On the Road in NH:

NHDOT Crews Apply BMPs to Roadside Invasive Plants

Submitted by Christine Perron – Senior Environmental Manager, NHDOT Bureau of Environment

Purple loosestrife and Japanese knotweed are common examples of invasive plants found in New Hampshire. An invasive plant is non-native and is able to spread rapidly throughout the landscape. Invasive plants threaten the survival of native plants and animals, interfere with ecosystem functions, threaten agriculture, and endanger human health.

Invasive plants spread from site to site by a variety of means, including by wind, water, animals, and people. Some common ways people spread invasive plants to new sites are by gardening, decorating, moving fill, or anything involving moving plants or plant parts.

Many routine roadside maintenance and construction activities contribute to the spread of invasive plants. For example, if mowing operations take place after invasive plants have gone to seed, typically by late summer, many seeds and stems are dragged down the road by the mower. Some plants can even sprout from small stem fragments, including Knotweed, which only requires half of an inch of stem to sprout.

Whenever possible, complete mowing operations before invasive plants go to seed. Clean seeds and other plant material from mowing equipment at least daily, as well as prior to transport to a new site. Also, don't mow knotweed! If roadside knotweed is causing safety concerns, cut it by hand with loppers, scythe, or line trimmer (“weed whacker”). The intact stems can be left on the ground.

It is the goal of the NHDOT to avoid spreading invasive plants to new sites during its maintenance and construction activities. Best Management Practices (BMPs) for invasive plants were used by the NHDOT during mowing operations this summer and mowing crews have done an excellent job avoiding knotweed while mowing our roadsides. Please use BMPs to help prevent the spread of invasive plants when mowing roadsides.

Spread the word…not the weed!


UNH Technology Transfer Center Mission: To provide technical and management information about roads and bridges to municipal officials and road-related organizations.
Master Roads Scholars

Master Roads Scholar—Michael Clarke

Michael Clarke is the highway foreman for the New Durham Highway Department. He has worked there since 1991.

Michael enjoys his job because he likes working outdoors and operating heavy machinery. He also says his co-workers are great to work with.

Michael says the UNH Technology Transfer Center offers a very good training program. He particularly likes the Hard Road to Travel (municipal law) workshop. He advises new public works employees to get involved with the T² Roads Scholar Program and the NHPWSTC Public Works Academy.

Michael would like to publicly thank his wife for her patience and understanding during the many hours he spends away from home to perform his job. Michael enjoys hunting, fishing, and golfing.

Master Roads Scholar—Michael Kercewich

Michael Kercewich has been an equipment operator for the town of Alstead for 7 years. He enjoys his job. His department is currently working on replacing culverts throughout town.

He will continue to take classes with T² to gain more knowledge. His advice to new public works employees is to learn as much as you can. His favorite part of the Roads Scholar Program is learning about many different subject areas.

He is married and has step children and step grandchildren. In addition to working for the town, he farms Beefalo (a cross between cattle and American bison), pigs and sheep, and manages a maple operation. He is also the Assistant Chief for the Alstead Fire Department. Michael enjoys hunting and fishing too.

Master Roads Scholar—Eddie Nason

Eddie Nason is the road agent for the town of Brookfield. He has worked there for four years. He likes that every day brings something different to his job.

He advises new public works employees to try to strive to do a good job. He will keep taking classes to continue learning. His favorite part of the Roads Scholar Program is the hands-on equipment classes.

Eddie has been married to his wife Tina for 24 years. He has 9 children, ranging in age from 2 years old to 21 years old. Eddie enjoys hunting, fishing and gardening.

Master Roads Scholar—Charles Pease

Charles Pease is a Highway Laborer II for the town of Northwood. He has worked there for the past 7 years. Previously, he was a laborer for the State of New Hampshire.

Charles likes the variety of jobs that are handled by his department. His department is currently rebuilding a bridge that was destroyed by high water.

Charles will continue to take classes to learn new things. He says new public works employees and new Roads Scholars should continue taking classes to better themselves and make their job easier. His favorite part of the Roads Scholar Program was the motor grader operations workshop.

Charles is married with two sons, a daughter-in-law, and a grandson. He enjoys hunting, RVing, and attending his grandson’s sporting events. He would like to learn to golf in the near future.
Master Roads Scholar—Ernest Perry

Ernest Perry has worked for the town of Alstead for four years. Previously, he was a grader operator.

He likes the variety in his job and enjoys being outside. His department is currently working on culvert installations.

He will continue to take classes with the UNH T² Center because he likes to be able to do his job to the best of his ability. His favorite part of the Roads Scholar program is the variety of classes offered. His advises new public works employees to learn as much as possible about their job.

Ernest has been married for 37 years. He has two sons and two granddaughters. He enjoys riding motorcycles, wood-working, camping, and fishing with his granddaughters.

Master Roads Scholar—Michael Plante

Michael Plante is a Foreman with the town of Chester. He has worked for the town for 26 years. He really enjoys his work.

Michael also enjoys the UNH Technology Transfer Center Roads Scholar Program and all of the courses that he has taken.

Michael's hobbies are haying and taking care of his cows.

Master Roads Scholar—Randall Smith

Randall Smith has been the Road Agent for the town of Sullivan for 12 years. His favorite part of his job is working with the town residents and making improvements to the town.

He will continue to take classes with the T² Center because there is always new technology to learn about. He believes it is important to use new technology in daily operations.

His advice to new public works employees is to be professional and continue learning. His favorite part of the Roads Scholar Program is meeting new people and learning new things.

Master Roads Scholar—Dean Truax

Dean Truax has worked for the city of Dover for nine years. He has been their Public Works Foreman for the past year. He began his involvement with public works in the 1980s for the town of Plymouth, where he worked for 5 years. He also previously worked in the private sector.

Dean advises new public works employees to take as many T² workshops as possible to learn as much as they can. Dean will continue to take classes with the UNH T² Center because he wants to learn new techniques. He also likes to talk to people from different towns to get ideas that will help him perform his job better.

Dean likes that his job utilizes different skill sets, and that every day is different. His municipality is currently doing 2 million dollars worth of paving.

Dean has been married for 21 years and has two kids: a 23 and a 25 year old.
New Hampshire Roads Scholars

We are pleased to recognize those who have achieved the following levels in the UNH T² Center Roads Scholar Program during the spring and fall semesters of 2009.

Master Roads Scholars

Ann Bedaw       Swanzey
Bruce Brown    Northfield
Michael Clarke           New Durham
Gene Cuomo        Fitzwilliam
David Desfosses  Portsmouth
Harold Fife    Northfield
Kelly Gibbons      Lebanon Airport
Harold Johnston        Lebanon
Scott Johnston        Enfield
Michael Kercewich        Alstead
Jason Kimball
Carl Knapp
Richard Lefavour
Dustin Muzzey
Eddie Nason
Carl Oehler
Charles Pease
Ernest Perry
Michael Plante
Steve Rougeau
Bob Seawards
Randall Smith
Mike Summersett
Craig Sykes
Ed Tourville
Dean Truax
Summer Weeks
Shawn White
Dave Wholley
Ray Castor
Matthew Costa
Steve Curtis
Scott Davison
Hank Denison
Randall Hegl
Matthew Kimball
Russell Nickerson
Eric Poitras
James Shackford, Jr.
Steven Smith
Phillip Sylvia
Dana Taylor
Earl Thibodeau
Edwin Wakefield
Kirk Young
NHDOT
Amherst
Merrimack
Henniker
Laconia
Jaffrey
Deerfield
Hampton
Dover
Conway
Laconia
Laconia
Richmond
Moultonborough
Gilford

Roads Scholars Level 2

Gavin Bell
Donald Class
Richard Cousins
James Culpon
Alan Dews
Samuel Fortune
Dale Gray
Mike Hammond
Robert Harrington
Warren Hilton
Nathaniel Jones
Tom Jordan
Bruce Kimball
Reno Nadeau
Patrick O’Reilly
Charles Seamans
Scott Sykes
Laconia
Winchester
Rochester
Laconia
Dover
Bradford
Winchester
Lebanon
New London
Dover
Concord
Northfield
Lebanon
Pembroke
Laconia
Hampton
Concord

Roads Scholars Level 1

Eric Allen
Eric Alley
Doug Benoit
Geoff Benson
Bob Brown
Jeff Cantara
New London
Pembroke
Hollis
Salem
Barrington
Alexandria

Senior Roads Scholars

Richard Abbott         Gilford
Thomas Bayrd           Hollis
Keith Brignano        Laconia
Richard Collins
Timothy Cutter
Tim Dougherty
Steve Dube
Mark Dubois
Joe Feole
Steve Gray
John Hackett
Jeffrey Haines
Alan Hamilton
Steve Harling
Brad Harriman
Warren Hatch
Bob Henry
Chris Jacobs
Paul Kimball
Mitchell Lachapelle
Ken Lanev
David Loock
Chris McDonnell
Mike McElman
Skip McEvoy
Giuseppe Mendola
Greg Minnon
James Nave
Robert Ramsdell
Dave Reynolds
William Rines
Mark Schultz
Lee Thompson
Derek Todd
Ronnie Verret
Brian Weikel
Jeff Wright
Anthony Yakovakis
Mike Ypya
Plainfield
Gilford
Milford
Newport
Jefferson
Salem
Private
Salem
Center Harbor
Lebanon
Temple
Ossipee
Lee
Hanover
Somersworth
Deerfield
NHDOT
Dover
Fitzwilliam
DHMC
New London
Exeter
Nashua
Salem
Wakefield
Littleton
Somersworth
Carroll
Exeter
Laconia
Plymouth
Littleton
Henniker
Hancock
Amherst
Mont Vernon
Living with a First Responder

Submitted by Ashley Benson, UNH T² Project Assistant

Public works employees are first responders, along with police officers, firefighters, and EMTs. Families of first responders often experience many of the same hardships. For example, public works employees often work long and odd hours and are required to work in sometimes dangerous conditions, such as plowing during winter operations or responding to other emergencies.

Here are some tips to help cope with the stress and worry of being a public works employee or a family member of an employee.

Communication

Strong communication skills are important for any relationship, especially if one person works a variable schedule. The long hours and stresses of the job can make communicating difficult, but it is important to make the effort to maintain communication with family. Even a short text message or phone call during a break can remind a spouse they are loved and needed.

Spouses should also address issues of loneliness and neglect together. If a significant other is feeling overshadowed by the public works employee’s job, it is far better to discuss these problems together openly and honestly before they worsen.

Time Management

If problems with loneliness do occur, it is important to find strategies for improving the situation. Establishing a night each week to be together with family highlights the importance of these relationships and allows each person in the relationship to realize that importance.

It is also important to establish and maintain boundaries between work and family. While emergencies do occur, and public works employees are often called in to work at odd hours unexpectedly, there are times when family needs to be the priority. Scheduling events and activities (and keeping those plans whenever possible) allows for family members and the employee to experience structure and stability, even with an unpredictable job schedule.

Significant others of the employee should also focus on themselves and their own social lives. It is best to stay busy during those long, stressful shifts when the employee may be gone for hours or days at a time. Many partners find it helpful to socialize and do activities without their partners, if necessary, just to have something to fill up lonely hours.

Finding Support

While family and partner relationships can be a great source of support and comfort, support can also be found in extended family, friends, and the families of other public works employees. In fact, other families can be particularly helpful, because they understand firsthand what it is like to live with a first responder. Sharing experiences and coping strategies for handling long hours and dangerous work conditions among other families and spouses can often be easier and less stressful than attempting to deal with these issues alone.

The effects of holding a job in the public sector can be felt by the employee and their family. Dangerous working conditions, long hours, and odd schedules, especially during the winter months and other emergency situations, are stressful for the employee and their family. Follow these suggestions and strategies to help ease some of the stress.

References

Local Public Works Groups Form a PW Summit
Submitted By Dave Danielson, Manager of Foresee Advocacy, LLC.

Board members from six local public works groups in NH have been meeting to discuss common issues. Issues already identified include: standardization and professionalism, advocacy, image building, sharing resources, providing a unified voice in relations with state departments or in response to proposed legislation, consideration of regionalization to address costs, increased communication between the professional groups, and overcoming complicated and costly policies.

Other items of interest were the continuation of the professional organizations and training, such as for water and waste water operators, backhoe operators, chainsaw operators, other safety programs and management skills training for managers at all levels.

Many public works departments in NH are very different, but the goal of this summit is to find the commonalities among them and to create lasting positive change.

Summit representatives are: Richard Lee and Brian Barden of the NH Road Agents Assoc.; Dave Lent and Carl Quiram of NH Public Works Assoc.; Gerry Curran and Peter Goodwin of NH Water Pollution Control Assoc.; Jim Terrell and Kurt Grassett of NH Public Works Mutual Aid; Steve Guercia and Dave Danielson of NH Water Works Assoc.; and Bruce Berry and Kevin Sheppard of NH Public Works Standards & Training Council.

Dave Danielson is chair of the APWA Small Cities/Rural Communities Forum. He can be reached at d.danielson@comcast.net.

Making the Grade
Submitted By Butch Leel, Technical Support Assistant and Grader Operator Training Instructor, UNH T² Center.

The UNH Technology Transfer Center’s Grader Operation and Safety training is designed for operators with limited or no experience. Participants will have both classroom and hands-on experience in safe grader operations. Items emphasized are:
• conducting a safe and proper pre-trip inspection
• the operators manual
• the machines maintenance needs
• proper tire inflation and how it affects the grading operation
• keeping a good cutting edge on the moldboard
• why blade pitch and angle are important for cutting a ditch
• shaping and smoothing a gravel road
• moving the moldboard in the different positions in the saddle
• why it can be helpful with working in a wet ditch or cutting a slope or back slope
• the importance of a proper crown
• calculating a slope using a hand level
• what is “good” gravel and why it is important
• cutting potholes out of gravel roads and
• dust control as a safety & public relations issue.

On the second day, participants get in the grader and have an opportunity to cut a ditch, grade a portion of the roadway with a 4 percent slope, check the grade with the hand level, grade up and down a hill, and move the moldboard all the way to the last position in the saddle and cutting a back slope.

To date, we have trained 132 people in grader operation safety and maintenance. A big thank you to Jim Mountford and the NHDOT. Jim has been co-instructing with me!

Hope to see you at a session!
Salt Usage in Winter Operations
By Justin Pelletier, UNH Civil Engineering Student & UNH T² Project Assistant

“The NHDOT’s winter maintenance goal is to obtain bare and dry pavements on most roads at the earliest practical time following cessation of a storm. Many municipal highway departments have similar goals” (NHDES Fact Sheet WMB-4).

Public safety is paramount. However, most public works budgets are currently reduced. Road Managers must balance public safety with the money allotted to complete winter road maintenance.

Many variables affect winter maintenance, such as the weather since we don’t know when it will arrive or how long it will stay, environmental issues since the NH Department of Environmental Services (NHDES) and many communities have adopted policies that Road Managers must comply with, and personnel since many highway crews have been reduced to help balance the town budget in these difficult economic times.

Read this article to learn about options available to local road managers during winter maintenance while trying to reduce the harmful effects on the environment and still maintain a safe travel surface for the public.

Dry Salt

Salt lowers the melting temperature of snow and ice. This means that salt will allow ice and snow to melt even if the road and air temperatures are below the freezing point of water (32°F). However, a major problem with dry salting is it scatters when being spread and when vehicles travel over it. Also, salt is most effective at air temperatures above 20°F. Once the air temperature is below 10°F, salt can no longer dissolve to break the ice-pavement bond.

Salt and the Environment

Increased salt usage in winter operations has caused the chloride content in New Hampshire waters to increase by 1000% over the past 50 years (NCHRP Report 577). High salt content is dangerous in many ways. First, high salt content disrupts aquatic ecosystems causing harmful effects to aquatic life. In a worst case scenario, an entire ecosystem can be destroyed. Second, high salt content negatively affects vegetation by causing the vegetation to eventually die if it can not adapt. Also, if a plant’s water source is contaminated, it is likely that the area groundwater that people use for drinking is contaminated as well. Third, high salt content in soil decreases the capacity to support natural and native life. A plant thrives in its natural environment. If the environment conditions change, then it is likely that the life supported by the soil will die. Fourth, salt dust can be thrown up into the air during street sweeping procedures if residue is left on the roads. This can irritate people’s sinuses, especially if they have a pre-existing condition. Fifth, salt affects the taste of drinking water and taste is an important concern for most people in regard to drinking water.
Abrasives

Abrasives (the most common one is sand) are commonly used to increase the traction on roadways when slippery conditions are present. Abrasives can be used in several instances. First, use abrasives on paved roads with speed limits below 30 mph where there are hills or where braking, accelerating, or turning occurs. Second, use abrasives at low speed intersections if snowpack or ice will remain on the road for a long time. Third, use abrasives at intersections where each connecting road is paved.

However, abrasives are not effective in every instance. For example, when dry sand is spread, 30% of it immediately scatters and over time, traffic will displace most of the remaining sand. As few as eight vehicle passes can move most of the sand off of a snow covered highway surface. Also, do not sand a road with a speed limit above 30 mph. Instead, plow and apply chemicals. In addition, do not use sand on gravel roads at all. Instead, groom the gravel road to break up and remove the snowpack.

Sand and the Environment

Sand left behind from winter maintenance operations must be removed from the environment. This is time consuming and costly, but it is important for several reasons. First, sand will wash off the road and end up in catch basins. Excess sand in catch basins causes drainage problems due to clogging. Second, sand will travel from catch basins into drainage pipes. Excess sand in drainage pipes will become trapped in the pipes and decrease the flow capacity, also causing flooding. Third, sand will travel through the drainage pipes and pile up at drainage outfalls. Excess sand negatively affects the marine ecosystems that drainage systems empty into.

In the spring, remove sand from the road, ditches, catch basins and drainage pipes to prevent flooding and hazardous driving conditions. Sand and debris removed from catch basins must be tested and disposed of properly. Modern trucks use high-pressure water to loosen compacted material and vacuum hoses are used to remove solids. Since these trucks are expensive, many municipalities hire contractors. They charge per catch basin and their fees increase for large quantities or compact material. Inspectors should always accompany contractors. Road Agents should establish cleaning schedules to minimize contaminants reaching receiving waters.

Something else to consider is the dust created while sweeping heavily sanded roads. Sand, like salt, can cause allergic reactions or respiratory issues for people living in the surrounding area. Be mindful of the amount of sand being put down.

Calcium Magnesium Acetate

Calcium Magnesium Acetate (or CMA) is another alternative to salt as an ice-fighting chemical. It is made up of limestone and acetic acid (the principal ingredient in vinegar). It is more environmentally friendly because it is less damaging to soils, less corrosive to concrete and steel, and non-toxic to aquatic life. However, it is more expensive compared to salt and calcium chloride. It costs around $600 per ton, whereas salt costs around $60 per ton.

Pre-wetting liquids

Sodium Chloride (NaCl) (a.k.a. salt) is the primary chemical used in de-icing and anti-icing applications. The mixture is 23% NaCl by weight. It is cheap and effective. When salt mixes with water, the freezing temperature is lowered. If salt is dropped on ice, the ice will begin to melt unless the temperature is much lower than the freezing point of water.

Pre-wetting a chemical or abrasive usually entails applying a light covering of liquid over the material to be applied to the road. It helps keep the material from bouncing off the road and scattering while spread.

Calcium chloride (CaCl₂) is the second most
common chemical used to battle ice and snowpack, after sodium chloride. It is more expensive than sodium chloride but it is rising in popularity for a pre-wetting liquid.

The mixture is 32% CaCl₂ by weight. It is effective at much lower temperatures than salt. It releases heat when it is dissolved in water. It can be effective in melting ice as low as 0°F. It also draws moisture from the air, which allows it to melt ice better because it will already be in brine form. These properties make it especially valuable in severe conditions.

De-icing

De-icing is a reactive process. De-icing is the process of breaking the bond between ice/snowpack and the pavement after the snow has fallen. Calcium chloride is the most common chemical used in de-icing roadways. The goal of de-icing is to achieve bare pavement as soon as possible. Plowing is also an integral part in de-icing roadways.

Anti-icing

Anti-icing is a preventative process. Anti-icing is to prevent ice and snowpack from bonding with the pavement before the snow has fallen. This is becoming a more popular method to improve driving conditions during winter. It can be more beneficial than de-icing, if done properly, because it does not allow the bond to form with the pavement at all. This improves road conditions immediately after a storm. Liquid chemical applications are the most successful way to prevent ice formation. Pre-wetting dry chemicals is another method, though less effective.

By using an anti-icing approach, material costs decrease due to more effective roadway treatment. Anti-icing can become ineffective if severe weather conditions persist. If heavy precipitation occurs before the onset of a winter storm but after the application of anti-icing chemicals, the effort made is rendered completely useless.

Spread Calibrating the spreader is the key to proper chemical application. Inspect and clean spreaders frequently since they are exposed to corrosive materials and extreme weather conditions. Each material that is used during de-icing and anti-icing will spread at different rates. Calibrate each spreader individually so that each spreader will disperse the material that it is spreading at the appropriate concentration.

Equip spreaders with automatic ground speed controls whenever possible. These automatically adjust the application rate as the truck changes speed. They allow for the truck driver to focus on the task of driving, instead of adjusting the spreader controls. This provides a safer driving environment, as well as cuts down on material waste.

Application Rate factors

No storm will be exactly like another. However, application rates must be determined before the start of each storm. Many things affect application rates. First, the ground temperature is one of the most important factors in application rate. For example, salt is five times more effective at 30°F than it is at 20°F. Second, the material being spread affects the application rate. Salt will not be spread in the same concentrations as calcium chloride or sand. Third, the nature of the storm affects application rates. A heavier or longer storm will require more material than a lighter or shorter storm. Fourth, pre-existing road conditions affect application rates. A road that is already heavily iced-over will require far more material than a clear road. Fifth, traffic conditions affect the application rate. Traffic on high volume or high speed roads will displace more material than traffic on low volume or low speed roads.
Material Storage and Handling

Follow these guidelines for a good chemical storage location:

- Locate a facility on a flat site away from surface waters and on an impervious surface that is easily protected from overland runoff.
- Chemicals should be stored under a cover to prevent material loss due to runoff.

Follow these guidelines for a good snow disposal location:

- Near flowing surface waters (but at least 25 ft. from high water line).
- Silt fence between disposed snow & high water line.
- At least 75 ft. from any private water wells. At least 200 ft. from community water wells. At least 400 ft. from municipal water wells.
- All debris in the snow storage area must be removed and properly disposed of by May 15 every year that the area is used.

To summarize, pre-wet road salt and other ice-fighting chemicals with a salt brine to jump-start the melting process and to improve material retention on the roadway. Calibrate your spreaders before every use to ensure the correct application rate. Only apply abrasives on roads with speed limits less than 30 mph and only when ice/snowpack is not melting. Dispose of plowed snow and debris properly to minimize environmental impacts. Store chemicals in a proper facility to protect them from the elements, and to protect the environment from the chemicals. Employ proper anti-icing techniques and plow frequently to efficiently combat snow and ice build-up on roadways.

## Table 2-1. Policy objectives.

<table>
<thead>
<tr>
<th>Decision Category</th>
<th>Decision Weighting (%)</th>
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</thead>
<tbody>
<tr>
<td>Purchase Price¹</td>
<td>Sum = 100 %</td>
</tr>
<tr>
<td>Performance as Melting Potential (MP)²</td>
<td>Sum = 100 %</td>
</tr>
<tr>
<td>Natural Environment</td>
<td></td>
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<tr>
<td>Infrastructure</td>
<td></td>
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</tbody>
</table>

¹ The Decision Tool uses purchase price per dry unit of active ingredient, including shipping, as a benchmark. This is a practical approach and yields a consistent and unbiased assessment of the dominant cost element (refer to Section 2.5 for further discussion).

² Given that the primary objective of winter maintenance is controlling snow and ice, it is recommended that performance weighting not be assigned a value below 25%.

## Table 2-2. Operational objectives.

<table>
<thead>
<tr>
<th>Decision Category (Policy Objectives)</th>
<th>Decision Subcategory (Operational Objectives)</th>
<th>Decision Weighting (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Environment</td>
<td>Aquatic Life¹</td>
<td>Sum = 100 %</td>
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<tr>
<td></td>
<td>Drinking Water</td>
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<td>Air Quality</td>
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<td>Vehicles</td>
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<td>Metal Infrastructure</td>
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<td></td>
<td>Concrete Corrosion</td>
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<tr>
<td></td>
<td>Concrete Degradation</td>
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</tr>
<tr>
<td>Infrastructure</td>
<td>Sum = 100 %</td>
<td></td>
</tr>
</tbody>
</table>

¹ It is recommended that aquatic life weighting not be assigned a value below 25%.

NCHRP Report 577 (page G-5) – Guidelines for the Selection of Snow and Ice Control Materials to Mitigate Environmental Impacts

References

Protect Your Personal Information on Public Computers

By Linsey Shaw, UNH T2 Program Assistant

Occasionally, you will use a public computer, such as the one you use while at work or at the library. When you are on a public computer there is always a risk of exposing personal information. Below are some tips on how to protect yourself and manage (or lessen) that risk:

- **Don’t save your log-in information.** Some websites will ask if you want to save your password and your answer should always be no. Saving your password may allow others to sign into the website with your username and password and possibly access private information.

- **Always hit the “log-out” button** after visiting a website that requires a username and password before closing the browser. Closing the browser window will not log you out of the website and the next time someone visits the same website you will still be logged-in.

- **Don’t do online banking or shopping.** A public computer is not secure and there are certain things you should never use them for. Online banking and online shopping both involve entering personal information that could be unsafe on a public computer. If you are away from home, use an ATM or bank to check your balance and complete your banking.

- **Delete your browsing history.** This is an easy way to prevent the next person from seeing the websites that you visited. Do this by looking under the Tools tab and clicking Internet Options. Under that menu you can delete the browsing history, cookies and temporary internet files.

- **Don’t save files directly onto the public computer.** Files that you would normally save onto your home computer, such as email attachments, should not be saved onto a public machine. This will help keep your documents and private information safe. It is also polite not to save personal files onto a public computer; this will give the next user a clean desktop and computer to work with.

- **Delete temporary files off the computer.** When using a program such as Microsoft Word or Excel the computer automatically creates a temporary file. These are supposed to be automatically deleted when the program is closed or the computer is shut down, however sometimes they are preserved. Before leaving a public computer, do a search of the hard drive for any files ending in “.tmp” and delete those files. This way, the next user cannot access the files you were working on.

- **Reboot or shut down the computer when finished.** A reboot or shut down of the system clears out most of the temporary files that were stored on the computer. It will also clear out everything you did that used computer memory.

- **Be aware of your surroundings.** It is good common sense to pay attention to what is going on around you when on a public computer. Be cautious of other people around you who could see what you are doing on the computer. Some people use public areas to purposely obtain private information about others. Do not view any documents that are private or sensitive that you wouldn’t want anyone else to see. Try to cover your hands when typing log-in information.

References:

UNH T² Provides Technical Assistance for DPWs

Butch Leel, T² Technical Assistant, will come to your town if you need help! He has responded to a variety of issues including but not limited to:

- Site visits to your roads (paved or gravel) to suggest ways to maintain it
- Help with setting up a budget
- Assist with workzone traffic control set-up & flagging operations
- Assist with new retroreflectivity rules for signs
- Assist new Road Agents with a variety of issues

Please call us at 800-423-0060 if you would like a visit from Butch!

Public Works Academy level 1 Graduates, Fall 2009

Congratulations to the following individuals (in alphabetical order by last name) who passed all five classes of the NHPW/STC Public Works Academy in the Fall of 2009:

1. Ralph Barrett, Pelham
2. Tim Dougherty, Milford
3. Mark Dubois, Jefferson
4. Jeffrey Haines, Ctr. Harbor
5. Bruce Kimball, Lebanon
6. David Loock, Fitzwilliam
7. Skip McEvoy, Exeter
8. Robert Ramsdell, Littleton
9. Dave Reynolds, Somersworth
10. Mark Schultz, Exeter
11. Ronnie Verret, Littleton
12. Jeff Wright, Hancock
13. Anthony Yakovakis, Amherst
14. Kirk Young, Gilford

NH LTAP & VT LTAP Deliver Workforce Development Training

Up to 40 to 50 percent of the existing national transportation workforce will be eligible to retire in the next 5 to 15 years and they will be taking their transportation knowledge, expertise, and institutional memory with them.

The Department of Corrections (DOC) at the Community High School of Vermont (CHS-VT) has an enrollment of more than 4,100 students. This potential source of workers has been largely untapped by the transportation industry.

NH LTAP has partnered with Vermont LTAP to provide a “Transportation Systems Academy”, which is introductory public works training to students within the VT DOC.

This is a pilot project to expose individuals to the transportation sector in hopes that they will pursue these types of careers in the future.

The University of Vermont (UVM) Transportation Research Center (TRC) was awarded the grant. The partnership includes NH LTAP, NH DOT, UVM TRC, Vermont Agency of Transportation, VT Technical College, VT DOC, CHSVT, the Vermont chapter of AARP, and the Maine Department of Transportation.

The training began this fall at the Northern State Correctional Facility in Newport VT. Further tasks of the project are to develop opportunity for further training, job shadowing and internships.

This article was adapted with permission from the VT LTAP June 2009 newsletter.
Crossword Puzzle

Be the first to successfully complete this crossword and fax it to 603-862-0620, to win a FREE T² workshop!

ACROSS

2 It is important to establish and maintain _________ between work and family.
7 Delete _________ files from your computer.
8 Complete _________ operations before invasive plants go to seed whenever possible.
12 When it comes to winter maintenance, public safety is _________.
14 Winter maintenance _________ should be stored under a cover or roof to prevent material loss due to runoff.
15 _________ Leel is the UNH T² Technical Assistant.
17 Delete your _________ history to prevent people from seeing the websites you’ve visited.
18 _________, your spreader is the key to proper chemical application in winter maintenance operations.
19 The stresses of working in the public sector can be felt by the employee and his/her _________.
20 Calcium Magnesium Acetate (CMA) is primarily made up of acetic acid and _________.
21 Due to increased _________ usage in winter operations, the chloride content in NH waters is 10 times higher than it was 50 years ago.
22 Anti-icing is a _________ process.

DOWN

1 _________ a chemical or abrasive helps keep the material from bouncing off the road and scattering when being spread.
3 Public works employees are first _________, along with police officers, firefighters, and EMTs.
4 Eddie Nason is the road agent for the Town of _________, NH.
5 To date, the UNH T² Center has trained 132 people in _________ operation safety and maintenance!
6 Always be sure to click the _________ button after visiting a website that requires a user name and password.
9 Strong _________ skills are always important to healthy relationships.
10 _________ is the process of breaking the bond between ice/snowpack and the pavement after a storm.
11 Up to 50% of the national _________ workforce will be eligible to retire in 5 to 15 years.
13 Michael Clarke is the _________ foreman for the New Durham Highway Department.
16 Only apply _________ on roads with speed limits less than 30 mph.
This material is available from UNH T². Publications are FREE unless indicated otherwise. Videos are FREE to rent for three weeks and $15 each to purchase. To request material, call 603-862-0599.

**Publications**

___ Accident Mitigation Guide for Congested Rural Two-Lane Highways (NCHRP Report 440). This guide will assist planners, designers, and traffic engineers in identifying and designing projects to improve safety on congested rural two-lane highways. The guide assumes that widening the road to four lanes is not a practical solution because of financial, environmental, or societal constraints. Geometric, traffic control, and other types of countermeasures are discussed. TRB.

___ At the Crossroads - Preserving Our Highway Investment. The purpose of this document is to stimulate serious discussion about the nation’s highways, including their role, extent, how they are financed, constructed, maintained, and to explore more effective and efficient ways of achieving our transportation objectives. This document should be of great interest to policy and decision makers. NCPP.

___ Calcium Chloride Package. Uses for calcium chloride, chemical advantages, deicing, and options for deicing. General Chemical.


___ Environmental Fact Sheet - Minimum Impact BMPs for Maintenance of Large Woody Material in Streams and Rivers. This info sheet is about large woody material, and when and why to remove it or not to remove it from rivers and streams. NHDES.

___ Local Low Volume Roads and Streets. Rural streets and other less-traveled roads, including inventory, classification, financial planning, program assembly, and helpful resources. ASCE.

**Videos**

___ A Snowplow Operators Guide to Snow and Ice Equipment. An interactive program with short segments on various winter operations and maintenance topics, such as types of equipment, mounting of equipment, inspection, anti-icing/de-icing, plowing techniques, and a final test.

___ Flagging in the Workzone, ST-233, 10 min.—DVD. Discusses proper flagging practices and techniques that help make work zones safer for flaggers, workers, and roadway users. OR DOT and T² Center.

___ Frost Action in Soils, 13 min.—CD. Describes how frost heaves are formed, the effects they have, and testing of frost action. USA CRREL.

___ Highway Safety & Trees: The Delicate Balance, ST-1, 21 min.—DVD. Encourages highway agencies and the public to work together to improve safety while minimizing damage to the environment. FHWA.

___ Preventive Maintenance: Project Selection, M-284, 30 min.—DVD. The principal is to apply the right treatment to the right road at the right time. It explains the advantages of preventive maintenance and the importance of preserving the life of the road, rather than restoring it. FHWA.


___ The Importance of Road Drainage, DC-251, 19 min.—DVD. Emphasizes the importance of drainage, including surface and subsurface drainage, drainage systems, and procedures for their inspection and repair. FHWA.

**Milestones**

- Jay Fitzgerald (Maintenance Supervisor) is no longer with the City of Lebanon Municipal Airport.
- Jeffrey Remillard is the new Road Agent in Bradford.
- William E. Manix, Jr. passed away (retired Superintendent of NH DOT Division 6).
- Kevin McDonald is the new Road Agent in Greenfield.
- Moultonborough joined NH Public Works Mutual Aid.
- Center Harbor joined NH Public Works Mutual Aid.
PW.Net Listserv

A listserv is a free way to use email to exchange information.

Want to know what is happening in public works in NH? Need a place to ask questions of other public works officials? Want to receive notifications of UNH T² Center trainings and other events? Sign up for PW.Net. PW.Net has over 400 subscribers currently.

To subscribe, send an email to linsey.shaw@unh.edu and include: your name (first and last), your email and your affiliation.

T² Center Advisory Board

UNH T² staff meet with the advisory board quarterly to discuss training, center initiatives and special projects.

NHDOT Representatives

Steve Dubois–Civil Engineer, NHDOT Systems Planning
Nancy Mayville–Municipal Highways Engineer, NHDOT Planning & Community

FHWA Representative

Christopher Tilley–Area Engineer

Municipal Representatives

Alex Cote–Road Agent, Deerfield
Martha Drukker–Associate Engineer, Concord
Richard Lee–Director of Public Works, New London

NH Public Works Standards & Training Council

Dave Danielson–President, Forecee Advocacy LLC

About UNH T²

Congress established the Local Technical Assistance Program (LTAP) in 1982 to provide services to US municipalities. There is an LTAP Center in every US state and Puerto Rico, and there are Regional Centers serving Tribal Governments.

UNH T² was established in 1986. We continue the LTAP mission by providing services to NH municipalities, the NH Department of Transportation, and private road-related organizations.

T² Program Supporters

• Federal Highway Administration
• NH Department of Transportation
• University of New Hampshire
• National LTAP & TTAP Program

T² Center Staff

• Charles Goodspeed, T² Center Director
• Kathryn Myers, Training Program Manager & Road Business Editor
• Linsey Shaw, Program Assistant
• Butch Leel, Technical Support Assistant
• Bob Strobel, Software Project Manager
• Justin Pelletier, Project Assistant--UNH Civil Engineering Student
• Ashley Benson, Project Assistant--UNH Literature (Masters) Student

About Road Business

Road Business is a quarterly publication of the University of New Hampshire Technology Transfer Center. Any opinions, findings, conclusions, or recommendations presented in this newsletter are those of the authors and do not necessarily reflect the views of our sponsors. Any product mentioned is for information only and is not a product endorsement.

To subscribe, email k.myers@unh.edu
### Spring/Summer 2010 Training Calendar

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Level</th>
<th>Location</th>
<th>Fee</th>
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<tbody>
<tr>
<td>2/25</td>
<td>Road Drainage and Culverts</td>
<td>Basic</td>
<td>Raymond</td>
<td>$60</td>
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<td>Sustainability Management for DPWs</td>
<td>Supervisory</td>
<td>Deerfield</td>
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<td>3/3 &amp; 3/5</td>
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<td>Concord</td>
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<td>Supervisory</td>
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<td>Basic</td>
<td>Amherst</td>
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<td>Safety</td>
<td>Derry</td>
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<td>Safety</td>
<td>Grantham</td>
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<td>Salt Reduction in Winter Maintenance</td>
<td>Environmental</td>
<td>TBA</td>
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