



# THE OBSERVER

January 2012

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## A WORD FROM THE PRESIDENT

By: Peter M. King, PE, LSP, LEP  
NHSPE President

Don't take engineering for granted.

If the general population has a high regard for engineering, why do I often hear complaints from my colleagues that our engineering jobs are routine or possibly even mundane?

I did a web search looking for the "most admired professions" and engineering made the Top Ten List on every site that I clicked on. How can it be that we are in one of the most admired professions, but most of us feel that we have never achieved a life-changing task? We don't often toot our own horn, or boast about our accomplishments at work. When was the last time you gave yourself a pat on the back for a job well done? Maybe it is our modesty. Perhaps the fact that we often do our best work in teams, so there is no one person to take the glory. The fact is that engineers have a profound impact on saving lives and we shouldn't take it for granted.

*A Word From The President  
continued on Page 2*

## E-Week Must Read

It can be argued that engineering is the greatest profession in the world. Whether it is or is not, it is undisputable that the world would have never advanced to where we are today and where we will go tomorrow, without our contributions. One week in February is set aside every year to recognize our talents, and 2012 is no exception. Among us will be recognized two especially deserving engineers to receive the esteemed "Young Engineer of the Year" and "Engineer of the Year" awards. There will also be an opportunity to attend educational sessions and obtain up to 3 Professional Development Hours (PDHs).

Engineering societies throughout New Hampshire will come together at the New Hampshire Engineers Week Awards Banquet on Thursday, February 16, 2012. Consistent with years of practice, the banquet will be hosted at the Center of New Hampshire at the Radisson Hotel in Manchester.

This year's keynote address will be given by Carl Quiram, P.E., Goffstown Public Works Director. Carl will present an overview of his recent experiences visiting Haiti in its post-disaster and recovery stage following the massive earthquake that shook the country in 2010. Carl visited the

country along with a group of public works officials as part of his involvement with "Global Solutions in Public Works". Global Solutions is an international public works outreach program overseen by the APWA International Affairs Committee. One of its purposes is to provide outreach to educate/share best practices with public works officials in underdeveloped countries across the world and provide APWA members opportunities to assist in third-world countries. Haiti is a prime example of why sustainable infrastructure is desperately needed as the lack of clean water, sanitation, proper building practices, transportation, and utilities all contribute to a disease ridden, unhealthy society with a life expectancy of 52 years.

The NHSPE Board of Directors, in planning the event, has decided to maintain the same ticket price as last year even though costs have increased. Therefore we will be looking to have more company sponsors to help offset the added expenses and ask your support. Look for registration, sponsorship, and exhibitor information soon available at [www.nhspe.org](http://www.nhspe.org).

*Submitted by Larry Dwyer, P.E.*

## MATHCOUNTS

Welcome to the 29th year for MATHCOUNTS! Registration for the 2011-2012 program is underway. We hope to have more than 60 schools registered by the deadline on December 16.

The six regional contests will be held in February, followed by the State Competition at Plymouth State University in March.

Fundraising to support the program is now in process. Contributions from NHSPE members (or others!) will be greatly appreciated, and we will also be looking for volunteers to help with the regional and state contests.

*Submitted by Ben Pratt, PE  
NH MATHCOUNTS Director*

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A few examples: As a highway designer, do you consider that by laying out roadway details you are saving lives? Look at the highway (and automobile designs) of a generation ago – I think that we can agree that the dramatic decrease in the number of highway deaths is due to improved engineering. By following the latest codes, listening to input from your peers, and keeping up on the latest research, you are saving lives – don't take it for granted.

A century ago, the "Urban Penalty" was commonly used to describe the high mortality rates in our cities. Increased urbanization of the US actually caused a decrease in the average lifespan at the turn of the century. Rapid urban growth coupled with inadequate water supply and sanitation infrastructure contributed to this mortality crisis. In a matter of only 40 years, the average lifespan of an urban resident in the US increased by a whopping 40 percent from 47 to 66 years. This is largely attributed to the advances in water treatment and disinfection. If your job involves water or wastewater, don't just take it for granted – you are saving lives.

Even the average homeowner recognizes that it was irresponsible to turn Love Canal into a residential development. However, most environmental projects involve sites where the dangers are much more subtle and would not be recognized by the public. Without engineers, the risks associated with pesticides, heavy metals or even volatile compounds would not be apparent to most people. Much of the work on these sites is associated with the routine sample collection, the monotonous data validation, and the comparison of site data with health standards. On a task by task basis it is tough to identify the impact of our daily jobs, but combined into the engineering model often results in a positive health impact at the Site and in the surrounding community.

As you enjoy the Holiday Season, please take a moment to reflect on the differences that you and your colleagues make every day. Don't take your profession for granted. ☺

## NSPE Northeast Regional Conference

The Northeast Regional Conference of the National Society of Professional Engineers was held in Sturbridge, MA, on November 4 through 6, 2011. The event was comprised of an evening gathering and social event on Friday night, followed educational sessions and dinner on Saturday, and was concluded on Sunday with the Northeast Regional Membership/Business Meeting. Membership was represented from New Hampshire and across the region.

The conference commenced on Friday evening with an education session on ethical consideration for practicing engineers and was followed by a welcome reception. Saturday was comprised of a day of technical sessions followed by dinner with a presentation by historian John Busch. The day's technical sessions were well diversified in subject matter. Some of the topics presented included: case study of an aluminum deck bridge; health and safety at hazardous projects site; use of digital signal processing to improve signal quality; new technology in masonry; and others. Multiple tracks were provided during the day sessions and PDH's/CEU's accompanied them, many of which meet the New York PDH requirements. Saturday evening concluded with a wonderful dinner and presentation on the building of the SS Savannah. Historian John Busch, and author of "Steam Coffin: Captain Moses Rogers and The Steamship Savannah Break the Barrier," presented the intricate and detailed history and technology of the production of the first steamship.

The conference concluded on Sunday with the Regional Membership/Business Meeting. Members shared ideas on an array of topics to provide other chapters insight to what they have found beneficial to their members and organization. Also discussed were the future NSPE Northeast Conferences, which will be held in Rhode Island in 2012 and Washington D.C. in 2013. In closing, recognition should be given to MSPE for all the efforts that went into coordinating this successful event. ☺

## THE OBSERVER

*The Observer* is published quarterly by the New Hampshire Society of Professional Engineers for its members. Its purpose is to inform members of NHSPE activities and related topics.

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# NHDES Annual Update

On December 7th, the NH Society of Professional Engineers hosted another successful “NHDES Annual Update” luncheon meeting at the Puritan Conference Center in Manchester. Presentations included an update on the Governor’s Water Sustainability Commission by John Gilbert, President of Synchrony Advisors, LLC and chair of the Commission; an update on the proposal to establish an Integrated Land Development Permit (SB 142) at NHDES by Carolyn Russell, Senior Land Use and Environment Planner within the Office of the Commissioner; an update on the current status of wetlands legislative activity and rulemaking by Collis Adams, CWS, Administrator of the NHDES Wetlands Bureau; and an update on the current rulemaking effort to develop proposed rules for redevelopment projects by Ridge Mauck, PE, Administrator of the NHDES Terrain Alteration Bureau. Approximately 70 people attended and received a certificate for 2 professional development hours (PDHs). Copies of the presentations are posted on the NHSPE website at <http://www.nhspe.org/events/>. 

*Gregg Comstock, PE,  
NHSPE State Director)*



*John Gilbert speaks about water sustainability*



*Ridge Mauck of NHDES provided an update of the AOT permit changes*

## NHJES UPDATE

On October 6th, the 5th annual New Hampshire Joint Engineering Society Conference took place. The subject of this year's conference was "Sustaining Our Future". With Sustainability being the buzz word around the country, this was a fitting subject for this year's conference. The day commenced with a presentation from the Commissioner of NHDES, Thomas S. Burack. Mr. Burack spoke about the importance of sustainability in New Hampshire's Future. This set the tone of sustainability for the day.

Four morning sessions started off the variety of topics that were covered during the day. Civil Engineering/Infrastructure Sustainability, by Howard LaFever, P.E. of GHD Inc. and Sustainability of Military Lands in Alaska by Sally Shoop, PhD, P.E. of CRELL-NH, lead off the morning sessions. The next two took a stand on a hot topic about the "Green Side of Nuclear Power" by Robert Couture P.E., NextEra Energy Resources Seabrook Station and "Securing the DOD Supply Chain from the Risks of Counterfeit Electronic Components" by Henry Livingston, BAE SYSTEMS. The morning sessions concluded with a luncheon presentation from Dennis Delay, New Hampshire Center for Public Policy Studies, which was about New Hampshire's current job growth and the state's future job growth.

The afternoon began with two different but related topics, one about "Sustainable Design using Precast Concrete Systems," by Rita Seraderian, Precast/Prestressed Concrete Institute and "Designing Products to Last; Is it Good for the Manufacturer, the Environment, the Economy?" By Robert Landman, H & L Instruments. The day was concluded with two presentations, Permitting of Small Scale Wind Power Projects by Sarah Barnum, PhD, Normandeau Associates, Inc. and Use of Porous Asphalt in Cold Regions by Jon Zufeit, PhD, P.E., CRELL-NH.

Special thanks should go out to all of the sponsors and volunteers that made the New Hampshire Joint Engineering Society Conference a great success. 🍷

*-Corey Dietrich, EIT*

## Regulatory Update

One of the goals of NHSPE is to "Be involved in government affairs as they relate to professional engineering issues." To this end, we take an active role in the legislative and regulatory processes to protect the professional rights of our members. One of our current activities is to monitor a proposal from an engineering firm to develop a prequalification and certification program for NHDES Alteration of Terrain (AOT) permits. NHDES has identified a concern that 20% of their permits are inadequately completed and take 80% of their time to review and the intent of this proposal would be to streamline the review process to benefit the NHDES and the project developers, who are currently impacted by delays in the review process. This proposal, in the early stages of development, would require anyone that prepares an AOT permit to have been prequalified. This proposal is in the early stages of development and is being spearheaded by an engineering firm. We will continue to monitor.

House Bill 248 was passed last year to authorize a Study Commission on Regulation and Business in New Hampshire. New Hampshire's Above Ground Storage Tank (AST) rules are one of the regulations under study. New Hampshire's AST rules currently require PE certification of SPCC Plans for any tank greater than 660 gallons or a cumulative storage capacity greater than 1,320 gallons. The commission is considering recommending that the rules be changed to require PE certification for any tank greater than 10,000 gallons, which would be consistent with federal regulations.

NHDOT has initiated discussions with NHDES that would allow a culvert certification program. NHSPE has been invited to be an active participant in this process, and our position will be to ensure that designs that are currently required to be PE stamped will not be allowed to be done by non licensed practitioners.

As we wait for the 2012 legislative session to begin, we are monitoring Legislative Service Requests (LSRs). Every bill must begin with an LSR, and for this year's session 796 LSRs have been filed and will require the attention of our house and senate. At this point in time, the LSRs are only a few words or a title of the bill; the language of the bills will not be revealed until January. It is only possible to speculate as to how the LSR will progress and what impact the LSR will have on the regulated community. A couple of the dozen or so LSRs that we are currently monitoring include LSR 2012-H-2696-R: Relative to the extension of fill and dredge in wetlands and LSR 2012-H-2300-R: Relative to examinations for licensure of a professional engineer... We'll see how these and others develop, or you can monitor them yourself at [http://www.gencourt.state.nh.us/lsr\\_search/LSR\\_Results.aspx](http://www.gencourt.state.nh.us/lsr_search/LSR_Results.aspx). 🍷

*Submitted by Peter King, P.E.*

## “Blast from the Past”

The following is an excerpt from a February 1976 NHSPE Observer Article:

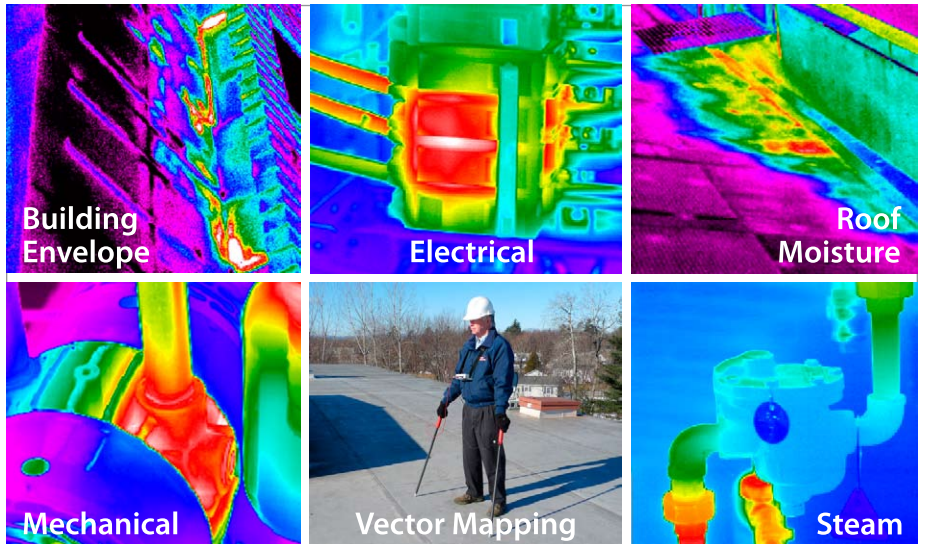
The Mount Washington Cog Railway, the first mountain climbing railway when completed in 1869, has been designated a National Historic Civil Engineering Landmark by the American Society of Civil Engineers.

Announcement of the designation was made by Arthur J. Fox, Jr., president of the 70,000 member national professional society. The society conducts a program to seek out and identify historic civil engineering landmarks which represent significant contributions to the development of America.

Through the railway’s cog system, grades exceeding 37 percent are overcome. Still operating, this world renowned project clearly demonstrates the ability of the American Engineer to provide innovative and economical solutions to unusual and difficult problems. It has been in continuous operation except for one year during World War I and three years during World War II.

Among the 30 landmarks designated to date by the American Society of Civil Engineers, are bridges, canals, buildings, and other civil engineering projects throughout the country. 🌐

*Submitted by T. Setas, P.E.*



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# April 30, 2012

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**Date:**

April 30, 2012

**Location:**

University of New Hampshire,  
Durham Campus

**Additional Info:**

[www.unh.edu/ciealumconference](http://www.unh.edu/ciealumconference)

**Join Us!**

We invite you to join us on April 30<sup>th</sup> for the second UNH Civil Engineering Alumni Conference to be held at the University of New Hampshire, Durham campus.

**Register online  
today!**

The conference will be a forum for alumni of the Civil Engineering Department to return to UNH and share with students and faculty their experience, including professional project work, research, and other achievements since leaving UNH.

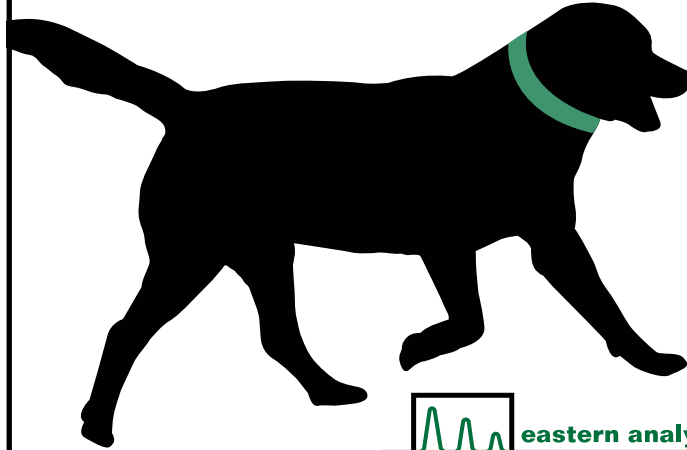
**Visit the website  
for more  
information!**

The conference will include formal panel discussions, with topics across the breadth of civil engineering. Social activities and a celebratory banquet are also planned.

**Presenters and panelists wanted! Visit the website to find out how to participate!**

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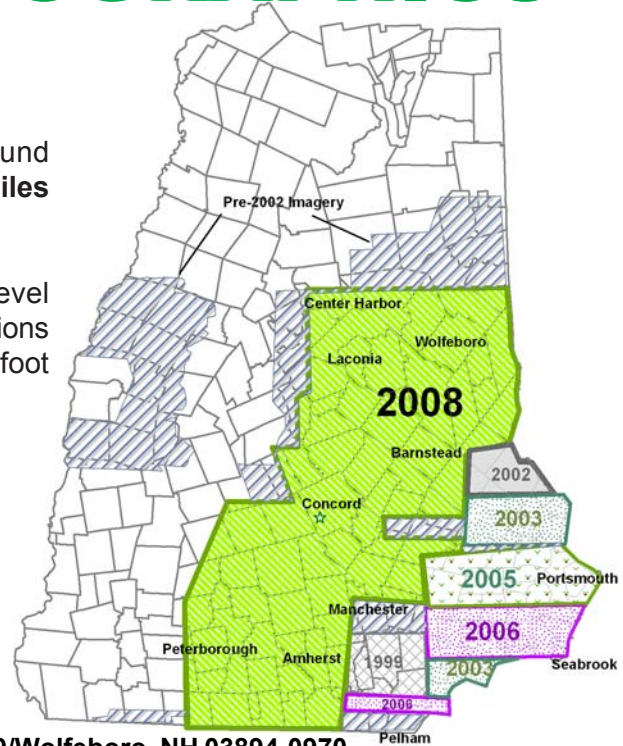
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