



NEW HAMPSHIRE MUNICIPAL ASSOCIATION



Alien Invasion: Preventing Aquatic Invasive Species in Your Local Waterbodies

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Our Presenters



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How to Participate Today



- Open and close your Panel
- Submit text questions
- Q&A addressed during today's session

A screenshot of the GoToWebinar interface. The top window is titled "Audio" and contains the following elements: a menu bar with "File", "View", and "Help"; a "Panel" icon (a square with a right-pointing arrow) highlighted by a red arrow; "Audio Mode:" with two radio buttons, "Use Telephone" (unselected) and "Use Mic & Speakers" (selected); a "MUTED" indicator with a microphone icon and a volume level bar with 10 green segments; and a "Send" button. Below the "Audio" window is a "Questions" window, also highlighted with a red border. It contains a large text input area with the placeholder text "[Enter a question for staff]" and a "Send" button. At the bottom of the interface, there is a promotional banner for "Start Holding your Own Web Events with GoToWebinar" with the "Webinar ID: 977-124-241" and the "GoToWebinar™" logo.



Webinar Agenda



- Introduction/Overview
- State of the State of AIS in New Hampshire
- Key AIS Species of Concern
 - Aquatic plants
 - Aquatic animals
 - Terrestrial plants
- State AIS Mantra/Approach Overview
 - Prevention
 - Early Detection
 - Rapid Response
 - Long-Term Management
- What a municipality can do now to get involved in AIS prevention
 - Boat Wash Stations
 - Local Ordinances
- Questions/Discussion



Five key elements of the New Hampshire program



- 1) Prevention of new infestations through education and outreach;
- 2) Monitoring for early detection of new infestations;
- 3) Control of new and established infestations;
- 4) Research towards new control methods;
- 5) Regional/national cooperation with other exotic species programs.



State-Level Program Implementation



State agencies have authority under both legislative mandate and administrative rules to implement various components of state programs addressing invasive species, namely:

- ❑ The Department of Environmental Services implements the Exotic Species Program for invasive aquatic plants.

- ❑ Amy Smagula at amy.smagula@des.nh.gov

- ❑ The Department of Agriculture implements the Invasive Species Committee to address terrestrial invasive plants and insects

- ❑ Doug Cygan at douglas.cygan@agr.nh.gov

- ❑ The Fish and Game Department implements programs and activities related to invasive animals on land and in water

- ❑ Scott Decker at scott.decker@wildlife.nh.gov



Non-Profits and Others

- Many non-profit organizations in New Hampshire implement their own programs and activities related to invasive species in the state, namely:
- NH LAKES - focused on prevention activities, outreach, education and advocacy
- New Hampshire Rivers Council- focused on early detection, outreach, advocacy
- Individual lake associations statewide volunteer for prevention and early detection activities, and raise funds for local initiatives
- Garden clubs, scouts, fishing organizations, conservation groups, and many more volunteer time and resources to work on issues related to invasives species.





State of the State of AIS in NH



Aquatic Invasive Species (AIS) Infestation in New Hampshire



Exotic Aquatic Species in NH

89 infested waterbodies

- 11 Rivers
- 77 Lakes and Ponds

108 infestations

- Some waterbodies have more than one species, a few have as many as 6 different invasives



Legend

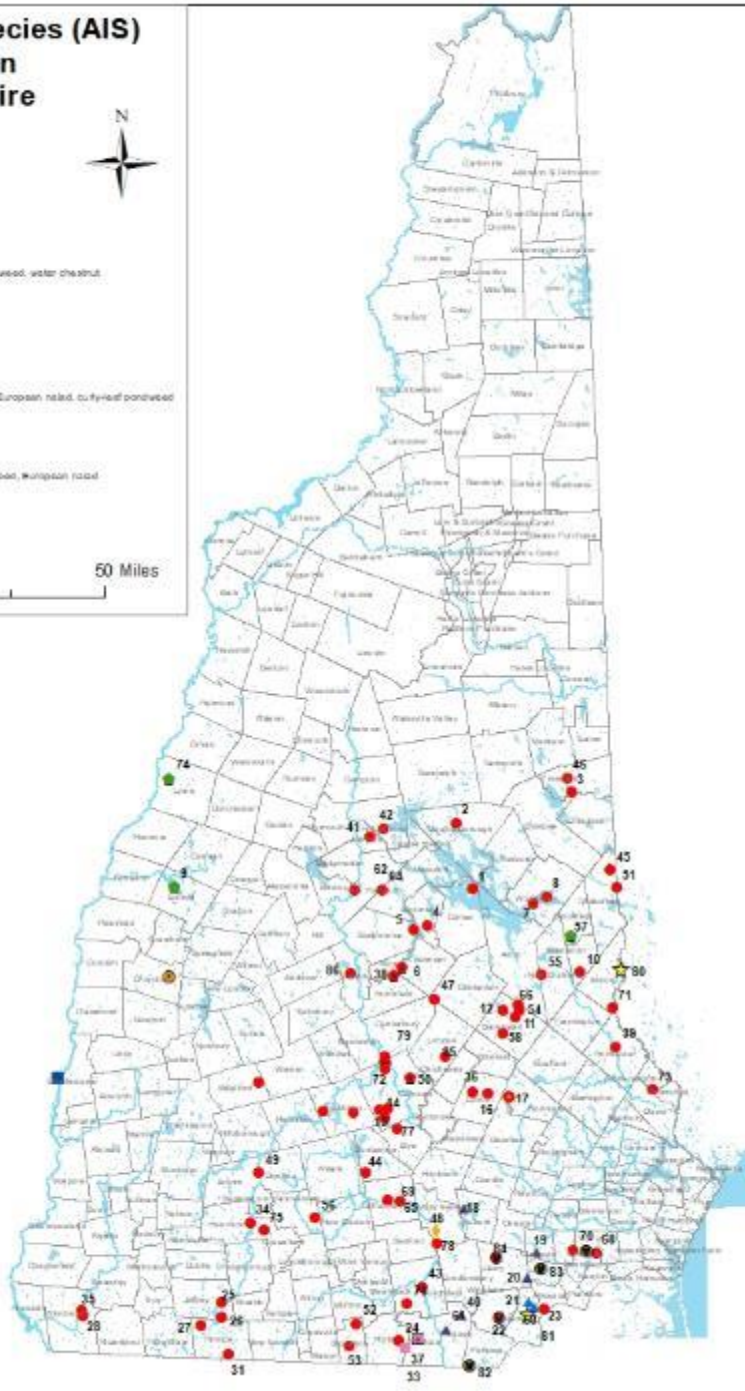
AIS Infestations

Type

- Asian clam
 - Brazilian elodea
 - Curlyleaf pondweed
 - Eurasian milfoil
 - European reed
 - Hornwort
 - Variable milfoil
 - Variable milfoil, Asian clam
 - Variable milfoil, Curlyleaf pondweed
 - Variable milfoil, Eurasian milfoil, hornwort, water chestnut, European reed, curlyleaf pondweed
 - Variable milfoil, European reed
 - Variable milfoil, curlyleaf pondweed
 - Variable milfoil, hornwort
 - Variable milfoil, hornwort, European reed, curlyleaf pondweed, European reed
- Town boundaries polygons
 NH Hydrography polygons
 State Boundary

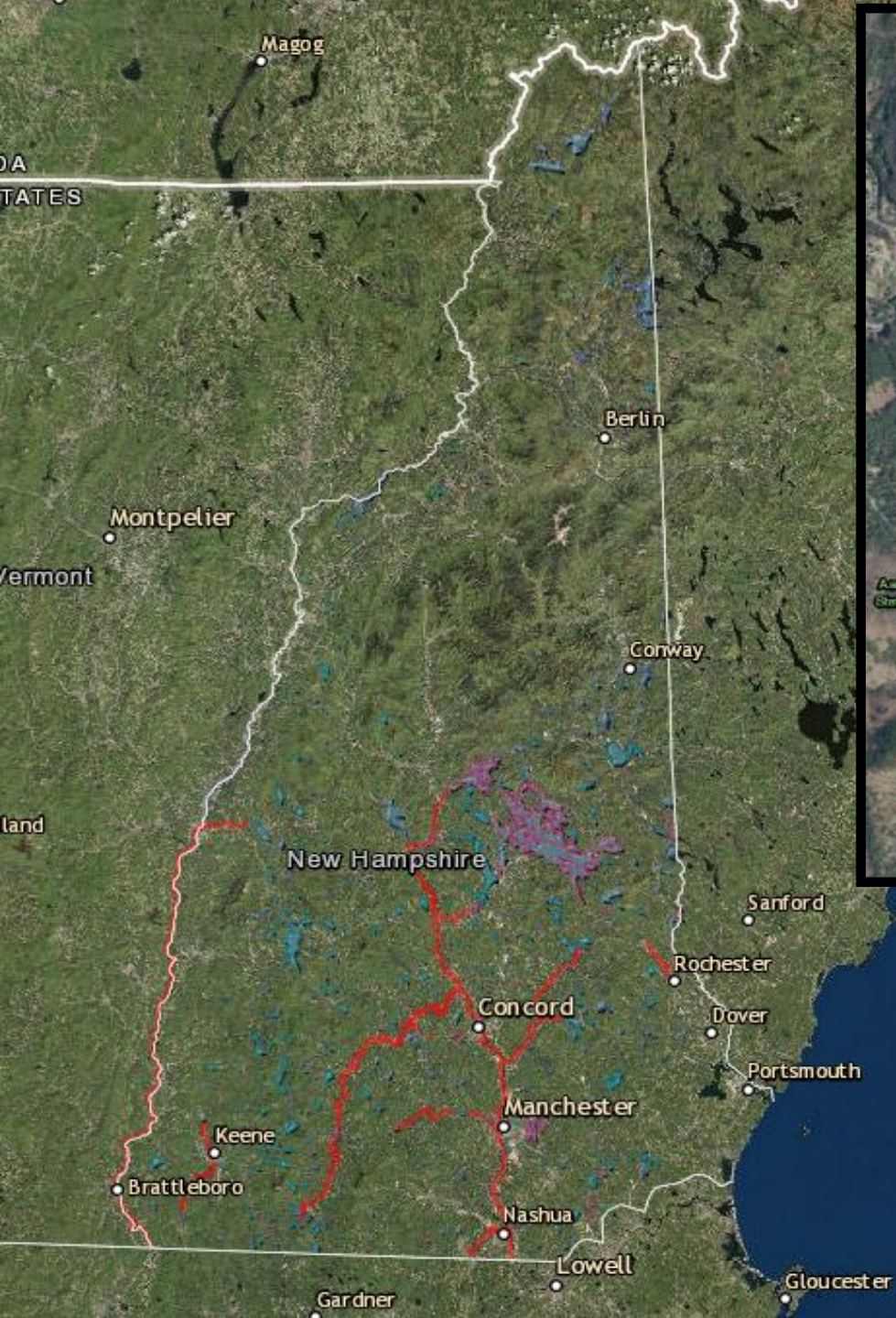


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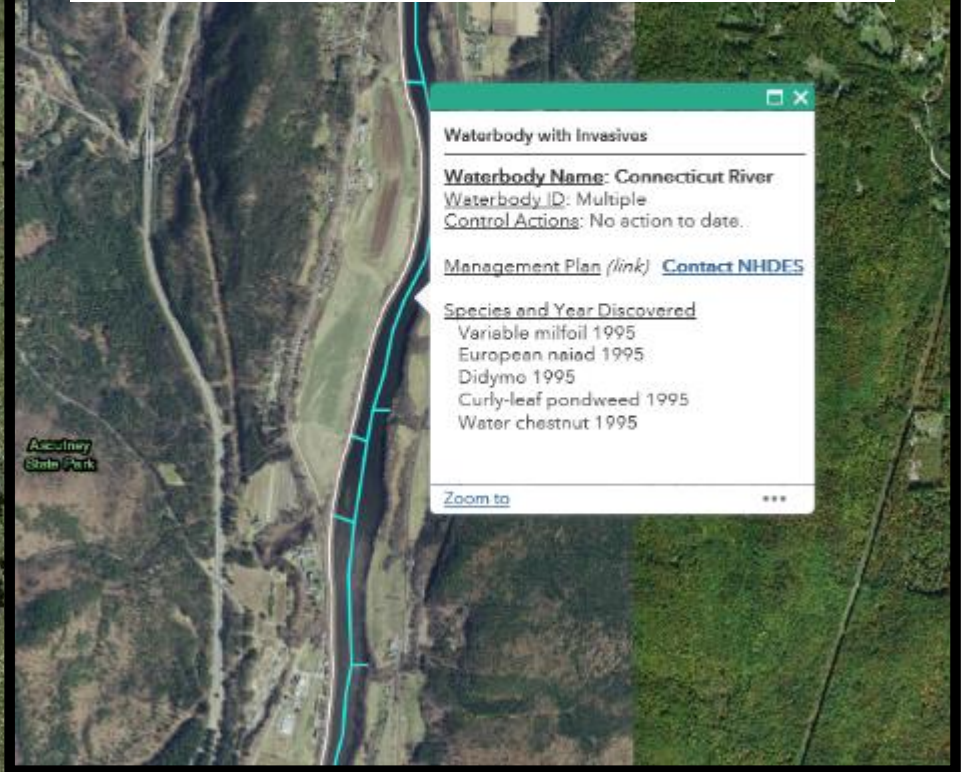


Map prepared by NH DES
Exotic Species Program
Updated October 2017

Numbers correspond to separate key which lists waterbody name and town.



If you zoom in on the map and click on a waterbody, a dialogue box will pop up and show list of infestations and reports.



[NHDES Lake Mapper App:](http://nhdes.maps.arcgis.com/apps/webappviewer/index.html?id=1f45dc20877b4b959239b8a4a60ef540)
<http://nhdes.maps.arcgis.com/apps/webappviewer/index.html?id=1f45dc20877b4b959239b8a4a60ef540>



Key Species of Concern



Hydrilla



Curly-leaf pondweed



Eurasian milfoil



Common Invasive Aquatic Plants

Variable milfoil



Fanwort



Spiny water flea



Zebra mussel



Ohio Sea Grant

Chinese mystery snail



Common Aquatic Invasive Animals

Asian clam



Oriental bittersweet



Glossy buckthorn



Common Terrestrial Invasive Plants



Giant hogweed

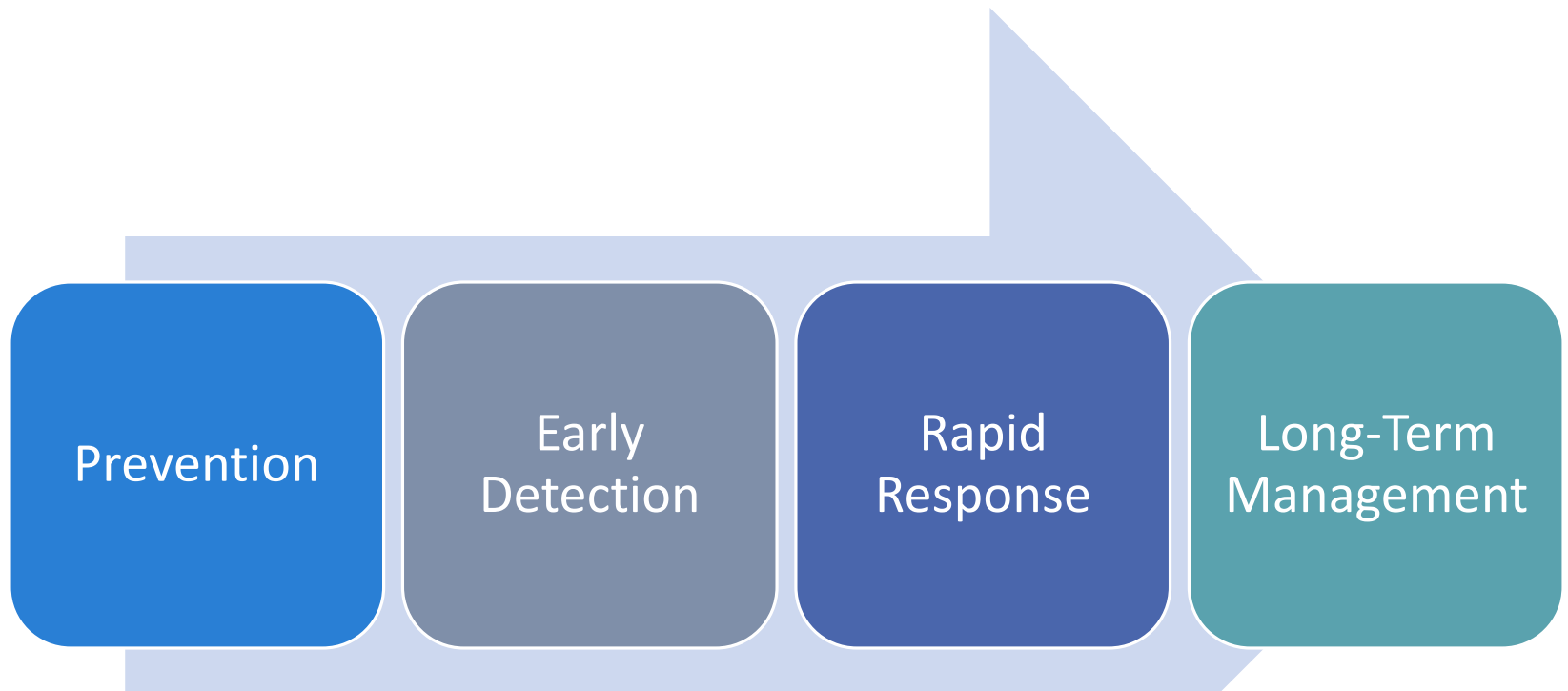


Japanese knotweed

Key Approaches/ Initiatives



Addressing the Problem of Invasives



- Prevention and early detection are far easier and cheaper than long-term management
- Infestations do happen, but it is best to find them early, when eradication is most feasible
- Most eradication success stories are those tied to infestations that are found early, when they are small patches or single stems
- Long-term management can reduce large-scale and complicated infestations to less than 10% of a vegetation matrix in a waterbody, but costs are high and routine maintenance is needed.

Prevention

Laws & Rules

Signage

Lake Hosts

Boat Washing &
Cleaning

Ordinances



Prevention Laws & Rules

Under current state law, any boat last used in a NH waterbody should have been cleaned (no visible plants and animals) and drained before arriving at the next waterbody.

PULL THE PLUG ON AQUATIC HITCHHIKERS!

You can help keep New Hampshire a boating paradise.



Brought to you by the Lake Host
Program of NH LAKES.
(603) 226-0299 info@nhlakes.org



PULL THE PLUG on Aquatic Hitchhikers!
Arrive
CLEANED, DRAINED & DRY!
www.nhlakes.org



Prevention Laws & Rules

No person shall negligently transport any aquatic plants or plant parts or exotic aquatic weed or weed parts to or from any New Hampshire waters on the outside of a vehicle, boat, ski craft as defined in RSA 270:73, trailer, or other equipment.

[NH RSA 487:16-c effective January 1, 2017.]



Prevention Laws & Rules

No person shall import, possess, sell, exhibit, or release any live marine species or wildlife, or the eggs or progeny thereof, without first obtaining a permit from the NH Fish and Game Department's Executive Director. (RSA 207:14)



Prevention Laws & Rules

No person shall be issued a permit to import (Fis 803.03 & Fis 803.04(b)) or possess (Fis 804.03) the following designated prohibited wildlife:

Zebra mussels, Spiny waterflea, Asiatic clam, & others



Prevention Law & Rules

When leaving waters of the state, a person shall drain his or her boat and other water-related equipment that holds water, including live wells and bilges.

Drain plugs, bailers, valves, or other devices used to control the draining of water from ballast tanks, bilges, and live wells shall be removed or opened while transporting boats and other water-related equipment, if the vessel is so equipped.

[NH RSA 487:16-d effective January 1, 2017.]



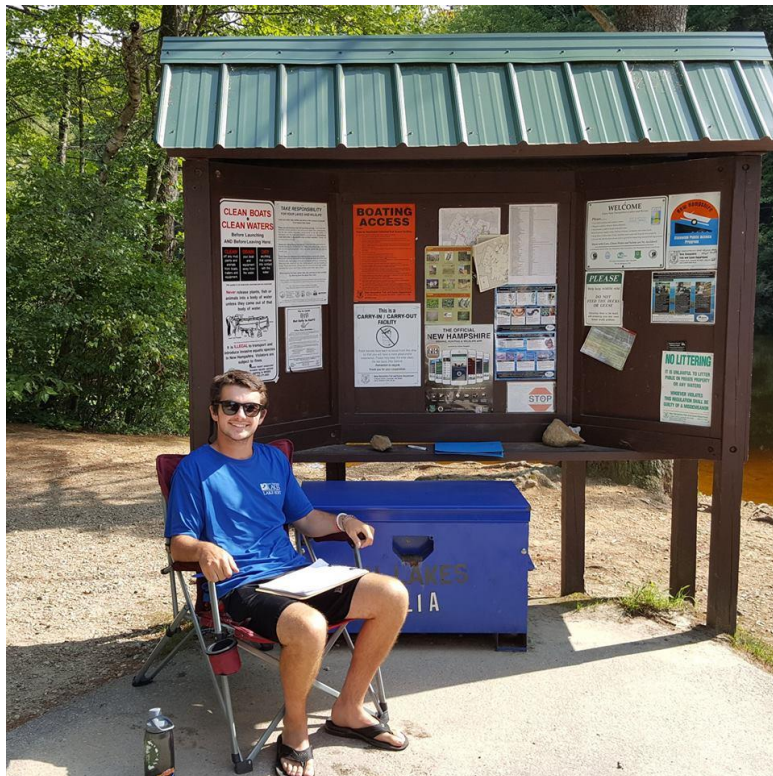
Signage



Signage



Lake Hosts



The Lake Host™ Program is a courtesy boat inspection program administered by NH LAKES in cooperation with local participating groups to prevent the introduction and spread of aquatic invasive species, plants and animals, from waterbody to waterbody.



Lake Hosts

- Program began in 2002
- Educate visiting boaters about aquatic invasive species (plants and animals)
- Conduct a brief boater survey
- Teach boaters the “Clean, Drain & Dry” method for preventing the spread of aquatic invasive species
- Conduct courtesy boat and trailer inspections to remove all hitchhiking aquatic invasive species and native species, too
- Remind boaters to always open/remove drain plugs before trailering from the ramp and to leave all drain plugs open/out while transporting
- Send suspicious species fragments to the New Hampshire Department of Environmental Services for identification



Lake Hosts

- This summer, we will conduct our one-millionth inspection
- Lake Hosts have made 1,600 'saves' of AIS trying to hitchhike into or out of a NH waterbody

Are the ramps in your community protected by the Lake Host Program? If not, contact NH LAKES to set up a program!



Early Detection

Early detection is key in finding infestations before they become widespread. This can be done in many ways, including:

- ❑ Vigilant citizens report suspicious species to the appropriate authority
- ❑ Trained volunteers monitor designated habitats for early detection
 - ❑ NHDES Weed Watcher Program
- ❑ State biologists monitor resources while they are performing routine work activities in the field



Rapid Response

Quickly responding to new infestations

- Most agencies will ask for voucher specimens, either specimens or photographs, based on what is appropriate/easiest
- Upon verification, staff biologists will conduct site inspections to map the extent of growth
- Immediate and appropriate control actions will resume, with the goal of containment and eradication where feasible



Willand Pond Dover



Legend

- Willand 061412 Events



Popular fishing area

Access Site



Willand Pond Dover

Legend

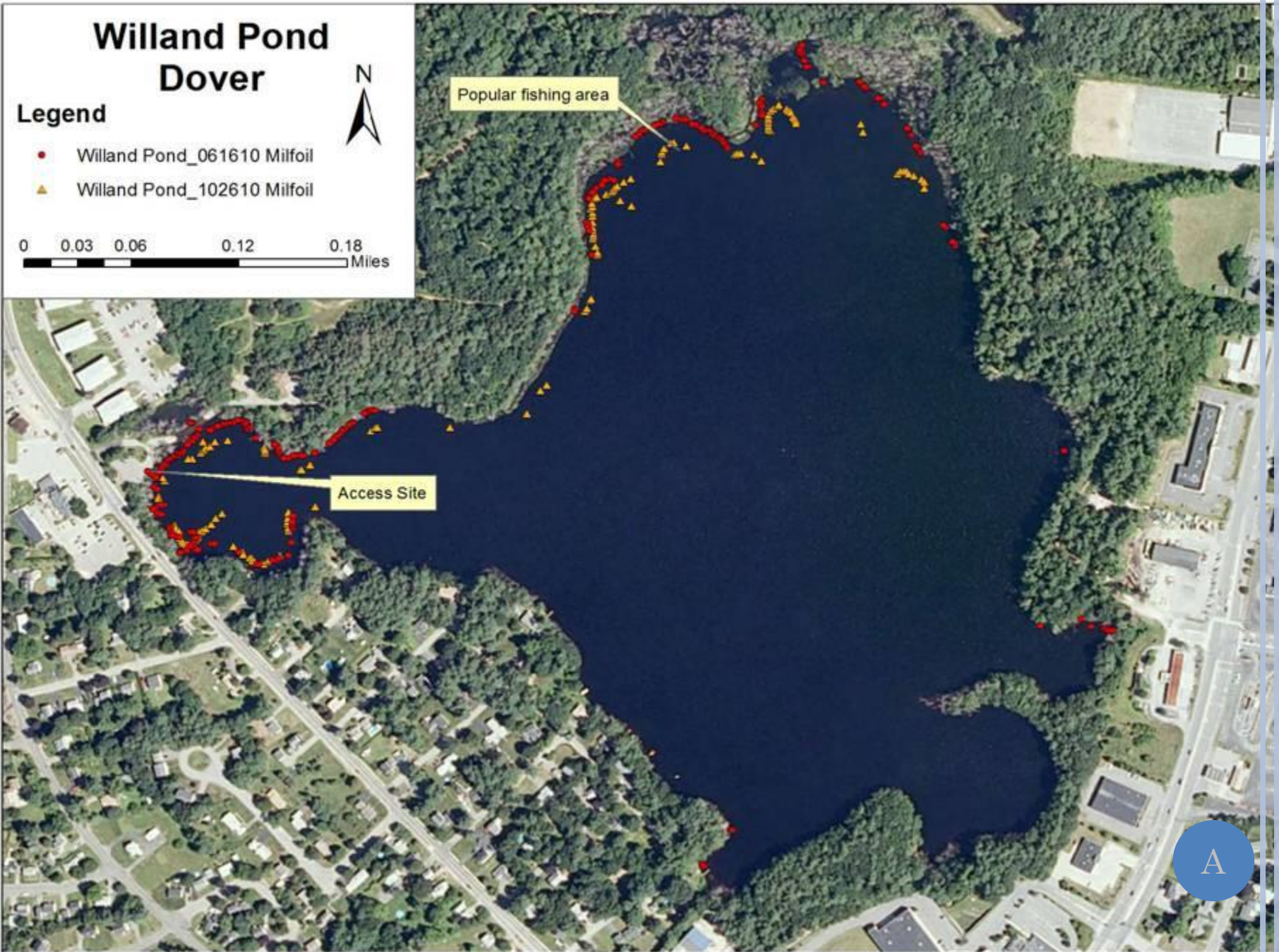
- Willand Pond_061610 Milfoil
- ▲ Willand Pond_102610 Milfoil

0 0.03 0.06 0.12 0.18 Miles



Popular fishing area

Access Site



AIS Manager's "Tool Box"

Containment/Quarantine

- Prevent further spread

Physical control

- Physically removing by hand, picking, capturing, benthic barriers, etc.

Mechanical control

- Cutting, digging

Chemical control

- Herbicides, pesticides, insecticides, fungicides, molluscides

Biological control

- Introducing a species to control another species



Long-Term Management

- The earlier an infestation is report and addressed, the quicker it can be managed
- In some cases, projects are complex, and involve long-term commitment for management. In those cases:
 - A long-term management plan is prepared
 - A local invasive species group is formed with concerned citizens and municipal entities
 - Local funding will be needed



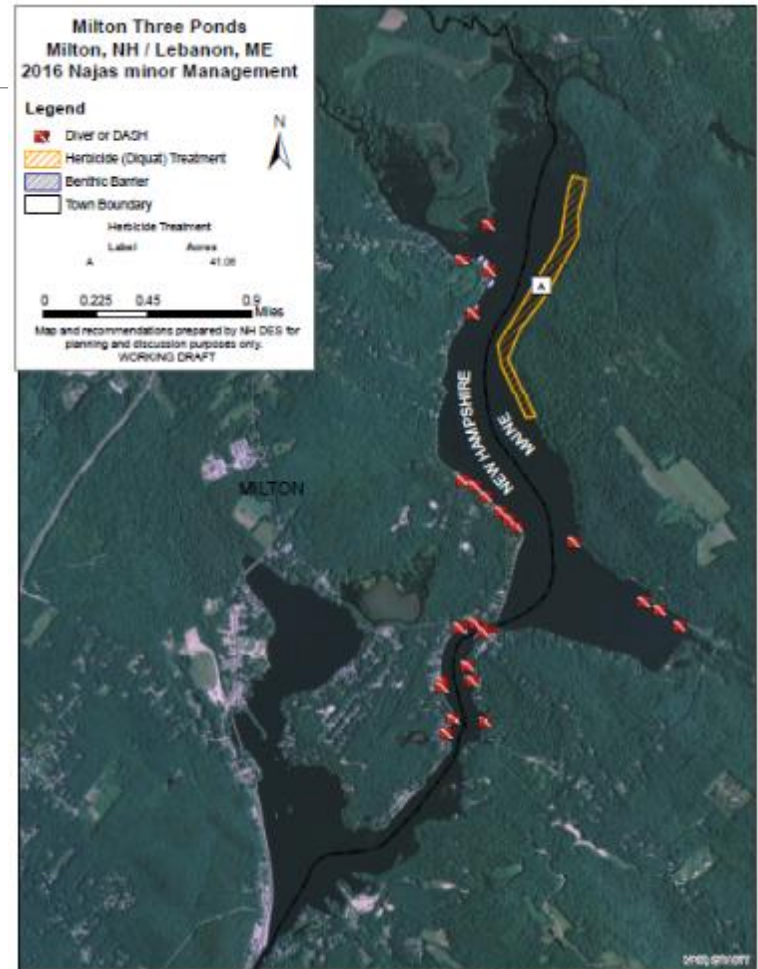
Elements of a Management Program

All infested waterbodies in NH have a long-term management plan tailored to them

Integrated Pest Management Strategies are employed

Emphasis on “adaptive management”

- Dealing with an invasive species that is adaptable
- The best laid plans don't always work due to too many variables working with natural systems that are infested/invaded



Funding

- NHDES pays 100% of brand new infestation management
- Follow-up management requires local match dollars
 - Best to establish a trust fund or non-lapsing and continually appropriate fund on the town level
 - Line item budgeting
 - Warrant articles



Stepped-Up Prevention Options

BOAT WASH STATIONS AND LOCAL ORDINANCES



Boat Washing & Cleaning

- Technologies and methodologies to:
 - Assist with clean, drain and dry practices
 - Cold or warm water, low pressure washes
 - Help from tools or cleaning stations
 - Decontaminate boats (the highest level risk reduction)
 - Hot, high pressure water
 - 140 degrees Fahrenheit for external components, 120 degrees Fahrenheit for internal flushing



Boat Washing & Cleaning



Boat Washing & Cleaning



Boat Washing & Cleaning



High Priority Sites for AIS Cleaning/Wash Stations



Sites in or near
State Parks



The “Big Six”



Waterbodies
infested with
invasive animals



NH LAKES Next Steps for Implementation

NH LAKES to develop a voluntary pilot program

Ramp owners can select, install, operate

Funding source & state law

Required by the 2018 NHDES Lake Host grant



Madison, NH Ordinance

**INVASIVE AQUATIC PLANT ORDINANCE
TOWN OF MADISON, NEW HAMPSHIRE
Revision #1
Originally Adopted January 31, 2006**

Section 1. PURPOSE

Pursuant to RSA 41:11-a, the purpose of this Ordinance is to prevent the introduction of invasive aquatic plants into Silver Lake in the Town of Madison, New Hampshire. Protecting the public and private economic resources, the bird and fish wildlife habitat, and the natural beauty of our lake is of prime importance to the overall welfare of our community. It only takes a small fragment of exotic species to infest and ultimately destroy a lake.

Section 2. REQUIREMENTS

This Ordinance requires that all motorized boats and trailers be thoroughly inspected and washed down before entering the lake. Per the Notice of Regulations - Town Properties (Rev. 8 dated 6/15/04) the Boat Ramp is the ONLY public approved launching site on Silver Lake for motorized boats. It is unlawful to launch a motorized boat or boat trailer from any other Town property.

Section 3. IMPLEMENTATION

The Town of Madison, in conjunction with the SLAM (Silver Lake Association of Madison) organization, has constructed a boat and boat trailer wash station at the Town's Boat Ramp site on East Shore Drive. This station has an extensive drainage bed, pump house, and pressure washer. It is manned everyday from Memorial Day weekend until Labor Day by designated Lake Hosts under the direction of a Point Person. The Lake Hosts have been trained by the State of New Hampshire to inspect boats and their trailers in search of invasive plant life and to thoroughly wash them down prior to entering the lake. In addition, a regular garden hose has been provided on the side of the pump house for use during non-operating hours. Signs indicate that it is required to self-inspect and wash down all boats and boat trailers when the Station is unattended. Removal of any signs or postings at the Boat Ramp is unlawful.



NH LAKES Model Ordinance



Section 1. PURPOSE

Pursuant to RSA 41:11-a, the purpose of this ordinance is to prevent the introduction and spread of aquatic invasive species into (or out of) [Insert Lake Name] within the Town(s)/City(s) of [Insert Municipality Name], New Hampshire.

Protecting the public and private economic resources, wildlife, and the natural beauty of the lake is paramount to the overall welfare of the community. One small fragment of plant matter or one microscopic animal larvae can infest a lake with an aquatic invasive plant or animal that can be nearly impossible to eradicate. Infestations of aquatic invasive species degrade water quality, reduce property values, hinder recreation, reduce tourism, and are expensive to manage.

Section 2. REQUIREMENTS

This ordinance requires that all watercraft and trailers entering or exiting the lake at the [Insert Name] boat launch facility be subject to the aquatic invasive species prevention treatment options provided at that site or as instructed there (by an attendant or as described in writing), in order to use this boat access facility to access or exit the lake. Treatment options may include adherence to, and inspection confirmation of clean, drain, and dry practices, up to and including a hot water, high pressure wash treatment (if made available).

The requirements of this ordinance are in addition to state law requirements relative to the transport of aquatic plants or exotic aquatic weeds on the outside of boats, vehicles, and equipment (RSA 487:16-c) and draining of water conveyances (RSA 487-d).

Section 3. IMPLEMENTATION

The best available treatment option for the prevention of aquatic invasive species is a hot water, high pressure wash of the watercraft, trailer, and any associated equipment. The next best available treatment option is a low pressure wash from a hose with the warmest available water. If no wash treatments are available, the next best treatment option is a cleaning station with tools to clean, drain and dry. If no wash station or cleaning station are available, the next best treatment option is towel cleaning and drying the watercraft. Watercraft operators should always conduct a visual and tactile inspection of the watercraft to remove plant and animal fragments and to open all drain plugs when trailering.

Section 4. ENFORCEMENT AND PENALTIES

It is unlawful and in violation of this ordinance not to use the best available treatment at boat access facility at [INSERT ADDRESS] to prevent the spread of aquatic invasive species upon entering and exiting the waterbody.

Any person who violates this ordinance shall be guilty of a violation punishable by a fine of \$50 for a first offense. \$100 for a second offense. and \$250 for any subsequent offense. The authority to enforce these sections shall extend to all peace officers in the state of New Hampshire. The fine shall be paid to [INSERT APPROPRIATE AGENCY] within [INSERT NUMBER OF DAYS].



What Can Municipalities Do Now?

- Start a conversation in your town about AIS prevention and how boat cleaning/wash stations help protect waterbodies
- Educate other municipal officials about the benefits of boat cleaning/wash stations and the cost of AIS
- Gather support for a town ordinance to require boat cleaning or washing at high priority (or all) town-owned boat access sites
 - Determine who owns access sites on your waterbody!



Questions/ Discussion





PROD.

COMING ATTRACTIONS

September 19
The ABCs of RPCs

VENUE

www.nhmunicipal.org





PROD.

COMING ATTRACTIONS

October 3
Elections: From Registrations
to Results

VENUE

www.nhmunicipal.org



9:00 am—4:30 pm

Wednesday, September 12
Derryfield Banquet Facility
Manchester

Thursday, September 20
Mountain Club on Loon
Lincoln



2018

Budget & Finance Workshops

Sponsored by:



Register online at www.nhmunicipal.org under Calendar of Events

Cost is \$90 and includes continental breakfast, lunch, and a copy of NHMA's 2017 edition and 2018 supplement of *The Basic Law of Budgeting: A Guide for Towns, Village Districts, and School Districts*.

Fundamentals of the Municipal Budget Process

Using the 2017 edition of NHMA's *Basic Law of Budgeting* and the 2018 *Supplement* as a guide, this full-morning session will address all aspects of the municipal budget process focusing on appropriations, gross-basis budgeting, separate vs. special warrant articles, multi-year contracts, transfers, lapses, spending limitations, no-means-no, duties of official budget committees, disallowed appropriations, special budget requirements under the SB 2 process (official ballot voting) including recent law changes, and other topics. This session is a must for members of governing bodies, budget committees, and other local officials involved in the budget process. Ample time will be provided for questions and answers.

Presented by: Stephen Buckley, NHMA Legal Services Counsel, and Margaret Byrnes, NHMA Staff Attorney II.

How to Pay for the Budget You Want

This session will address the numerous ways to finance the municipal budget including user fees, reserve and special revenue funds, unanticipated revenue, use of fund balance, long-term debt, leases, Tax Increment Financing (TIF), and of course property taxation. The importance of multi-year planning using capital improvement plans will be explained, as well as an overview of state aid available to municipalities.

Presented by: Stephen Buckley, NHMA Legal Services Counsel and Barbara Reid, NHMA Government Finance Advisor.

Understanding the Property Tax System

This session will describe how the property tax system works, including school, county and village district components of property tax rates. Participants will better understand the difference between "assessed" and "equalized" property values, how those values are used in the tax rate setting process, and how to estimate budgetary impacts on the property tax rate in their municipality.

Presented by: Barbara Reid, NHMA Government Finance Advisor.

Data Analysis for Decision-Making

The final session of the day will explore the information and data available to municipal officials and the public on the New Hampshire Public Finance Consortium website. This Data Model was developed to provide access to consistent and timely data about New Hampshire local governments utilizing financial information reported annually by cities and towns to the Department of Revenue Administration, along with other information, with a goal of helping to analyze trends and provide relevant comparisons.

Presented by: Barbara Reid, NHMA Government Finance Advisor.





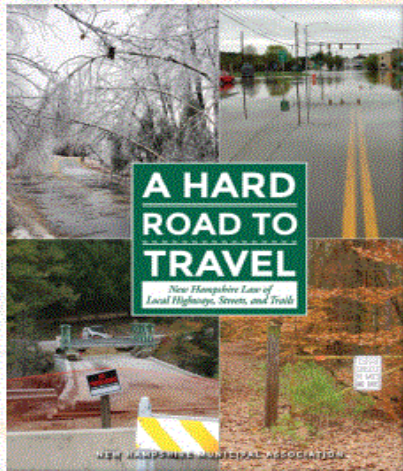
Stranger Streets: A *New* Hard Road to Travel Workshop!

If a Class VI road is washed out, can the town really do nothing?

Can public works cut trees on a scenic road?

Do there really need to be summer cottages on a "highway to summer cottages"?

Join NHMA Attorneys Stephen Buckley and Margaret Byrnes for the answers to these questions—and many more! The attorneys will discuss the “stranger” side of municipal road law, including bridges, municipal trails, sidewalk maintenance, scenic roads, highways to summer cottages, and winter roads. Ample time will also be spent on Class VI and private roads, including what municipalities—and residents—can and cannot do on these roads.



Thursday
October 4, 2018
9:00 a.m.—12:30 p.m.
Registration at 8:30 am

NHMA Offices
25 Triangle Park Drive
Concord, NH

Workshop Cost: \$60.00*

** workshop does not include publication!*

Register online at www.nhmunicipal.org under Calendar of Events

Online pre-registration required one week prior. Space is limited.

Bedford

Questions? Call 800.852.3358, ext. 3350,
or email NHMAregistrations@nhmunicipal.org





2 Right-to-Know Workshops

Each \$75 and includes breakfast and publication
NHMA offices, 25 Triangle Park Drive, Concord

The Right-to-Know Law (RSA Chapter 91-A) affects every aspect of local government in our state. Every board, committee, commission, and advisory committee in every town, city, and village district in New Hampshire must comply with this law, which requires that discussions and actions of these bodies take place in a public meeting, subject to exceptions.

Public Meetings and Nonpublic Sessions

9:00 am—12:30 pm
Friday, September 28

Join Legal Services Counsel Stephen Buckley and Staff Attorney Margaret Byrnes, who will discuss the requirements for holding a proper public meeting, as well the exceptions to the meeting requirement (the so-called "non-meeting"). Then the attorneys will discuss the purposes for which public bodies may hold a nonpublic session, as well as the procedural requirements for a proper nonpublic session. This workshop will also address difficult "meeting" issues, such as communications outside a meeting and electronic means of communicating. There will be ample time for questions and answers.

*Who Should Attend?
Everyone in Municipal Government*



Includes Top Ten Compliance Tips
Public Meeting & Governmental Records Posters
Is it a Meeting Flow Chart
Remote Participation Checklist
And More!

Attendees receive the NHMA publication, *A Guide to Open Government: New Hampshire's Right-to-Know Law*.

The Right-to-Know Law and Governmental Records

9:00 am—12:30 pm
Tuesday, October 16

Join NHMA's Legal Services Counsel Stephen Buckley and Staff Attorney Margaret Byrnes who will share strategies to assist municipalities in handling governmental record matters arising under the Right-to-Know Law. Guidance will be provided on determining what is a governmental record, where records must be stored, and when and how access and copies of public records must be provided. This workshop will also address what records are exempt from disclosure, along with whether a record request that would require a search for multiple documents must be fulfilled or whether a request impermissibly seeks to create a record that does not exist. In addition, guidance will be provided on the retention of governmental records and how claims under the Right-to-Know Law are enforced.

*RSA 91-A Impacts Every
Aspect of Municipal
Government in our State.*

For registration information, visit
www.nhmunicipal.org
under Calendar of Events.

Questions? Call 800.852.3358 or email
NHMARegistrations@nhmunicipal.org.





2018 Municipal Law Lecture Series

\$90 for three lectures/\$35 per lecture

These lectures are intended for members of the New Hampshire Municipal Association particularly for municipal officials with an interest in or responsibility for any aspect of municipal land use regulation, including members of planning and zoning boards, planners, land use administrators, select boards, town and city councilors, building inspectors, code enforcement officers, and public works personnel.

	<i>Lecture 1</i> Planning Board Fundamentals	<i>Lecture 2</i> How to Read a Survey Plan and the Professionals Involved	<i>Lecture 3</i> Solar Power & Land Use
Presenters:	C. Christine Fillmore, Esq. Gardner Fulton & Waugh PLLC Diane M. Gorrow, Esq. Soule, Leslie, Kidder, Sayward & Loughman, PLLC	Stephan Nix, Esq., Licensed Land Surveyor Nate Miller, AICP, Deputy Director Southern NH Planning Commission	Clayton R. Mitchell, Ph.D., Esq. University of NH John T. Ratigan, Esq. Donahue, Tucker & Ciandella, PLLC
Locations:	Cheshire County Hall 12 Court Street Keene	Derry Municipal Ctr., 14 Manning Street Derry	Stratham Municipal Ctr. 10 Bunker Hill Ave. Stratham
	Wednesday September 26 7:00 pm—9:00 pm	Wednesday October 10 7:00 pm—9:00 pm	Wednesday October 3 7:00 pm—9:00 pm
	Wednesday October 10 7:00 pm—9:00 pm	Wednesday September 26 7:00 pm—9:00 pm	Wednesday October 3 7:00 pm—9:00 pm
	Wednesday October 3 7:00 pm—9:00 pm	Wednesday October 10 7:00 pm—9:00 pm	Wednesday September 26 7:00 pm—9:00 pm
NHMA Offices 25 Triangle Park Drive Concord	Saturday, October 20 9:00 am-4:00 pm Continental Breakfast & Registration begin at 8:30 am		



For registration information, visit www.nhmunipal.org
under Calendar of Events.
Questions? Call 800.852.3358 or email NHMAregistrations@nhmunipal.org.





Sharing Ideas: *Shaping the Future*

2018 Annual Conference

Wednesday and Thursday, November 14 & 15, 2018

Manchester Downtown Hotel, Manchester, NH





for attending our webinar presentation today!

Mission Statement

The New Hampshire Municipal Association is a non-profit, non-partisan association working to strengthen New Hampshire cities and towns and their ability to serve the public as a member-funded, member-governed and member-driven association since 1941. We serve as a resource for information, education and legal services. NHMA is a strong, clear voice advocating for New Hampshire municipal interests.

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