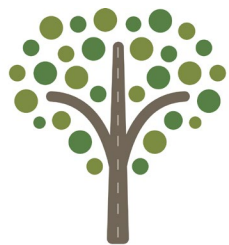


Emerald Ash Borer and Municipal Preparedness

Joanne Garton

Technical Assistance Coordinator

Vermont Urban & Community Forestry Program



PLANT
LIVE
GROW

VERMONT URBAN & COMMUNITY
FORESTRY PROGRAM



FORESTS, PARKS & RECREATION
VERMONT
AGENCY OF NATURAL RESOURCES

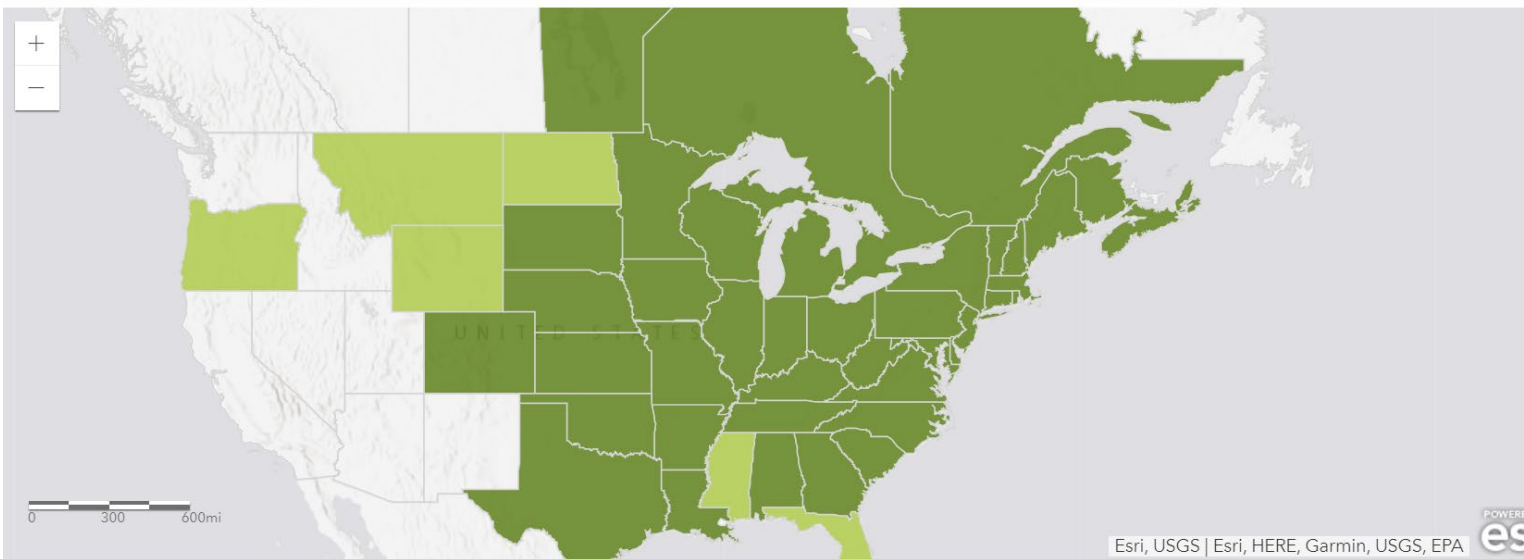


VERMONT
INVASIVES



Emerald
Ash Borer



Emerald Ash Borer Information Network

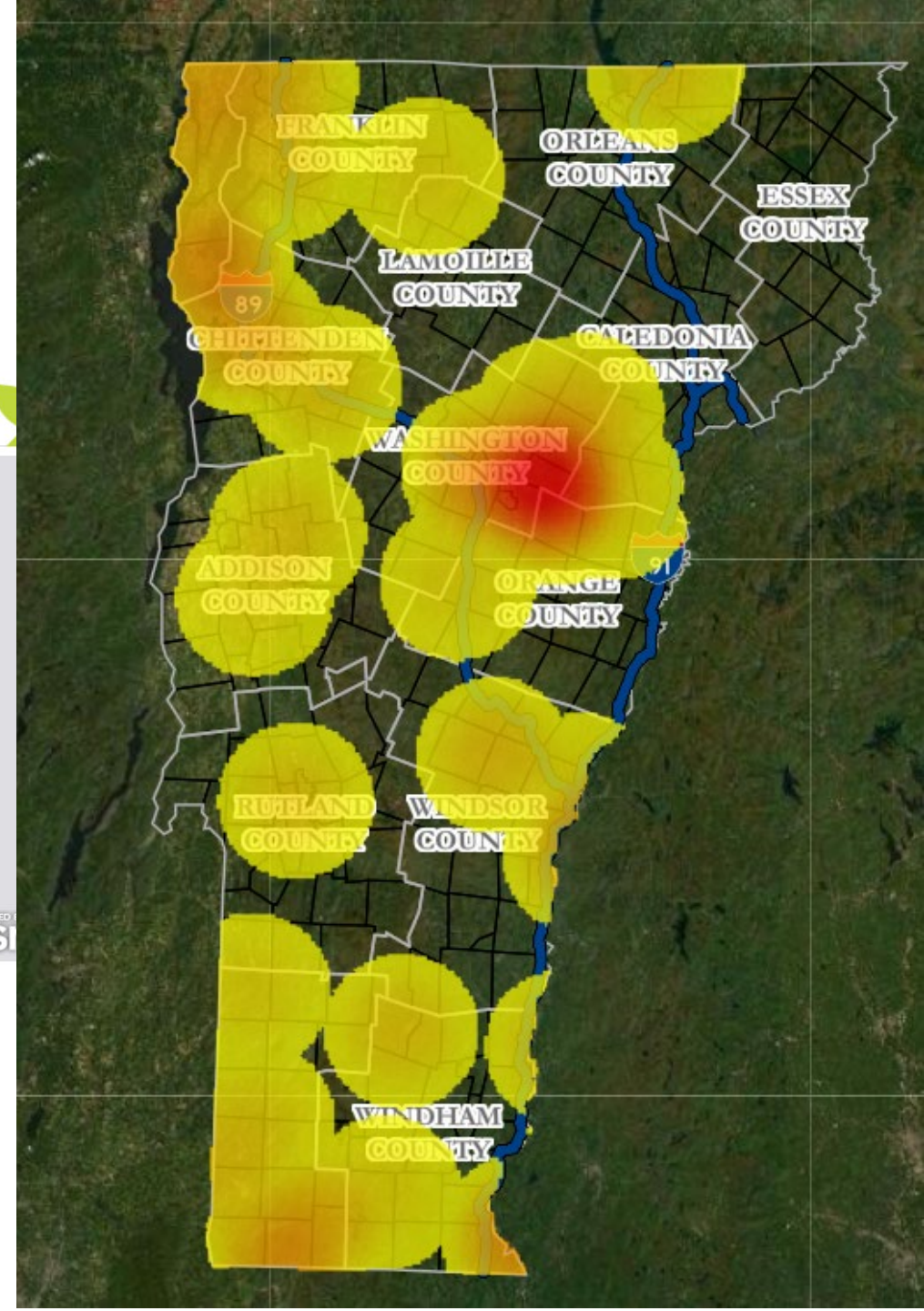


Select a state for local information

-  EAB confirmed in state
-  State EAB information available

Multi-state map: March 2022

Vermont EAB Infested Area Map: March 28th, 2022



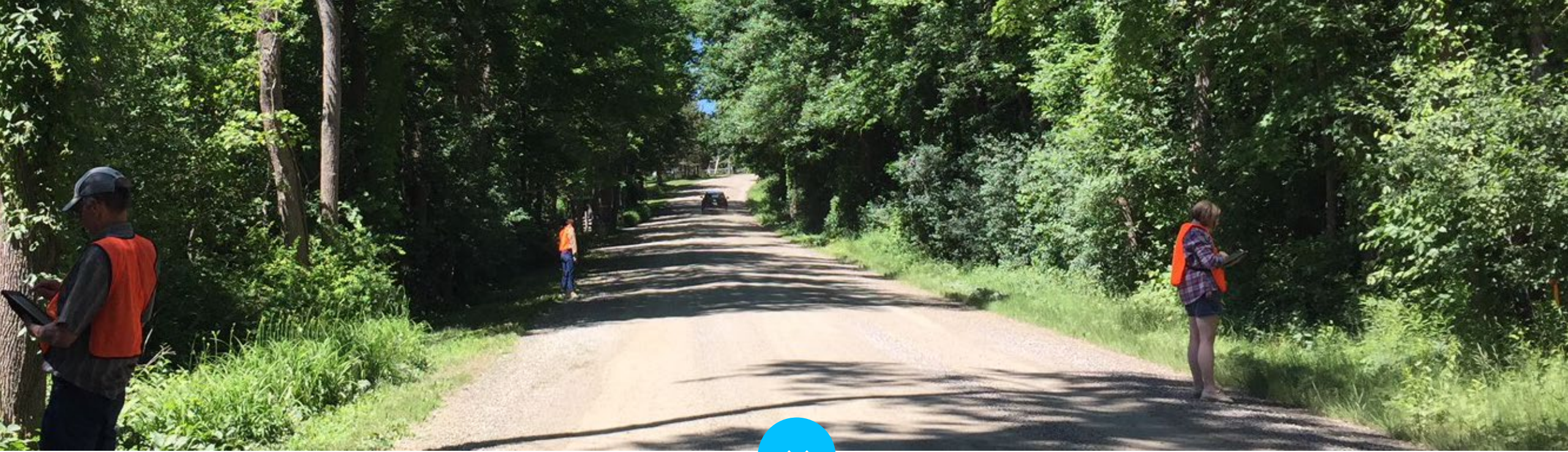


Municipal Planning & Management

- **Ash trees play an important role** as street and park trees, along rural roads, and in public forestland
- Municipalities need to **ensure public safety** and to manage the impacts of EAB on public trees
- Municipalities and land managers need to consider ash population, capacity, public input, and risk threshold as they make decisions.
- **Municipalities will bear** the responsibility and costs

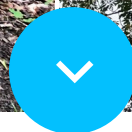
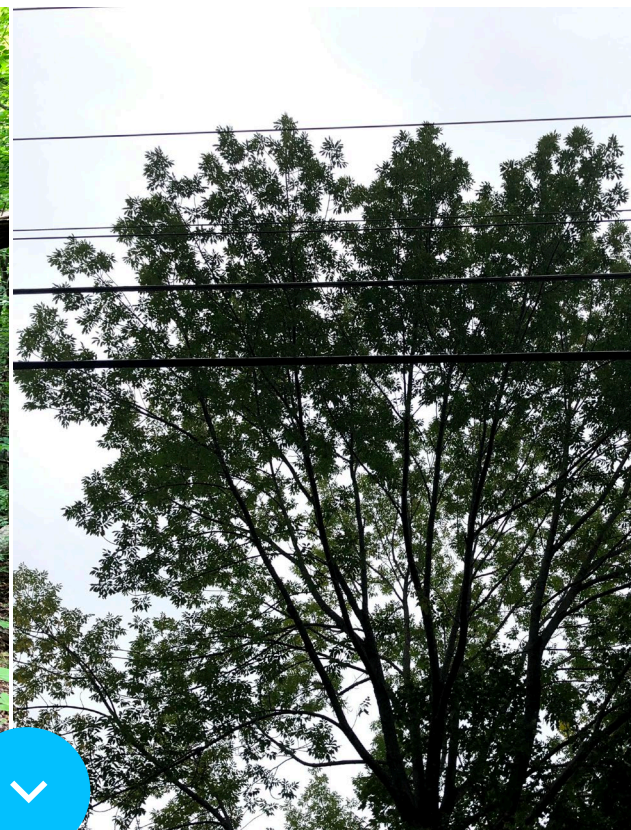
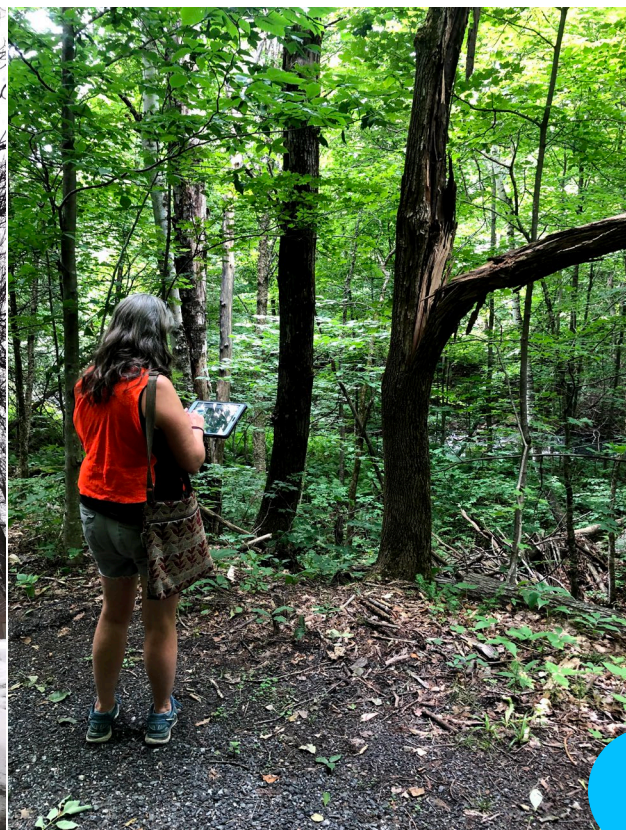
Where will your municipality fall on the EAB management spectrum?





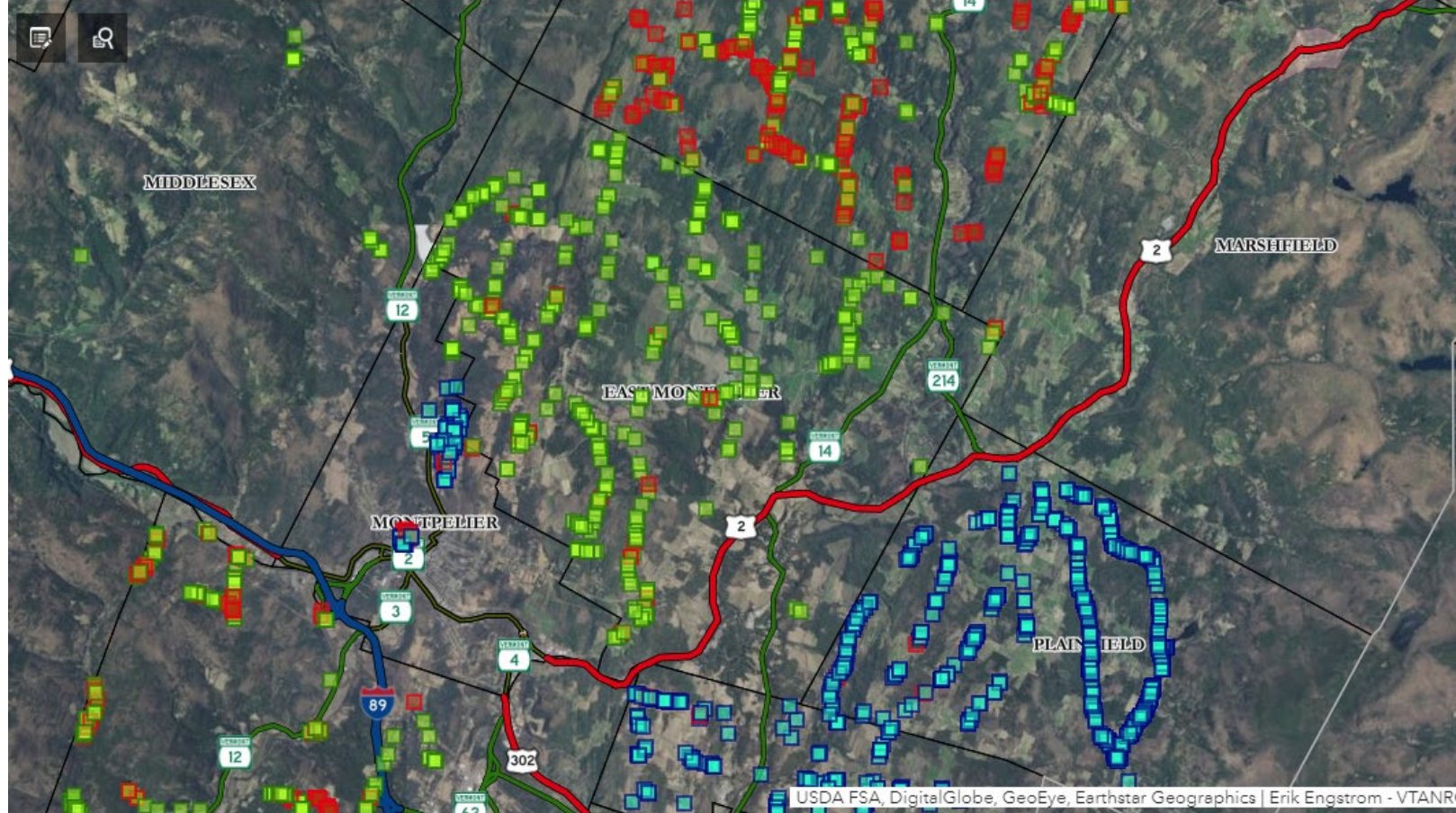
Ash Tree Inventory

- **What's your vulnerability?** You can't manage what you don't know you have.
- **You have options:** Tree by tree, sampling, paper, mobile app.
- **Display your data:** There are [many ways to view and map your information](#) for planning and outreach.



Ash Tree Inventory

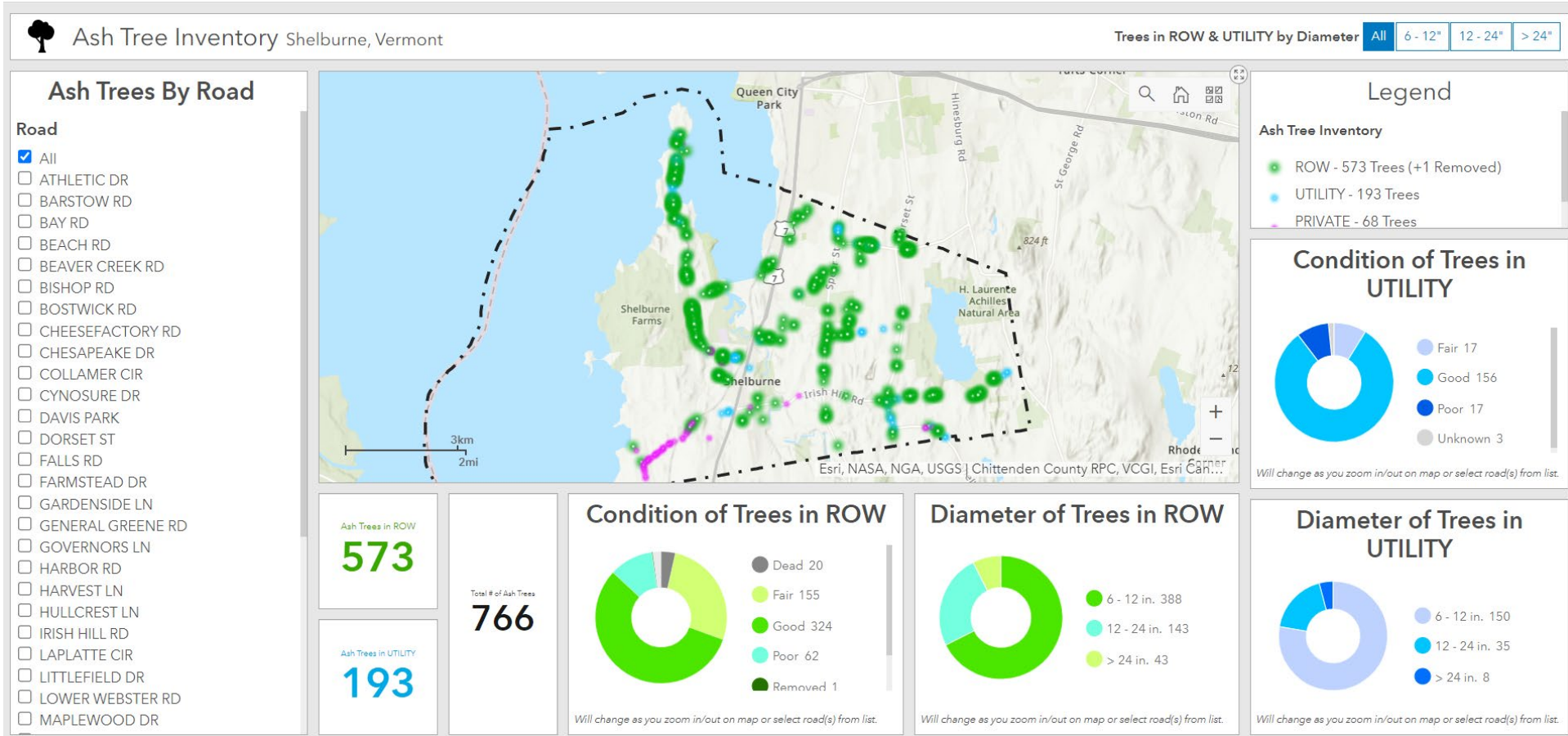
Urban • Rural • Utility corridors • Black ash research



Digital Inventory Tool

Utilizing State of Vermont software

- Utilizing ArcGIS Field Maps on smartphones or cell-enabled tablets
- Volunteers and municipal staff have collected **55,018 data points in 49 municipalities** since 2018
- Model for Agency of Transportation (state ROW) and Agency of Natural Resources (state lands) inventory



Digital Inventory Tool

Utilizing State of Vermont software

- Dashboards for road-by-road analysis created by Chittenden County Regional Planning Commission



Training

For municipal crews

- Evaluate risk posed by any tree
- Use throw lines to guide trees safely to the ground
- Keep abreast of EAB spread statewide
- Look for signs and symptoms of EAB
- Know when to walk away



Training

For arborists

- Learn how to evaluate risk posed by EAB infestation
- Learn when not to climb infested ash trees (spoiler: never!)
- Understand costs of utilizing specialized equipment
- Train in aerial rescue for all tree work



[Home](#) > [Resources](#) > [Community Preparedness & Response](#) > [Emerald Ash Borer Management](#) >

EAB Municipal Management Case Studies

The Emerald Ash Borer Municipal Management Case Studies were developed to help municipalities determine the best approach to ash management for their unique situation. The case studies were drawn from six municipalities in the Midwest, New England, and Vermont that vary in population, percentage of public trees that are ash, and resources. Each case study includes the economic costs of ash management for that municipality.



Waterbury, Vermont

Approach: Select ash tree removal, tree planting, volunteer wood utilization project

[Case study](#) - published January 2022

Northfield, Vermont

Approach: Outreach, Education, and Pilot Ash Tree Removal

[Case study](#)

Chillicothe, Ohio

Approach: Preserving Urban Ash Trees

Tree Wardens

[Report Contact Info](#)



TREEmail

[Sign up](#)



Emerald Ash Borer Management

[Vermont Forest Pest Planning Case Studies](#)

EAB Municipal Management Case Studies

[Managing Town Forests for Emerald Ash Borer](#)



EXPLORE THE

Tree Selection Tool



VISIT OUR

Resource Hub

COST OF PILOT PROJECT

Activity	Pilot Project	Pilot Work Personnel
Treatment	1 46"-DBH ash tree in Hope Cemetery Total cost: \$552 (\$12/diameter inch) 2 ash trees in Hope Davey Park Total cost: \$468	Vermont Arborists
Removal	Removal of 20 ash trees along three rural roads: Total cost: \$6,500 Average cost per tree: \$325	Potter's Tree Healthcare
Replanting	Purchase and planting of 15 trees Total cost: \$6,491.75 Average cost per tree: \$433	Evergreen Gardens of Vermont provided both the nursery stock, planting labor, and three-year guarantee on the trees.

Waterbury
VT



Volunteers split and load donated roadside ash logs.

ON THE GROUND

We decided to utilize the roadside ash logs as firewood for residents sold as part of a fundraiser for two local non-profits. The utilization program has been impactful but labor-intensive. The biggest challenge has been rallying volunteers to get the bucking and splitting done.

Steve Lotspeich, Waterbury Tree Warden and Planning & Zoning Director

Read more about Waterbury's roadside ash wood utilization in this [October 2021 article](#) in the Waterbury Roundabout.



Three white spruce planted in Hope Cemetery.



Steve Lotspeich at a 2021 Arbor Day tree planting site.

LESSONS LEARNED

- **Continue to plant a diverse array of downtown tree species.** Waterbury has a long history of active tree stewards but is benefitting now from a renewed interest in public green spaces. Plan to purchase and plant a diverse array of tree species in many downtown and managed parks to ensure healthy tree canopy for future generations. Understand site conditions that will dictate the success or failure of certain tree species.
- **Raise awareness about emerald ash borer.** Many residents know about emerald ash borer but because it is not yet prevalent in Waterbury, most have not seen its impact. Continuing to raise awareness about the importance of planning for ash tree loss in managed landscapes and along rural roads continues to be part of the work of the tree committee.
- **Work towards a long-term plan.** Waterbury continues to grow its urban tree canopy and make steps towards removal of hazardous roadside ash trees. However, a long-term plan and budget for ash tree management is not yet in place. The tree committee recognizes this planning as a necessary next step.
- **Think proactively.** Know that removal of ash trees when healthy will be cheaper and safer than removing them when they are dead.

Vermont Urban & Community Forestry Program
Vermont Department of Forests, Parks and Recreation in partnership with University of Vermont Extension



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COST OF PILOT PROJECT

Activity	Pilot Project	Pilot Work Personnel
Treatment	2 trees of approx. 8"-10" DBH, \$336	Treeworks, Inc.
Removal	Municipal staff removed 25 ash trees: Total cost \$7,735 Average cost per tree: \$310	Public works and town highway employees
	Local contractor removed 5 ash trees: Total cost: \$781 Average cost per tree: \$156	Snapping Turtle Tree Works, LLC
	Utility contractor removed 19 ash trees: Total cost: \$6,940 Average cost per tree: \$365	Davey Tree Expert
Replanting: Cost of Trees	5 trees Total cost: \$870 Average cost per tree: \$174	Monetary donation from the Rotary Club; trees planted by volunteers in approximately 50 person-hours

ON THE GROUND

I think that many people in town don't know what emerald ash borer is. If you're a landowner, you're more likely to pay attention to this issue, but most people in town are not landowners. EAB doesn't feel real until trees die along the road. Keep providing outreach and education to help Vermonters know that EAB is here.

Ruth Ruttenberg, Northfield Conservation Commission member



Ash tree on the Northfield Town Common.



Interplanting location for two littleleaf linden trees along Wall Street between the senior center and the fire station.



Examining ash tree stems near Route 12.

LESSONS LEARNED

- **Combine ash tree management with annual municipal tree work.** Northfield is unique by having a municipal utility company that can coordinate tree removals when they impact access to the wastewater treatment facility and utility lines. Municipal staff can remove small-diameter trees along roadways, ensure that the ash wood stays local, and prioritize high traffic and essential routes. Combine removal of ash trees with other road, water, and sewer projects.
- **Work with utility contractors to optimize tree removal efforts near utility lines.** Currently, Davey Tree Experts is hired to remove trees near overhead utility lines. In the future, the tree warden and conservation commission could mark ash trees near utility lines that are leaning towards roads and identify them for removal during on site tree work.
- **Use the media.** Both local and statewide channels can raise awareness about emerald ash borer. Write your own articles for local news outlets and share resources coming from statewide or regional sources.
- **Follow through with youth and community groups.** Raising awareness about urban and community tree canopy is helpful but it can be hard to guarantee long-term participation. Ensure that you have back-up volunteers or staff to water newly planted trees or finish tree inventory.
- **Work towards a long-term plan.** Even with grant money, municipal match and effort, and cooperation among many municipal staff and volunteers, Northfield still needs clarity regarding how to manage the thousands of municipal ash trees in the years to come.

Vermont Urban & Community Forestry Program
 Vermont Department of Forests, Parks and Recreation in partnership with University of Vermont Extension



Frequently Asked Questions

Insecticide Applications to Protect Ash Trees from Emerald Ash Borer



The invasive forest insect emerald ash borer, first confirmed in Vermont in 2018, threatens all species of ash trees statewide. Some municipalities, landowners, or other land managers may choose to treat selected ash trees with insecticide (a specific type of pesticide) to protect them from emerald ash borer infestation.

Pesticide use is governed by 6 VSA, Chapters 81 & 87 and the Control of Pesticides supporting [regulations](#).

Pesticides registered for use in Vermont are broken into two broad categories:

1. **Restricted use / Class A** pesticides that can only be purchased and applied by certified pesticide applicators. All restricted use pesticides are Class A pesticides categorized by the Environmental Protection Agency or the State of Vermont.
2. **General use / Class B and C** pesticides that can be applied by people with or without a certified pesticide applicator license. General use pesticides are broken into two groups; Class B pesticides are typically for outdoor use and contain greater than 3% active ingredients) and Class C (recommended for homeowner use and contain less than 3% active ingredients).

More information about pesticide [product registration and classification](#) and pesticide applicator certification in Vermont is available from Anne Macmillan at the Vermont Agency of Agriculture, Food and Markets.

Vermont Forests, Parks & Recreation and Vermont Agency of Agriculture, Food and Markets recommend that insecticides used to treat ash trees for emerald ash borer contain the active ingredients emamectin benzoate or azadirachtin. These pesticides have the least ecological impact on soils, groundwater, and pollinators compared to other types of chemical treatments for EAB. Trunk-injected systemic pesticides, applied with specialized equipment via carefully drilled holes in the base of the trunk, enter directly into the vascular system of the tree. This technique reduces the risk of insecticide drift away from the site. However, some trunk-injected and systemic insecticides, including some containing emamectin benzoate, cannot be purchased or used by uncertified landowners because they are classified as [restricted use or Class A pesticides](#), which require testing and certification through the Vermont Agency of Agriculture, Food and Markets.

Contact:

Anne Macmillan
Pesticide Certification and Training Coordinator
Vermont Agency of Agriculture, Food and Markets
116 State Street
Montpelier, VT 05620
(802) 461-6118
Anne.Macmillan@vermont.gov

Anyone applying pesticides should choose the proper pesticide labeled for the site and pest, thoroughly read the label prior to use, and ensure that the pesticide is legally registered for use in Vermont. Remember, **THE LABEL IS THE LAW!**

The following pages include some frequently asked questions individuals ask when considering insecticide treatment to protect privately owned ash trees on their own property publicly managed ash trees on municipal property.

Pesticide Use

- Are there **insecticides that are registered for use** in the state of Vermont for control of emerald ash borer?
- Can I apply insecticide to **ash trees on my own property?**
- What **certifications does a person need** to apply insecticides to ash trees on municipally owned land or on private property that is not their own?
- Do municipalities need a **permit to apply insecticide** to ash trees in the right-of-way?
- When is it **too late to treat an ash tree** for an emerald ash borer infestation?



Biocontrols

Parasitic Wasps

- Lay eggs in the EAB larvae or eggs
- Piloted in two locations in the state, controlled by APHIS
- Aim is to keep EAB population low, not eradicate EAB
- Monitoring success as we speak





Invasive species

Stay Informed

- Sign up for our **EAB Update Listserv** on [VTinvasives.org](https://vtinvasives.org)
- Sign up for **TREEmail newsletter** at [VTcommunityforestry.org](https://vtcommunityforestry.org)
- **Grant funding** for EAB reforestation/tree planting will likely be available again this summer/fall.