

## GOVERNOR'S COLUMN

### Earth Day Message



In New Hampshire, our scenic views and beautiful natural resources drive our economy and define us as a place and a people. And each year on Earth Day, we come together to ensure that we maintain our commitment throughout the year to protecting these natural resources that are critical to our high quality of life.

Clean air, in particular, is essential for the health of our people and the health of our economy. Last December, in order to protect our air quality, New Hampshire joined seven Northeast and Mid-Atlantic States in petitioning the U.S. Environmental Protection Agency (EPA) to require upwind states to reduce air pollution generated within their borders, that causes asthma, respiratory disease,

and other public health problems downwind.

For the people of New Hampshire to live the healthy, productive lives that they deserve, our air needs to be as clean as possible, so we are asking the EPA to require those states doing the polluting to live under the same rules as our states.

In New Hampshire, we have a strong history of protecting the natural resources that make our state so special and are taking major steps to reduce emissions that harm our air. But other states aren't doing the same, and New Hampshire – along with other East Coast states – is paying the price.

Downwind states, such as New Hampshire, have aggressively reduced air pollution emissions, and as a result the air in these states is significantly cleaner than it was 30 years ago, but there are still times when ozone reaches unhealthy levels. However, even if the people of New Hampshire took every car off every road in our state, we would, at best, reduce ozone by only three percent on bad air days. And on those bad air days, New Hampshire receives more than 95 percent of its air pollution from upwind states.

That's because much of our pollution comes from upwind states – states that do not live under the same federal requirements that we do; states that are reaping



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## COMMISSIONER'S COLUMN

### Climate Change in New Hampshire

It's once again that time of year when many New Hampshire residents are anticipating the return of warmer weather and being outdoors enjoying all that New Hampshire has to offer. With the arrival of spring also comes the celebration of Earth Day, a time when many of us think about the things we can do to maintain and restore our environment. Addressing climate change is increasingly high on the list of people's priorities. Climate change is real, serious, substantially man-made and a condition that affects us all. However, the severity of this winter, due in part to the phenomenon referred to as the "Polar Vortex," has raised a fundamental question – "how can it be so cold if the planet is supposed to be warming?" The answer can be found by distinguishing between weather and climate.

A cold snap in the winter doesn't mean that Earth's overall temperature has stopped warming or that our climate has stopped changing. It simply means that the weather for this region during this winter has been cold. While New Hampshire experienced sub-zero temperatures, Alaska was in the 60s, parts of England were paralyzed by rainfall not seen in 250 years, California was experiencing a 500-year drought, and Australia was gripped by a heat wave that was killing wildlife. Weather is defined as the state of the atmosphere with respect to wind, temperature, cloudiness, humidity or precipitation at a given place at a given time. These conditions change from day to day or

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economic benefits and advantages from poisoning New Hampshire's air.

Industries and electric power plants in downwind states have already invested heavily in pollution-control technologies, and if additional emissions reductions were required from states like New Hampshire, they would come from their smaller sources at greater cost. The cost of removing an additional ton of pollution in downwind states (including New Hampshire) is estimated at between \$10,000 to \$40,000 - compared to as little as \$500 a ton in upwind states, where even some of the basic control technologies have not been installed.

That is why I am calling on states around the country to join us in taking common-sense steps to address air pollution.

It is unacceptable for our citizens to suffer from poor air quality because of the inaction of upwind states. We need these states at the table, joining with us to improve the air quality across our country.

We are calling on the EPA to hold those states accountable and help bring them into the Ozone Transport Region process so we can improve the lives of all of our people. The petition cites decades of inaction by the upwind states during which time the eight Mid-Atlantic and Northeastern states have spent tens of billions of dollars to reduce their own air emissions, and it would require upwind states to take actions consistent with the air pollution efforts of the downwind states through the use of readily available control technologies and reliance on cleaner fuels to generate power.

We hope that upwind states will recognize the impact of air pollution in our communities and come to the table to improve the quality of life for all of our people.

In honor of Earth Day, I want to thank everyone whose efforts are helping to provide clean air for our people and protect all of the beautiful natural resources that are important to our state. Your work is critical to maintaining our high quality of life, and I look forward to continuing to work together to build a stronger, cleaner, more innovative New Hampshire. ■

## Helping Small Facilities with Easier On-Line Reporting

NHDES is proud to announce that the Air Resources Division is rolling out a new and enhanced online permit application system to aid in the application process for current and future air permit holders. The newest feature added to the system allows for NH facilities to register under the newly created provisions of NH Administrative Rules, Env-A 625, Limitations on Potential Emissions. This enhanced feature will allow facilities that have very low *actual* volatile organic compounds (VOCs) and hazardous air pollutants (HAPs), but which have the *potential* to emit very large amounts of VOCs and HAPs, to register to limit their emissions through recordkeeping and avoid more extensive regulatory requirements. Companies that might be interested in this feature include those that operate paint spray booths, auto body shops, and small manufacturers that apply raw materials containing VOCs to their products.

The online application system enables facilities to register under the General State Permit for Emergency Generators, as well as the Permit by Notification for Non-Metallic Mineral Processing Plants (for rock crushing operations). It also enables facilities to submit requests for Administrative Permit Amendments electronically.

For more information, visit <http://des.nh.gov/onestop/air-epermitting.htm> or contact Cathy Beahm at [catherine.beahm@des.nh.gov](mailto:catherine.beahm@des.nh.gov) or (603) 271-2822. ■



### ENVIRONMENTAL NEWS

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even from year to year. In fact, as Mark Twain famously said of New England, "If you don't like the weather, wait five minutes."

Climate, on the other hand, describes the average weather for a region over an extended period of years. The climate is determined by the long-term weather patterns over decades. Scientists measure it by calculating the 30-year averages for weather conditions. Residents in New Hampshire also have an intuitive sense of climate, expressed as our expectations for the weather. For example, we have wardrobes for each of the four seasons, we buy vehicles that can perform in all manner of road conditions and we know the best months to head to the beach or a lake to beat the heat. Climate affects how we live, but it also affects natural systems. For instance, New Hampshire's iconic forests are dependent on abundant rain to grow and cold temperatures to lock out southern species and pests.

While the weather varies day to day, on a year to year basis the climate has historically been stable, a fact that has allowed natural systems to become established and human communities to adapt to their regions' specific conditions. However, since the beginning of the industrial revolution, Earth's temperature has warmed considerably as greenhouse gases have trapped a greater portion of the Sun's energy. To understand how the climate in locations around the country and the globe have changed, scientists have compared recent and long-term observations of the weather patterns.

One pattern observed has been a warming in the Arctic to the north that has led to a decline in sea ice and increased snowmelt on land. Since ice and snow reflect sunlight back into space, both of them help to keep the Arctic cold. However, as they melt, they leave behind darker land and ocean water, which absorb sunlight and thereby cause increased warming in that region. An unexpected outcome of a warmer Arctic is a weaker jet stream, the high-level river of wind that circles the globe. Normally in winter, the jet stream tightly circles the Arctic, keeping the arctic air trapped to the North. But as the jet stream slows, it seems to allow frigid air to spill south and cause the severe conditions that we have experienced this winter.

Understanding the connection and distinction

between weather and climate will help us all to understand how a single cold winter or a cool summer doesn't indicate that the climate has finally stopped changing or that overall temperatures on Earth have stopped rising. Addressing climate change will take work to accomplish, both by reducing our energy consumption to reduce greenhouse gases that are causing climate change and to work within our communities to prepare for the current and anticipated future changes in climate. In the meantime, with the end of a cold winter, it is time to get outside and enjoy the springtime weather. Here in New Hampshire, we all love to get out and appreciate all of the beauty that surrounds us and makes this state one of the best places to live, work and play. ■



### Coastal New Hampshire Climate Summit - April 10, 2014

The third annual Coastal New Hampshire Climate Summit will provide an open dialogue focused on the question, "What do communities, researchers, and practitioners need in order to keep moving forward with climate change adaptation?" This full-day event is shaping up to be highly interactive with an exciting game show format to explore how natural resources are of value to Seacoast communities.

To register or for more information, contact Steve Miller at [steve.miller@wildlife.nh.gov](mailto:steve.miller@wildlife.nh.gov) or (603) 294-0146.



[twitter.com/NHDES](https://twitter.com/NHDES)

# Partnerships Make Progress in Efforts to Reduce Fertilizer Impacts to Water Quality

Lawn fertilizer is the source of one-fifth of the nonpoint source load polluting Great Bay, excluding the nitrogen that falls from the sky with precipitation. Along with septic systems, animal waste and stormwater, pollution from fertilizer must be addressed in order to restore Great Bay.

When it comes to fertilizing your lawn, understanding when and how much to apply can be the start to keeping fertilizer from polluting our waters. NHDES has been working with partner organizations on two new initiatives to help keep our lawns healthy and our waters clean. First, a unique multi-state partnership created voluntary guidelines to reduce fertilizer impacts to water quality; Regional Clean Water Guidelines for Turf Fertilization was recently published by New England Interstate Water Pollution Control Commission (NEIWPCC). Second, New Hampshire passed a new fertilizer packaging law consistent with the new guidelines.



In our surface waters, some nutrients are essential for algae and phytoplankton growth and the animals they support. However, excess nutrients, phosphorus and nitrogen that run off our properties into local waterbodies can trigger algal blooms that cloud water and actually deplete the oxygen aquatic animals need to survive. Lawn fertilizer can be a significant source of nitrogen and phosphorus pollution to both fresh and salt waters. When excess fertilizer is applied to a lawn, it can travel to stormdrains and streams, eventually entering our rivers, lakes, and bays. In addition to Great Bay, NHDES has documented nutrient pollution from fertilizer in many of our lakes.

New Hampshire is not the only state concerned about excess nutrients in surface waters. Long Island Sound, Lake Champlain and the Charles River are a few high-profile examples of waters of the Northeast highly impacted by nutrient pollution. As a result, several states around New England have recently passed legislation to limit the amount of nutrient content in fertilizer and in some cases restrict the amount that can be applied. To reduce these inconsistencies across state lines, the New England and New York state environmental agency commissioners requested that NEIWPCC work with states to develop a uniform set of regional turf fertilizer guidelines. To make the guidelines both scientifically defensible and mutually agreeable to stakeholders, the process included work sessions with turf fertilizer manufacturers, lawn care professionals, and state, federal and local environmental and land care agencies, academic researchers,

university extension specialists, and regional watershed and environmental advocacy groups. NHDES hosted one of the work sessions and New Hampshire stakeholders were well represented.

The guidelines address a full range of scenarios. For example, a new lawn may require fertilizer while an established lawn will most likely do fine just leaving the grass clippings. Or, if soil pH is too low or too high, it is unlikely any amount of fertilizer will help the grass grow. The report includes 33 guidelines based on the 5 Rs – some of which are summarized below.

**Right Formulation:** Recommends soil testing to determine how much or if fertilizer with phosphate is needed. Phosphate may not be needed on most on established lawns. Manufacturers should label the products appropriately and should formulate nitrogen turf fertilizers to provide at least 20 percent of total nitrogen as slow release.

**Right Rate:** Includes following soil test recommendations, some limits on application rates for phosphate and nitrogen per application and per year, appropriate labeling on products to reflect the limits, recommendations to calibrate fertilizer spreaders, restrictions in environmentally sensitive areas, disposal recommendations and more.

**Right Time:** Strongly discourages applying fertilizer during the winter or on partially frozen ground, during the hot summer dormancy and within 48 hours before or after a major rain event. Packaging should include warnings about applying near surface waters.

**Right Place:** Restricts applying on paved surfaces, on bare

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## Atkinson Update: 19 Homes to be Hooked up to New Water Line

Progress has been made in Atkinson where a chemical contaminant called 1,4-Dioxane was discovered in some homeowners' private drinking water wells. On November 21, 2013 the U.S. Environmental Protection Agency (EPA), NHDES and the Town of Atkinson hosted a public information session to discuss the remediation process. NHDES provided an updated summary of the sampling that has been performed and the extent of the contamination; 19 residential wells have concentrations of 1,4-Dioxane exceeding the New Hampshire ambient groundwater quality standard of 3 micrograms per liter and 28 additional wells have detectable levels of 1,4-dioxane.

EPA representatives described the solution to hook up the 19 homes with levels exceeding the state standard to the Hampstead Area Water Company line, which will be extended by approximately 11,000 feet to reach the affected area. The additional 28 households will have the option to buy in to the new water line. EPA started the water line construction in December 2013, completing the work on Island Pond Road and then ceased construction for the winter. The project will start up again in the spring and will be completed in 2014. Currently, NHDES is providing bottled water to the 19 affected households.

Considered a current emerging contaminant of concern, 1,4-Dioxane is a probable carcinogen that has been found in ground water at sites throughout the United States. Used as a stabilizer in chlorinated solvents, 1,4-Dioxane is used in manufacturing and in commercial products like laundry detergents and soaps. As a contaminant, it is highly mobile and travels farther than other contaminants. Furthermore, it's persistent, which means it does not readily break down, evaporate or adsorb into the soil. This makes it difficult and expensive to treat. To date, NHDES has detected 1,4-Dioxane at low levels at over 75 hazardous waste and landfill sites, several wastewater treatment plants, public water sources and at carwashes. ■



### Fertilizers *continued from page 4*

ground or near protected water bodies.

**Right Supporting Actions:** Recommends mowing turf grass high (about 3 inches) and leaving clippings on lawn, testing for soil acidity and applying lime as indicated, aerating turf, over-seeding bare patches and watering  $\frac{1}{4}$  -  $\frac{1}{2}$  inch water following fertilization application.

For the full report and guidelines see: <http://www.neiwppc.org/turfertilizer/guidelines.asp>.

The work on the report was perfectly timed. In June, 2013, the New Hampshire Legislature passed HB 393 "limiting the nitrogen and phosphorus content of fertilizers sold at retail and intended for use on turf" effective January 1, 2014. The content of the bill was consistent with the recommendations in the new guidelines. Through consistent application recommendations on fertilizer packaging labels, the bill defined fertilizer for turf and identified packaging content requirements for nitrogen and phosphorus sold at retail.

For more information about recommendations for water quality and keeping your lawn healthy in New Hampshire, visit: <http://des.nh.gov/organization/divisions/water/wmb/was/categories/publications.htm#lawn>. ■

### Upper Valley Adaptation Workgroup Workshop: Is your community ready for the next flood?

April 28, 2014, 5:30-8:30

Dartmouth-Hitchcock Medical Center, Lebanon, NH

Communities have been repeatedly impacted by flooding events. Recovering from these types of events can be challenging and expensive. Many communities are looking for guidance and support to become more resilient to these types of events.

Join the Upper Valley Adaptation Workgroup and municipal officials, volunteers, and neighbors for an evening to:

- Learn from Upper Valley communities in Vermont and New Hampshire that have been impacted by flooding events.
- See a demonstration of rivers and how they flood.
- Get tips on how to move through the recovery process and working with FEMA.
- Learn about a co-benefits/systems approach for investing in community resources across the different sectors.

This workshop is FREE, but space is limited. A light dinner will be provided. Registration will be open in March. For questions, contact Sherry Godlewski at [sherry.godlewski@des.nh.gov](mailto:sherry.godlewski@des.nh.gov) or (603) 271-6801.

## Certified Culvert Maintainer Program Now in Effect

Does your town have a lot of culverts? Are many of the culverts old? If you answered yes to these questions, your town should be interested in the Certified Culvert Maintainer program that is now in place.

Under RSA 482-A:3, XVII-XIX and Env-Wt 905, a municipal public works employee who becomes a certified culvert maintainer can maintain, repair, replace, or modify culverts without first filing any notification or application with the NHDES Wetlands Bureau. Instead, the certified individual must periodically file a report that covers all of the culverts maintained, repaired, replaced, or modified in the prior calendar quarter. NHDES has adopted rules to establish the details of how certification can be obtained and renewed and what must be in the quarterly report. The rules are available on the NHDES website at <http://des.nh.gov/organization/commissioner/legal/rules/index.htm>. ■

## Discover Wild NH Day

April 19, 2014



Celebrate Our Environment!

Admission to this family-friendly event is FREE.

Event location: 11 Hazen Drive, Concord, NH

### Local Solutions: Northeast Climate Change Preparedness Conference

May 19-21, 2014 at the Center of New Hampshire in Manchester

This regional conference is designed for local planners and decision makers to understand how to create healthy resilient communities that are better prepared to handle severe weather and climate impacts. This pragmatic, hands-on, interactive conference offers workshops on how to:

- Conduct vulnerability assessments.
- Protect natural and societal mechanisms that maintain resilience.
- Frame and create plans that allow a community to adapt.
- Build community support to implement adaptive responses.
- Network with schools, community planners and leaders working toward solving similar problems.

Visit Antioch's Local Solutions Conference website:

<http://www.antiochne.edu/innovation/climate-change-preparedness/> for more information.



## Pollution Prevention Program Tackles Food Waste

The New Hampshire Pollution Prevention Program (NHPPP) has been working with businesses that prepare and serve food to help them reduce the amount of food waste going to landfills and incinerators. To date, NHPPP has connected several restaurants and two hospitals with farmers who raise pigs, chickens, goats and cows, resulting in approximately 20,000 pounds of food diverted from the waste stream annually. One particularly successful connection involves the Grappone Conference Center in Concord and two farms in Loudon: Song Away Farm and Miles Smith Farm. Song Away Farm is a small farm that raises rabbits but also has chickens, turkeys and a few pigs. Miles Smith Farm raises Scottish Highlanders. All of these critters enjoy the fresh food supplied by the Grappone Conference Center. The Center collects 15 to 30 gallons of kitchen prep scraps per day and sometimes more during the busy times. "It's an easy system in our kitchen and we get to see nice people every day," said Trish Taylor, Executive Chef at the Grappone Conference Center. With this collection program in place, along with their rigorous recycling program, the Center was able to go from an 8 yard dumpster down to a 6 yard dumpster, and they rarely fill that! The farmers report the collection process is simple and the fresh food scraps are a welcome addition used to supplement costly grains.

Each year millions of pounds of food waste ends up in dumpsters. These pre-consumer kitchen scraps consisting of veggies, bread and dairy products decompose when sent to landfills and generate methane, a greenhouse gas 21 times more potent than carbon dioxide. These scraps, which can be the majority of waste in the business' dumpsters, are considered a valuable resource for farmers who raise animals. NHPPP saw this as an opportunity to divert this waste by connecting these businesses with farmers throughout the state, creating a win, win, win situation. The businesses reduce their costs for disposal, the farmers receive free food and there are environment benefits by having a valuable food source diverted from landfills. This effort also indirectly increases support for local farming!

Collecting food scraps to give to farmers is not a new phenomenon. Grocery stores, hospitals, colleges, universities and the hospitality industry throughout the state have had this connection with larger farms for decades. NHPPP recognized the benefits of these connections and has focused outreach efforts to promote waste diversion to farms of all



sizes. Smaller farms and restaurants that generate a bucket or two of food waste a day are a perfect match.

NHPPP is looking to build on the success of this project by facilitating more connections throughout the state. If your business generates food waste (pre-consumer: fresh veggies, bread or dairy...NO MEAT), or you are a farmer looking for food scraps for your animals, please contact NHPPP at 271-6460 or email [nhppp@des.nh.gov](mailto:nhppp@des.nh.gov). ■

### NH Water and Watershed Conference, March 21, 2014

The NH Water and Watershed Conference will be held Friday, March 21, 2014 from 9:00 AM-4:00 PM at the Hartman Union Building, Plymouth State University, Plymouth, NH. This year's theme is Sustainability of New Hampshire's Water Resources.

The agenda includes a morning plenary talk on the sustainability of New Hampshire's water resources. Throughout the day there will be informative sessions on a variety of topics and the event will close with an afternoon wrap-up discussion where participants will be able to ask questions and share ideas about water and sustainability in New Hampshire.

The New Hampshire Water and Watershed Conference is designed to meet the information need of a broad audience. Participants include scientists; educators; consultants; students; lake, river, and watershed groups; environmental organizations; volunteer monitors, municipal board and staff members; elected officials; local and regional planners; and policy makers.

For more information and to register: <https://www.plymouth.edu/center-for-the-environment/2014-nh-water-watershed-conference/>.

## Tales From the Field: Little Bay Harbor Sunken Vessel

On June 4, 2012, a 37-foot sail boat sank in Little Bay Harbor. While the owner had intended to repair the vessel, a recovery company determined the damage to be too extensive. Eight days later, the boat was raised and moved to the mudflats off of the Adams Point Road Boat Launch in Durham. During the process, the batteries and a one-gallon gasoline container were removed, and the fifty-gallon fuel tank on board was emptied. Despite continuous attempts to work with the owner, the setting of deadlines for the removal of the vessel, and a letter of deficiency, the boat remained abandoned through 2013 due to the owner's limited resources.

In October of 2013, NHDES was contacted by the Town of Durham requesting information relating to the removal of the vessel. Following a review of the situation, Durham officials offered assistance with equipment, labor and disposal. With the owner's permission, the NHDES Spill Response and Complaint Investigation Section (SRCIS), working closely with the NHDES Wetland Bureau as well as the Coast Guard, Fish & Game, Portsmouth Harbor Master's Office and Marine Patrol, developed a detailed wetlands restoration plan to address the removal of the vessel. The NHDES Wetlands Bureau expedited the plan approval while Fish & Game granted the use of the boat launch parking area for vessel access and equipment staging. Using a Spill Response boat, SRCIS deployed containment boom around the vessel. On December 11, 2013, Durham DPW staff, with oversight from SRCIS, proceeded with the restoration. Thanks to the collaborative efforts, it took less than three hours to demolish the vessel, inspect the site and dispose of the materials appropriately.

Compliments followed from Todd Selig, Durham's Administrator, stating, "Too often in public service we receive complaints from individuals quick to criticize our efforts. On this occasion, I would like to compliment [everyone involved] for working together with the Town of Durham to accomplish the removal of an abandoned boat that, for over 18 months, posed a threat to the state's waters and our particular community." ■



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