

## COMMISSIONER'S COLUMN

### Drinking Water and Groundwater Trust Fund victory

New Hampshire's environment and its residents won a major victory this spring thanks to the successful conclusion of thirteen years of hard fought litigation and the simultaneous enactment of New Hampshire Senate Bill 380 (SB 380), which addresses drinking water infrastructure and groundwater protection concerns statewide by establishing the New Hampshire Drinking Water and Groundwater Trust Fund. The trust fund is funded exclusively with the jury award (after costs) of approximately \$276 million, resulting from a final ruling of the U.S. Supreme Court in the State's favor in its case against ExxonMobil Corporation. This case involved contamination of drinking water and groundwater with methyl tertiary-butyl ether (MtBE), which was used as a gasoline additive. In brief, the SB 380 legislation provides funding to NHDES to "investigate, manage and remediate contaminated groundwater in New Hampshire." The trust fund will, among other things, provide funding through cost sharing grants to municipalities for the design, construction and expansion of public water systems and the expansion of local and regional wellhead protection programs, and support the mapping of classes of groundwater and groundwater contamination throughout the state.



*Ledge probes for a Windham water line extension project*

To help with the startup and oversight of the Trust Fund, an advisory commission will be established consisting of four legislators, three members from state agencies and four members of the public, including a member to represent municipalities that have public water systems. The commission will consult with NHDES at least annually and provide advice and counsel relative to future work

*Commissioner's Column, cont. page 2*

### Buoy on popular New England lake helps determine when to stay out of the water

A high-tech buoy that monitors water quality in real-time was just installed in one of New England's most popular lakes, where in the future, it will help with determining when swimmers should and shouldn't be in the water.

Scientists from the U.S. Geological Survey (USGS), with support from NHDES and Health and Human Services (NHDHHS), deployed the buoy and weather station at Weirs Beach on Lake Winnepesaukee at the beginning of June. The buoy will provide real-time temperature, specific conductance, pH, dissolved oxygen and water levels, all clues to that may help predict when bacteria levels are too high to permit swimming.

"The USGS will be comparing the buoy measurements with culture-based E. coli samples to better understand what environmental conditions may lead to high bacteria counts at Weirs Beach," said Richard Kiah, a supervisory hydrologic technician from the USGS New England Water Science Center and project lead. "Once we understand the correlation, we will be able to develop a model that will help state officials make real-time decisions on when water conditions are not suitable for swimming."

It is unclear exactly what environmental conditions lead to high

*Buoy, cont. page 3*

**Commissioner's Column** *continued from page 1* and project priorities. The advisory commission will review and report back to the legislature via an annual report on the progress being made toward achieving the goals of the legislation. The advisory commission will also prepare a report for the legislature every five years on the progress being made relative to MtBE contamination and the efficacy of the program established by SB 380. The advisory commission is not yet in place; however, efforts are underway to appoint advisory commission members. NHDES hopes that the commission can start its important work this fall. Formulation of the advisory commission's recommendations on spending priorities will be a key step in the development of this new program, as will adoption of administrative rules to guide the effort.

The new trust fund is not the only funding source stemming from the MtBE litigation that has been made available to address groundwater and drinking water issues. The other source of funding is from the parties that settled the MtBE litigation with the State prior to the jury trial against ExxonMobil. These settlement funds are currently being used for MtBE-related cleanup activities and all settlement fund-related spending is governed by the language of the settlement agreements. After deduction of two years of expenditures, \$71.4 million in settlement funds remain available for MtBE projects. These funds are currently being used by the NHDES MtBE Remediation Bureau for MtBE remediation activities, including release prevention, cleanup, drinking water well sampling and infrastructure projects. To date, this program has:

- Removed 195 underground storage tanks and provided 77 gasoline spill prevention systems to in-state motor vehicle recycling facilities.
- Completed a water line extension to address contaminated water supplies impacting 30 homes in Rochester.
- Approved funding for three water line extension engineering designs and six water line extension feasibility studies.
- Funded work to relocate Dover's MtBE-contaminated Griffin water supply well to a more protected portion of the Pudding Hill aquifer.
- Removed over 10,000 tons of contaminated soil from 13 contaminated sites.
- Sampled approximately 3,500 drinking water wells statewide for MtBE contamination.

Work is proceeding on MtBE cleanups using the settlement funding and that work is not affected or changed by the passage of SB 380. These ongoing settlement fund-related cleanup efforts will be helpful in developing capacity, identifying categories of potential projects for the advisory commission to consider, and piloting a variety of approaches to executing these types of projects.

Although key decisions on the future implementation of SB 380 must await the advisory commission's recommendations and the adoption of administrative rules, NHDES has already started collecting public input and comment that may be helpful to NHDES and the commission in shaping this new initiative. If you would like to share your ideas on the development, implementation and prioritization of future SB 380 programs, please don't hesitate to contact us. You may submit comments directly to Gary Lynn, P.E., Administrator of the MtBE Remediation Bureau, at (603) 271-8873 or [gary.lynn@des.nh.gov](mailto:gary.lynn@des.nh.gov). NHDES will share your comments and thoughts with the future advisory commission to help ensure that the New Hampshire Drinking Water and Groundwater Trust Fund truly benefits the environment and citizens of the Granite State for the long-term. ■



*Large scale MtBE remediation in Richmond, New Hampshire*

## ENVIRONMENTAL NEWS

*Environmental News* is published six times a year by the New Hampshire Department of Environmental Services.

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*Printed on recycled paper.*

## Buoy *continued from page 1*

bacteria counts, but several factors are possible. These include high water temperatures, the presence of aquatic birds, high swimmer counts, failed septic systems and storm water runoff. Once the concentration of *E. coli* in lakes reaches a certain level, state officials issue swimming advisories recommending people stay out of the water.

“Bacteria counts resulting in no swimming advisories can occur frequently and often when and where people most want to go swimming,” according to Sonya Carlson, NHDES Beach Program Coordinator. “At Weirs Beach, the most popular and well-known beach on Lake Winnepesaukee, ‘no swimming advisories’ were posted after 29% of all samples taken from 2003-2014.”

Currently, NHDES evaluates swimming conditions at more than 160 inland beaches statewide using culture-based methods for determining counts of *E. coli*. Water samples are generally collected once a month and can take at least 24 hours to process. This time delay may result in beachgoers being exposed to high levels of bacteria, or swimming advisories being in effect for conditions that no longer exist.

The goal of this collaborative project is to produce web-based tools specific to New Hampshire beaches to help state and local officials determine when bacterial conditions may be unsafe for swimming using beach-specific data collected in real-time. A similar effort is currently underway at Pawtuckaway State Park beach on Pawtuckaway Lake.

“This project is a great example of how high-quality data can be used to inform decision making at the state and local level. The real-time modeling approach has the potential to reduce human exposure to waterborne pathogens,” says Kathleen Bush, NHDHHS Environmental Public Health Tracking



*image credit: Richard Kiah, USGS*

Program Manager.

The sentiment was echoed by David Neils, NHDES’ Chief Water Pollution Biologist. “I’m excited with how this collaborative project has come together, and with its very real potential to provide more timely information to the public on beach conditions, reducing the risk of waterborne illnesses.”

The status of conditions at New Hampshire beaches can be found at NHDES Beach Maps website ([http://www4.des.state.nh.us/WaterShed\\_BeachMaps/WaterShed\\_BeachMaps.aspx](http://www4.des.state.nh.us/WaterShed_BeachMaps/WaterShed_BeachMaps.aspx)).

Access current water-quality conditions across the country by visiting the USGS WaterQualityWatch website (<http://waterwatch.usgs.gov/wqwatch/>). Receive instant, customized updates about water conditions in your area via text message or email by signing up for USGS WaterAlert (<http://water.usgs.gov/wateralert/help/manage.html>). ■



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## NHDES' Carroll Brown receives Visionary Award from Gulf of Maine Council



The Council, a U.S.-Canadian partnership dedicated to protecting environmental quality in the Gulf of Maine, annually recognizes extraordinary work in each of its five jurisdictions, which include the states of New Hampshire, Maine and Massachusetts, as well as the Canadian provinces of New Brunswick and Nova Scotia.

Gulf of Maine Visionary Awards are given to two individuals or organizations within each state and province to recognize their innovation, creativity and commitment to marine protection. Carroll Brown, Jr., Coastal Spill Response Coordinator for NHDES, received one of the two New Hampshire Visionary Awards.

Since 2002, Carroll has been tireless in his work to plan for, and make sure the region is equipped and ready to respond to, an oil spill in the coastal waters of New Hampshire and Southern Maine. Following the disbanding of the Piscataqua River Cooperative, he was instrumental in continuing coastal oil spill preparedness efforts by helping to form and chair the Portsmouth Oil Spill Response Workgroup. NHDES retained the former Cooperative's spill response equipment, and Carroll ensured that this equipment was accounted for, repaired and kept in service to continue a high level of response readiness in the region. In addition, Carroll's outreach efforts and coordination have led to strong partnerships between different agencies and stakeholders, including a Memorandum of Understanding with the Portsmouth Naval Shipyard that was successfully put into practice during an oil spill release this past year. During this spill event, the agreement with the Navy and coordination with the Coast Guard resulted in a swift response, and the mutual use of equipment provided responders with the tools necessary to quickly contain the spill and effectively remove the oil. The region's response capabilities have been greatly increased by Carroll's dedication, creativity and the relationships that he has been able to build. ■

## EPA Merit Award for E-Enterprise



Several NHDES staff were recently recognized by EPA Region 1 in Boston with an EPA Merit Award. The staff included Susan Carlson, Vince Perelli, Ted Diers, John Duclos and Wendy Waskin, and they were recognized for their work on the State Performance Partnership Improvement Project. The team used 21<sup>st</sup> century tools to streamline work plan negotiations and ultimately strengthen oversight and management of the Performance Partnership Grant process for the six New England states. The work of the team, consisting of representatives from six states, showed that waste can be eliminated, processes streamlined and budget shortfalls tackled through partnerships and online cooperation.

Vince Perelli was a leader in convening all six New England states to commit to trying this new approach. The state partners worked with EPA New England to design a new SharePoint site, which served as the E-Enterprise platform to conduct real-time state work plan negotiations, provided the opportunity to spur program dialogue in a new way and allowed codification of negotiated two-year agreements in a single document. This was the first time EPA New England used SharePoint for this type of E-Enterprise collaboration on such a large scale with external users.

This new E-Enterprise approach is already paying big dividends. For instance, the air program completed negotiations through SharePoint with all six states within two months and agreement for all work plan elements were completed with three states by mid-December, 2015 – significantly faster than in prior years. A high level of interest has been shown nationally for using this model to improve joint strategic planning by EPA and states to save time, resources and produce measurable environmental results. ■



## Governor Hassan highlights state employee energy efficiency efforts

To highlight state government's efforts to improve energy efficiency, Governor Maggie Hassan presented the Governor's Excellence in Energy Efficiency Awards at the State's annual energy conference in June, hosted by the New Hampshire Department of Administrative Services, Department of Environmental Services and the Office of Energy & Planning.

This annual conference, which brings together state agency staff involved in energy, transportation and efficiency efforts, serves to celebrate the great work being done in state government to reduce fossil-fuel energy consumption, provide information on other ways to reduce energy use and enable staff to network with their colleagues in other agencies.

"As a state, we remain focused on diversifying our energy supply mix and investing in energy efficiency and conservation – the cleanest and cheapest approach to reducing our energy bills," Governor Hassan said. "Because of the efforts of our dedicated and hard-working state employees, the state is conserving more energy, which is saving valuable state resources and helping to preserve our environment. Together, we must continue to innovate and move our clean energy economy forward."

In the last ten years, the State has avoided more than \$10 million in energy costs through energy efficiency measures and by switching to lower-cost fuels. The state energy manager estimates the state saved nearly \$5 million on its energy costs in Fiscal Year 2014 and Fiscal Year 2015 alone. Between Fiscal Year 2005 and Fiscal Year 2015, the square footage of building space used by state government increased by 11 percent while overall energy use has remained the same. This meant that the energy used per square foot of building space (i.e., the Energy Use Intensity or "EUI") fell by 11 percent and the fossil-fuel EUI fell by nearly 21 percent.

Awards this year were given to: Sharon Rivard of NHDES; the New Hampshire Adjutant General's Department and the New Hampshire Army National Guard; and the Bureau of Court Facilities, under the Department of Administrative Services.

Individual Recognition Awardee Sharon Rivard works as a Design Review Engineer in the Wastewater Engineering

Bureau in the Water Division at the Office at the Department of Environmental Services. In this capacity, Sharon has woven energy consciousness into her daily work, making changes to wastewater funding programs and design criteria, which result in energy efficiency improvements in the design and construction of all wastewater facilities going forward. The work that Sharon did in this regard has been showcased by EPA as an innovative approach that other states might follow. Further, she is collaborating with the New Hampshire Office of Energy & Planning and New Hampshire's electric utilities on a project that will help the state's 84 municipally-owned wastewater treatment plants reduce their energy use and avoid 10,000 tons of greenhouse gas emissions per year, saving municipalities almost \$2 million per year in electricity costs. ■



## NHDES team receives Askew Award

For the second year in a row, a team of NHDES staff have been recognized with the distinguished Askew Award for their project work undertaken as part of their Certified Public Manager (CPM) training course. The team of Wendy Bonner, Bob Bishop and Andrew Fulton completed a CPM capstone project that focused on knowledge management and retention in the face of the silver tsunami – "Preparing for Employee Departure - Information Gathering & Work Process Continuity."

The Askew award is presented to one project from each program, selected by that program as the outstanding project for the award year. Each recipient is presented a medallion of honor from AACPM, engraved with the wording "For the utilization of management practices exemplifying the philosophy of the American Academy of Certified Public Managers in the completion of an exceptional curriculum project." ■



## Summer compliance inspections for rock crushing operations

Rock crushing operations are a source of fine particle air pollution (dust). Fine particle air pollution can penetrate deep into the lungs when inhaled and has been linked to a variety of serious health problems. Not only can fine particle pollution impact our breathing, some particles are so small they can cross into the blood stream and cause heart problems too. Even healthy adults engaged in moderate or strenuous outdoor activities can experience the unhealthy effects of fine particle air pollution. Because rock crushing operations are a source of fine particle pollution, they are regulated by EPA and NHDES rules.

Though most people think of New Hampshire as having relatively clean air, fine particle air pollution also plays a major role in the formation of regional haze. Regional haze degrades visibility and can diminish the enjoyment of natural and scenic areas. Haze obscures the color, clarity, texture and form of what we see. It affects how far and how well we can see landscape features.

As part of the effort to reduce and control fine particle air pollution and regional haze, NHDES conducts periodic inspections of both stationary and portable crushing plants. In short, a stationary plant is one that does not move, while a portable plant is one that is moved from one location to another, often from town to town. During the 2016 summer

season, NHDES will implement an enhanced compliance initiative for inspection of portable rock crushing operations.

Rock crushing operations are regulated under EPA 40 CFR Subpart 000, Standards of Performance for Nonmetallic Mineral Processing Plants, and NHDES Code of Administrative Rules Env-A 2800, Sand and Gravel Sources: Non-Metallic Mineral Processing Plants; Cement and Concrete Sources. These rules establish requirements to ensure that rock crushing operations are conducted in a manner that appropriately controls fine particle air pollution.

Additional information on NHDES' Rock Crushers and Regional Haze Programs can be found at: <http://des.nh.gov/organization/divisions/air/do/asab/rhp/index.htm> and <http://des.nh.gov/organization/divisions/air/pehb/apps/rock-crushers.htm>. ■



## Fourth biennial 'Green Your Fleet!' is "best ever!"

The Air Resource Division's Granite State Clean Cities Coalition fleet outreach event was held on Friday, June 10 at the New Hampshire Motor Speedway. This year's Green Your Fleet! event set records for attendance, number of vehicles exhibited and sponsorship fees collected.

The coalition partnered with the New Hampshire Motor Speedway and New Hampshire Auto Dealers Association to hold the event at the Speedway, which drew nearly 150 attendees (fleet managers, industry professionals and members of the public). The opening remarks, given by Senator

Nancy Stiles and Chris Trajkovski of C&S Wholesale Grocers-Keene, inspired the crowd. Mr. Trajkovski shared some of C&S' successes with its innovative fuel reduction efforts.

Panel presentations by fleet managers on propane-powered fleets and idle reduction were well attended. After lunch, breakout sessions on compelling topics like electric vehicles, compressed natural gas and telematics rounded out the day.

Toyota Motor Corporation, the Speedway's sponsor, exhibited the hydrogen-powered Mirai and provided a Prius for rides on the track (which did laps at 80+ mph!). Area dealerships exhibited the latest in fuel efficient diesel trucks and buses, and provided an impressive array of electric vehicles. Nearly 20 sponsors set up exhibit tables and talked to attendees.

Sponsor fees brought in \$9,300 toward the event. After all expenses are paid, the remainder (approximately \$3,000) will be presented to the Speedway's Children's Charity: <http://www.speedwaycharities.org/>. ■



## Safe Schools chemical evaluation project

In early May of 2016, the New Hampshire Pollution Prevention Program participated in a project initiated by the Upper Valley Lake Sunapee Region Planning Commission (UVLSRPC) and funded by EPA, to assist schools in identifying hazardous chemicals in their science and art classrooms.



Janitorial cleaning supplies were also examined to determine if any of the products contained toxic chemicals. In all cases, suggestions were made to switch, where possible, to non-hazardous alternatives. Dave Waddell, from Seattle Washington, who is an expert in school chemical safety, was contracted to visit eleven schools located in the UVLSRPC service area. Many of the schools had implemented thorough cleanouts of their old and unwanted science lab chemicals within the past few years, but Dave was able to find additional potentially hazardous chemicals and make suggestions to both the science and art teachers to help them reduce or eliminate the use of certain chemicals. In addition, Dave helped schools to reorganize existing chemical storage areas, so that only chemicals that are compatible with each other are stored together. These activities help ensure safer classrooms for students, teachers and school staff. All of the schools have switched or are in the process of switching over to janitorial cleaning systems that incorporate safer cleaners. Detailed reports filled with comments, suggestions and helpful resources were provided to all participating schools. ■

## NH citizen recognized for environmental achievement

William Boulanger, Superintendent of Public Works and Utilities in Dover, was recognized on May 10 at the 2016 Environmental Merit Awards ceremony of EPA's New England regional office. The merit awards, given out since 1970, honor those who have shown particular ingenuity and commitment in their efforts. Boulanger was recognized as an individual who has taken action as a crucial catalyst for reducing negative impacts on the Berry Brook Watershed in Dover.

The goal of the Berry Brook project has been to use green infrastructure stormwater treatment practices to improve water and habitat quality in a severely degraded urban watershed. Under Boulanger's leadership, researchers at the University of New Hampshire Stormwater Center and city staff installed stormwater controls that remove more than 19 tons of sediment, 710 pounds of nitrogen and 127 pounds of phosphorus each year. They have reduced the non-porous cover in the watershed from 32% to less than 10%.

Boulanger's ability to seek practi-

cal solutions has helped overcome municipal barriers to green infrastructure and resulted in a greater understanding of stormwater management.

When city staff were reluctant to accept green infrastructure, Boulanger addressed their concerns, coordinating with city engineers, laborers and UNH researchers to build systems that can be maintained with the existing equipment, are affordable, and include designs easily understood by city staff. Bill also invented a new style of green infrastructure with the water quality and volume reduction benefits of porous asphalt. The new approach was nick-named "The Boulangerator." Bill,



who has provided outstanding municipal public works service for 42 years, is a master communicator with excellent leadership skills. It is local champions like Bill Boulanger who will lead the green infrastructure wave and who will do it more economically and effectively than anyone ever imagined.

Congratulations, Bill! ■



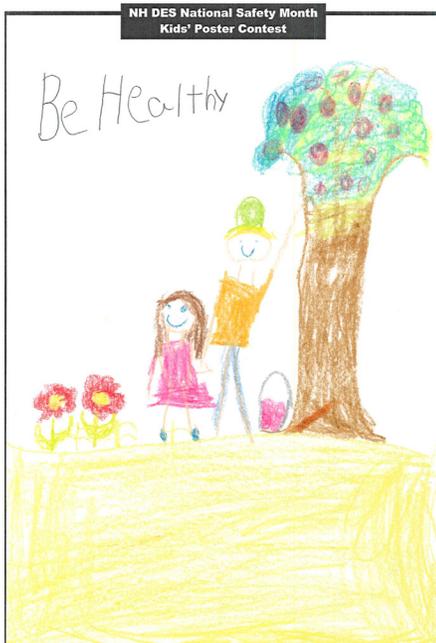
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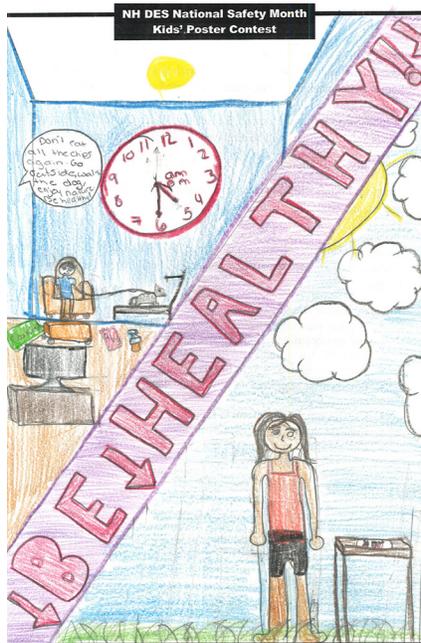
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## NHDES National Safety Month art contest

Observed annually in June, National Safety Month focuses on reducing leading causes of injury and death at work, on the roads and in our homes and communities. The art contest was targeted at children from ages 5-13. Children were asked to create a poster related to the four topics recognized in June: Stand Ready to Respond, Be Healthy, Watch Out for Dangers, and Share Roads Safely. The posters were judged on connection to safety, visual impact and originality in three categories (Ages 5-7, 8-10, and 11-13). ■



Winner 5-7: Elizabeth Zink, age 6



Winner 8-10: Charlotte Summerlin, age 10



Winner 11-13: Jacelyn Faucon, age 12