EAB Municipal Management Case Study

Williston, Vermont

APPROACH

Removal and Replacement with Diversity of Species

SUMMARY

In the mid-2000's, 51 percent of the street trees in Williston, Vermont were species of ash. In certain neighborhoods, over 90 percent of the public trees were ash trees. This high percentage of ash trees meant that the town also had a high vulnerability to the devastating impact of the invasive emerald ash borer (EAB).

Recognizing this vulnerability, in 2014, an environmental planning intern, working with the Conservation Committee, conducted an inventory of Williston's public ash trees, and developed an EAB management plan. The plan recommended a phased removal of 10% (approximately 47) ash trees each year, over a 10-year period with an almost one-to-one replacement of the ash with a diversity of other species. The plans' goals were to: (1) increase species diversity through the replacement trees, (2) reduce the future visual impact of dead and diseased roadside trees and (3) deal with future impacts to public health and safety. The plan was presented to the public at Select Board meetings, and there was no negative feedback.

The team creating the plan prioritized removals based on the density of ash on a given street and the condition of the tree; streets with the highest percentage of ash and trees in poor condition were assigned the highest priority for removal. Twelve ash by the library and cemetery were selected for treatment with pesticide injections. In line with best forestry practices for conservation of wildlife habitat and biodiversity, town staff decided to leave ash trees in town parks and on conserved lands. Town staff monitor the ash trees on paths in parks and conserved lands, and if any of these trees become a danger to the public, they are removed. Trees that do not pose a danger will be left to fall naturally in place and decompose, providing important woody debris to the soil and habitat for wildlife, as well as conserving the ash component of the forests as long as possible.

Ash Trees Treated at Town Library

FAST FACTS

Population: 9,637

Miles of Town Maintained Roads: 72

Number of Ash Inventoried on Town Roads prior to Removals: In 2015, 494 trees, or approximately of 51% of Williston's street trees were ash.

Normal Management of Public Trees: Public Works Department manages trees in right-of-way.

Active Tree Board or Conservation Commission: Conservation Commission.

Local Tree Ordinance: None.

Ash Inventory Conducted: 2014 by environmental planning intern, using a prior inventory of all public trees as a guide.

EAB First Detected: Not detected as of summer 2020. Nearest confirmed infestation is 20 miles away.

Written EAB Management Plan: 2015

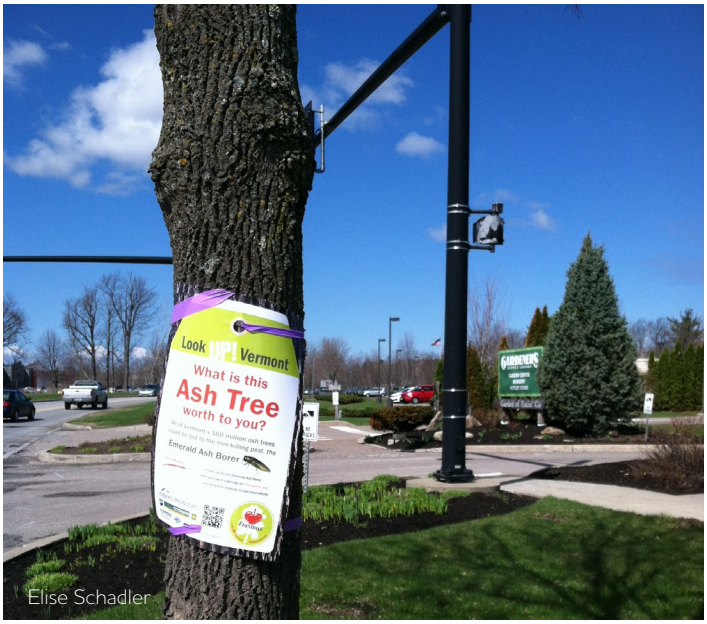
Ash Management Status in 2020: Began tree removals in 2015; by 2020 164 ash removed, 12 are being treated, and 143 trees replaced. The city anticipates completing removals and replacements by 2025. Tree removals are done by Public Works, treatment and new plantings are done by contractors.

Key Players: Town Manager; Director and staff of Department of Public Works; Conservation Committee; Environmental Planning Intern; County Forester.

Funding: Town's General Fund; Tree Fund for Tafts Corner neighborhood; $9,850; VT Urban & Community Forestry Program Caring for Canopy Grants (2015, 2017, 2019): $9,391.

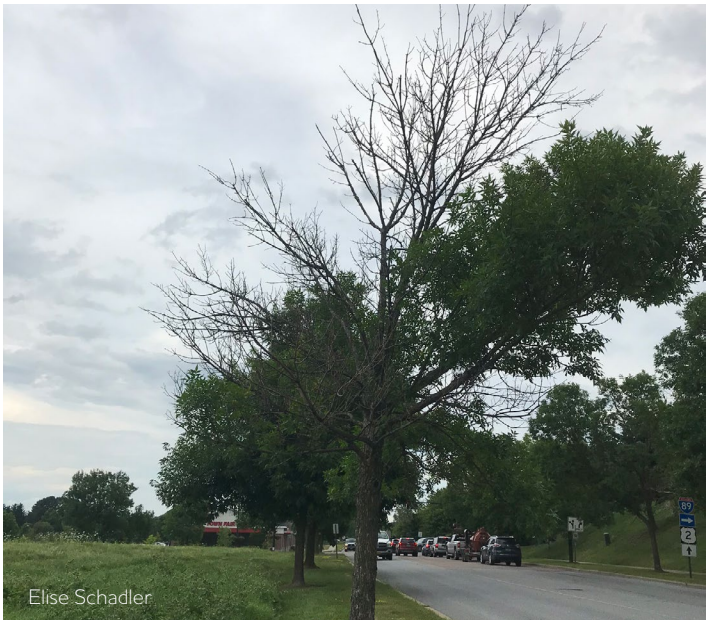
Wood Utilization: Tops and smaller pieces are taken to Chittenden Solid Waste District's compost facility. Larger wood is taken to Williston Public Works Facility.

Contacts: Bruce Hoar, Director of Public Works (also functions as Tree Warden), Williston, VT. bhoar@williston.gov; (802) 878-1239



Elise Schadler

Tagged Ash Tree during EAB Awareness Week


Elise Schadler

Thinning Canopy of Ash Trees

REMOVAL PRIORITIES & REPLACEMENT STRATEGY

As part of Williston's proactive approach, the town chose to remove ash trees on streets with the highest percentage of ash and trees in poor condition. Once EAB is confirmed in the area, they will prioritize trees that impact public safety and are visibly diseased or damaged.

Since 2015, the town has replaced the removed ash trees with elms, red maple, oak, honey locust, and gingko. Like ash, these species are salt tolerant and suited to urban environments. By replacing the ash with a diversity of five different species, the town will hopefully avoid having to remove a large percentage of their street trees again should another species-specific pest or disease emerge in the future.

ESTIMATED AND ACTUAL COSTS

In the 2015 EAB Management Plan, the author's estimated cost of removing and replacing 10%, or 47, of the ash trees each year was between $18,800 and $28,200 per year at an average of $400 to $600 per tree. The costs were calculated using in-house estimates as well as the Purdue EAB Cost Calculator. As of 2020, or halfway through their ten-year plan, Williston has removed 164 or 33% of their ash trees and planted 143 replacement trees. The cost of the work up to summer, 2020 has been $101,906. However, the town has a special fund of $9,850 for tree replanting in one neighborhood, and has received another $9,391 in grants. Therefore, the actual town expenses after five years are only $82,675, or $266 per tree for removals and stump grinding and $428 for total costs for removal and replacement of each tree.

Activity	**No. of Trees**	**Work Done By**	**Actual Costs** (2015-2020)
Treatment	12 near library, Town Green & cemetery	Contractor	$3,000; (or average of $250 per tree)
Removal & Stump Grinding	494 trees (164 removed as of 2020, 330 remaining)	Public Works	$40,628; (or average of $266 per tree, removal only)
Replacement Trees & Labor	143 trees at least 2" DBH[1] as of 2020	Contractor	$61,288; (or average of $428 per tree, for replacement tree and labor)
Grand Total	**$101,906 (actual through 2020, not including grants)**		

[1] Williston Public Works Specifications recommend that all new tree plantings have a DBH of at least 2 inches.

ON THE GROUND

As a general rule of thumb, street tree populations should consist of no more than 10% of any one species, 20% of any one genus, or 30% of any one family of trees. Currently, maple and ash are overrepresented in Williston's Town right-of-way. New tree plantings should continue to support the goal of diversification of the community tree population.

Williston's Emerald Ash Borer Management Plan, 2015

LESSONS LEARNED

- **Take advantage of engaged citizens.** Members of the Williston Conservation Commission have been dedicated and great resources.
- **Develop partnerships within State agencies,** such as the state highway department, to collaborate and inform each other of hazard trees that pose a threat to public safety.
- **Interplanting replacement trees among the trees that you are planning to remove is not as easy as it sounds.**
- **Holding a public hearing is important to let the public know about your plan.** Remember to include homeowner associations, and work with the public as much as possible on selecting replacement tree species. Williston presented the management plan to the public at Select Board meetings; and the Director of Public Works posted information on the town's website.

ABOUT THE PROJECT

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.

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

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