

VERMONT URBAN AND COMMUNITY FORESTRY PROGRAM

EAB Municipal Management Case Study

Northfield, Vermont

APPROACH

Outreach, education, pilot ash tree removal

SUMMARY

Having completed their roadside ash inventory in 2019, the town of Northfield knew that it had a long road ahead to manage the almost 4,000 ash trees in municipal right-of-ways and on municipal property. The Northfield Conservation Commission, Town Manager, Highway Department, and Public Works Department applied for grant funding to address removal of some of its high-risk and large-diameter ash trees, plant new trees in public spaces, and raise awareness among town residents and Norwich University land managers about emerald ash borer and the threat it poses to all native ash trees.

Northfield approached its first round of ash tree removals by selecting large-diameter ash in individual locations coinciding with existing utility line or road construction projects. Interplanting of non-ash tree species occurred in public spaces where existing mature ash trees would not be treated with insecticide and the town would face tree canopy loss. Insecticide treatment of two ash trees (paid for with municipal funds) on the town common secured public investment in these high-value and high-visibility ash trees.

In 2020, Northfield applied for and received a \$15,000 matching grant from the Vermont Urban & Community Forestry Program (VT UCF) to conduct a pilot project estimated at \$30,560. The work would remove a planned 66 hazard or unhealthy ash trees along municipal roads and overhead utility lines and plant 14 trees in publicly

owned spaces that will lose ash trees to emerald ash borer infestation. Equal match funds provided by the municipality paid for contractor fees to treat two ash trees on the town common with insecticide to ensure their longevity and resistance to emerald ash borer infestation.

Ultimately, the town coordinated and completed 49 ash tree removals, planted five trees (red oaks and littleleaf lindens), treated two ash trees, and held two public forums, for a total project cost of \$25,762. Grant funding covered \$12,881 of this cost.

In the fall of 2020, Davey Tree Experts:

- removed three large-diameter ash trees near utility lines along Highland Avenue and Byam Hill; the landowner kept the downed wood;
- removed 13 ash trees leaning towards Northfield Electric utility lines on Turkey Hill Road, leaving downed wood on site; and
- removed three ash trees along Water Street. The wastewater treatment plant utilized the chipped branches and a local landowner took the downed wood.

In the winter of 2021, Northfield Conservation Commission members held two virtual public forums regarding EAB awareness in cooperation with Vermont Coverts and the Vermont Urban & Community Forestry Program. The events attracted approximately 100 attendees.

In the spring of 2021, Northfield Conservation Commission members Deborah Zuaro, Russ Barrett, Ruth Ruttenberg, Nigel Hicks Tibbles, and Brad Johnson joined Bonnie Kirn Donahue from the Dog River Park Committee to utilize a monetary donation from the Rotary Club to purchase five trees. The group:

- planted two littleleaf linden trees along Wall Street between the senior center and the fire station to ensure future tree canopy in an open space currently hosting three mature ash trees that will not be treated with insecticide and will ultimately be removed when/if they become infested with emerald ash borer; and
- planted three red oak trees within the town right-of-way along School Street where existing green ash trees will not be treated with insecticide and will ultimately be removed, when/if they become infested with emerald ash borer.

In the summer of 2021, Snapping Turtle Tree Works, LLC, removed five ash trees (>10 inches diameter at breast height) on Union Brook Road during existing road construction. Also in the summer of 2021, municipal staff led by Sam Jensen:

- removed seven ash trees along Dog River Drive, deemed a high priority route because it is the only access route to municipal wastewater treatment facility; and
- removed 18 ash trees along Route 12A that leaned towards the road near a municipal garage. Branches were chipped on site and the downed wood was accepted by a nearby landowner.

The town of Northfield hired Treeworks, Inc. to treat two ash trees on the town common with a systemic, trunk-injected insecticide that protects ash trees from damage caused by EAB larvae.

FAST FACTS

Population: 7,554

Miles of Town Maintained Roads: 90

Number of Ash Inventoried on Town Roads Prior to Removals: 3,751

Normal Management of Public Trees: The tree warden and town highway (road) crew address hazard trees on a case-by-case basis.

Active Tree Board or Conservation Commission: A six-member conservation commission includes an active tree warden Russ Barrett.

Local Tree Ordinance: None.

Ash Inventory Conducted: 2019 inventory conducted using VTANR's Roadside Ash Inventory Data Collection project hosted by the Vermont Urban & Community Forestry Program. 2015 LANDS windshield survey for ash in unpaved road right-of-ways on 10% of Northfield dirt roads.

EAB First Detected: EAB has not yet been detected in Northfield but has been confirmed in neighboring towns. The majority of Northfield is within Vermont's EAB infested area.

Written EAB Management Plan: [A draft EAB plan](#) for Northfield was approved by the Northfield Conservation Commission in Oct. 2018.

Ash Management Status in 2021: Completed removal of 49 ash trees within municipal and utility rights-of-way in 2020 and 2021, planted five trees on municipal property, and treated two ash trees on municipal property with insecticide.

Key Players: Members of the Northfield Conservation Commission including the tree warden; Town Manager; Northfield Electric superintendent and staff; Northfield Highway (road) foreman and department staff; other volunteers from the community.

Funding: \$12,881 grant from the Vermont Urban & Community Forestry Program for the pilot project matched by \$12,881 of in-kind and monetary match from the Town of Northfield and from donations.

Wood Utilization: All wood of removed ash was chipped on site or taken by a local landowner.

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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	<p>Municipal staff removed 25 ash trees: Total cost \$7,735 Average cost per tree: \$310</p> <p>Local contractor removed 5 ash trees: Total cost: \$781 Average cost per tree: \$156</p> <p>Utility contractor removed 19 ash trees: Total cost: \$6,940 Average cost per tree: \$365</p>	<p>Public works and town highway employees</p> <p>Snapping Turtle Tree Works, LLC</p> <p>Davey Tree Expert</p>
Replanting: Cost of Trees	<p>5 trees Total cost: \$870 Average cost per tree: \$174</p>	<p>Monetary donation from the Rotary Club; trees planted by volunteers in approximately 50 person-hours</p>

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

