



# Finding lingering ash for resistance breeding: MaMA 2025 program update

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## What is MaMA?

**Monitoring and Managing Ash (MaMA)** is a program of the Ecological Research Institute (ERI) that enables detection of strictly defined lingering ash, and collection of material from them for resistance breeding. **Lingering ash** are chemically untreated, native, naturally occurring trees that had  $\geq 4"$  DBH at the time of peak EAB infestation and retained healthy crowns for  $\geq 2$  years after  $\geq 95\%$  of the mature ash in the area were killed by EAB. The **USFS EAB Resistance Breeding Project** has shown (for green and white ash) that material collected from such trees can be used in selective breeding programs to yield highly EAB-resistant native ash.

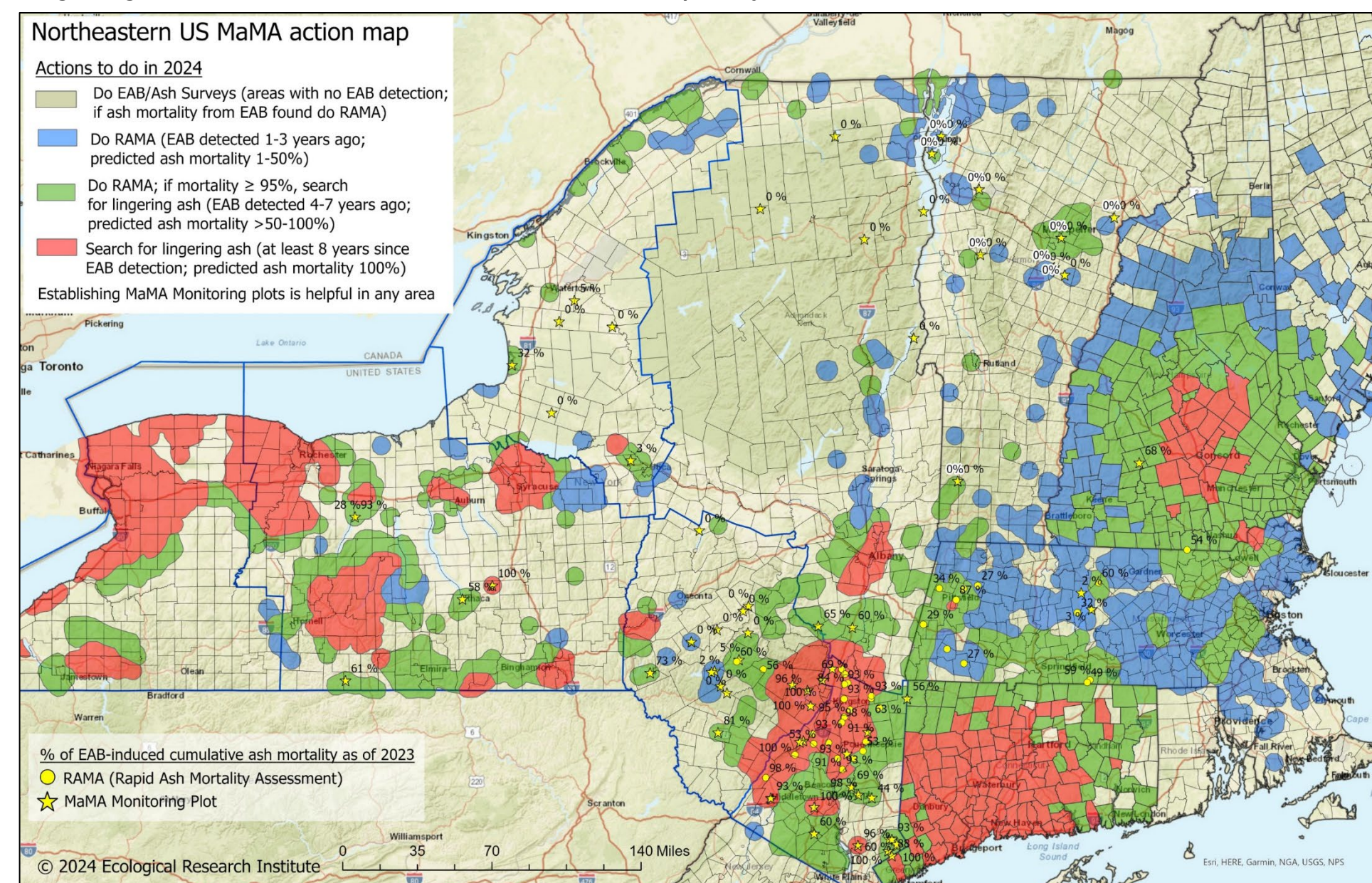
MaMA is being implemented throughout **New York** and **New England** thanks to support provided by the **Tree Species in Peril** initiative led by the USFS and The Nature Conservancy.

MaMA's ability to detect lingering ash relies on: **1) large-scale data collection to identify where and when to search for lingering ash**; and **2) integrating lingering ash detection into ash management** (as management practices such as large-scale proactive cutting can prevent finding such trees). Finding lingering ash depends on searching soon after the mortality threshold has been met and the trees have maintained their health long enough to demonstrate they are truly lingering ash (waiting too long after this can make detection impossible).

## Lingering ash search timing

MaMA's **action maps** enable searching for lingering ash at the right places at the right times, by showing: 1) areas known or projected to be ready to search for lingering ash; and 2) areas needing more data and which MaMA project to use to collect it. The maps are first created using EAB detection data along with standard mortality trajectories and spread rates and are updated annually using mortality data collected by MaMA projects.

The map below is based on data collected through 2024; we are in the process of generating a new map incorporating data from 2025. This will likely show that in addition to areas of NY, CT, and MA, some locations in VT, NH and possibly ME will be ready to be searched, especially for lingering black ash, which tends to decline most quickly.



To access MaMA action maps, go to [www.monitoringash.org/mama-action-maps](http://www.monitoringash.org/mama-action-maps).

## MaMA's four data collection projects



photo by T. Bittner  
MaMA has achieved detection of lingering ash of all three widespread NE ash species (white, green, black) and collection of material from them for a resistance breeding program at Cornell University.

These projects comprise **MaMA Monitoring Plots Network** (40 trees monitored until they die from EAB); **MaMA Rapid Ash Mortality Assessments (MAMA RAMAs**, a less precise but less time-consuming alternative to plots); **MaMA Lingering Ash Search** (reporting lingering ash found opportunistically or through systematic searches; and **MaMA Ash/EAB Surveys** (reporting EAB evidence from areas where it hadn't yet been reported). For full descriptions of each, see [www.MonitoringAsh.org](http://www.MonitoringAsh.org).

All of MaMA's activities rely on numerous partnerships with agencies, NGOs, researchers, professional land managers and community scientists.

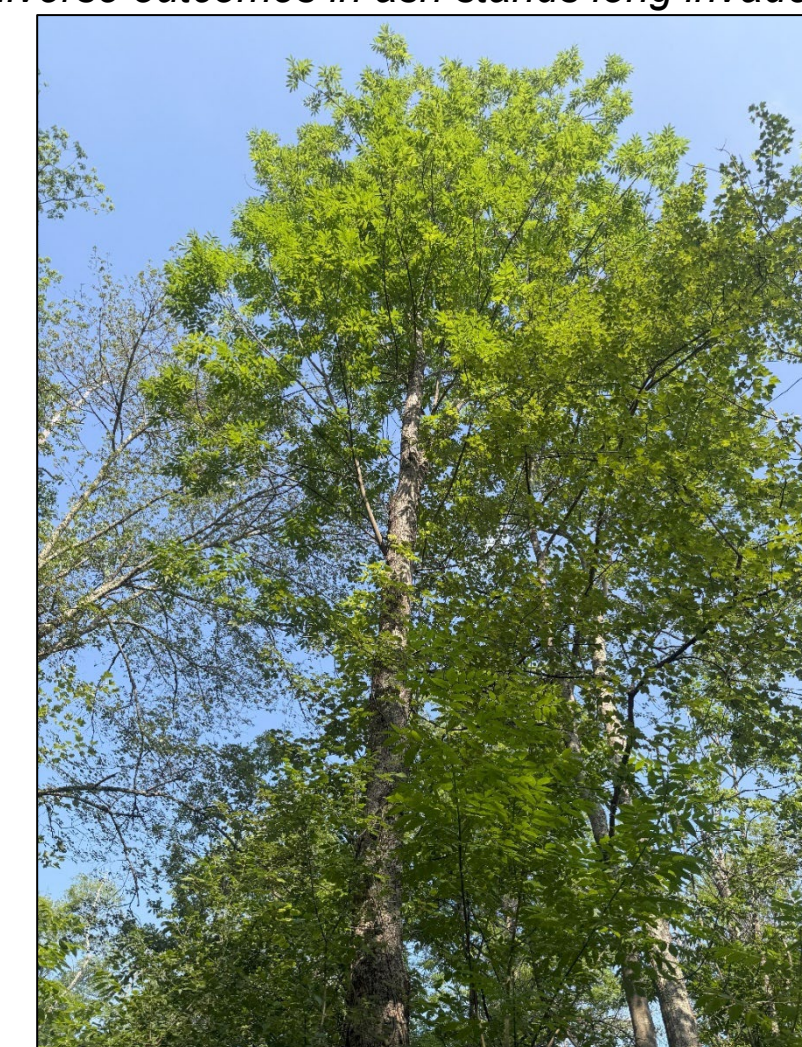
## 2025 updates

### 1) Collaboration with indigenous initiatives, aimed largely at black ash conservation.



ERI hosted a team from Ash Protection Collaboration Across Waponahkk (APCAW) at Hudson Valley MaMA sites to examine diverse outcomes in ash stands long invaded by EAB.

Collaborative training of professionals and community scientists in Maine by ERI, APCAW and the Gulf of Maine Research Institute (GMRI) that integrated lingering ash detection into other approaches to ash and cultural conservation.



This beautiful 20.5" DBH female lingering black ash found during APWAC visit in the Hudson Valley !!!

In the fall we found 8.5" DBH male lingering black ash nearby.



ERI was invited to give a presentation at the Gathering on the Future of Black Ash and Basketry at the Odanak Abenaki community in Quebec.

Mahawk fancy black ash and sweet grass basket.

**2) Our other efforts to increase lingering black ash detection** have included working with **NY Natural Heritage** to identify sites with historic black ash occurrences, which can provide a model for other states. We are also prioritizing initiatives with other institutions in NY and northern New England responsible for black ash management. Aside from black ash, we are also prioritizing green ash, because we need more data on this species, which is considerably less common than white ash in the New York-New England region.

### 3) Data collected, lingering ash detected

- First data reported from Maine; expansion in all other states in the region.
- New plots added to MaMA Monitoring Plots Network in CT, ME, NH, NY and VT.
- New RAMAs done in CT, MA, ME, NH, NY and VT.
- Mortality data from other initiatives shared that can help populate action maps.
- 82 new lingering ash found and validated (white ash 54, green ash 8, white/green ash 13, black ash 7), bringing totals to 245 overall (**white ash 190, green ash 22, white/green ash 16, black ash 17**); other possible lingering ash were reported, awaiting validation
- Exciting new collaboration with FEMC. FEMC field crews performed 39 RAMAs in NH, NY, MA, VT (and set up a plot in NH)



ERI trained FEMC field crew leaders in MaMA data collection projects.

### 4) Data reporting and management collaborations

- MaMA Ash/EAB Surveys and MaMA Lingering Ash Search are now also supported on **TreeSnap** in addition to its original platform, **Aneccdata** (smartphone app and Aneccdata.org)
- ERI worked with APCAW and GMRI to harmonize their **Protecting Ash for the Future** initiative data collection with MaMA data forms.



### 5) Lingering ash material collection

- MaMA has already collected scion from **72** lingering ash (**53 white, 9 green, 10 black ash**) for EAB resistance breeding at Cornell University.
- ERI collected seed from a lingering black ash; will attempt to collect more from it and also from a lingering green ash.



Scion (left) and seed (right) collection from lingering trees

### 6) Ash propagation collaboration

- New Hampshire's state nursery supplied white ash seedlings to our new propagation partner, Land Stewards, in NY; these will be ready to receive lingering scion collected from NY, CT this winter.
- This will complement the breeding already being done at Cornell, where trees from grafted lingering scion of all three species collected in 2024 were planted out in October.

## Acknowledgements

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