JOURNAL OF THE NEW HAMPSHIRE WATER WORKS ASSOCIATION



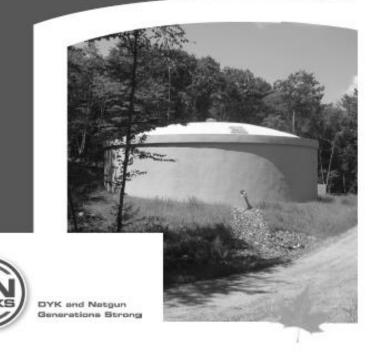


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<u>Front Cover Photo</u>: Exeter, NH Water Department's new groundwater treatment facility, substantially completed in August of 2015, will have the capability of pumping treated water from three wells to the distribution system.

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Alton	Alton Water Works	William Curtin
Amherst	Amherst Village District	Chris Countie
Andover	Andover Water Works	Todd Cartier
Antrim	Antrim Precinct	Jim Cruthers
Ashland	Ashland Water Works	Russell Cross
Bartlett	Bartlett Village Precinct	Scott Hayes
Bartlett	Lower Bartlett Precinct	Gary Chandler
Bath	Bath Village Water Works	Spencer Richardson
Belmont	Belmont Water Works	Jim Fortin
Bennington	Bennington Water Dept.	Jim Cruthers
Berlin	Berlin Water Works	Craig Carrigan
Bethlehem	Bethlehem Village District	Terence Welch
Boscawen	Penacook-Boscawen Water	Peter Miner
Bow	Bow Municipal Water System	Eric Burkett
Brentwood	Rockingham County Home	Tom Schulte
Bristol	Bristol Water Works	Jeffrey Chartier
Campton	Campton Village Precinct	Joseph Vaillancourt
Campton	Waterville Estates Village District	Corey Smith
Canaan	Canaan Water Department	John Coffey
Carroll	Carroll Water Works	Scott Sonia
Carroll	Rosebrook Water System	Nancy Oleson
Charlestown	Charlestown Water Works	Dave Duquette
Charlestown	N. Charlestown Water Works	Dave Duquette
Claremont	Claremont Water Works	Robert Lauricella
Colebrook	Colebrook Water Works	Kevin McKinnon
Concord	Concord Water Resources	Phil Bilodeau
Contoocook	Contoocook Water Precinct	Steve Clough
Conway	Conway Village Fire Precinct	Gregg Quint
No. Conway	N. Conway Water District	David Bernier
E. Conway	Fryeburg Maine Water Co.	John Hastings
Derry	Derry Water Works	Thomas Carrier
Dover	Dover Water Works	Doug Steele
Durham	UNH/Durham Water Works	Wesley East
Darnam	Sing Burnam water works	Westey Last
Enfield	Enfield Village Fire Precinct	Bruce Prior
Epping	Epping Water Works	Norman Dionne

Town

Epsom Errol Exeter

Farmington Fitzwilliam Francestown Franconia Franklin Freedom

Georges Mills Gilford Gilford Goffstown Goffstown Gorham Grantham Greenville

Hampton Hancock Hanover Haverhill No. Haverhill Haverhill Henniker Hill Hillsborough Hillsborough Hinsdale Hooksett Hooksett Hopkinton Hudson

Jackson Jaffrey

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Epsom Village District Erroll Water Works Exeter Water Works

Farmington Water Dept. Fitzwilliam Village Water District Francestown Village Water Franconia Water Works Frankin Water Works Freedom Water Precinct

Sunapee Water Works **Gilford Village Water District** Gunstock Acres **Goffstown Village Fire Precinct Grasmere Village Water Precinct** Gorham Water Works Village District of Eastman Greenville Water Works

Aquarion Water Co. Hancock Water Works Hanover Water Works Co. Haverhill Corner Precinct N. Haverhill Water & Light Woodsville Water & Light Precinct **Cogswell Springs Water Works** Hill Water Works Hillsborough Water Works **Emerald Lake Village District** Hinsdale Water Works Hooksett Village Water Precinct **Central Hooksett Water Precinct Hopkinton Village Precinct** Pennichuck Water Works

Jackson Water Works Company **Jaffrey Water Works**

Keene Keene Water Works

Dockham Shores Estates Laconia Laconia Laconia Water Works Lancaster Water Works Lancaster

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Dale Sprague Joseph Damour Dennis Orsi Tom Mason, Ir. Brian Sullivan Francis Lyons

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Benjamin Crowder

Colin Robertson Seth Nuttelman **Timmy Bilodeau** **Town** Lebanon Lincoln Lisbon Littleton

Madison Manchester Marlboro Meredith Meriden Merrimack Milford Milton Monroe

Nashua New Castle Newfields New Hampton New London Newmarket Newport Northumberland

Orford Center Ossipee

Pembroke Peterborough Pittsburg Pittsfield Plainfield Plymouth Portsmouth

Raymond Rochester Rollinsford Rye

Salem Seabrook Somersworth Stewartstown

System

Lebanon Water Works Lincoln Water works Lisbon Village District Littleton Water & Light Dept.

Village District of Eidelweiss Manchester Water Works Marlboro Water Works Meredith Water Dept. Meriden Village Water District Merrimack Village District Milford Water Utilities Dept. Milton Water District Monroe Water Department

Pennichuck Water Works New Castle Public Works Dept. Newfields Village Water & Sewer New Hampton Village Precinct New London/Springfield Water Newmarket Water Works Newport Water Department Groveton Village Precinct

Orford Village District Ossipee Water Department

Pembroke Water Works Peterborough Water Works Pittsburg Water District Pittsfield Aqueduct Company Plainfield Water District Plymouth Village Water Works Portsmouth Water Works

Raymond Water Works Rochester Water Works Rollinsford Water District Rye Water District

Salem Water Works Seabrook Water Works Somersworth Water Works W. Stewartstown Water Works

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Matt Gagne Nate Brown Richard Sargant Curt Sheing Jim Angers John Crowley Brian Goetz

Scott Keddy Michael Bezanson Scott McGlynn Kenneth Aspen

Frank Giordano Curtis Slayton Gregory Kirchofer Wilman Allen

Town	System	Name
Stratford	No. Stratford Water	Carleton Harris
Sunapee	Sunapee Water Works	Dave Bailey
Swanzey	No. Swanzey Water & Fire Precinct	Sly Karasinski
Tamworth	Tamworth Water Works	Tom Mason, Jr.
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Walpole	Walpole Water Department	Mark Houghton
No. Walpole	No. Walpole Village District	Robert McGuirk
Warner	Warner Village Fire District	Joseph Damour
Waterville Valley	Waterville Valley Water Dept.	Robert Burhoe, Jr.
Whitefield	Whitefield Village Precinct	Bill Thompson
Wilton	Wilton Water Works	Michael Bergeron
Winchester	Winchester Water Works	Richard Meleski
Wolfeboro	Wolfeboro Water & Sewer Dept.	Scott Pike
Woodstock	Pennichuck Water Service Co.	Bernie Rousseau

New Hampshire Water Works Association A Report of the 2015 Legislative Session

by the Legislative Action Committee

Several important drinking water related issues were addressed in the 2015 legislative session, once again emphasizing the importance for NHWWA to be involved in the legislative process. This year the legislative action committee and the legislative agent were actively involved in 13 bills. Many of these bills, had they become law, would have had a negative impact on our members and the public drinking water community at large. The bills that did pass and became law, we believe, improve our ability to operate and manage our utilities more effectively.

NHWWA's legislative agent regularly attended hearings and work sessions, testified before committees on numerous occasions, met with legislators and others, working to assure that the best interests of our organization and NH's public drinking water community were kept in mind. Association members who subscribed to the legislative program were kept informed with regular mailings describing bill status, scheduled hearings and work sessions, and other important meetings, events, and actions. Here is a summary of the 2015 legislation.

<u>House Bill 109 (Chapter 50)</u>, relative to the testing of backflow devices was signed into law by the Governor and became effective on August 1. This bill was of great interest to operators because of its potential implications with regard to accessing backflow devices. Qualifications for inspecting, testing, installing, replacing, and maintaining and repairing backflow devices were clarified in 2014 legislation [HB 1383 – Chapter 304 (2014), and SB 116 – Chapter 106 (2014)]. This 2014 legislation clarified some gray areas in past policy, specifically it stated that an operator with qualifications has legal authority to inspect, test, install, replace, and repair the containment device – that is the backflow device directly adjacent to and required as part of the protection for the drinking water distribution system.

This year, HB 109 addressed potential backflow from residential properties, by amending RSA 485:11 in the following way. "A residential property containing a non-testable device shall not be considered a hazard facility and shall not require annual testing. A residential property may be considered a high hazard facility if it has an irrigation system, private well connection, or other feature that may cause a public health risk."

HB 511 (Chapter 15), relative to funding of eligible infrastructure projects, was signed into law by the Governor in May. This legislation is very important to our members and the drinking water industry in general because it would set future state funding policy for water, wastewater, and landfill closures. In its initial form this legislation would have required the New Hampshire Department of Environmental Services to repeal a moratorium on maintaining a list of infrastructure projects eligible for state aid grants, to submit a report of certain drinking water and wastewater infrastructure projects to the general court, and to submit a 10-year budget funding projection. The legislature, understanding the financial challenges in meeting the infrastructure improvement needs of New Hampshire's water and wastewater systems, decided that it would be prudent to look at a number of aspects of funding infrastructure needs. A legislative committee was established through this legislation. The committee will be comprised of three members of the House of Representatives and two senators. This committee is charged with studying the State Aid Grants Program for drinking water, wastewater and landfill closures. Specifically, the committee will determine whether current thresholds for state aid are appropriate, how to fund future state aid projects, the best financing options, and how to establish criteria for when and which projects are eligible and how to prioritize projects.

Three additional bills that addressed funding of water, wastewater, or landfill closure projects, or water supply land or watershed protection, were either tabled or retained in committee. These include the following:

<u>HB 376</u>, appropriating funds to the New Hampshire Department of Environmental Services (NHDES) for the purpose of funding eligible and completed drinking water, wastewater and landfill closure projects under the State Aid Grants Program. The funding would include a sum of \$9,017,024 for the fiscal year ending June 30, 2016, including \$903,592 for drinking water filtration. For the fiscal year ending June 30, 2017 an additional sum of \$7,641,311 would be appropriated. This would include \$771,750 for drinking water filtration. HB 376 was retained in committee.

<u>SB 196</u>, an act appropriating funds to the NHDES for the purpose of funding eligible water supply land protection costs under the State Aid Grants Program. This would include the sum of \$1.5M for the fiscal year ending June 30, 2016 and \$1.5M for the fiscal year ending June 30, 2017. This bill was tabled.

<u>SB 229</u>, appropriating funds to the NHDES for the purpose of restoring and protecting waters of the southeast watershed in accordance with EPA guidelines. Funds would be in the amount of \$200,000 FY 2016 and \$200,000 for FY 2017. This money would be paid to the Southeast Watershed Alliance to fund a study that would analyze water, wastewater, stormwater, septic, and fertilizers and specifically would include the following;

- measures to improve and protect water quality and meet clean water standards, particularly with respect to nutrient pollution.
- guidance for municipalities in the watershed, the state and other stakeholders to plan, implement, and invest in water, wastewater, stormwater and land use planning and management approaches that protect water quality, natural hydrology, and habitats of the state's resources and that

advance the state's economic growth, resource protection and planning policy under RSA 9-B.

- proposed solutions to reduce pollution and enhance water quality within the southeast watershed. NHDES would submit a report to the Governor and the legislature at the end of the analysis. This bill was tabled.

<u>HB 306 (Chapter 67)</u>, relative to membership of the Wetlands Council and the Water Council was signed into law by the Governor in early June. This legislation increases the number of people (from 11 to 13) who serve on the Water Council. The two new members include a representative of NH Rivers, nominated by the New Hampshire Rivers Council, and a representative of NH Lakes, nominated by NH Lakes Association. All members are appointed by the Governor and Council. One of the 13 members is an employee of a municipal or privately-owned waterworks. This legislation became effective on August 1, 2015.

The following legislation was found to be "Inexpedient to Legislate".

<u>House Bill 342</u>, relative to a property owner's consent for smart meter gateway devices. Had it passed, this bill would have allowed customers to decline installation of certain remotely read meters. The bill would have amended RSA 374:62, I(a) which defines "smart meter gateway device", which currently applies to only electrical appliances, equipment or devices. HB 342, had it passed, would have added the following language. (A) "device capable of being read through a wired or wireless network by a utility corporation and used by such utility to measure the delivery of electricity, water, propane, or natural gas, to a resident.

<u>HB 244</u>, relative to the permissible level of methyl tertiary butyl ether (MTBE) in drinking water would not have allowed any public drinking water system to deliver water with greater than 0 parts per billion MTBE. <u>HB 248</u>, had it passed, would have required the University System of New Hampshire to conduct a study of the effect of prolonged human consumption of and exposure to MTBE.

<u>HB 345</u>, would have required utilities to provide data to customers explaining rates and rate increases. Customers currently are able to access this information by contacting the NH Public Utilities Commission, or the utility directly. In addition, customers are able to make inquiries regarding this information throughout the rate making process.

<u>HB 360</u>, relative to public utilities that fail to restore service within 3 days. Had this legislation become law, it would have held the utility liable for damages sustained by the customer and that were resultant of the utility's failure to restore service within 3 days. The only exception was in the case of a declared state of emergency.

The Dreaded Threads: Sampling Strategies for Compliance with the Revised Total Coliform Rule

by Darleen P. Buttrick, P.E., Tighe & Bond, and Tom Barger, So. Central CT Regional Water Authority

No one is happy when a false positive total coliform sample occurs. Additional sampling is necessary to confirm or deny the presence of total coliform and fecal coliform/*E. coli*, and the additional sampling requires more time and resources for sample collection and analysis. Also, with the Revised Total Coliform Rule (RTCR), total coliform "hits" may now result in the requirement to perform a Level 1 Assessment, resulting in more time and effort for a utility. In addition, if a routine distribution sample under the RTCR is total coliform positive for a system supplied by groundwater, then repeat samples must be collected from each source that was in use at the time the positive sample was collected under the Groundwater Rule (GWR). As such, it is imperative that human error is eliminated from sampling efforts.

The use of threaded taps for sample collection points rather than smooth nosed taps is a common issue that is observed when completing facility inspections for water systems. The "Recommended Standards for Water Works", also known as the "10 State Standards" Part 2.10 states that "*Taps used for obtaining samples for bacteriological analysis shall be of the smooth-nosed type without interior or exterior threads, shall not be of the mixing type, and shall not have a screen, aerator, or other such appurtenance.*" But why?

Threaded taps provide a place for dirt and debris to collect, which creates an ideal environment for the growth of microorganisms on the threads of the tap. The threads prove nearly impossible to properly flush and disinfect, which can ultimately result in the contamination of a sample collected for bacteriological analysis. This could result in a false positive coliform detection, followed by the need for additional time and money expended on repeat sampling, documentation, and possible notifications.

A smooth nosed tap, on the other hand, does not have threads on the spigot, and so does not provide this avenue for potential accumulation of dirt and debris and the ensuing growth and contamination, and allows for easy cleaning and disinfection prior to sample collection. In addition to employing the best equipment at a sample location, it is also critical to have a detailed set of procedures for sample collection in place.

Recommended Procedures for Sample Collection



A critical piece of the sample collection puzzle includes having a standard sampling protocol and to make sure employees understand the protocol and are following it at all times. The following is an abbreviated version of the standard sampling procedures that the South Central Connecticut Regional Water Authority utilizes for collection of bacteriological samples, and can be used as a guideline for development of a standard sampling protocol if a utility does not already have one in place:

Figure 1 - Smooth Nosed Sample Tap

1. All bacteriological samples are collected in 120 mL vessels with a 100 mL fill line containing Sodium Thiosulfate and sealed with a shrink band. The vessels are provided by a supplier, and are certified as EPA Level 3 (pre-cleaned with a certificate of analysis), with certificates provided with each Lot Number. Do not collect any bacteriological sample in a container that has a missing or broken sanitary seal. Also, inspect each bacteriological sample container for cracks or other imperfections prior to sample collection. Any sample container showing damage should be discarded immediately.

- 2. The sampling faucet should be flushed for a minimum of 5 minutes prior to the collection of samples. Prior to the collection of these samples, it is required that the faucet-end aerator be removed if sampling from a public sampling location. Containers must be handled in a sanitary manner so as not to contaminate the inside of the sample container. If there is any question that the container was contaminated by touching any surface, the sampling container must be immediately discarded and another container used for sample collection.
- 3. When sampling, place the sampling container directly into the flowing water stream and fill to the pre-measured line labeled "100 mL". If over-filled, do not pour off excess. Samples containing a volume less than the 100 mL line will not be accepted by the laboratory.
- 4. All completed samples are to be placed in a cooler for transportation back to the laboratory (certified by CT DPH and NELAC). An internal temperature of 4.0 degrees Celsius (+/- 2 degrees Celsius) must be maintained inside the cooler. Cooler thermometers are used to determine compliance with temperature maintenance requirements.
- 5. Raw water samples must be analyzed within 8 hours from collection and finished water samples must be analyzed within 30 hours from the time of collection.
- 6. Record all sample collection data and time of sample collection in the appropriate columns of the chain of custody. These forms must also include the temperature of the sampling cooler upon arrival at the laboratory.

Success Moving Forward

Ensuring that you have the proper sampling equipment, while following a standard sampling protocol, is the best strategy a utility can have to reduce the risk of false positives and the additional resources associated with repeat sampling, documentation, and possible assessments required by the RTCR and GWR.



Figure 2: Public Sampling Point with Aerator Removed

Construction Day 2015 August 5



Left: Construction Day attendees view a portion of Pennichuck Water Works' Merrimack River Transmission Water Main Connector Project.



Above: Merrimack Village Water District's new 1.8 MGD iron and manganese removal treatment facility.





Above: A birds eye view of the foot print of Manchester Water Works' new 6.5 MG water tanks.

Left: Concord's newly completed chemical room rehabilitation project.

Below: A walk down Main Street to visit Concord's Main Street revitalization project.



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HYDRANT MARKERS E.J. Prescott, Inc. Ti-SALES, Inc.	HD Supply Waterworks	Stiles Co Inc.
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JOINT SEALING HD Supply Waterworks		
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Smith Pump Co.	Stonkus Hydraulics

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BAU-HOPKINS	Epping Well & Pump	E.J. Prescott, Inc.
HD Supply Waterworks	Stiles Co Inc.	Ti-SALES, Inc.

PUMPS - DITCH

Epping Well & Pump	E.J. Prescott, Inc.	HD Supply Waterworks
ΡΙΙΜΡς - ΡΩ ΡΤΛΡΙ F		

PUMPS - PORTABLE

HD Supply Waterworks	R.H. White Construction	Smith Pump Co.
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PUMPS—TURBINE

HD Supply Waterworks Maher Services

PURIFICATION EQUIPM BAU-HOPKINS	IENT Epping Well & Pump	Technology Sales
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WATER TESTING/ANALYTICAL LABORATORY

Epping Well & Pump

WATER TREATMENT EQUIPMENT

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Supply Waterworks To	echnology Sales	

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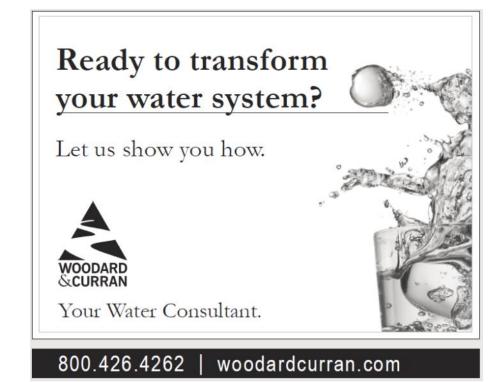


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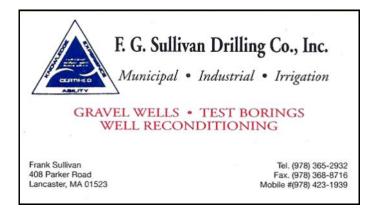
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