

Who Should Attend This Symposium

Are you concerned about future water resources? Water utility managers, planners, public works managers, consulting and regulatory professionals, and watershed association representatives will find this a comprehensive, timely program of interest. Water commissioners and water board members will also find the symposium a valuable source of information as they look to the future and the water resources available for their communities.

Registration / Cancellation

The fee for NEWWA members, watershed organizations, planning association members, or members of any of the sponsoring organizations is \$160. The fee for non-members is \$200. Multiple registrations from the same organization can attend at a discounted fee of \$130 for members and \$170 for non-members. The registration fee covers attendance, CEUs, lunch, handouts, and certificate.

Register for the symposium online at www.newwa.org or complete the registration form below and return to:

NEWWA
125 Hopping Brook Road
Holliston, MA 01746-1471
P 508.893.7979 F 508.893.9898

Cancellation Policy

If you cannot attend you must contact NEWWA in writing two business days prior to the start of this program to request a refund or credit minus a \$30 administrative fee. If you contact NEWWA within one business day you will be charged 100% of the original course registration fee. This charge is non-refundable and non-transferable. Written refund/credit request made for special circumstances will be considered if received within two weeks from the start date of this program. Credits issued are valid for six months from the date of this program. If you register within 2 days of the course - add a \$20 late fee.



#1671

Symposium Location

Holiday Inn
242 Adams Place
Boxborough, Massachusetts 01719
P 978.263.9429

Reservations can be made for the night of October 27, 2010 by calling the hotel directly. Mention NEWWA to obtain the special room rate of \$104 single/double, plus 9.7% tax. Reservations should be made by October 6, 2010.

Directions

The Holiday Inn is located at the junction of Route I-495 and Route 111. If you're travelling from the south, take Exit 28 (Route 111) off Route I-495 and turn left at traffic light. The hotel driveway is on the right.

If you're travelling from the north, take Exit 28 off Route I-495 and merge onto Route 111 towards Boxborough. The hotel driveway will be after the first light on the right.

Registration Form

2010 Water Resources Symposium - October 28, 2010

Name: _____ Nickname: _____ NEWWA Member #: _____
(As you want your name on CEU certificate) (As you want on your name badge)

Company: _____

Address: _____ City, State, Zip: _____

Phone: _____ Fax: _____ E-mail: _____

Please check the total fee for the symposium	Members	Non-Members
NEWWA Members, Non-Profit Organizations, Members of Sponsoring Organizations / Non-Members:	<input type="checkbox"/> \$160	<input type="checkbox"/> \$200
Multiple Registrants from the same organization (a separate registration form should be completed for each individual)	<input type="checkbox"/> \$130	<input type="checkbox"/> \$170

Method of Payment: Personal Check (Payable NEWWA) Company Check PO Enclosed MasterCard Visa AMEX Total: \$

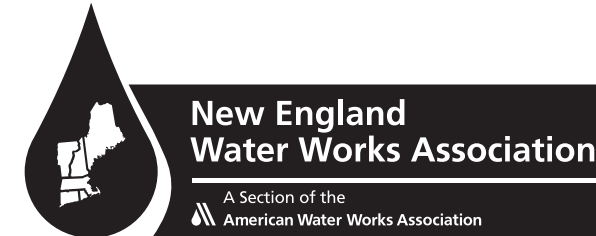
PO # _____ Credit Card # _____ Exp. Date _____ Signature _____

Check here if you have a disability and require accommodations to fully participate. You will be contacted by NEWWA.

NOTE: Confirmation will be sent if received by 10/7. Any questions, call NEWWA at (508) 893-7979 or e-mail jgilpin@newwa.org.

Complete this form and return to NEWWA, 125 Hopping Brook Road, Holliston, MA 01746-1471. Or, fax to (508) 893-9898

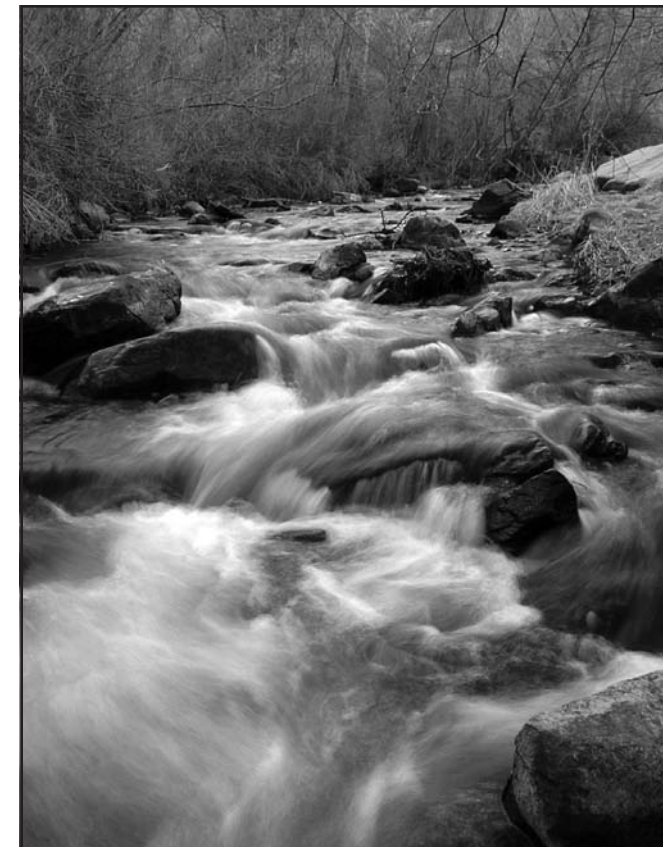
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2010 Water Resources Symposium

Ten Year Perspective on Water Resource Issues in New England: Where Have We Been, and Where Are We Going?

.6 CEUs (equivalent to 6 Training Contact Hours)



Symposium Highlights

Keynote Address

"Efforts by the Patrick Administration to Create a More Integrated Statewide Sustainable Water Resource Management Program"
David Cash, Assistant Secretary for Policy, Massachusetts Executive Office of Energy and Environmental Affairs, Boston, MA

Preview of Topics

- "Water Resources Policy Retrospective and Look Ahead - The Federal Perspective"
- Panel Discussion: "Evolution of State Policy and Water Supply Issues"
- "An Example of Science Informing Policy: The Massachusetts Water Indicators Project"
- "Sustainable Water Development: The Paradigm Did Shift"
- "Sustainable Water Resources Management - Balancing Withdrawals With Wastewater Return Flows and Stormwater Recharge Offsets"
- "Wetland and Environmental Permitting Challenges Associated with Dam Repair Projects in Massachusetts - An Update"
- "Sustainable Yields for Bedrock Wells: Case Study - Lessons Learned Over the Last 10+ Years"
- "Preparing Communities to Adapt to an Increase in Run-Off and Peak-Flow Due to a Changing Climate"

October 28, 2010

8:30 AM to 4:25 PM

Holiday Inn, Boxborough, Massachusetts

coordinated by the

New England Water Works Association

Water Resources, Conservation, and Groundwater Committees

NEWWA Symposium Sponsors

Gold Sponsors					Silver Sponsors	

Fall 2010 Water Resources Symposium
Thursday, October 28, 2010 ~ Boxborough, Massachusetts

Ten Year Perspective on Water Resource Issues in New England: Where Have We Been, and Where Are We Going?

8:30 AM Registration and Refreshments

9:00 AM Welcome, and Introduction

Moderator: BRIAN F. GOETZ, *Technical Leader - Water Resources and Supply, Weston & Sampson, Portsmouth, NH*
Chair, NEWWA Water Resources Committee

9:15 AM Keynote Address

“Efforts by the Patrick Administration to Create a More Integrated Statewide Sustainable Water Resource Management Program”

DAVID CASH, *Assistant Secretary for Policy, Massachusetts Executive Office of Energy and Environmental Affairs, Boston, MA*

David advises the Secretary of Energy and Environmental Affairs (EEA) on issues ranging from land and water management to energy, climate change, transportation, and waste management. He works across state agencies to develop and analyze policy options to further EEA's mission. Before working for the Commonwealth, David was a research associate at the John F. Kennedy School of Government at Harvard University, and a Lecturer in Environmental Science and Public Policy. He received a Ph.D. in Public Policy from the Kennedy School in 2001, and a B.S. in biology from Yale University in 1987.

Morning Session: Water Resources Policy: Historical, Current, and Forthcoming

Moderator: ALAN CATHCART, *Water/Sewer Superintendent, Concord Public Works, Concord, MA*

9:45 AM “Water Resources Policy Retrospective and Look Ahead - The Federal Perspective”

STEPHEN PERKINS, *Director of the Office of Ecosystem Protection, U.S. Environmental Protection Agency-New England, Boston, MA*

This session will take a 10,000-foot high look at water resource issues in New England, how EPA has changed its approach to these issues, and what the agency has been working on related to these issues, both past and future. It will also highlight recent work with Massachusetts on final safe yield regulations, along with other federal tools and resources available to help drinking water suppliers protect water resources for future generations. Lastly, the presentation will cover how essential it is to embrace sustainability as a management principle and as a way of life.

10:15 AM Break

10:30 AM Panel Discussion: “Evolution of State Policy and Water Supply Issues”

Policies and regulations affecting water resources management are ever-changing to respond to evolving human and ecological needs. In this panel, water policy experts from most of the New England states will share key policy developments and state programs that directly affect water suppliers. There will also be a “look ahead” discussion where emerging water resources topics will be identified that suppliers may want to plan for or consider. This panel will aim for a lively, constructive dialog (among panelists and the audience) regarding the effect of policies on the water supply industry.

Panelists

KENNETH BURKE, P.E., *General Manager, Rhode Island Water Resources Board, Providence, RI*

AHMADALI ALEX TABATABAI, Ph.D., P.E., *Environmental Analyst, Drinking Water Section, Connecticut Department of Health, Hartford, CT*

KATHLEEN BASKIN, *Director of Water Policy, Massachusetts Executive Office of Energy and Environmental Affairs, Boston, MA*

BRANDON KERNEN, *Supervisor-Hydrology and Conservation, New Hampshire Department of Environmental Services, Concord, NH*

ANDREWS L. TOLMAN, CG, *Assistant Director, State of Maine CDC Drinking Water Program, Augusta, ME*

JEFFREY McNELLY, *Executive Director, Maine Water Utilities Association, Waldoboro, ME*

12:00 PM “An Example of Science Informing Policy: The Massachusetts Water Indicators Project”

PETER K. WEISKEL, *Associate Director, U.S. Geological Survey MA-RI Water Science Center, Northborough, MA*

Over the past 10 years, datasets and computer tools have become available for statewide analysis of water availability and its relation to basin characteristics, land use, water use, and other factors. For example, the USGS, in cooperation with Massachusetts water agencies, has developed a tool – the MA Sustainable Yield Estimator – to assess the magnitude of natural streamflows, withdrawals, and wastewater returns for ungaged stream basins statewide. This information, in combination with datalayers of impervious cover and dams, has been used to quantify the critical factors controlling fish community composition at 756 fish sampling sites statewide. Project results are being used by the State, in close consultation with stakeholders, to formulate new water allocation policies.

12:30 PM Lunch

Afternoon Session: Case Studies

Moderator: AARON WEIENETH, AICP, *Project Environmental Planner, AECOM, Wakefield, MA*

1:30 PM “Sustainable Water Development: The Paradigm Did Shift!”

JOHN J. DONOHUE, IV, PG, *Principal, Geologix, Inc., Gilford, NH*

In 2001, the speaker presented a presentation entitled, “Sustainable Water Development: A Shifting Paradigm.” Much along the lines forecasted in the talk, the paradigm of sustainable water development has shifted: Regulations have become more rigorous concerning the identification and mitigation of environmental impacts created by withdrawals. Comprehensive monitoring and adaptive management approaches are increasingly employed. Finally, public interests have indeed become a very important part of the allocation and management of water resources for drinking water use. This presentation will review these developments and lay out, at a planning level, the components that lead to the creation of a sustainable water supply. It will also summarize current trends and look to the future with opinions on anticipated technological and policy developments.

2:00 PM “Sustainable Water Resources Management – Balancing Withdrawals With Wastewater Return Flows and Stormwater Recharge Offsets”

SCOTT HORSLEY, *President, Horsley Witten Group, Inc., Sandwich, MA*

Sustainable water resources management presents some seemingly impossible compromises. How can we extract increasing amounts of water from our aquifers for drinking water supplies and agricultural/golf course irrigation and at the same time protect streamflows and aquatic habitat? This presentation will review three critical tools that can enable the achievement of this goal and provide for both the needed water supply demand withdrawals and the preservation of aquatic habitat: 1) Keeping Water Local/Return Flows, 2) Low Impact Development (LID) techniques, and 3) Stormwater Recharge Offsets. This presentation will provide examples of how water budgets can be balanced by providing both wastewater return flows and stormwater recharge to offset water withdrawals.

2:30 PM “Wetland and Environmental Permitting Challenges Associated With Dam Repair Projects in Massachusetts – An Update”

THOMAS TOUCHET, *Senior Scientist, AECOM, Wakefield, MA*

Many public water supply dams are currently in need of repair in Massachusetts. Repair of these dams and associated structures is often challenging from a wetland and environmental permitting perspective. The water body that the dam impounds is typically under the jurisdiction of federal and state environmental regulations and often under local jurisdiction such as wetland protection by-laws. Since additional wetland resource areas are often present in areas of low topography within or near access and/or staging areas needed to conduct dam repair activities, the presence of these resource areas as well as site size constraints may limit access locations, location of potential wetland mitigation areas, and affect logistics for implementing proposed repairs and any required wetland mitigation. This presentation provides an update to the Ashley Lake Dam repair project, located in Washington, Massachusetts. Prior to construction, the project was initially discussed at the October 2008 NEWWA Symposium. Since then, the dam repairs have been substantially completed. The presentation includes lessons learned as well as an overview of a creative solution for wetland impact mitigation for the project.

3:00 PM Break

3:15 PM “Sustainable Yields for Bedrock Wells: Case Study - Lessons Learned Over the Last 10+ Years”

JAMES H. VERNON, Ph.D., *Senior Hydrogeologist/Project Manager, AECOM, Belmont, NH*

JOHN BOISVERT, P.E., *Chief Engineer, Pennichuck Corporation, Merrimack, NH*

Assigning an appropriate sustainable yield for bedrock wells that serve community water systems has long proven to be a technical challenge that has critical planning, wellfield management, and regulatory implications. This presentation will focus on a wellfield consisting of seven bedrock wells that serve a community water system in southern New Hampshire. Three new wells were added in the late 1990s, and pumping tests were conducted to obtain regulatory approval, estimate yield, and characterize well interference. Pumping experience over more than 10 years provided different information regarding sustainable yield and well interference and led to new testing in 2010. The presentation will discuss this case study, lessons learned, and suggestions for appropriate assignment of sustainable yields for bedrock wells.

3:45 PM “Preparing Communities to Adapt to an Increase in Run-off and Peak-Flow Due to a Changing Climate”

MICHAEL H. SIMPSON, *Core Faculty and Chairperson, Antioch University New England, Keene, NH*

The New Hampshire seacoast area has experienced highly destructive “100 year or greater” storm events in 2006, 2007, and 2010. Due to these recent destructive storms, regional awareness of peak flow events and climate change impacts is at an all-time high. A study funded by the U.S. EPA Climate Ready Estuaries program, with support from the Piscataqua Regional Estuaries Partnership, has analyzed the past and projected future changes in land-use in the Oyster River Basin to ascertain the capacity of the water conveyance infrastructure to past run-off peak flow. This study necessarily included changes in rain-fall amounts from recent historical records as well as increases in storm intensity due to projected climate changes. The results of this study provide community decision-makers important information from which to assess risk and allocate resources to adapt to changes on the landscape, combined with a changing climate.

4:15 PM Closing Remarks

4:25 PM Adjourn
