

Road Business

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Cyber Security

Kürt Blomquist, *Director of Public Works*
City of Keene, NH

We work on roads, fix pipes, and run water and wastewater plants. Why should we in public works be concerned about cyber security? Today, to meet the demands of our customers and our residents for leaner and more efficient organizations and operations, technology has been integrated more and more into our everyday operational lives.

Public Works staff depends on electronic technology whether through computer networks, mobile devices and networks, to receive, analyze and process information and data. Many of our water and wastewater plants and systems are monitored and operated remotely through the use of technology. We use technology to monitor weather conditions and to make decisions on when to initiate operations or on what products to use.

Cyber threats have risen to the point to receive national attention. In May 2009, President Barack Obama, in a speech, pledged to make securing the nation's most vital computer networks a top economic and national security priority. He was broadly detailing the results of a cyber security review that calls for a range of responses to help improve the security of information networks that power the government and the U.S. economy. Former Federal Bureau of Investigation (FBI) Director, Robert Mueller, had made cyber security the Number 3 priority for the Bureau and the Department of Homeland Security (DHS) made cyber security one of its five priority missions.

Cyber threats can range from an individual or group wanting to make a point to a disgruntled employee. Cyber attacks can range from the deliberate shutting down of networks, malicious attacks to manipulate data or destroy data, steal information, to the thrill seeker trying to just enter a system. Many of these attacks may not be directed at public works functions but can affect the computer networks and systems we use and depend on.

Recognizing that technology is part of public works' daily life, the City of Keene participated in a trial program provided by the DHS National Cyber Security Division. This program provides a Cyber Resilience Review (CRR) which is a high level look at an organization's cyber security activities. The goal of the CRR is to develop an understanding of an organization's capabilities and whether cyber security is managed and institutionalized, and provides an assessment at



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Hello from UNH T2!

This year is just zipping by so quickly! We've already witnessed friendly competitions, provided dozens of trainings, shared interesting and innovative ideas and resources, and even added a few to our playbook. We truly appreciate the opportunities we've had to connect with so many of you throughout the year.

Amid the lightning speed of days ticking by, one day gave us pause for a moment of reflection and remembrance. From all of us at UNH T2, we celebrate and thank you, the public works community, - local and state - for your tireless and dedicated contributions to our amazing state!

The UNH Technology Transfer Center (UNH T²) provides training and services to municipal employees, public and private road associations, and citizens, regarding new technologies and the management of roads and bridges. Established at UNH in 1986 by the Federal Local Technological Assistance Program (LTAP), the center is funded by the Federal Highway Administration and the N.H. Department of Transportation and sponsored by the University of New Hampshire, and the National LTAP and TTAP Program.

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June 5th, 2019 marked a milestone for the State of NH. The New Hampshire Public Works Employee Memorial, the first of its kind in the country strictly dedicated to memorializing fallen public works, county, and state highway maintainers in New Hampshire, was unveiled amid a sea of attendees in construction yellow and orange. Rough counts estimate that 400 people attended this important and historic event. Among those were representatives from 43 New Hampshire public works cities and towns, as well as other NH municipalities that attended virtually through #NHRemembers and #NHPWMemorial.

Under a mix of sun and clouds many hugs were exchanged, among friends and colleagues, but also among strangers, as friends and family members of the deceased expressed deep gratitude for this tribute to their loved ones.

More than 70 family members and friends of those who had died sat before NH Governor Sununu as he spoke and dedicated the memorial acknowledging the enormous contributions that roadway maintainers provide to the public with a Proclamation to the NH Public Works Employees Memorial.

The dedication prayer and blessing provided by Chaplain Gary Williams of the Milford Fire Department set the tone of remembrance for those who have come before us. Other speakers included NHDOT Commissioner Victoria Sheehan, William Boynton, NHDOT's Public Information Officer, Lisa Fauteux, President of the NH Public Works Association, and Rick Riendeau, President of the NH Road Agents Association. Each speaker referenced the important, and often dangerous, work that public works employees and roadway maintainers face on a day to day basis, recognizing them as first responders.

While bag pipes hummed Amazing Grace in the background, Jim Rivers, the son of one of the fallen, read the 37 names that are engraved on the four black monuments.



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There are Partners Among Us

By: Marilee LaFond, UNH Technology Transfer Center

Public works is often the unsung hero in the community. The late hours spent clearing roads from a winter storm, removing fallen trees from a wind event in the wee hours before commuters come out, and collecting municipal trash from parks following a holiday weekend of celebration and fun are all in a day's job, but often go unnoticed or unrecognized. However, supporting safe, resilient roadways is a common goal shared by many in your community, and there are likely partners and advocates for the critical tasks public works does, right outside your door. For instance, engaging with your local law enforcement and your citizens can provide ample opportunities to gather critical road user information and enhance roadway safety.

Engage your local law enforcement!

I recently attended a workshop with several state police members, local law enforcement, traffic engineers, and traffic planners from throughout New Hampshire. We explored the benefits of leveraging the eyes and ears of our law enforcement community with our public works objectives. The strongest argument to building a positive, collaborative relationship with your law enforcement team is to promote safer roads.

Understand the incidents

One way this partnership can support that goal is by gathering and sharing timely, meaningful data to provide a more complete picture to those who lead traffic planning and road design efforts. Take time regularly to engage with law enforcement in your town. Ride along with them and invite them to ride along with you. Ask about the "hot spots" in town - where are speed offenses most common, stop signs missed? Are there certain corners or stretches of roadway that they're frequently called out to for a roadway departure or other type of crash? Offer to provide education and outreach to better equip them to consider the roadway from a design perspective. What are the signs of an ineffective or broken signal phase? Why would it be valuable for you to know if there's a guardrail that seems to be hit routinely, or perhaps there's been a crash in which a vehicle rolled over it? Is there a mailbox that has been knocked down several times? If there's an intersection in town where crashes occur on a regular basis, perhaps there is inadequate signage, poor lighting, or the intersection signal phasing no longer meets the traffic volume needs. While enforcement efforts may address the cause of some traffic issues and challenges, road design can also play a key factor in enhancing roadway safety. Build a strong partnership that supports open, timely dialogue regarding your community's roadway incidents.



photo credit Monsterkoi

Understand your users

Talk with your local police and emergency responders about their understanding of your roadway users. Are pedestrians coming and going from certain community buildings, retail stores, or other destinations across intersections at certain times? Are there parts of your community where users have special needs that make navigating roadways safely more challenging for them?

Gathering meaningful data

As more and more communities look to Data Driven Safety Analysis (DDSA) and systemic analysis to enhance roadway safety, the quality, availability, and timeliness of data becomes more critical. Have you talked with your local law enforcement about how traffic engineers utilize data from traffic counts, crash reports, and other sources to develop a picture of your roadways? Crash reports provide critical information well beyond information for insurance purposes. Knowing the precise location where a crash occurred can help traffic engineers to identify potential problem areas and avoid attributing the wrong factors to a crash based on a misunderstanding of location (such as a curve rather than an intersection, a signage issue rather than a visibility issue). Ask your law enforcement professionals to include GPS coordinates or other identifiable location specifics whenever possible in crash reports.

Be a safety advocate

Be sure every individual you engage with for work zone flagging is trained and familiar with proper MUTCD sign package and work zone safety. Provide training resources and opportunities to your local law enforcement and contractors that you partner with. Be sure that accountability for safe work zones is clearly understood and embraced by everyone that is a part of a work zone in your community.

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4th Annual NH Public Works Association Plow Rally

By: Scott Kinmond, *Past President, NHPWA*

The New Hampshire Public Works Association continues to sponsor the annual NH Public Works Association Plow Rally. This year's competition was held at the NH Road Agents Association, "Mountain of Demonstrations," at Mt. Sunapee, in Newbury, NH on May 23, 2019. The continued collaborative working relationship between the NH Road Agents Association Executive Board and the NH Public Works Association Board of Directors has allowed for a combined venue.

As the Plow Rally Chair, I hope that greater participation will occur with the event venue change, which is in its 3rd year. The Mountain of Demo's has between 400-500 attendees from Public Works agencies around the State, and is a perfect venue and event to hold the Plow Rally & Backhoe Competition. The Public Works Association held two events

navigate simulated narrow streets with parked cars and mailboxes. The operators then had to use good driving skills with stop and turning maneuvers, then alleyway backing and then forward serpentine to a front alleyway stop. The operators then switch drivers do a backing serpentine followed by a left hand sweeping turn, with wing obstacles.

The teams are scored by how they negotiate the course, along with being timed in case of a tie.

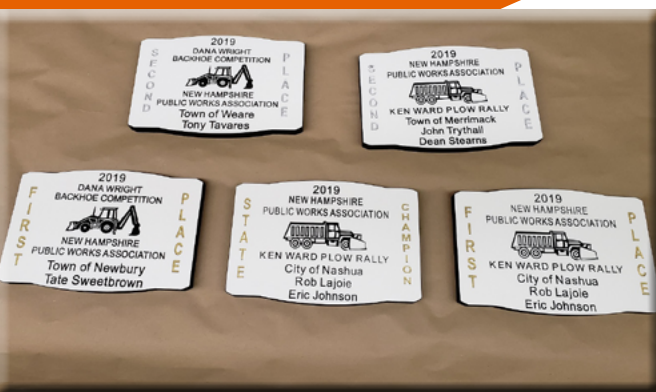
After the results were tallied, the winning Municipal team from the City of Nashua consisted of Eric Johnson and Bob Lojoie. The first runner up was the team of John Trythall and Dean Stearns from the Town of Merrimack. The City of Manchester's team of Donnie Dionne and Roy Voisine were the second place municipal runner's up.

The municipal winners then squared off with the NHDOT team, consisting of Bob Gardiner and Tim Libby, of the NHDOT District 2. These two teams competed in the plow truck operator's practical course to determine the state champions. The state championship was won by the City of Nashua's team, Eric Johnson and Bob Lojoie.

The Plow Rally judges presented the gifts and certificates to the municipal champion, First Runner up teams and the State Champions. The two teams will represent the State of New Hampshire and travel to the New England Public Works Association Plow Roadeo to compete in the New England's Plow Roadeo finals.

The Dana Wright Backhoe competition event brought several talented operators to test their operator abilities. The operator's skill is tested, which points are scored coupled with the time to complete. The 1st place winner went to Tate Sweetbrown of Town of Newbury and runner up to Tom Tavares of the Town of Weare. A big thank you to DPW Director Benji Knapp of Weare and the Weare DPW Crew for running and judging this event.

We would like to thank all the 2019 Plow Rally and Backhoe Completion participants and the Plow Rally judges and event staffers, Dave Witham- Primex, Bob Lovering- Merrimack DPW, Josh Blaisdell- Rye DPW, Bruce Gosselin- Manchester DPW, Caleb Dobbins- NHDOT, John Nalette- Goffstown DPW, Sarah Jones- Primex and the staff at the UNH Technology Transfer Center.



again this year, the Ken Ward Memorial Snow Plow Operator competition and the Dana Wright Memorial Backhoe Competition.

The competitions again had participation with teams from across the State. The Plow Rally had ten (10) municipal teams and one (1) NHDOT Team (NHDOT 2019 Champions).

These two person teams competed in three (3) phases of testing: First: a written examination on winter maintenance operations and safety. Second: a pre-trip inspection of a plow truck and Third: plow truck operations practical. During the plow truck operation practical, the teams each had to navigate a course of hazards and demonstrate vehicle maneuvers to test the team's skill in working together as well as the individual operator's skill. The teams had to

Natch Greyes, *Municipal Services Counselor*
[NHMA](#)

Nuisance Trees

It's that time of year where public works departments must begin preparing for the first icy storms of winter. That also means that it's time for the final push in tree maintenance. Unfortunately, for many departments, that means that it's time to seriously consider alternatives to the polite conversations with residents earlier in the season regarding their dead, dying, or otherwise dangerous trees overhanging the roadways.

Generally, trees are owned by the person on whose land they grow, but make sure to check your municipal tree records to ensure that the municipality did not purchase or plant the tree in the distant past. The tree-owner generally has the right to grow, maintain, or cut down owned trees. The owner also has a right not to have their trees pruned or removed without their consent, except pursuant to certain statutory procedures.

Importantly for municipalities, if the municipality cuts a tree or trims a tree without receiving owner permission, the tree owner has the right to damages under the common law. See *Darling v. Newport Electric Light Co.*, 74 N.H. 515 (1908). The value of the tree may not be limited to its value as lumber (a.k.a. stumpage value, but could include its purpose, such as apple production, or aesthetic value as a shade tree. See *Elwood v. Bolte*, 119 N.H. 508 (1979; *Barker v. Publishers' Paper Co.*, 78 N.H. 571 (1918). A failure to obtain advance permission for cutting could be held to be a "timber trespass" in violation of RSA 227-J:8 and :8-a, with the penalty being either civil or criminal, and the damages for the tree enhanced by the court by between 3 and 10 times the market value of the tree removed or defaced. Those damages can easily reach the thousands of dollars. See, e.g., *McNamara v.*

Moses, 146 N.H. 729 (2001) (utilizing a damage factor of five in a case involving cutting along a prescriptive right of way without permission).

Municipalities are, however, allowed to cut trees under certain circumstances without owner permission. RSA 231:150 gives municipalities the right to remove from highway rights of way, except scenic roads, all trees and bushes that may damage or pose a danger to the highways or traveling public so long as the vegetation has a circumference of less than 15 inches at a point 4 feet from the ground. Unfortunately for public works employees, for trees with a circumference of more than 15 inches at a point 4 feet off the ground, the consent of the landowner must usually be obtained for pruning or removal. For highways designated "scenic" pursuant to the procedures under RSA 231:157 the prior written consent of the planning board or other designated municipal body must be given before any trees can be cut, damaged, or removed.

Public works employees, therefore, are often left with the "public nuisance" procedure under RSA 231:145 for removal of the trees, when the tree-owner is non-consenting. Under RSA 231:145, any tree within the right of way may be declared a public nuisance by the governing body by reason of danger to the traveling public, spread of tree disease, or the reliability of equipment installed at or upon utility facilities. Notice must be provided to the landowner, an opportunity for a hearing in front of the board provided, and the landowner is provided a further right to appeal the issue to the Superior Court within 30 days of the board's decision declaring the tree a public nuisance.

Declaring a tree a public nuisance may not grow feelings of affection among individual tree-owners, but it's an important step in ensuring that dangerous trees won't create insufficiencies in the roadways, leaving municipalities liable, or facilitate the spread of pests, such as the Emerald Ash Borer.

Natch Greyes provides legal advice to members, as well as advocates on their behalf, at the legislature. He can be reached at (603) 224-7447.

what level the organization is at and recommendations for improvement. The areas covered included: critical infrastructure awareness, asset definition and management, information and technology management, vulnerability analysis and resolution, incident management, service continuity, environmental control, external dependency management, and situational awareness.

The City of Keene uses technology heavily in the monitoring and operations of its water and wastewater systems. We chose to review the water and wastewater Supervisory Control and Data Acquisition system which uses a number of different software programs and has numerous points of information gathering, monitoring, and control. The review consisted of a one-day structured discussion with key department personnel, a half-day tour of facilities, and a review of how computer technology is being used in the field. The personnel involved included, from the City of Keene, the Public Works Director, Utilities Maintenance Manager, Assistant Public Works Director in charge of utilities, the City's Information Management Director (IMS), Assistant IMS Director, and two DHS personnel. The discussion process involved the answering of a series of questions on each of the identified areas.

The process was very enlightening. It provided an opportunity for Public Works and Information Management staffs to participate together looking at how we manage our computer networks and technology systems. The review pointed out both weaknesses and strengths. Some of the information from the review included that both department personnel are very knowledgeable of systems (their weaknesses and strengths) and processes, but much of this information resides in institutional memory of people and is not documented in set procedures and policies. Departmental personnel are aware of vulnerabilities, but there is no structured vulnerability management.

The review pointed out that staff had an informal process for dealing with incidents and continuity of operations if a technology service was to fail, but there was a limited or lack of cyber incident response and management planning or documented strategy for dealing with an incident affecting technology or the loss of a technology service provider. Overall the review pointed out that people were aware of the dependency on technology and the struggle for time to manage this area along with all the other competing needs. The recommendations addressing the weaknesses range from simple solutions, like better password management to more complex development, implementation, and testing of formal processes and procedures.

It was a valuable process. Cyber security is an area that Public Works staff members do not think about on a regular basis. The use and integration of technology

into our everyday operations has heightened the risk associated with the disruption of computer and data systems from cyber threats. It provided an opportunity to look at and, for key personnel, to talk about cyber security and what can be done to better protect or manage cyber incidents. I would expect that the City of Keene operations is very similar to other departments across the State of New Hampshire and the country. I would encourage departments to perform a formal, or participate in an informal, process to look at the effects on your services from cyber threats and how you would manage a cyber incident.

Critical infrastructures are the assets, systems, and networks, whether physical or virtual, so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, public health or safety, or any combination thereof. Think of Dams, Energy, Information Technology, Postal and Shipping, Agriculture and Food, Commercial Facilities, Banking and Finance, Communications, Defense Industrial Base, Government Facilities, National Monuments and Icons, Transportation Systems, Chemical, Critical Manufacturing, Emergency Services, Healthcare and Public Health, Nuclear Reactors, Materials and Waste, and Water.

**“True CyberSecurity is preparing
for what’s next, not what was
last.”**

~Neil Rerup, ECSA

April 6, 2011 Bloomberg – (National) Energy infrastructure lacks advanced defense from cyber attacks. A majority of energy and utility companies do not use “state-of-the art” technology to defend their networks and are exposing critical infrastructure to sophisticated cyber attacks, a new industry survey said. Sixty-seven percent of information technology professionals surveyed said their organizations had not deployed the best available security to guard against hackers and internet viruses, states a report released April 6 by Ponemon Institute LLC, an information-security research group. Of the 291 security practitioners who responded, 71 percent said their companies’ top executives do not understand or appreciate the value of information-technology security, according to the report. “One of the big surprises in this survey was that, despite increasing cyber attacks on networks, the strategic importance of IT security among C-level executives hasn’t increased,” said the senior vice

Engage your community!

Gather public input.

Encourage community participation and input early and often, and whenever possible! Engage with your public ahead of decisions or town meetings, such as when you draft Levels of Service (LOS) Agreements, consider a new roadway project, or develop a traffic plan to address an upcoming project. NHDOT recently held a walking tour at three locations along Route 108 in Somersworth. They utilized public comment from the prior listening sessions to identify locations that warranted more conversation and a hands-on awareness. On the walking tour, the general public had an opportunity at each of the three stops to engage with NHDOT representatives, project managers, consultant engineers, and elected officials to share their roadway user stories. By scheduling this “onsite” public input session during evening hours that encompassed prime commuting time, participants were able to experience and discuss the traffic corridor similar to the average local user experience. Business owners, residents, and commuters across all methods (bike, bus, foot, and personal car) talked about the intersections they avoided during rush hour, how they navigate traffic to get to their morning coffee spot, traffic speed, and many other topics.

While a road safety audit (or RSA) allows transportation partners to look at engineering and design specifics, crash data, and other details in the context of roadway safety, a public input opportunity like the listening session or walking tour gathers direct user feedback about many factors, including traffic patterns, delays, and driver habits. Although different in nature, RSAs and public input sessions each serve an important purpose to traffic engineers and planners. By understanding how the roadway is actually being used and where the perceived trouble spots are, engineers can design a future roadway that not only meets the needs of more users by incorporating design elements such as complete streets, but can also potentially enhance community, economic, and development opportunities. Public involvement also allows the design team to build collaborative relationships with the community- to meet and engage with community members and openly hear their thoughts and challenges. Local road users are part of a road project not just during the planning and construction period, but well after the last piece of equipment leaves and the roadway is complete. Public input sessions are the start of a long-term vested relationship.

Highlight Public Works as Educators – and Innovators

Federal Highway Administration (FHWA) routinely releases new Tech Briefs, videos, and infographics on the “Every Day Counts” (EDC) initiatives. These resources give an overview of the proven countermeasures that are available



to increase roadway safety. Many of the documents include associated CRFs (Crash Reduction Factors) to highlight the success these investments in safety can have. Since they are user-friendly to a broad audience, these documents can help you to inform public support for integrating these countermeasures into your road project budgets. Feature relevant resources at public meetings,

on community television, in your newsletters, reports, and presentations, and wherever possible. Distributing information about the advances in roadway safety technology also achieves another purpose; creating awareness of public works as a profession. Workforce development is a critical goal for public works – sharing the latest technologies with your community highlights that your profession is rich in opportunities for engineers, innovators, and change agents.

To get started, check out:

- [Safe Transportation for Every Pedestrian](#)
- [Reducing Rural Roadway Departures](#)
- [Highway Safety Improvement Program \(HSIP\) and Road Safety Audit application](#)

Engage your elected officials.

Another benefit of public input is to create ownership in a project, and to engage local champions. Elected officials turn to the public to understand what matters to the community, to best address the needs of those they were elected to serve. The voice of the people they represent is an important one.



photo by Victor Hanacek

Consider inviting your elected officials on a ride-along during your next winter storm, or to empty trash barrels at public parks. Create opportunities for them to engage with your team and understand the work you do, and the challenges you address (most often without any public recognition or awareness).

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Resilient Tidal Crossings in New Hampshire

Prioritizing tidal crossing replacement for community and ecosystem resilience

Kevin Lucey, *Habitat Coordinator*
NHDES Coastal Program

New Hampshire Department of Environmental Services (NHDES) Coastal Program led a team of partners in 2018 to perform a comprehensive inventory and assessment of coastal transportation infrastructure. This innovative partnership utilizes the Statewide Asset Database Exchange System (SADES), comprehensive field assessment data, and high resolution mapping products to assess the resiliency of tidal road crossings, their effect on adjacent tidal habitats, and their potential to accommodate rising sea levels.

A Committee Runs Through It

There are an estimated 17,083 road stream crossings in New Hampshire. Stream crossings are structures (i.e. culverts, bridges, arches) that carry a road over a river, lake, wetland, or small stream. Efforts to assess stream crossings for their condition and their effect on river systems are enacted by the [NH Stream Crossing Initiative](#), which is coordinated by the New Hampshire Stream Crossing Steering Team. The steering team develops and refines the stream crossing survey protocols and scoring criteria, manages stream crossing data, coordinates field data collection, and facilitates the strategic replacement of road crossing structures.

The multi-agency approach of the NH Stream Crossing Initiative enables towns and agencies to more efficiently address the problem of undersized stream crossings, infrastructure safety, and flood risk management by working collaboratively. To date, 7,500 stream crossings in NH have been assessed and evaluated through the NH Stream Crossing Initiative.

Salty Counterparts

Among the state's 17,083 stream crossings, 118 structures stand out because they are located on the Seacoast and convey bi-directional tidal-flow. These "tidal crossings" are a unique and challenging class of transportation assets that have different engineering, regulatory, and risk management considerations than their freshwater counterparts. For instance, properly designed tidal crossings need to convey sufficient tidal flow to allow the periodic inundation of the salt marsh and be of sufficient size to simultaneously accommodate freshwater flows from upstream sources. Tidal crossings often restrict tidal flows and/or freshwater drainage thus altering hydrology, sediment

movement, salinity, and plant species composition of tidal marshes.

From a transportation management standpoint, properly designed and functioning tidal crossings are necessary to safely and reliably move people, goods and services throughout coastal communities; however, this infrastructure is increasingly at risk from flooding and erosion with rising sea levels and more frequent and intense storm events.

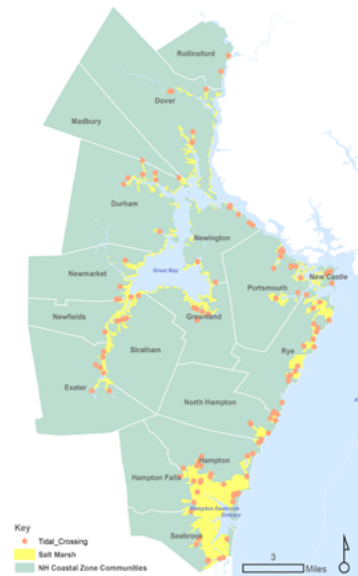


Figure 1: Tidal Crossings Map

While an assessment protocol for freshwater stream crossings has been widely deployed throughout NH, there has not been an applicable and comprehensive assessment protocol for culverts and bridges in the tidal environment until now. Recognizing this gap in understanding, the NHDES Coastal Program (NHCP) began working with The Nature Conservancy (TNC), NH Department of Transportation, and NH Fish and Game Department in 2015 to design a tidal stream crossing assessment protocol that is specific to NH's environment and to the management needs of NH's coastal zone communities. Published by TNC in July 2017, [New Hampshire's Tidal Crossing Assessment Protocol](#), ("NH Tidal Protocol") creates a new management tool designed to assess tidal crossings based on:

- Crossing condition to address public safety and asset management.
- Degree of flood risk to the roadway and crossing structure.
- Crossing effect on aquatic organism passage and salt marsh vegetation.
- Crossing restriction of tidal flow in and out of the salt marsh.
- Potential for salt marsh to move inland with sea level rise.
- Potential adverse upstream impacts of restoring full tidal flow.

Where the Recommendations Hit the Road

In 2013, the NH Legislature created the [NH Coastal Risks and Hazards Commission \(CRHC\)](#) to "recommend legislation, rules, and other actions to prepare for projected sea-level rise and other coastal and coastal watershed hazards such as storms, increased river flooding, and stormwater runoff, and the risks such hazards pose to municipalities and the state assets in New Hampshire." The CRHC commissioned a [Science and Technical Advisory Panel \(STAP\) report](#), which analyzed historic trends and projections for sea level rise, storm surge and extreme precipitation, to make 35 recommendations to help NH coastal zone communities prepare for and respond to coastal risk and hazards.

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Emerald Ash Borer Checklist

for New Hampshire Towns and Cities

Emerald Ash Borer (EAB) was found in Concord, New Hampshire in 2013. Towns in the rest of the state can reasonably expect it to arrive in coming years. There are steps towns can take right now to reduce its impact when it arrives. This checklist will help municipalities prepare. Your UNH Cooperative Extension County Forester is available to discuss these recommendations and provide additional information. Call 1-800-444-8978 to contact your local county forester. www.nhbugs.org has more information.

1. COLLABORATION

- ☐ Form an EAB working group of key players in your town such as conservation commissioners, selectmen, parks and recreation, planning, and others. The group will define roles and responsibilities for EAB preparedness. Identifying a “champion” is a good idea so this person can keep momentum going.
- ☐ Engage others. Master gardeners, Coverts Cooperators, foresters, arborist, loggers, and other partners can make your efforts more effective. These people are interested in natural resources, add expert voices to planning discussions, and can help detect EAB early.

2. ACTION

- ☐ Determine your EAB management zone on NHbugs.org and examine the current recommendations. There are three management zones in New Hampshire. Your zone depends on how close you are to a known infestation. Detailed recommendations for homeowners and woodlot owners have been developed for each zone.
- ☐ Complete an inventory. To plan effectively, know how many ash trees are present and, ideally, their size and condition. There are several ways to inventory. Your County Extension Forester can help you get started.
- ☐ Conduct a survey for EAB. A late winter drive-around tour where passengers look for “blonding” is an efficient way to look for new infestations.

3. DECISION

- ☐ Triage trees for treatment and removal. Identify high-value ash trees you’ll want to preserve through chemical treatment, as well as trees you are sure will need to be removed. You may be able to complete this step during your inventory work.
- ☐ Budget for the future. Consider treatment, removal, and replacement costs. Your County Extension Forester can help you estimate these costs.
- ☐ Don’t plant ash. Every ash you plant now will need to be treated or removed when EAB arrives in your town.

4. EDUCATION

- ☐ Hold a public educational program in your town. Everyone will be affected when EAB arrives. People should know what to expect and what options are available. UNH Cooperative Extension can provide these programs in your town, free of charge.
- ☐ Hold a field training exercise. Involve town staff as well as others who are interested. Go over ash identification and signs of EAB, especially blonding caused by woodpecker activity.
- ☐ Make EAB factsheets and information available at town offices and the town website. See www.nhbugs.org for printable factsheets.

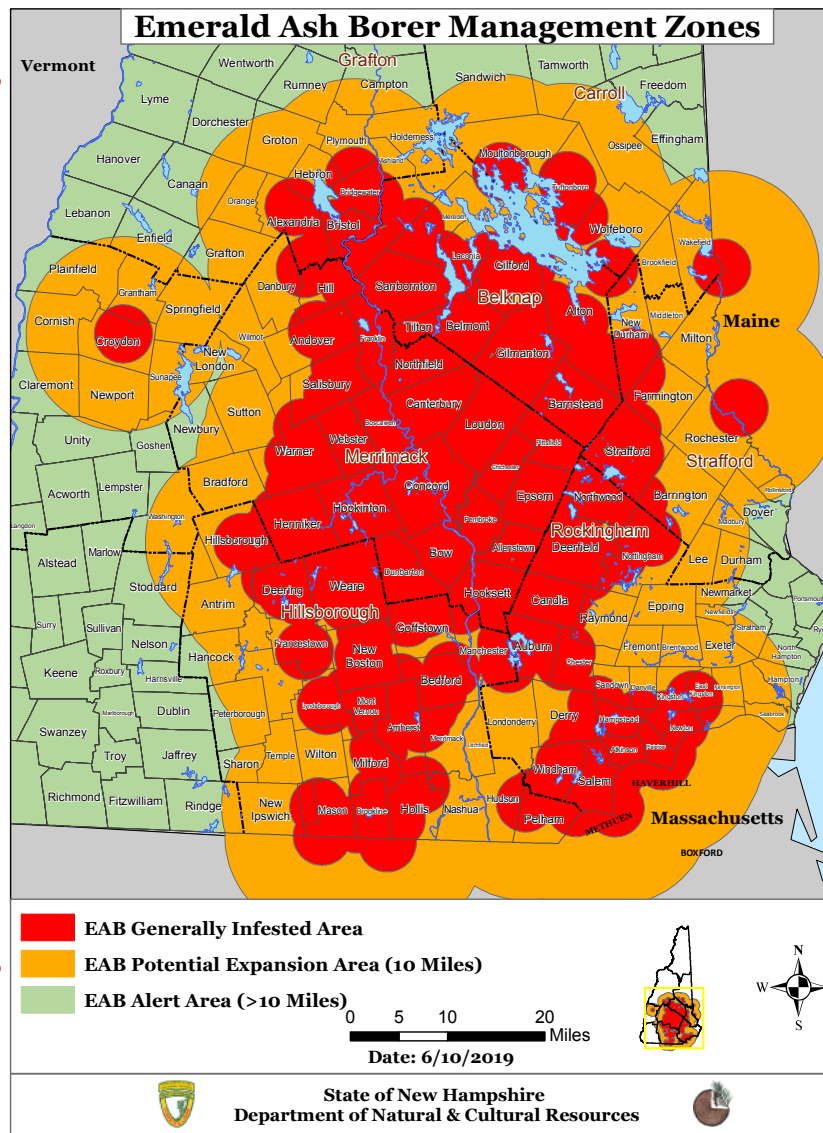
The University of New Hampshire Cooperative Extension is an equal opportunity educator and employer. University of New Hampshire, NH Division of Forests and Lands, U.S. Department of Agriculture and N.H. counties cooperating.

Engage local advocates.

Build the same collaborative relationship with your community members. If you're having trouble furthering a project, ask yourself who cares about a project you are considering, or who benefits from it. That person may be a good champion to engage with. It may be someone who has a personal connection to the project, such as their children cross the intersection every day on their way to school, or they were involved in a crash at that intersection. People with personal interest in a project are more likely to energetically advocate for it. If you have a local contributor- someone who attends your project hearings or reaches out with concerns- consider how to engage that person in your efforts towards positive change, including asking him or her to attend public input sessions, town meetings, and selectboard meetings where projects the person values will be discussed.

Public engagement can take many forms- online polls, social media, community days, and more. We'll share some best practices in future Road Business issues about these and other engagement strategies.

Meanwhile, we'd like to know- how are you engaging with your community, and do you have any success stories that have come from building strong local relationships? Please call us at 603-862-1362 or email us at T2.center@unh.edu to share your story of how you are engaging with local community partners and how this synergy has helped you to tackle some hurdles. We look forward to hearing from you.



Continued from page 6 **Cyber Security**

president of marketing and channels for Q1 Labs Inc., a software company that sponsored the survey. "It seems that the industry is very reactive in terms of IT security investment."

The report follows recent high-profile cyber attacks, including the Stuxnet computer worm, which affects machines sold by Munich-based Siemens AG and can take over networks that run factories and power plants. The Ponemon report also identified shortcomings in adhering to industrywide regulatory initiatives. Seventy-seven percent of survey respondents said compliance with industry security standards did not rank as a priority at their organizations. U.S. regulators currently lack the authority to issue and enforce rules for protecting electric grids from cyberthreats, leaving the industry to follow its own voluntary standards. Those guidelines are set by the North American Electric Reliability Corp., an industry self-regulatory group that helps companies assess their ability to respond to potential attacks.

Source: <https://www.bloomberg.com/news/articles/2011-04-06/energy-infrastructure-lacks-advanced-defense-from-cyber-attacks>

"Importance of IT security among C-level executives hasn't increased," said the senior vice president of marketing and channels for Q1 Labs Inc., a software company that sponsored the survey. "It seems that the industry is very reactive in terms of IT security investment."

Butch Says

Lift one another up and cheer one another on instead of outshine one another. The sky would be an awfully dark place with only one star. ~Stacie

Leaders, just like employees, come from many backgrounds and influences, which shape their leadership styles. Those who can adapt to these differences and still nurture each team member's potential are the ones who demonstrate great leadership and professional relationships. Forbes.com's article, "Leadership is About Enabling the Full Potential in Others" by Glenn Llopis, says "The best leaders are those that can identify and appreciate the differences that one brings to the table and know how to put them to full use. These leaders are emotionally intelligent enough to connect the dots and the opportunities within each dot to enable the full potential in each of their employees." In other words, professional relationships develop and depend on a number of factors in order to be successful, productive, and enjoyable. Whether you are the leader or the employee, when improving your professional satisfaction and productivity, there are many steps you can take to improve yourself and assist others. These are just a few.

- **Encourage diversity** - their own styles and ways of thinking
- **Develop their decision-making abilities** - shows investment in success
- **Give credit when credit is due** - timing and authenticity are crucial
- **Avoid gossip** - Bring problems directly to the source
- **Share information** - team players build trust, but be sure it's a genuine effort
- **Trust staff to execute tasks properly** - micromanagement deteriorates trust
- **Actively listen to others** - positive responses translates into a feeling of being valued
- **Be mindful** - leave personal feelings out of equation
- **Show appreciation and be positive** - both will strengthen trust
- **Keep lines of communication open** - builds trust and creates productive environment



photo by Mahkeo

Resources:

MindTools.com, [Building Great Work Relationships](#)
Monster.com, [How to Build Trust at Work](#), Daniel Bortz
Forbes.com, [Leadership is About Enabling the Full Potential in Others](#), Glenn Llopis

State of New Hampshire BEST MANAGEMENT PRACTICES

Help stop the spread of
EMERALD ASH BORER
in New Hampshire

Natural spread of Emerald Ash Borer (EAB) takes decades; human-assisted spread takes only hours.

Following best management practices will help protect ash woodlots across New Hampshire and provide valuable time to managers and scientists looking for new control methods.



Signs of EAB infestation includes birds removing the outer layer of bark (called blonding) and "s"-shaped galleries under the bark.

EAB was discovered in New Hampshire for the first time in 2013. While EAB has spread into most of NH's counties, it still infests a very small percentage of the state's total ash trees. Close attention to practices described on this card will help keep the outbreak from killing trees for decades.

Learn more at NH Bugs.org

How to help minimize risk of spreading EAB in New Hampshire

When moving ash logs:

- Transport **ONLY** after September 1 **AND** have processed by June 1
- Ship only to mills willing to debark immediately **OR**
- Confirm logs are likely NOT infested

When moving firewood:

- Remove ash wood from shipments traveling more than 5 miles; deliver ash wood less than 5 miles **OR**
- Season ash wood at its place of origin for at least 12 months **OR**
- Deliver ash wood after September 1 and make sure it's burned by June 1

(NOTE: Mulch or chips of any size can be moved year round.)



New Hampshire
Department of Agriculture,
Markets & Food

www.t2.unh.edu

Public Works SPOTLIGHT

with Bettina Sietz

Meghan Doucette

City of Keene Department of Public Works

Tell us about how you came to the City of Keene's Public Works Department? What is your background, and how does it align with public works?

I was new to the area and was looking for a job that would keep me active. I ran a small business in upstate New York for five years that focused on landscaping and tree services.

What position are you currently working in and what drew you to it? How long have you been working this position?

I am currently working as a highway maintenance aide. I have been working in this position a little over a year, first in part-time, and now in a full time position. What drew me to this position were the many different aspects of the job: As a highway maintenance aide my job duties include patching potholes, brush cutting along roadsides, garbage disposal and basin repairs. You get to be outside, and I like to stay active, which can include brush cutting and shoveling, for example.



Meghan Doucette, assembling road barricades

What are some job related rewards and challenges?

To me, it is rewarding to live in the city I work in. I get to see how clean the downtown area is, how the roads look like after we are done with our repair work. It makes me proud to see the difference we are making as a public

works team. It also makes me happy to help the residents of Keene. There's a direct impact that goes along with our work.

Sometimes things change very quickly- it can impact the schedule of the workday, and you must shift your priorities, which can bring its own challenges.

What is your favorite moment of your workday?

Our morning meeting, when different tasks are getting assigned to us, and we are figuring out how our day is going to look like.

How important is professional development to you? Do you have a favorite training or development event?

Very important - you never really stop learning. I strongly believe you can always learn, there's always room to grow. I enjoy taking T2 Classes, and whenever I have a quiet moment, I try to watch some technical videos. There's so much out there. I applied for Primex's Supervisor Academy because I would like to expand my leadership skills. At some point, I would like to be a working foreman or a supervisor.

How do you maintain a healthy work-life balance?

I make sure that I have a healthy lunch every day. I bring healthy snacks from home, so I don't get tempted to buy food that's not good for me. And I make sure to get all my steps in, which is an easy thing to do in my job. My average is around 15,000 steps per day, my record was during foliage season when we take care of the leaves. During that time, I can easily make 10 miles per day.

Do you encounter any surprises in your job?

(Meghan laughs) "Not really, nothing surprises me."

What are you surprisingly good at?

I am good at dealing with stressful situations. When there's a difficult situation or an emergency, I can step back and look at the big picture and come up with a solution or a different angle to solve and handle it.

What are you complimented on most in your work?

My witty attitude – I have a quick come back, and people seem to like that.

What advice would you give someone who is considering a career in Public Works?

I really would like to encourage more women to consider a public works career. If you can deal with change and adapt to change quickly, this might be for you. There's always a different angle to your day, and if you aren't afraid to work hard, it's a great job.

Continue to page 18

Sea-level rise scenarios under different emission levels in 2050 and 2100. Source: Adapted from NHCRC STAP (2014).

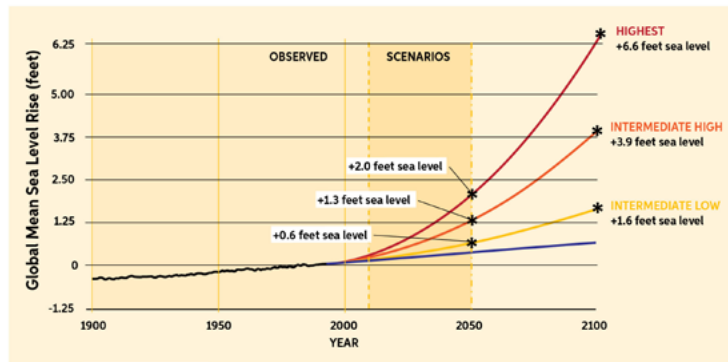


Figure 2: Sea level rise projections published in the 2013 Coastal Risk and Hazards Commission

The NH Tidal Protocol implements priority CRHC recommendations by creating a method to assess all tidal crossings in NH, identifying vulnerable state and municipal assets, and using best available climate science in planning activities. The CRHC also recommended that public infrastructure construction projects consider the sea level rise projections that may occur over the design life of the structure. For example, the CRHC suggests that “if the design time period is 2014–2050, commit to manage to 1.3 feet of sea-level rise, but be prepared to manage and adapt to 2 feet if necessary.”

The NH Tidal Protocol selected 1.7' of sea level rise at 2050 as a common sense planning horizon for tidal crossing replacements. The 1.7' sea level rise scenario was selected because it captures normal flood heights at Mean Higher High Water under a near term (2050) high carbon emission scenario but also prepares for projected sea level rise under the longer term low emissions scenario by 2100. For these reasons, in addition to assessing road crossings that currently convey tidal flow, the NH Tidal Protocol assessed structures that are not currently, but predicted to become tidal with 1.7' of sea level rise.

Powerful Information

In 2017, the NHCP received a \$187,500 grant from the National Oceanic and Atmospheric Administration for the “Resilient Tidal Crossings Project”. The grant enabled NHCP to work with a team of partners to implement the NH Tidal Protocol

at all tidal crossings in NH. This collaborative project brought together robust technical expertise and resources to implement this ambitious field and data analysis project.



Figure 3: NHCP field crew receives training from Dr. David Burdick (UNH Jackson Estuarine Lab), Chris Dowd (UNH T2) and Peter Steckler (TNC)

One of the key components of the NH Tidal Protocol is the longitudinal profile, which captures relative elevations of key site features. When coupled with LiDAR - derived high resolution elevation maps and predicted water surface elevations, the longitudinal profile conveys powerful information about the compatibility of the crossing and resiliency of adjacent habitat features.

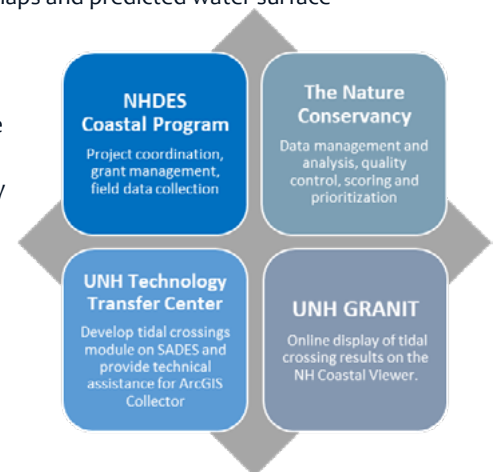


Figure 4 Partner Roles for NHDES Coastal Program's “Resilient Tidal Crossing Project”

After NHCP personnel conducted field assessments at 118 sites, field data was processed and analyzed by TNC to score and prioritize tidal crossings according to ecosystem, flood hazard and climate resilience criteria described in the NH Tidal Protocol.

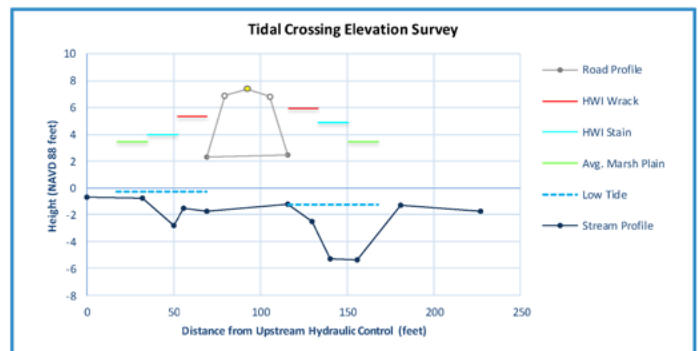


Figure 5. Example diagram of key elevation data collected at each of the 134 tidal crossings in NH, including elevations of the road surface, stream channel, culvert top and bottom, and high water indicators (HWI). Understanding the elevation of these attributes relative to sea level and the adjacent landscape can help determine whether the tidal crossing is compatible with transportation and environmental needs.

To access results, mapping products and other Resilient Tidal Crossings To access results, mapping products and other Resilient Tidal Crossings Project material, please refer to NHCP's [Resilient Tidal Crossing webpage](#).

For more information:

- [New Hampshire Stream Crossing Initiative](#)
- [Coastal Risk and Hazards Commission](#)
- [CRHC Scientific and Technical Advisory Panel \(STAP\) Report](#)
- [NH Tidal Crossing Assessment Protocol](#)
- [NHDES Coastal Program Resilient Tidal Crossings Website](#)

Important Dates 2019



- 8/23 [NHPWA Board Meeting](#), Concord, NH
 9/8-11 [APWA PWX](#), Seattle, WA
 9/10 [6th Annual NH Salt Symposium](#), Concord, NH
 9/17-21 [National Roundabouts Week](#)
 9/22-25 [ARTBA National Convention](#), Savannah, GA
 9/26-27 [NH Construction Career Days](#), New Boston, NH
 10/3 [NHPWA Technical Meeting](#), Manchester, NH
 10/28-29 [Northeast Transportation Safety Conference](#), Burlington, VT
 11/13-14 [NHMA Conference](#), Manchester, NH

If you know of a trade show or conference that the transportation community would be interested in, please let us know at t2.center@unh.edu.



Grab a cup of coffee?

Feedback & Input Wanted!

We're preparing newsletter articles, workshops, & other resources on the following topics, and appreciate your input!

- Segmented flexible plow blades
- Use of brine and chemical deicers
- Creating a culture of innovation
- Public Works Spotlights - highlighting the PW profession and individual careers
- Public engagement strategies including social media
- Creating engaging orientation and onboarding plans for public works employees

Are you willing to share your thoughts, experience, or expertise on these topics?
 Please reach out to marilee.lafond@unh.edu.

Let's chat!

Visit the [UNH T² website](#) today!

Training schedule Technical Assistance Resources
 Statewide Asset Data Exchange System (SADES)

Certification programs

ATSSA Flagger Culvert Maintainer



Stay connected to T2 and partner activities
 View photos from our training classes and other events.
 Check out T2's growing video resources

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@UNHT2CenterLTAP

www.twitter.com/nhltpap

@nhltap

www.youtube.com/c/UNHTechnologyTransferCenter

SOLUTION TO SPRING 2019 BRAIN TEASER

First Tim and Janet will cross (2 minutes).
 Then Tim will bring back the flashlight (1 minute).
 Next Suzy and Charles will cross (10 minutes).
 Then Janet will bring back the flashlight (2 minutes).
 Finally Janet and Tim will cross (2 minutes).
 Totaled: 2+1+10+2=17



"It Starts Here"

New Hampshire shows up for Fill a Truck and then some!

Stephanie Cottrell, UNH Technology Transfer Center

The theme for the 2019 National Public Works Week (NPWW) was "It Starts Here." Everything from infrastructure to security to healthy communities begins with public works professionals. Clean water, safe roads and bridges, beautiful neighborhoods and parks, and sustainable trash disposal are woven into our lives so seamlessly, strengthening and securing our everyday routines and safety. This year's theme resonates through all aspects of public works including the return of the New England Chapter of APWA's (NEAPWA) annual "Fill A Truck" Food Drive. The purpose behind this event is to bring awareness about public works to our communities in a way that joins everyone together through a common goal.

After a conversation with one public works manager, I became curious about how much food and goods are collected by departments across the State of New Hampshire and donated to local food banks. With my call for municipalities who participated in the Fill A Truck, I was able to get a sense of the magnitude of our state's efforts (thank you to those who responded to my post!). Just from the seven municipalities that responded, collectively, over 2000 pounds of food was donated. That is enough to provide roughly 1550 meals to people in need! That's quite an impact. Congratulations to you all for making a difference in your communities above and beyond your day to day work!

Of course, the Fill A Truck Food Drive wasn't the only way public works departments celebrated and connected with their communities. Many public works departments also held other outreach events. Here's a list of what they shared with me:

- Touch a Truck event
- Food and ice cream festival
- Education tables
- Equipment Demonstrations
- Scavenger Hunts
- Fire muster
- Trick bike show
- Collaboration with fire and police departments to distribute bike helmets
- TShirt Design contest
- Build a mini town truck for food drive
- School celebrations
- Community breakfasts at school
- Art contests-recycling
- Social media events
- Staff luncheons

The ways in which your department can bring your community together are endless! For more information on how to plan for next year's NPWW, visit APWA. If you would like to learn more about any of the events that were shared here, please contact stephanie.cottrell@unh.edu.



Goffstown held an art contest~photo courtesy of Town of Goffstown



Hampton's mini truck visited town buildings~photo courtesy of Town of Hampton

Derry partnered with other town depts to create a Touch a Truck festival~photo courtesy of Alan Cote



Exeter markets their efforts at the Hannaford in town~photo courtesy of Trisha Allen

New spreadsheet tool helps you manage gravel roads

Originally published:
June 2019, vol. 27 No.2

[Minnesota LTAP Technology Exchange](#)
[Minnesota LTAP, University of Minnesota](#)

A new spreadsheet tool from the Minnesota Local Road Research Board (LRRB) is designed to help county engineering offices better track and manage gravel roads. It can be used as an inventory tool, providing one location for keeping all maintenance and construction data about a gravel road system. It can also be used to track costs and optimize spending.

The tool, designed by SRF Consulting, is flexible and customizable for a variety of purposes and system sizes. A user guide provides instructions for the gravel road management tool.

There are approximately 142,900 miles of roads in Minnesota, and over half of them are dirt or gravel-surfaced. These roads often have little traffic and service remote areas, so tools for their management and maintenance have been lacking. At the same time, the time and cost to maintain and service these roads is significant. The simple tool is intended to support local agencies in their management of these roads.

The spreadsheet includes tabs where users can enter their road segment inventory, maintenance record, desired thickness, and segment evaluation. Other tabs have an evaluation guide and raw GIS data for Minnesota county roads from the 2018 MnDOT Linear Referencing Network.

The developers prepopulated many of the input cell locations, but users may also choose to customize those options very easily.

Learn more:

- [Gravel Road Management tool website](#)
- Gravel Road Management Spreadsheet Tool Supplemental Guidance ([LRRB 2019RIC03, March 2019](#))
- [Minnesota LTAP's Low-Volume & Gravel Roads topic page](#)

Desired Thickness

Instructions:
This tab allows the user to select a segment from the "Road Segment Inventory" tab and enter a measured thickness of gravel and a desired thickness of gravel. Based on the length of the segment and the average maintained width from the "Road Segment Inventory" tab, a total cubic feet of gravel is calculated. The user can then add the price per ton of gravel to calculate a total gravel cost.

KEY: Dark blue cells contain prepopulated formulas

Example Data Entry:

Segment ID	Type of Gravel	If other, spec	Length of Segment (mi)	Avg Maintained Width (ft)	Date of Measurement	Measured Thickness (in)	Desired Thickness	Difference	Cubic Feet Needed	Gravel Cost / Ton	Total Gravel Cost
MainStreet 100th-105th	Pt Run		4	10	5/15/18	7	8	1	31200	\$20.00	\$624,000
100th-140th-100th-140th-105th-105th	Pt Run		5.5	20	7/12/17	7	8	1	48000	\$20.00	\$960,000
100th-140th-100th-140th-105th-105th	CLT		2	19	7/8/17	9	8	1	0	\$15.00	\$0
100th-140th-100th-140th-105th-105th	CLT		0.5	17	8/1/18	8	8	0	0	\$17.00	\$0
100th-140th-100th-140th-105th-105th	Local pt		2	20	4/13/17	4	8	4	70400	\$20.00	\$1,408,000

Segment ID	Type of Gravel	If other, spec	Length of Segment (mi)	Avg Maintained Width (ft)	Date of Measurement	Measured Thickness (in)	Desired Thickness	Difference	Cubic Feet Needed	Gravel Cost / Ton	Total Gravel Cost
MainStreet 100th-105th	CLT		10	10		0	8	8	132000	\$20.00	\$2,640,000
WalrusDr 10th-10th	Pt Run		5	4		0	8	8	0	0	\$0
WalrusDr 10th-10th	CLT		4	6		0	8	8	0	0	\$0

This tab allows the user to select a segment from the "Road Segment Inventory" tab and enter a measured thickness of gravel and a desired thickness of gravel. Based on the length of the segment and the average maintained width from the "Road Segment Inventory" tab, a total cubic feet of gravel is calculated. The user can then add the price per ton of gravel to calculate a total gravel cost.

Continued from page 2 [Memorial](#)

Even though some tears were shed that day, the mood and air were filled with not only remembrance to those who made the ultimate sacrifice while performing their work duties, but also of gratitude for the memorial's completion, and hope for those who continue their dedicated efforts to provide safe roadways throughout the state.

As the weeks after the dedication unfolded, four more communities have come forward with names of public works employees who passed away on the job during the last 100 years. If someone in your community remembers a worker who died, please submit their name for consideration to be added to the memorial by completing the application at the link below and sending it to the Memorial Committee at the address listed below. Anyone with questions regarding the Public Works Employee Memorial may call 603-271-2693.

["Names for the Memorial" application](#)

Applications or donations may be sent to:
NHDOT Commissioner's Office
PO Box 483
Concord, NH 03302-0483

By: Stephanie Cottrell, UNH Technology Transfer Center
Editing contributions made by Chris Bonoli, NHDOT



Roads Scholar Program

The Roads Scholar Program establishes educational and training requirements for municipal level highway practitioners, and recognizes those who have

successfully completed specified T2 Center workshops. Annually, the T2 Center publishes a directory to acknowledge those who have earned an achievement level among our Roads Scholars.

Since January 1, 2015, there are six levels in the NH Roads Scholar Program, plus an additional "side award." Each Level has a defined number of contact hours, and Level 2 requires attendance at workshops in specific subject areas. A contact hour is an hour of actual instruction. A typical one day workshop includes 5 hours of instruction in a specific subject area to ensure that training covers a range of subjects essential to local road management. In addition, if Roads Scholar participants earn 20 contact hours in the Safety category, they earn a Safety Champion award.

§ Roads Scholar 1

Completion of 25 contact hours

Jesse Allatt	Town of Weare
Daniel Barron	Town of Rye
Kevin Belanger	NHDOT
Joseph Bolduc	NHDOT
Will Cardinal	Town of Farmington
Cody Carroll	NHDOT
William Chick	Town of Madison
Marc Cotnoir	NHDOT
Jon Cyr	Town of Madison
Lee Dexter	City of Keene
Corey Dickerson	Town of Brookline
Eugene Doe	NHDOT
Meghan Doucette	City of Keene
Adam Dow	NHDOT
Brady Eastes	NHDOT
Robert Ellis	Town of Groton
Marissa Escabi	Town of Derry
John Faulkner	NHDOT
Russel Fish	City of Keene
Scott Foster	NHDOT
Denis Frenette	NHDOT
Leon Gadwah	NHDOT
John Hamilton	NHDOT
Donna Harris	NHDOT
William Heath	Town of Amherst
Richard Hiltunen	RCH Paving
Cameron Huntoon	Town of Danbury

Charles Kingsbury	NHDOT
Robert Lambert	NHDOT
James Lanoue	Piedmont Excavation
Stewart Long	Town of Amherst
Jeff Lord	NHDOT
Fred Mackey	Town of Merrimack
Scott Magoon	NHDOT
Florent Martineau	Town of Derry
Connor McCallum	Town of Exeter
Jon Neal	City of Laconia
Robert Neveu	NHDOT
Brad Osgood	Town of Sunapee
Jon Provost	Town of Merrimack
Richard Radwanski	NHDOT
Robert Rand	Town of Madison
Robert Richards	NHDOT
Brian Scribner	NHDOT
Leonard Smith	NHDOT
Michael Spaulding	NHDOT
Zachary Stetson	NHDOT
Andrew Sylvester	Town of Barnstead
Gretchen Young	City of Dover

§ Roads Scholar 2

Completion of 50 contact hours in specific subject areas: 5 hours of Environmental, 10 hours of Safety, 5 hours of Supervisory, 20 hours of Technical, 10 additional hours

Joshua Byrnes	City of Keene
Michael Cahalane	Town of Effingham
Gary Clifford	NHDOT
Ron DeDucca	Town of Moultonborough
Craig Hale	Town of Meredith
John Hamilton	NHDOT
Lucas Lamos	City of Laconia
Charles Nichols	City of Keene
Mike Nugent	City of Concord
Kelly Robitaille	Vill. District of Eidelweiss
Christopher Theriault	Town of Moultonborough
Dawn Tuomala	Town of Merrimack

§ Senior Roads Scholar

Completion of 75 contact hours

Lee Adams	NHDOT
Mark Chase	Town of Lyndeborough
Robert Coates	Town of Hampton
Robert Coates	NHDOT
Reno Nadeau	Town of Pembroke
Dawn Tuomala	Town of Merrimack

Continued to page 17

§ Master Roads Scholar

Completion of 100 contact hours

Greg Blecharczyk	Town of Merrimack
Brandon Farrar	Town of Derry
Don Lashua	Twon of Enfield

§ Master Roads Scholar 2

Completion of 150 contact hours and individual must be a Safety Champion

William Byrne	City of Keene
Kevin Demers	City of Concord

§ Safety Champions

Completion of 20 Safety contact hours

Gerald Barss	NHDOT
Raymond Beaudoin	NHDOT
Michael Boylan	NHDOT
Gary Clifford	NHDOT
Robert Coates	Town of Hampton
Eric Costello	NHDOT
Nick Coursey	Town of Rumney
Shawn Cummings	NHDOT
Ron DeDucca	Town of Moultonborough
Adam Dow	NHDOT
Charles Dylyn	NHDOT
Raymond Bernier	NHDOT
Peter Elliott	Town of Northwood
John Faulkner	NHDOT
Scott Foster	NHDOT
Samuel Grenier	City of Rochester
Michael Howe	Town of Dublin
Kevin King	NHDOT
Cameron Lapointe	City of Keene
David Latuch	NHDOT
Anthony Paveglio	NHDOT
Steven Perron	Town of Pembroke
William Rand	NHDOT
Michael Reifke	NHDOT
Robert Richards	NHDOT
Christopher Rose-Clark	NHDOT
James Ruggles	City of Laconia
Jeffrey Stillman	Town of Newbury
David Stone	Town of Dublin
Steve Tallman	Town of Rumney
Christopher Theriault	Town of Moultonborough
Roger Trempe	Town of Dublin
Scott Walker	NHDOT

If you could add a soundtrack to your workday, what would be your theme song?

“Don’t Stop Believing” by Journey.

Do you have a favorite summer treat during your workday?

Watermelon and really ice-cold water.

Do you have a co-worker with a unique approach to public works? Or someone who has been working different positions in their longtime public works career? We would be happy to share your story! – Please contact T2 at the University of NH, if you would like to suggest a story spotlight about yourself or a co-worker: t2.center@unh.edu or call 603-862-0030.



photo by Bettina Sietz



Among our public works and LTAP community are members who retired within the past year. We'd like to thank them for their service and commitment to the transportation industry. Congratulations on closing this chapter and starting a whole new one! Best wishes for this new chapter to be full of adventures and filled with all things good.

- Doug Almon NHDOT District 6
- Ernie Doucette Town of Merrimack
- John Paul Hilliard NHDOT, District 1
- Sharon Jensen Town of Derry
- Richard Fenoff NHDOT, District 1

If a member of your team has earned a special honor or achievement that you'd like to share, please let us know at t2.center@unh.edu.

Word Scramble

NAME _____

AFFILIATION _____

E-MAIL _____

Submit your completed word scramble by September 1st, 2019 to be entered to win a FREE T² workshop!

Fax: 603-862-0620

Email: t2.center@unh.edu

Mail: Technology Transfer Center

33 Academic Way

Durham, NH 03824

Brain Teaser solution from the Spring 2019 newsletter can be found on page 14.

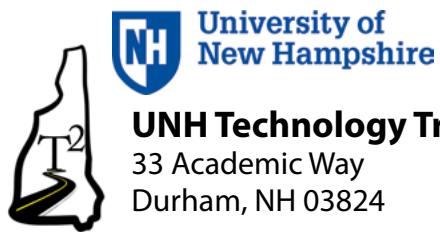


Training
Contaminated Soils
Plow Rally
Construction
Projects
Culvert repairs
Invasive Plants
Mutual Aid
Environmental
Waivers
Permitting
Enrollment
Tailgate Talks
GoLive
LearnforLife
Emergency
Management
Documentation
Lyme Disease
Erosion Control

I	A	M	O	P	M	V	U	S	C	U	Q	Q	H	H	P	V	D	J	A	W
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N	E	O	T	A	I	L	G	A	T	E	T	A	L	K	S	D	A	W	W	G
V	V	K	N	O	I	T	A	T	N	E	M	U	C	O	D	R	K	P	C	V
E	I	J	I	U	M	B	W	O	T	H	H	P	L	O	W	R	A	L	L	Y
E	L	Y	I	B	A	Z	X	Y	K	O	M	W	D	N	C	W	C	T	N	B
D	O	U	N	Y	C	B	E	N	V	I	R	O	N	M	E	N	T	A	L	Z
Q	G	R	S	U	J	D	I	A	L	A	U	T	U	M	W	M	Q	D	A	Y
C	C	O	N	S	T	R	U	C	T	I	O	N	P	R	O	J	E	C	T	S
O	L	G	D	Y	L	E	A	R	N	F	O	R	L	I	F	E	I	T	S	T
E	S	R	C	R	O	U	W	D	S	L	E	P	Z	X	L	U	K	M	X	N
S	I	H	Q	W	A	I	V	E	R	S	E	I	N	F	H	Q	Y	A	K	E
A	I	E	R	O	S	I	O	N	C	O	N	T	R	O	L	V	Y	H	Q	M
E	T	D	S	L	I	O	S	D	E	T	A	N	I	M	A	T	N	O	C	L
S	M	V	T	A	G	C	Q	Z	R	S	C	B	L	G	A	O	Z	H	V	L
I	W	L	D	P	G	N	I	T	T	I	M	R	E	P	P	V	U	S	L	O
D	O	G	G	Y	T	J	X	L	H	Q	X	G	N	I	N	I	A	R	T	R
E	Z	L	D	G	Y	A	N	D	D	H	T	T	E	O	G	W	C	E	N	N
M	E	M	E	R	G	E	N	C	Y	M	A	N	A	G	E	M	E	N	T	E
Y	Q	P	I	N	V	A	S	I	V	E	P	L	A	N	T	S	V	X	Y	W
L	K	X	C	U	L	V	E	R	T	R	E	P	A	I	R	S	H	N	G	N

CONGRATULATIONS!!

Janice Pack-Town of Wilton is the winner of a \$100 UNH T2 workshop coupon for being the first to submit the correct answers to the Brain Teaser from the Spring 2019 issue of Road Business Newsletter:



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