

VERMONT URBAN AND COMMUNITY FORESTRY PROGRAM

EAB Municipal Management Case Study

Burlington, Vermont

APPROACH

Removal and replanting of all ash trees

SUMMARY

The initial detection of emerald ash borer (EAB) in Vermont in 2018 prompted municipalities across the state to gather their resources and take the next steps to reduce impacts of this introduced insect on urban and community forests. The City of Burlington, designated as a Tree City USA since 1993, has a strong history of tree management. It currently supports four full-time staff who plant, care for, and remove trees in municipal rights-of-way and on municipal land. Burlington's EAB response has been led by these staff and supported by City leadership.

In 2018, the City of Burlington published "[Emerald Ash Borer Information, Prevention & Procedures](#)" that outlines potential courses of action. This document was based on a preexisting survey of trees within the Burlington municipal right-of-way (ROW) and park spaces, including 1,275 ash trees along streets and within parks among the approximately 11,600 municipally-managed trees of Burlington. The City ultimately plans to remove all ash trees within Burlington in response to EAB infestation and in combination with ash tree health decline. The plan includes a strong focus on planting hardwood tree species other than ash between existing ash trees (known as "interplanting") prior to their removal. These new plantings are the future canopy that will replace ash trees in Burlington. This decision was made based on the high cost of using insecticide treatment to preserve a large number of municipal ash trees, as well as viewing EAB infestation and resulting

ash tree decline and death as an opportunity to increase tree species diversity within Burlington through replanting.

All work and decision making for ash tree management is completed by the City's arboricultural team except for stump grinding, which is contracted out to local companies. Since EAB was detected in Vermont in 2018, City of Burlington arborists have removed 215 municipal ash trees that showed signs of declining health, leaving those ash trees in good health. EAB was confirmed in Burlington for the first time in July 2024; the rate of municipal ash tree removals will now increase.

The City arborists expect to complete removal of the remaining public ash trees by 2030. As of spring 2024, approximately 70% of ash trees within Burlington have been interplanted or replanted with approximately 900 new trees. Planting began in 2020 and is ongoing. The majority of the remaining 30% of ash trees are located in areas that exclude interplanting as an option and will be replanted once the ash trees are removed and the stumps are ground. Trees planted in Burlington as part of this effort, as well as the City's overall planting program, are sourced from the Burlington Community Tree Nursery (co-managed with Branch Out Burlington, the City's volunteer tree group) as well as Schichtels Nursery Inc., in New York.

FAST FACTS

Population: 44,595 (2022)

Miles of Town Maintained Roads: 95

Number of Ash Inventoried on City Roads prior to Removals: 1,094

Normal Management of Public Trees: The City Arborist and technicians monitor City trees on a four-year cycle. Each of the City's 11,600 municipal trees (street trees and trees in public parks) are assessed approximately once every four years, and maintenance such as pruning, cabling, and mulching is performed.

Local Tree Ordinance: [Burlington Code of Ordinances Ch. 29 Vegetation](#), Revised: 1962.

Ash Inventory Conducted: A [citywide tree inventory](#) was conducted in 2015, including all ash trees. The inventory was published online in 2022, and is regularly updated.

EAB First Detected: July 2024

Written EAB Strategy: Burlington Parks, Recreation, and Waterfront published an "[Emerald Ash Borer Information, Prevention & Procedures](#)" document in June 2018. Last updated May 2021.

Ash Management Status in 2024: Between 2018 and 2024 the City Arborists have removed 215 ash trees from the City ROW utilizing bucket trucks and limbing techniques. They have also replanted and interplanted approximately 900 trees including a variety of hardwood species such as sycamore, river birch, tulip poplar, and elm, oak, and maple species. There are 879 remaining ash trees in the municipal ROW.

The City has largely avoided chemical injection treatments as part of their EAB plan, however, the City Arborists approved injection treatment of one

ash tree outside of City Hall due to its high cultural and historic value to Burlington residents. The tree is treated biannually with emamectin benzoate. Several other ash trees within the municipal ROW have been given the same treatment, paid for by nearby homeowners.

Key Players: VJ Comai has led the EAB effort as the Burlington City Arborist. He works in the Burlington Parks, Recreation, and Waterfront department and manages the City's budget for tree care and its three full-time City Arborist technicians. Homeowners' associations (HOAs) throughout Burlington, such as the Strathmore HOA, have also been involved, voicing their opinions for a healthy urban tree canopy, and in some cases treating high value ash trees out of their own pockets.

Funding: The majority of EAB project funding comes from the City Arborist's annual budget of \$500,000. Of this, the use of \$40,000 is up to the City Arborist's discretion, and is used for a wide array of services including pruning, mulching, new plantings, removals, and other general maintenance. In addition to these funds, over the past six years the City Arborist has applied for and received \$50,000 in grants. These grants were not directly associated with EAB and ash tree management but have played a role in funding the Burlington EAB plan, primarily being used to purchase trees for interplanting and planting efforts.

Wood Utilization: : A small amount of ash wood from removed ash trees is used as firewood by local residents. The remainder is either chipped by the City Arborists or given to McNeil Generating Station to be used as biomass for the power plant.

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PROJECT COSTS

Activity	Project
Removal	Between 2018-2024, 215 ash trees were removed from the Burlington ROW. Work was completed by the City Arborists. The remaining 879 public ash trees will be removed by 2030.
Treatment	One tree in City Hall Park has been treated with pesticide containing emamectin benzoate injected by the City Arborist. Several other trees have been treated by contractors, paid for by private residents of Burlington.
Replanting	Since 2020, 900 trees have been planted in place of ash trees. Trees are sourced from the Burlington Community Tree Nursery, as well as Schichtels Nursery Inc. and are purchased for \$35 and \$125, respectively. These trees are planted by the City's Arborist team. The approximate cost of these trees as of 2024 has been \$85,500.



Ash lined residential street interplanted with additional tree species.

ON THE GROUND

“One thing that’s been really important is just public communication... when you educate people on what we’re doing, it saves a lot of headaches.”

Vincent “VJ” Comai, Burlington City Arborist

On the importance of communication and keeping the public involved in the EAB management process. He has met with multiple HOAs in Burlington, as well as private homeowners in order to take their input and understand their wishes for the future of Burlington’s urban forest.

LESSONS LEARNED

- **Public Communication:** Alerting the public as to what EAB is, and why your municipality is taking the management strategy that they are can prevent confrontation in the future, and ensure understanding of well-meaning residents. It also allows for residents to voice their opinions, helping to create a management plan in the best interest of all.
- **Consider Long Term Management:** Chemically treating ash trees is a recurring cost over the span of decades. This is a large commitment to make, so it is important to consider other management options. Will your town be better off investing into the future with new plantings? Consider what is right for your municipality based on your resources and goals.



Ash lined residential street interplanted with additional tree species.

Vermont Urban & Community Forestry Program

Vermont Department of Forests, Parks and Recreation in partnership with University of Vermont Extension

