Road Business

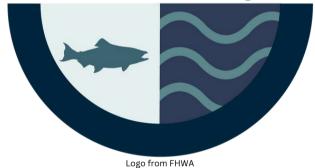
A quarterly newsletter from New Hampshire's Local Technical Assistance Program Spring 2024

IMPROVING FISH PASSAGE IN DOVER

WRITTEN BY LEE COOPER, PROGRAM COORDINATOR, UNH TECHNOLOGY TRANSFER CENTER AND NH LTAP

The National Culvert Removal, Replacement, and Restoration Grant Program (Culvert Aquatic Organism Passage (AOP) Program) is an annual competitive grant program that awards grants to eligible entities for projects for the replacement, removal, and repair of culverts or weirs that meaningfully improve or restore fish passage for anadromous fish. Anadromous fish species are born in freshwater such as streams and rivers, spend most of their lives in the marine environment, and migrate back to freshwater to spawn. By prioritizing culvert projects that enhance fish passage, reduce

Culvert AOP Program



flooding risks, and improve water quality, these grants contribute significantly to ecosystem health and resilience. The National Culvert Removal, Replacement & Restoration Grants play a vital role in promoting sustainable infrastructure practices and fostering healthier environments for both wildlife and communities.

The city of Dover, NH was awarded a National Culvert Removal Replacement and Restoration Grant for the Bellamy River Fish Passage Restoration Project for year one (FY 2022). The city of Dover was approached by Kevin Lucey, Habitat Coordinator with NHDES, to submit an application for the Bellamy Road culvert replacement with the goal of improving fish passage. The Bellamy Road culvert is a steel elliptical culvert with a reinforced poured concrete base that conveys the Bellamy River below Bellamy Road. According to scoring criteria developed by the NH Stream Crossing Initiative, the culvert received inadequate/poor scores for aquatic organism passage and geomorphic compatibility. The replacement of this culvert would not only improve fish passage but also fix an issue with overtopping.

Continued on page 4











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> NH Road Agents Association: Vacant NH Public Works Mutual Aid: Vacant Member at Large/RPC Rep: Vacant

About UNH T2 and NHLTAP

The UNH Technology Transfer Center fosters a safe, efficient, and environmentally sound surface transportation system by improving skills and increasing knowledge of the transportation workforce and decision-makers. As the site of the state's Local Technical Assistance Program, it works to enable local counties, cities, and towns to improve their roads and bridges by supplying them with a variety of training programs, an information clearinghouse, new and existing technology updates, personalized technical assistance, training videos and materials, and newsletters. LTAP Centers nationally are able to provide local road departments with workforce development services; resources to enhance safety and security; solutions to environmental, congestion, capacity, and other issues.

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SPRING IS THE TIME OF PLANS AND PROJECTS.

The end of winter means spring and for us at UNH T2, it also means workshop season! We have spent countless hours over the past months preparing for our wide variety of workshops throughout the state. We hope that you or your team members will able to join us either virtually or in person for a workshop. From Gravel Road Maintenance to Public Works Budgeting to ADA and Pedestrian Infrastructure Accessibility, we have a little something for everyone.

We are excited to have launched the second round of our Road Safety Advocate Program. The UNH T2 NH Roads Scholar Road Safety Advocate Program (RSAP) was developed from a nationally recognized certificate program designed to build a knowledgeable, safety-minded workforce, responsible for operating, maintaining, and designing local roads. Aspiring Road Safety Advocates take core courses as well as

develop a Local Road Safety Plan for their municipality. When all requirements are met, participants will be awarded a Road Safety Advocate certificate in the NH Roads Scholar achievement program.

Speaking of workshops, are there any workshops that you'd like to see offered by UNH T2? We are always looking for ideas on how we can better serve you so please do not hesitate to reach out with your ideas on future offerings.

Lastly, are you a member of PW.net? Public Works Net (PW.net) is a Microsoft365 Group for open discussion among people who are associated with Public Works in New Hampshire. If you are not yet a member, please visit our <u>website</u> to learn more or join. With almost 600 members, PW.net is a great resource that allows Public Works professionals in NH to connect and ask questions.



Trillium flowers in bloom. Photo from Lee Coop

We wish you all a safe and healthy spring. We hope to see you at a workshop soon!

Jake care - Lee Cooper

Leo Tolstoy

Insights about applying for this grant

Jillian Semprini, Assistant City Engineer for the City of Dover, NH answered some questions about how Dover was able to secure this important funding.

Question: How did you find out about this grant?

Kevin Lucey from NHDES approached the City. As noted in the Executive Summary attached, three dams have been removed along the lower Bellamy River, which has restored aquatic connectivity from Great Bay to an additional 1 mile of habitat. The FHWA Culvert AOP Grant is a great hybrid grant as it combines the City's goal of replacing a structurally deficient structure with NHDES' goal of restoring additional stream habitat specifically for anadromous fish by replacing this perched culvert.

Question: Were there any challenges with this project or applying for the grant?

This is a new grant for FHWA; therefore, understanding the grant requirements was likely the biggest challenge. Kevin did a great job coordinating with all stakeholders for the project to establish the project to meet the requirements of the grant; stakeholders such as the City, NHDES, NHF&G, and UNH.

Question: Is there any other information you think would be helpful to other municipalities that are thinking about applying for future Culvert AOP grants or other similar grants?

The Culvert AOP Grant was very specific to replacement/removal/repair of culverts/weirs that improve/restore anadromous fish passage. However, for a similar grant, my advice to any municipality would be to partner with another entity, such as NHDES, to combine goals to meet the grant's requirements. Without the help of Kevin, the grant for this project would never have succeeded.



Photo from the city of Dover

Considerations when applying for grants

With Grants, specifically new grant programs, there can be obstacles and challenges. Since this was a new grant for FHWA, understanding the grant requirements was a challenge. Jillian Semprini explained that Kevin Lucey did a great job coordinating with stakeholders to explain what was needed to complete the grant application. Kevin Lucey further elaborated on the challenges of this type of grant application. The funding criteria for this grant was quite specific with the need to have a culvert that meaningfully impacts and restores

passage of anadromous fish and has a strong transportation nexus. Kevin Lucey said "While I haven't conducted a geo-spatial analysis to determine sites that meet this criteria, I suspect that there are very few structures in the State of NH that will meet the criteria and that will compete well on a national level. By nature of the anadromous fishery in NH, the site would likely have to be on one of tributary rivers to Great Bay and more likely need to occur fairly low in the watershed on the Exeter, Oyster, Bellamy, Lamprey and Cocheco Rivers." One of the most important aspects to consider when looking for a potential grant to apply for is ensuring that all required criteria can be met. The last thing you want to do is spend the time applying for a grant that your community or organization does not qualify for.

Thank you to Jillian Semprini, Assistant City Engineer for the City of Dover, NH and Kevin Lucey, Habitat Coordinator, New Hampshire Department of Environmental Services for their insight regarding this grant opportunity. Are you considering applying for a grant that will benefit your municipality but have questions? We may be able to help! Please email T2.Center@unh.edu with your questions or view the recording of our webinar <u>Grant</u> <u>Writing Basics</u> on our YouTube channel!

Proven Safety Countermeasures



Safety Benefits:

10-60% reduction in total crashes.¹

For more information on this and other FHWA Proven Safety Countermeasures, please visit

<u>https://highways.</u> <u>dot.gov/safety/provensafety-</u> <u>countermeasures and</u> <u>https://highways.dot.gov/</u> <u>safety/intersection-safety/</u> <u>intersection-</u> <u>types/roundabouts.</u>

Road Safety Audit

While most transportation agencies have established traditional safety review procedures, a road safety audit (RSA) or assessment is unique. RSAs are performed by a multidisciplinary team independent of the project. RSAs consider all road users, account for human factors and road user capabilities, are documented in a formal report, and require a formal response from the road owner. (See the eight steps for conducting an RSA below.)



RSAs provide the following benefits:

- Reduced number and severity of crashes due to safer designs.
- Reduced costs resulting from early identification and mitigation of safety issues before projects are built.
- Increased opportunities to integrate multimodal safety strategies and proven safety countermeasures.
- Expanded ability to consider human factors in all facets of design.
- Increased communication and collaboration among safety stakeholders.
- Objective review by independent multidisciplinary team.

1 Road Safety Audits: An Evaluation of RSA Programs and Projects, FHWA-SA-12-037; and FHWA Road Safety Audit Guidelines, FHWA-SA-06-06.

RSAs can be performed in any phase of project development, from planning through construction. Agencies may focus RSAs specifically on motorized vehicles, pedestrians, bicyclists, motorcyclists, or a combination of these roadway users. Agencies are encouraged to conduct an RSA at the earliest stage possible, as all roadway design options and alternatives are being explored.



Multidisciplinary team performs field review during an RSA. Source: FHWA

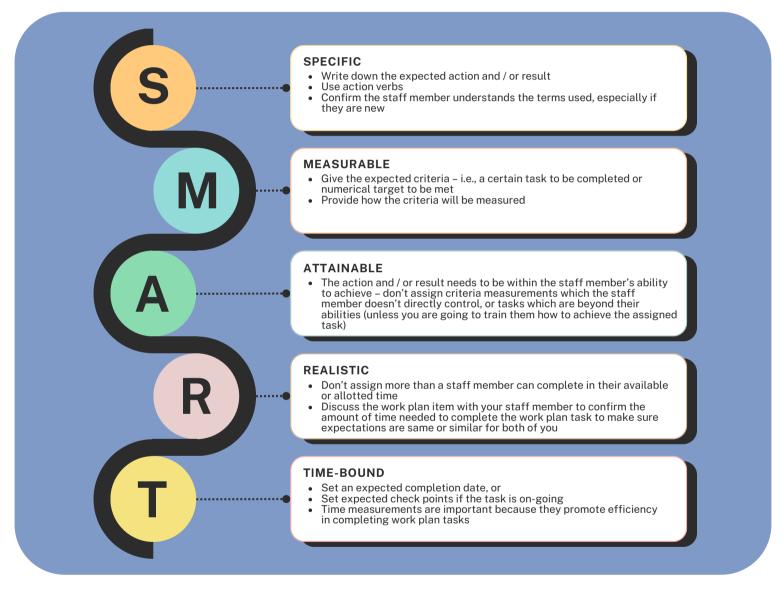


USING SMART GOALS IN STAFF WORK PLANS

Technical Update courtesy of OHIO LTAP Local Technical Assistance Program

How you write a work plan goal directly impacts your ability to measure the goal's successful completion. There is a process you can follow to make the work plan goals you write understandable and objectively measurable.

The process is explained by the acronym SMART –**S**pecific, **M**easurable, **A**ttainable, **R**ealistic and **T**ime-bound.



Getting the work plan tasks down on paper is probably the hardest part of drafting a work plan. Editing is much quicker. Don't worry so much about following the SMART process when you write down your original tasks. Take the time when you edit the tasks to then rephrase them to meet the SMART process.

A way to enhance the work plan task process is to actively engage your staff member in writing the initial task list and then helping you turn the list into the final work plan by applying the SMART process. This is great for staff member engagement and ownership of the plan. It also helps more seasoned staff members apply their expertise in your field to the work plan's creation. Last, but not least, it allows you to begin training staff who are interested in eventually managing others on how to create work plans someday for their staff.

NEW HAMPSHIRE STREAM CROSSING REPLACEMENT PRIORITIZATION



Stream crossings (i.e. culverts and bridges) play a pivotal role in connecting human and wildlife communities, with roughly 20,000 structures dotting New Hampshire alone. Many of these crossings are aged or failed, exacerbating stream fragmentation and flooding risks, yet resources to manage these assets are often limited and scattered across stakeholders. Funded through the American Rescue Plan Act (ARPA) and in collaboration with New Hampshire Department of Environmental Services (NHDES) and the <u>New Hampshire Stream Crossing Initiative</u> (NHSCI), the University of New Hampshire (UNH) is pioneering the Stream Crossing Replacement Prioritization Project to develop a stakeholder-informed prioritization framework for stream crossing replacements that aims to identify win-win management scenarios that will balance road safety, ecosystem restoration, climate resiliency, aquatic organism passage, and cost. The project encompasses two components:

Stream Crossing Field Assessment

Over the summers of 2022 and 2023, UNH teams assessed over 4,000 stream crossings for geomorphic compatibility, hydraulic capacity and aquatic wildlife passage using standardized methods developed by the NHSCI. Thanks to this effort, all accessible stream crossings within the Merrimack River and Salmon Falls-Piscatagua River watersheds have been assessed, setting the stage for data-based decision making. Previous assessment efforts led by other entities have been limited by field personnel and supervisory capacity and typically only accomplish 100 to 300 assessments per year. The complete stream crossing dataset, which currently accounts for over 70% of New Hampshire's stream crossings (and counting!), can be accessed through NHDES' Aquatic Restoration Mapper.



Stakeholder-informed Prioritization

Despite a robust stream crossing data set, New Hampshire lacks a uniform stream crossing replacement prioritization process. The second phase of this UNH partnership project, which is underway, is rolling out an extensive engagement process to elicit feedback from a diverse group of stakeholders at the local and state level that can inform the development of a stream crossing prioritization model and interactive planning tool utilizing the stream crossing assessment data. UNH is engaging stakeholders through a survey to understand their perspectives, priorities, and preferences to inform a prioritization framework that will facilitate the identification of win-win stream crossing management projects. By participating in this survey, launched on March 25th, together, we can achieve optimal ecological, economic, and societal outcomes through collaborative effort and shared knowledge. Don't miss this chance to make a tangible difference in our state's transportation system! A short presentation about the project can be found here.

Direct any questions to Polly Crocker, NDHES Watershed Management Specialist, (pauline.f.crocker@des.nh.gov) and/or Koorosh Asadifakhr, PhD student at the UNH College of Engineering, (koorosh.asadifakhr@unh.edu).

NEW HAMPSHIRE STREAM CROSSING REPLACEMENT PRIORITIZATION

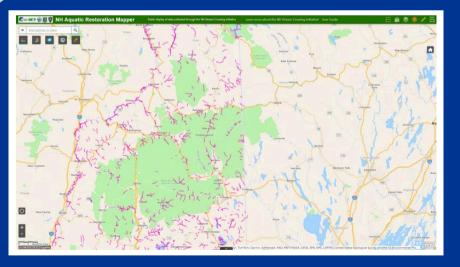


Environmental

New Hampshire Stream Crossing Initiative website

Public display of data collected through the NH Stream Crossing Initiative

New Hampshire Stream Crossing Initiative website

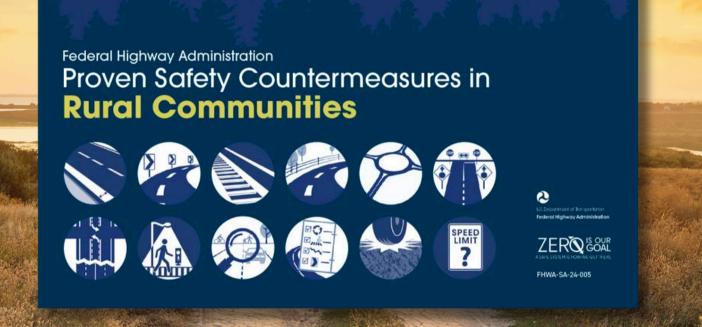


NH Aquatic Restoration Mapper

Public display of data collected through the NH Stream Crossing Initiative

NH Aquatic Restoration Mapper





FEDERAL HIGHWAY ADMINISTRATION PROVEN SAFETY COUNTERMEASURES IN RURAL COMMUNITIES

The Federal Highway Administration (FHWA) has identified 28 Proven Safety Countermeasures (PSCs) to reduce fatal and serious injury crashes on roads nationwide. These PSCs are applicable for a range of contexts, road types, and governing agencies across the country. The PSCs can offer significant and measurable impacts across an agency's rural road network as part of their approach to improving safety.

The PSCs can support agencies with implementation of the Safe System Approach, which seeks to build and reinforce multiple layers of protection to both prevent crashes from happening and minimize the harm caused to those involved when crashes do occur. Implementing a Safe System Approach requires collaborative engagement among a diverse group of stakeholders to increase safety for all road users. Accordingly, agencies should consider how the PSCs and National Highway Traffic Safety Administration's

(NHTSA) Countermeasures that Work4 can create a system with redundancies in place to protect all road users.



NEWRCE RESOURCE

> DOWNLOAD THE FEDERAL HIGHWAY ADMINISTRATION PROVEN SAFETY COUNTERMEASURES IN RURAL COMMUNITIES



LET US KNOW HOW WE CAN HELP YOU APPLY FOR THIS IMPORTANT **FUNDING!** EMAIL MARILEE.ENUS@UNH.EDU

Safe Streets and Roads for All (SS4A) Grant Program

Learn more about the SS4A grant program.

S



https://www.transportation.gov/grants/SS4A



Road Business Word Search

Congrats to the winner from the last Road Business newsletter!

Chris T.

I	В	G	R	Α	V	Е	L	W	G	т	Ρ	S	R
Ν	Е	L	E	R	S	V	I	L	G	т	R	0	н
Ν	Α	Е	I	0	Μ	В	С	Ο	R	0	U	К	E
0	F	т	Ν	I	S	S	Α	S	Α	Ν	E	L	L
V	W	С	Н	0	т	Y	R	т	D	Μ	L	Α	Ν
Α	Α	Α	В	Α	Ζ	E	Ν	Α	E	D		W	Е
т	S	D	I	R	Е	K	В	т	R	L	G	S	S
1	Ν	н	I	R	U	0	R	S	E	Ν	Н	S	R
0	I	В	Ε	U	U	Ν	G	0	U	т	Ε	0	т
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L	С	К	т	R	L	Т	S	Ι	R	Ρ	В	Α	R

GUARDRAIL	CROSSWALK	ROUNDABOUT
CHAINSAW	GRAVEL	GRADER
GEOSYNTHETIC	WORK ZONE	INNOVATION

SUBMIT YOUR COMPLETED ENTRY TO T2.CENTER@UNH.EDU BY 6/20/2024 FOR A CHANCE TO WIN A FREE WORKSHOP SEAT!

U.S.Department of Transportation Federal Highway Administration



Unmanned Aerial Systems (UAS) New Web-Based Training

FHWA, through the National Highway Institute, is pleased to announce the creation of free web-based training on the use of Unmanned Aerial Systems (UAS). There are 16 individual training sessions focusing on specific use cases and each session may be completed online. Feel free to take only the courses you need or enroll in all 16 and gain a well-rounded understanding of the full capabilities of UAS to support surface transportation asset management. Each course can be found by clicking the link below and searching "UAS".

FHWA - National Highway Institute Catalog $\,\,$

DID YOU KNOW? TECH TIP

Microsoft Excel has a 3D Map tool that can be used to map out coordinates.



Please contact <u>lee.cooper@unh.edu</u> for more information.

Upper Valley Lake Sunapee Regional Planning Commission selected for \$1.18 million USDOT grant



READ THE PRESS RELEASE HERE $igodoldsymbol{Q}$

2024 BUILD **A BETTER** MOUSETRAP **Innovation Competition**



Did you or your team build an innovative gadget, improve how you do a certain job or task, or otherwise implement a change that had a positive impact to your workplace or community? Did you solve a challenge or frustration with ingenuity?

WE WANT TO HEAR FROM YOU!

WHAT IS A BETTER MOUSE TRAP?

It could be any improvement, enhancement, tweak or tinker that results in a creative solution (innovation!) to solve an issue, save time or money, fix what was a clunky process, or make work safer or more efficient. From tooling to process and equipment - your innovation could help other public works teams!

Submissions are eligible for the monthly drawing raffle, and importantly, can help another public works team work better, safer, and more efficiently!

2024 NH PROGRAM WINNER'S CHOICE OF ONE:

- APWA membership for up to 2 people
- Heavy equipment training & lunch for 4 from UNH T2
- 4 free UNH T2 workshop seats (up to \$400 value) & 4 APWA First **Responder camp chairs**

Monthly drawings for free workshop seats or a PW First Responder hoodie!

NH ENTRIES NEEDED BY 5/31 FOR FHWA'S



Questions? Contact Lee.Cooper@unh.edu or scan the QR code



Visit our website t2.unh.edu



New Hampshire

Build a Better

National Recognition Program for Transportation Innovation



ASK OUR TECHNICAL SPECIALIST

We're pleased to provide personalized technical assistance to NH municipal highway departments via phone, email, or special site visits to assist you with a variety of topics, such as drainage issues, gravel roads maintenance, pavement condition, roadway safety opportunities, and asset management. We also provide technical assistance for operational and administrative functions such as workforce development and software applications.

Although we can't provide design work, we're happy to provide considerations, resources, and guidance to assist municipalities in maintaining their road infrastructure and leading successful departments and teams. Let us help you solve a roadway riddle!

If you would like to speak to someone about receiving technical assistance or a roadway condition or safety audit on any matter, please contact the UNH T2 Center at (603) 862-1362 or email T2.Center@unh.edu

2024 FREEBIE FEATURES NOW AVAILABLE

Are you employed by a local road agency and would like to attend high-quality training and receive NH Roads Scholar hours, virtually at your own pace on your own time, FREE?

A new Freebie Feature will be open for registration each month.



ROAD SAFETY ADVOCATE PROGRAM



7 REQUIRED COURSES

ALL COURSES ARE VIRTUAL

May 7 RSAP Module 1 Introduction to Road Safety

June 6 RSAP Module 2 Anatomy of the Crash Understanding Human Factors

July 10 RSAP Module 3 Introduction to Traffic Safety Culture

August 6 RSAP Module 4 Overview of the MUTCD

September 11 RSAP Module 5 Intersection of Transportation with Public Health and Law Enforcement

October 2 RSAP Module 6 Reading the Road for Safety

November 6 RSAP Module 7 Safety Analysis Process

FINAL PROJECT



Develop a Local Road Safety Plan for your municipality.

The development and presentation of the communityspecific LRSP is the final requirement in the NH Roads Scholars Local Road Safety Advocate certificate.

ROAD SAFETY ADVOCATE CERTIFICATE



When all requirements are met, participants will be awarded a Road Safety Advocate certificate in the NH Roads Scholar achievement program!

VISIT THE RSAP WEBSITE

NH PUBLIC WORKS LEADERS AND TEAMS RECOGNIZED FOR THEIR EXCELLENCE

The sounds of claps and cheers were heard loudly at the May 9th NH Public Works Association Annual Meeting in Manchester, when New England American Public Works Association (NEAPWA) chapter President Tom Roy presented awards on behalf of NEAPWA to Meghan Theriault (Gilford DPW), Thomas Carrier (Derry DPW), and the Bedford DPW team. Surrounded by their peers from both the municipal and private sectors, each came up to accept a plaque and be honored for their achievements in the NEAPWA 2024 NH state award program. Theriault was named the 2024 New Hampshire Public Works Leader of the Year, Carrier 2024 New Hampshire Public Works Supervisor of the Year, and Bedford DPW was recognized as the NH Outstanding Public Works Department of the Year.





NEAPWA President Tom Roy (right) presents Meghan Theriault (left) with a plaque recognizing her achievement as NH's Public Works Leader of the Year

driving force behind NH Construction Career Days for over a decade, introducing hundreds of high school students to career paths in construction and transportation each year.

Carrier has been at the forefront of planning for providing safe municipal water to the residents of Derry. He was instrumental in reviewing the capacity of the municipal water and sewer system and coordinating with NHDOT and NHDES to bring areas of town that had wells contaminated by MTBE on to the municipal water system, without any cost to Derry rate payers. Carrier is also coordinating several significant and regionally-impacting water and waste water system expansion and renovation projects taking shape in Derry and totaling over \$50 million in potential project costs.



NEAPWA President Tom Roy (left) presents Thomas Carrier (right) with a plaque recognizing his achievement as NH's Public Works Supervisor of the Year





Bedford DPW was recognized by NEAPWA as NH's Outstanding Public Works Department of the Year

In 2022 the Bedford Public Works Department became the first agency in NH to receive APWA Accreditation. Other highlights of the department's successes include presenting a project for a 1 MW solar array and installation of electrical trash compactors to their capped landfill and transfer station, a \$4 million project that is proceeding to design and permitting for construction later this year or early 2025. The solar array is expected to fully offset the Town's electrical usage and the conversion to trash compactors will reduce the staffing required to manually compress trash into open box trucks. Additionally, the project is expected to offset 1,225,848 lbs. of CO2 annually, reduce equipment repair and replacement costs, and significantly improve safety at the facility. The department has also been instrumental in developing new recycling programs including for food composting and other community recycling partnerships. In

addition, the Bedford DPW team hears positive feedback on its community communication and engagement, including its newsletters, permitting portal, construction website, and development of innovative applications in support of asset management and work order tracking.



About the New England Chapter of the American Public Works Association (APWA):

The New England Chapter of APWA is committed to promoting professional excellence and public understanding through education, advocacy, and the exchange of knowledge. The Chapter serves over 800 members throughout the New England region. For more information, visit <u>New England</u> <u>APWA.</u>



About the NH Public Works Association (NHPWA):

The NH Public Works Association is a state association committed to serving public works professionals throughout New Hampshire. The association is dedicated to promoting professional excellence and public understanding through education, advocacy, and the exchange of knowledge. For more information, visit <u>NHPWA.</u>