



## WSCAC Virtual Meeting

May 9, 2023 – 10:00 am

### WSCAC Members in Bold in Attendance:

**Michael Baram**

Whitney Beals

**William Copithorne, Town of Arlington**

**Steven Daunais, Tata & Howard**

**Kelsey Wentling, CT River Conservancy**

**Gerald Eves, Trout Unlimited**

**Bill Fadden, OARS**

**Bill Kiley, BWSC**

Paul Lauenstein

Martha Morgan, Nashua River Watershed

**Martin Pillsbury, MAPC**

**Janet Rothrock, League of Women Voters**

**Bruce Spencer, retired DCR Chief Forester**

**James Guiod, MWRA Advisory Board**

### Non-Members in Attendance:

**Lexi Dewey, WSCAC staff**

**Andreae Downs, WAC staff**

**Steve Estes-Smargiassi, MWRA**

**Katie Ronan, MWRA**

**Nicole Keleher, DCR**

**Bill VanDoren, DCR**

### WSCAC Business

Lexi opened the virtual WSCAC May 9<sup>th</sup> meeting and provided the following briefs and announcements:

- Remote meeting permission has been granted until March 2025
- Conflict of Interest training is now available at the following link:  
<https://massethicstraining.skillburst.com/>
- Legislative update-Public hearing on the drought bill and the Quabbin equity bill
- June 20<sup>th</sup> in-person meeting at Quabbin at 11:00. Chief Forester Ken Canfield and Natural Resources Director Ken MacKenzie will be present to answer questions on DCR forestry and wildlife programs.

### **MWRA Advisory Board Briefs-James Guiod**

- Lou Taverna, Chief Engineer in Newton and Chair of the Advisory Board, and representative on the Water Supply Protection Trust has been voted in as an Advisory Board member on the MWRA Board of Directors. He will be replacing John Carroll who resigned in March. A new Chair of the Adv. Bd. and representation on the Trust will be voted in the fall.

- A rate of 2.4% for FY24 is recommended and described in the Adv. Board’s draft comments and recommendations on the FY24 MWRA CIP and CEB. The Board of Directors will vote on June 21.
- EPA is planning on issuing a draft Deer Island NPDES permit in May, with the final to go into effect in 2024. Included in the draft is co-permittee language which changes the relationship between MWRA and its ratepaying communities from partners, to MWRA becoming an enforcer. Updates will be provided as this process continues. See link below for more information.

<https://www.epa.gov/npdes-permits/epas-permit-massachusetts-water-resources-authority-mwra-deer-island-treatment-plant>.

### **MWRA Briefs-Steve Estes-Smargiassi & Katie Ronan**

- The MWRA annual Consumer Confidence Report will be sent out to all ratepayers in June
- Water Management Act-new drought requirements for Public Water Suppliers with registrations
- Spring and fall emergency response training
- Lead sampling continues
- Metrowest study is likely to be available at the end of June
- MWRA ratepaying communities Dedham-Westwood Water District and Burlington are requesting additional water
- Lynnfield Water District, requesting under 1mgd, is moving forward to MEPA review

### **Presentation I:**

- **2023 Forest Health Threats with Nicole Keleher-DCR Forest Health Program Director**  
<https://storymaps.arcgis.com/stories/b60f63199fa14805a8b9f7c82447a25b>

Nicole Keleher introduced herself and described activities in the Forest Health Program. She and her team monitor all sorts of insects, diseases, invasives, storm events, anything that is negatively affecting forests in the state, and work to mitigate the effects of these events using a variety of tools and methods including:

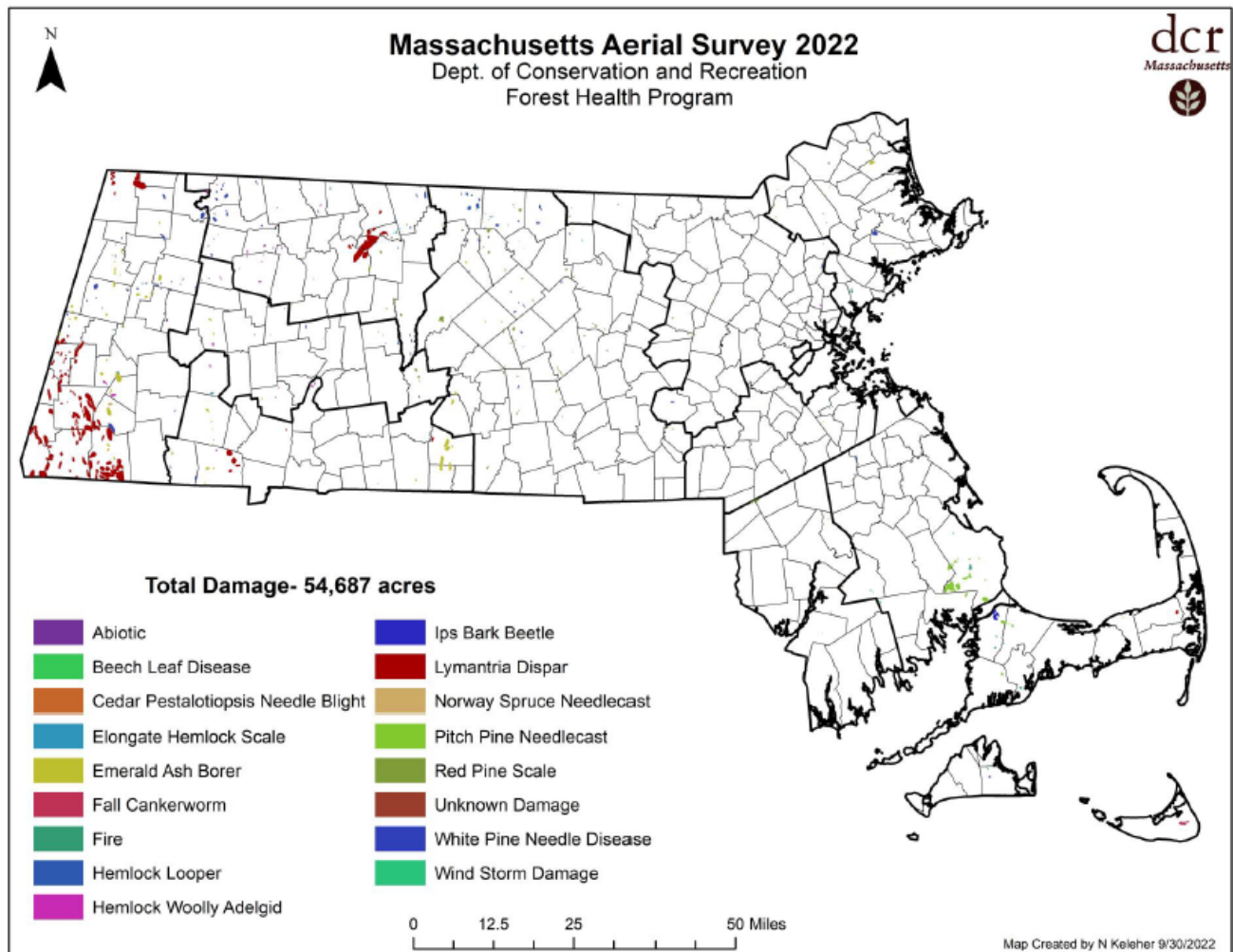
- Early detection of forest pests and diseases
- Forest disturbance mapping
- Long term monitoring
- Treatment programs
- Biocontrol release programs

Nicole said that one of the biggest tools she and her team use that provides a snapshot of what’s going on in the forest is the annual aerial survey. She and a forester fly across the state with a pilot in a small Cessna and mark areas of discoloration, tree mortality and any other areas of concern. Then her team travels to each area to investigate further.

She pointed out from the survey that the biggest impacts from Sponge Moth outbreaks are in the western part of the state as seen below, with less impact and defoliation currently in the watersheds.

She described DCR’s Storymap (see link above) that offers a lot of information with interactive maps and details on projects over the last two years. For more historic aerial survey data beginning in 1934 through 2020, the FEMC Regional Forest Health Atlas (see link below) has data from New England and New York. It is easy to use and offers a variety of historic data and trends. Historic data can help with research to determine trends and the types of mitigation that may be useful.

<https://www.uvm.edu/femc/forest-health-atlas>



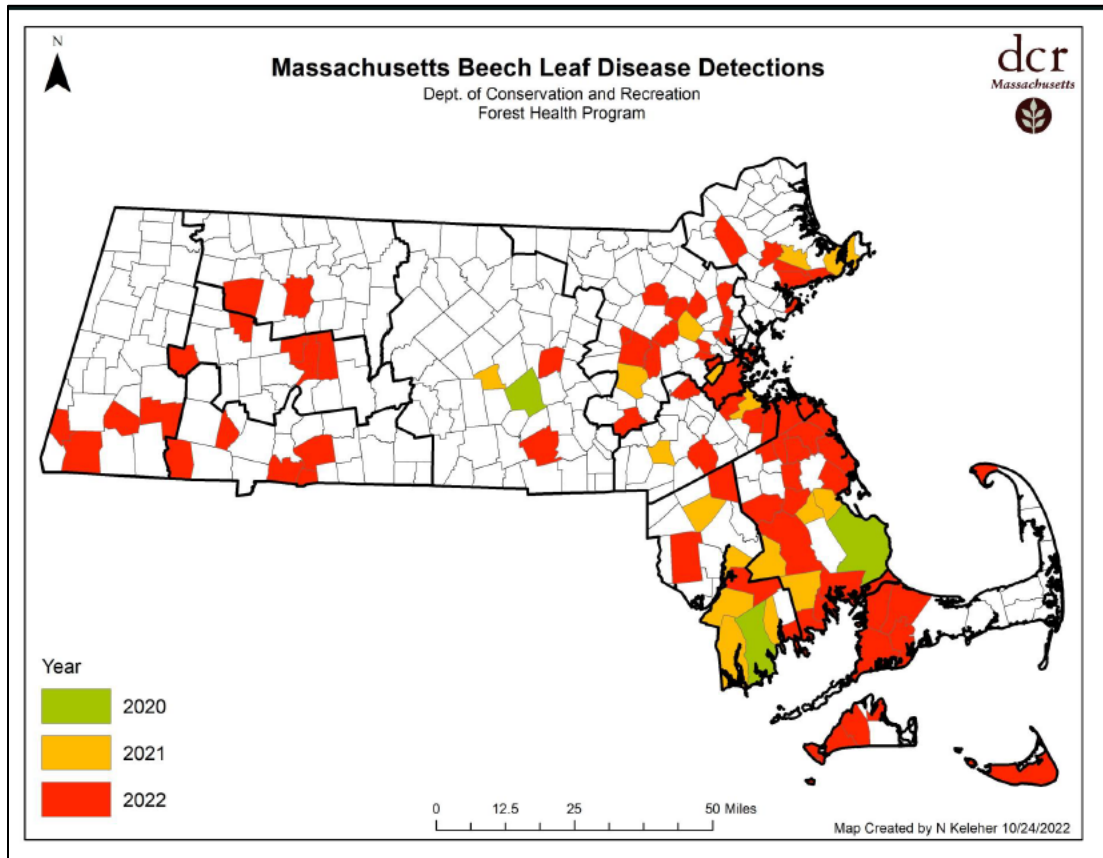
Nicole then discussed the following diseases:

- Beech Leaf Disease-the newest worse health threat, initially found in Ohio in 2012. Found it in 2020 in Plymouth MA. It's now in every MA county. A pathogenic nematode with no current treatment. Beech's are valuable trees with many benefits both in the watershed and elsewhere.
- Lymantria Dispar (Spongy Moth, previously known as Gypsy Moth) A well-known pest with a new name. The few days of cold wet weather we had this spring had a negative effect on the caterpillars. The 2022 aerial survey shows extensive Spongy Moth in Southwestern MA.
- Hemlock Woolly Adelgid-recent increase in the population with higher densities. Winter temperatures make a large impact. When it's very cold or with rapid fluctuations, Adelgid mortality increases. Mild winters show a jump in populations as the Adelgid feed in the winter and produces 2 generations. Two new species are being used as biological controls.
- Elongate Hemlock Scale-invasive and persistent armored scale insect. Hemlocks can be infected by both the Adelgid and Scale.
- Hemlock Looper-a native caterpillar that feeds in early summer. Found in Worcester and Franklin County causing a large amount of mortality.
- Red Pine Scale-Dense plantation plantings allow the insect to move quickly. Found in the watersheds where plantations have been targeted for removal. It is a species found in more northern states.

- Eastern White Pine Decline-A combination of native fungus which has become more persistent and abundant. It is driven by even aged pines that are unmanaged and become dense. Little air flow allows the fungus to proliferate. Entire stands can be killed off from this type of fungus. The University of Maine produced a report on the different types of fungus and how to manage for it. This document is helpful to foresters and land managers. (See below)
- Emerald Ash Borer-This insect is now everywhere in MA and starting we are starting to see a lot of mortality in the first wave of this infestation. This is a boring insect that feeds under the bark. The health of the trees determines how fast mortality occurs. Decline occurs over 3-5 years, with mortality within 5-8 years. There are several pesticide treatment options that have been used in urban areas. Nicole's crew is now treating patches of old growth trees to keep them on the landscape and as seed sources. Biocontrols are also being used in the form of 3 types of parasitic wasps which are released. They won't affect the current generation, but hopefully will assist the upcoming next generation of ash trees. These wasps have been released in 26 sites, including Oakham in the Ware River watershed.

Nicole noted that this all sounds like a lot of bad news, but she showed a picture of the Quabbin when it was being filled. There were few trees given that the land had been used agriculturally. Gypsy moth had also been present for a decade. She then showed a picture of Quabbin today with healthy forested landscape. Nicole mentioned that in the face of our changing climate, management options that promote a resilient forest are important. Nicole's presentation is available on the WSCAC website. See link below. Click on Presentations.

<https://www.mwra.com/02org/html/wscac.htm>



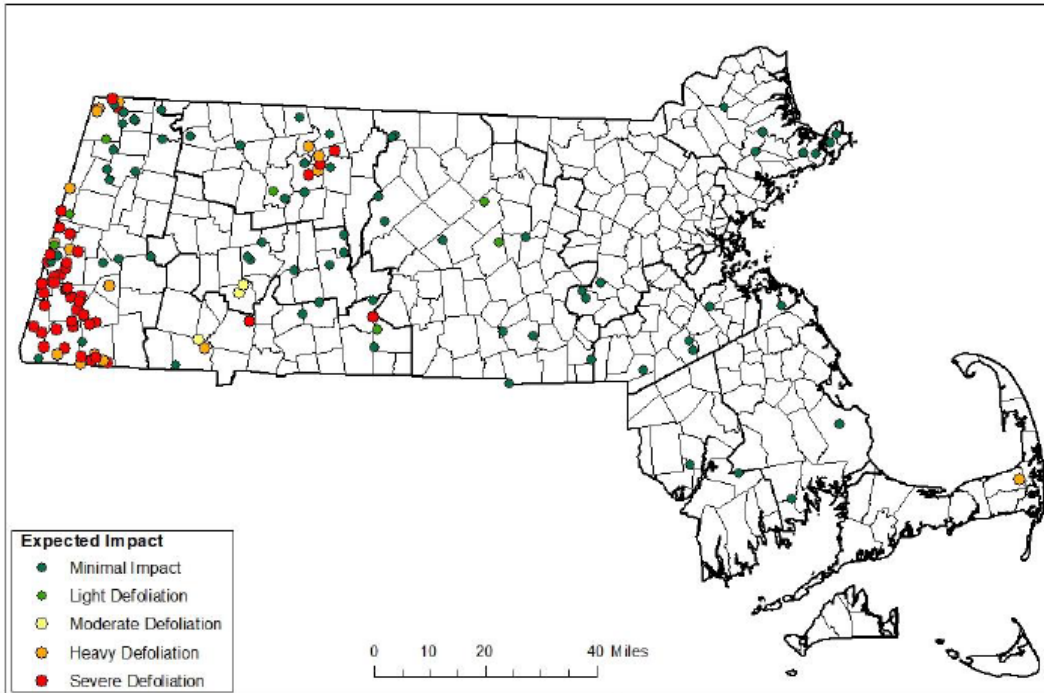
## BLD Progression

As the disease progresses, more of the canopy will exhibit leaf symptoms. Overtime, leaves will have more dark bands and severely diseased leaves will emerge shriveled and curled. Eventually, impacted buds will be aborted and the tree will have canopy dieback.



## Spongy Moth Egg Mass Survey Results 2022

Department of Conservation and Recreation  
Forest Health Program



Map Created by E. Peterson, DCR Forest Health 2/8/2023

## Spongy Moth Recent Impact

	LDD Defoliation	Oak Mortality
2015	38,175	545
2016	349,866	6,536
2017	923,186	122
2018	159,705	23,602
2019	9,955	57,912
2020	140	-
2021	11,455	-
2022	30,895	



LYMANTRIA DISPAR

# Biocontrol Program



*Laricobius nigrinus*



*Sasajiscymnus tsugae*



2023

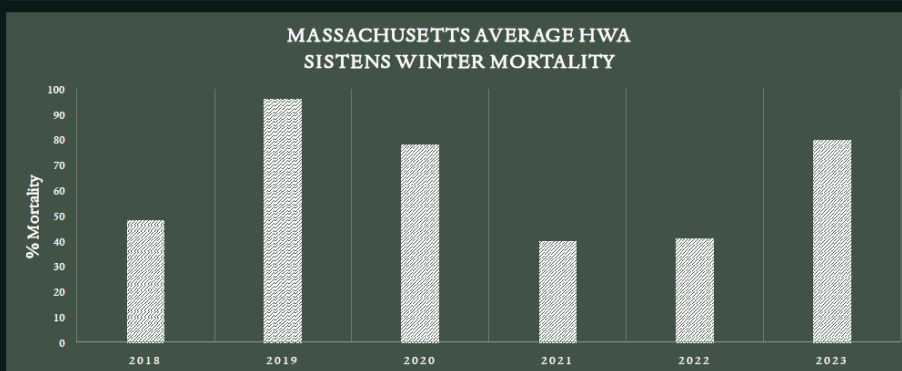
HEMLOCK WOOLLY ADELGID



Hemlock Woolly Adelgid

*Adelges tsugae*

## Impact of Winter Temperatures



23

HEMLOCK WOOLLY ADELGID



**Field Manual for Managing Eastern  
White Pine Health in New England**

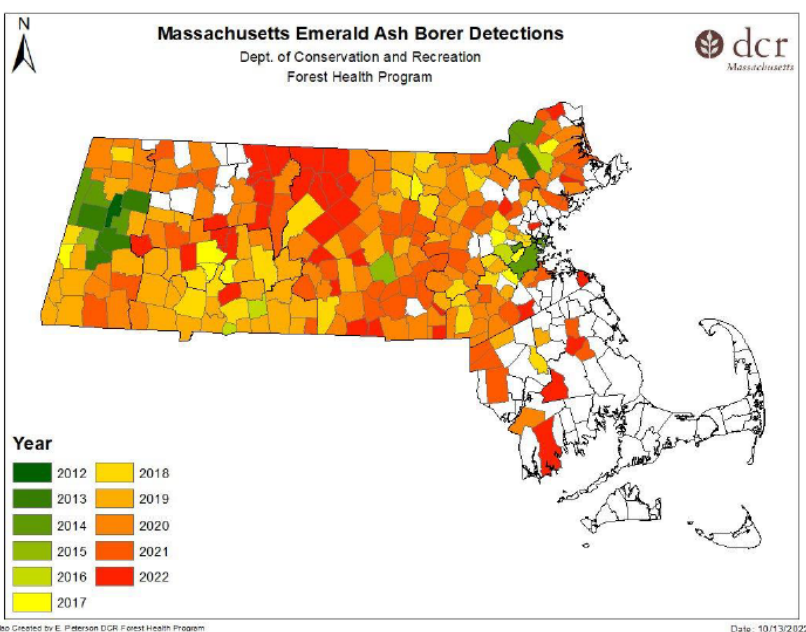
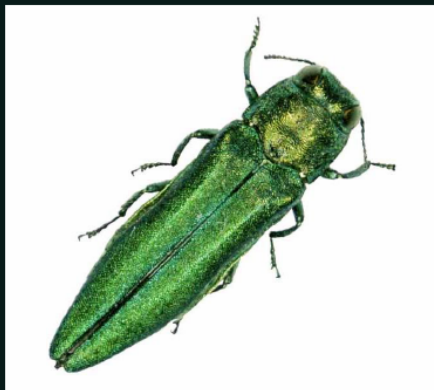
William H. Livingston, Isabel Munck, Kyle Lombard,  
Jennifer Weimer, Aaron Bergdahl, Laura S. Kenefic,  
Barbara Schultz, Robert S. Seymour

College of Natural Sciences, Forestry, and Agriculture

Figure 1. Needle Discoloration



Current Detected  
Infestations





## **Presentation II:**

Bill VanDoren introduced himself and said he works in DCR's Bureau of Forest Fire Control and Forestry as a forest biometrician. He works with measurements, data, models, and predictions around forests and their management and ecology. Bill's presentation is available on the WSCAC website. See the link below. Click on Presentations.

<https://www.mwra.com/02org/html/wscac.htm>

Bill's presentation discussed the use of Continuous Forest Inventory (CFI) and the role it plays in understanding forest resilience and carbon. The program was established in the late 1950s with 1100 plots. Now 60 years later, the number of plots has grown to over 2000, and they are being measured a sixth time.

DCR-DWSP also completes a CFI every 10 years. Brian Keevan, DCR analyst, provided information to WSCAC last fall on the most recent CFI completed last year in the watersheds.

DCR's Bureau of Forestry CFI program, similar to the US Forest Service's nationwide Forest Inventory and Analysis program, provides the following:

- Strategic information on forest status and trends
- Complements operational, site-level, pre-and post-project data collection
- Data is used in reporting, modeling, planning and analytics
- Phases include sample layout, field work, and processing
- Currently there are more than 2000 plots with over 100,000 trees; now measuring for the 6<sup>th</sup> time over more than 60 years

The program is one of the best tools DCR Division of State Parks and Recreation has to help understand the potential of the forests it manages to mitigate atmospheric carbon as well as its capacity to adapt and respond to climate change.

**THE NEXT WSCAC MEETING WILL BE HELD AT THE BLUE MEADOW CONFERENCE  
CENTER ON**

**Tuesday, June 20, 2023 AT 11:00 A.M.**

**TOPIC: DCR staff Chief Forester Ken Canfield and Director of Natural Resources Ken MacKenzie**