Know About Rain Gardens (1:30-3:30)
 - C. The NH Climate Action Plan: Opportunities to Preserve and Protect Water Quality and Watersheds (1:30-3:30)
 - D. Designing Stronger Projects and Proposals for Watershed Protection (1:30-3:30)
 - E. The Active River Area: A Framework for River Conservation and Restoration
 - F. Protecting Surface Water Through Land Conservation: Why, How, and Whom to Work With (1:30-3:30)
- 2:00 PM - 3:00 PM **Workshop I-B**
- A. NH's New River Management and Hazard Mitigation Approach: Science and Planning for Fluvial Erosion Hazards
- 3:00 PM - 3:30 PM **Workshop I-C**
- A. Holistic Assessment and Mitigation of the Bacteria-Impaired Furnance Brook Watershed
- 3:30 PM **Conference Concludes**

ABOUT THE PLENARY...

Treading Lightly on the Land: How Growth and Development Can Protect Water Quality

In 1997, Maryland adopted a revolutionary approach to public spending that aimed to protect natural resources, rebuild thriving towns, and provide a cleaner, healthier future for all citizens. Lessons learned in Maryland and around the country indicate that the development solutions that protect the environment are also essential strategies to strengthening local and regional economies. Former Governor Glendening, who won an Innovations in Government award for his leadership on Maryland's Smart Growth laws, will address how this smart growth strategy worked to protect the Chesapeake Bay and precious open space, while contributing to thriving cities and historic town centers.

Governor Parris N. Glendening, President, Smart Growth Leadership Institute

PLENARY SPEAKER PROFILE

Governor Parris N. Glendening, President *Smart Growth Leadership Institute*

Former Governor Glendening spent eight years as chief executive of the state of Maryland, where he made the environment education and inclusiveness the heart of his legislative, administrative and personal agenda. Governor Glendening was elected by his peers to serve as chairman of the National Governor's Association, where he made quality growth his top agenda item. He was elected to statewide office after serving three terms as County Executive of Prince George's County, a jurisdiction of 800,000 outside of Washington,

D.C. He was twice named "Public Official of the Year" by Governing Magazine, the first time for his work as County Executive and the second, as Governor, due to the impact of his nationally recognized Smart Growth program. As president of the Smart Growth Leadership Institute, Governor Glendening travels the nation advising citizens and leaders about the costs of urban sprawl and its effect on our communities. He works with local and state government to develop innovative and effective approaches to growth and development that protect the environment, ensure economic prosperity and create healthier places to live.