



N.H. Department of Environmental Services
**Drinking Water Source
Protection Conference**

Wednesday, April 30, 2014 (8:30 am – 4:00 pm)
Grappone Conference Center
70 Constitution Avenue,
Concord, NH 03301

Sponsored by
American Ground Water Trust
Concord, New Hampshire
A 501(c)(3) non-profit organization



5.0 Technical Credit Hours for NH Water Works Operators

AGENDA

- 8:30 – 8:45 AM **WELCOME, CONFERENCE OVERVIEW**
◆ **Paul Susca, Supervisor - Planning, Protection and Assistance; Drinking Water and Groundwater Bureau, NH DES**
- 8:45 – 8:55 AM **ANNUAL DRINKING WATER SOURCE PROTECTION AWARDS**
◆ **Thomas Burack, Commissioner, NH DES**
- 8:55 – 9:15 AM **NH DES'S INITIATIVE TO ADDRESS THE MTBE LEGACY**
◆ **Michael Wimsatt, Director, Waste Management Div., NH DES**
This session will summarize NH DES plans to use \$81 million in settlement funds from the State's MtBE (Methyl Tertiary Butyl Ether) lawsuit to address MTBE contamination in NH's groundwater and drinking water.
- 9:15 – 10:00 AM **GREEN INFRASTRUCTURE, CLIMATE CHANGE, FLOODS, AND YOUR DRINKING WATER: SUBTLE AND COMPLEX ASPECTS OF NAVIGATING ADAPTATION**
◆ **Thomas P. Ballestero, Dir., University of New Hampshire Stormwater Center**
Investments in "green" stormwater infrastructure, such as bio-retention or rain gardens infiltrate stormwater and protect our lakes and rivers from more intense storm events. Climatic trends in the northeast portend more weather extremes, meaning wetter wet periods and drier dry periods. With more frequent flooding occurring over the last decade, green infrastructure has an important role in integrated water resources management.
- 10:00 -10:45 AM **WATER FROM THE HILLS: ADDRESSING IMPACTS FROM A CHANGING CLIMATE WITHIN THE CONTEXT OF A CHANGING LANDSCAPE: BUILDING RESILIENCY FOR THE LAKE SUNAPEE WATERSHED**
◆ **Michael Simpson, M.S, M.A., Chair, Antioch University New England's Environmental Studies Department**
Using a two year NOAA funded initiative in the Lake Sunapee Watershed as a case study, this session will provide guidance on how communities might approach prioritizing initiatives to mitigate impacts associated with increased run-off that can threaten vulnerable surface water resources. This discussion will also touch upon more recent NOAA funded research in an MS4 community and what is being done to divert surficial flooding from direct entry into surface water supplies.
- 10:45 - 11:15 AM **BREAK / REFRESHMENTS**

11:15 –12:00 PM **BREAKOUT SESSION**

Surface Water	Groundwater	Community-Based Source Water Protection	Best Management Practices
Making Local Changes That Mitigate Climate Impacts	Rehabilitation and Reincarnation of the Brown Farm Well, Berlin, NH	Partnering Opportunities through the NHDES Aquatic Resource Mitigation Fund Grant Program	Implementing Low Impact Development (LID) Practices in the Lakes Region
This session will continue from the morning plenary a discussion concerning how to engage stakeholders in building community capacity to implement strategies that mitigate climate impacts. Discussion will also focus on making local decisions in an environment of uncertainty and how to prioritize and pay for proposed mitigation strategies.	Berlin (NH) Water Works relies primarily on surface water but the Brown Farm Well, a source used as a backup emergency supply, is envisioned to play an important role in meeting future water demands. This presentation will review activities associated with assessing the well's true yield and reconfiguring the well to better address future system demands.	DES's Aquatic Resource Mitigation Fund can be utilized as a source of funds to support the permanent protection of land near public sources of drinking water. The fund has been operating for seven years and has had great success to date. The program's funds are generated through payments provided by applicants as a form of mitigation for wetland permits. This presentation will discuss what makes a successful grant application and review several case studies that involve land conservation to further protect surface water sources in Meredith and Nashua.	This session will review innovative stormwater practices, such as rain gardens and bio-retention areas, constructed in the Lakes Region to provide greater treatment of runoff that eventually discharges into Lakes Waukegan and Winnepesaukee (Paugus Bay), primary sources of drinking water for Meredith and Laconia, respectively.
Prof. Jim Gruber, P.E., Antioch University; Michael Simpson, Chair, Environmental Studies Department	David Maclean, P.G., Senior Hydrogeologist, Geolnsight, Inc.	Lori Sommer, NH DES	Dari Sassan, Lakes Regional Planning Commission (formerly); Luke Powell, Assistant Dir., DPW, Laconia, NH

12:00 - 1:00 PM **LUNCH**

1:00 - 3:30 PM **AFTERNOON SESSIONS—CONCURRENT TRACKS**

Surface Water	Groundwater	Community-Based Source Water Protection	Best Management Practices
1:00 – 1:45 PM			
Developing a Watershed Water Quality Monitoring Plan: How to Develop and Use the Data?	Arsenic, Lead, Iron, Manganese, and Uranium Concentrations in Private Well Water in South-eastern NH (2012-2013)	A New Land Conservation Plan for the Merrimack Watershed	Road Salt Reduction Efforts in Derry (Beaver Brook Watershed)
Changes in raw source water quality can have impacts upon water treatment. Establishing a monitoring plan can help to both identify "hot spots" contributing contaminants to your source and allow analysis of long-term trends in water quality. This session will review the basics of a monitoring plan and how raw water monitoring is being used in Paugus Bay to identify and mitigate non-point sources of contamination.	Many water quality conditions of private wells in NH are not well evaluated. This session will review the results of a 2012-2013 USGS assessment of the arsenic, iron, lead, manganese, and uranium concentration distribution in groundwater from privately-owned bedrock wells in three counties of southeastern NH.	In 2010 the U.S. Forest Service ranked the Merrimack River Watershed as <i>the most threatened watershed in the nation</i> in terms of the projected loss of private forest land over the next twenty years. Changes in natural land cover could have profound ramifications for surface and groundwater resources. This science-based plan prioritizes areas to conserve land to protect drinking water supplies, aquatic and terrestrial ecosystems, recreational open space, farms and forests.	Derry has worked closely with the NH DOT and NH DES, and surrounding towns to reduce the use of road salt in the Beaver Brook watershed. This effort has been multifaceted and has included calibration of equipment, new equipment, education of employees and contracted salt applicators, and public outreach. This session will share the lessons learned to date concerning how to reduce salt use and protect water resources.
Danna B. Truslow, CG, PG, Truslow Resource Consulting LLC; Luke Powell, Asst. Dir., DPW, Laconia, NH	Sarah Flanagan, Hydrologist, U.S. Geological Survey	Chris Wells, Dir. of Policy, Society for the Protection of NH Forests	Alan Cote, Superintendent of Operations, Derry, NH
1:45 - 2:30 PM			
With a Little Help from Our Friends: Collaborations to Protect a Water Supply	Municipal Guidance for Clearly Defining Potable Water in Local Building and Health Codes	The 2013 Draft EPA Small Municipal Separate Storm Sewer System (MS4s) Permit: How Can It Protect Drinking Water?	Where Is My Water Going?: A Practical Approach to Performing Water Audits
Sebago Lake is a unique, multi-use lake that provides over 200,000 Maine residents with drinking water. This session will review six collaborations between the Portland Water District and lake users that are intended to minimize the impacts of public uses on lake water quality.	Potable water is a requirement under the NH State Building Code yet it is not clearly defined. This makes it difficult to ensure private well water is free from natural or human sources of contamination present in groundwater. This session will review the need for a clearer potable water definition and summarize new guidance for municipal health and code enforcement officers concerning potable water standards in local codes.	Drinking water managers should be aware of new MS4 stormwater permit conditions and the potential to partner with local stormwater managers to better protect local drinking water resources. Details will be shared regarding the new MS4 permit and how Durham's MS4 program and new water ordinance protect ground and surface water, including the Lamprey and Oyster Rivers, used by the town as sources of drinking water.	This presentation will discuss a practical approach to performing water distribution system audits using the AWWA Manual of Practice M36 (Water Audits and Loss Control Programs) as the basis of the audit. The findings and results from two recent audits in medium-sized NH communities will be presented.
Paul Hunt, Environmental Manager, Portland Water District	Pierce Rigrod, NH DES	Newton Tedder, U.S. EPA; David Cedarholm, Town Engineer, Durham, NH	Richard Davee, P.E., Vice President, Wright-Pierce
2:30 - 2:45 PM BREAK			

2:45 – 3:30 PM

<p>Cyanotoxins – An Emerging Group of Contaminants and What It Means for Water Systems</p>	<p>Addressing Increasing Salt Concentrations in a Sand and Gravel Aquifer: Protecting Water Quality for Future Generations in Plymouth, NH</p>	<p>NH DES’s Local Source Protection Grant Program: Summary of Protection Projects Completed and How to Apply</p>	<p>Water Conservation in Concord - Protecting Penacook Lake</p>
<p>Cyanobacteria (blue-green algae) and the toxins they produce are of increasing concern for water systems that rely on surface water sources. This presentation will provide an overview of the potential threat, what is being done in NH and other states, and efforts to develop of a consistent New England-wide approach to monitoring for cyanobacteria and their toxins, utilizing relatively inexpensive equipment and methods. The talk will also touch on the effectiveness of treatment to remove cyanotoxins from drinking water, and source water protection to reduce the likelihood of harmful blooms.</p>	<p>The Plymouth Village Water and Sewer District (PVW&SD) provides drinking water to the town of Plymouth from two wells located near I-93. Salt levels in the aquifer have increased steadily over the past several decades. This presentation will summarize salt use within the wellhead protection area and review a detailed mitigation plan to address the ongoing issue of salt impacts to the local aquifer.</p>	<p>This session will provide examples of successful source protection grant projects and review eligibility and scoring criteria, application materials, and related information necessary to complete the grant application. NH DES staff will field questions and provide feedback on project ideas you may have to better protect local drinking water resources.</p>	<p>With the creation of a Water Conservation Technician position in 2013, the City of Concord became the first water system in the state to have a position dedicated to conservation. This presentation will provide a background of Concord's water system, the capital improvement plan to protect and improve the system, and a discussion of the reasons Concord chose to develop the water conservation technician position. Josh will review his responsibilities and observations in his first year and elaborate on Concord's water conservation goals moving forward.</p>
<p>Paul Susca, NHDES; Hilary Snook, USEPA</p>	<p>Jeffrey Marts, P.G., Emery & Garrett Groundwater; Dana Hadley, District Administrator, PVW&SD</p>	<p>Kelsey Vaughn, NH DES</p>	<p>Joshua Worthen, Water Conservation Technician, City of Concord, NH</p>

3:30 - 4:00 PM EVALUATIONS & NETWORKING