Interim East Montpelier
Ash Tree Management Plan

3/9/2020

Prepared by the
Town of East Montpelier
with assistance from the
Vermont Urban & Community Forestry Program
and the
Central Vermont Regional Planning Commission

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Introduction

In 2017, East Montpelier formed the Rural Roads Vegetation Assessments Project Advisory Committee (subsequently renamed the Resilient Roads Committee) charged with developing a plan for the management of the town's roadsides, including the fostering of healthy native vegetation to help reduce the runoff of water and contaminants into streams and rivers. The study also examined other characteristics such as minimizing invasive plant species, encouraging traffic calming, and enhancing roadside character. This study was written by Joanne Garton of the State Urban and Community Forestry Program with assistance and approval of the Resilient Roads Committee. As this report was being developed, the Town learned that Emerald Ash Borer (EAB) had been found in two neighboring and one nearby town (Figure 1). Following the completion of this Plan the Resilient Roads Committee was reconvened and charged with developing a plan to address this potentially fast-spreading pest that is expected to cause severe damage to ash trees in our town. The nature of EAB damage makes affected treats particularly hazardous to people and property in roadways, along power line rights-of-way, and on private lands near homes or outdoor living spaces.

EAB is a small, metallic-green beetle native to eastern Asia and now considered invasive in North America. It was first detected in Vermont in February of 2018 and has been confirmed in eight counties in the state as of February 2020. Adult EAB are bullet-shaped and ¼ - ½ inch long; the larvae are segmented, creamy white, legless and can grow up to about one inch in length. Adult EAB eat the leaves of all trees in the ash (*Fraxinus*) family and lay eggs under the ash tree bark. The larvae form s-shaped galleries under the bark while feeding, ultimately killing the ash tree once the infestation is severe enough to cut off the flow of nutrients up and down the tree. Signs of EAB in an ash tree include canopy dieback, "blonding" from woodpecker flecking, epicormic branching[1], bark cracks or splits, and s-shaped galleries underneath the bark.

Learn more about EAB, ash tree identification, the signs and symptoms of EAB, and recommendations to Slow the Spread of EAB at vtinvasives.org.

See Figure 1: Map of Washington County EAB Infestation Area, for spatial information on the current known infested area.

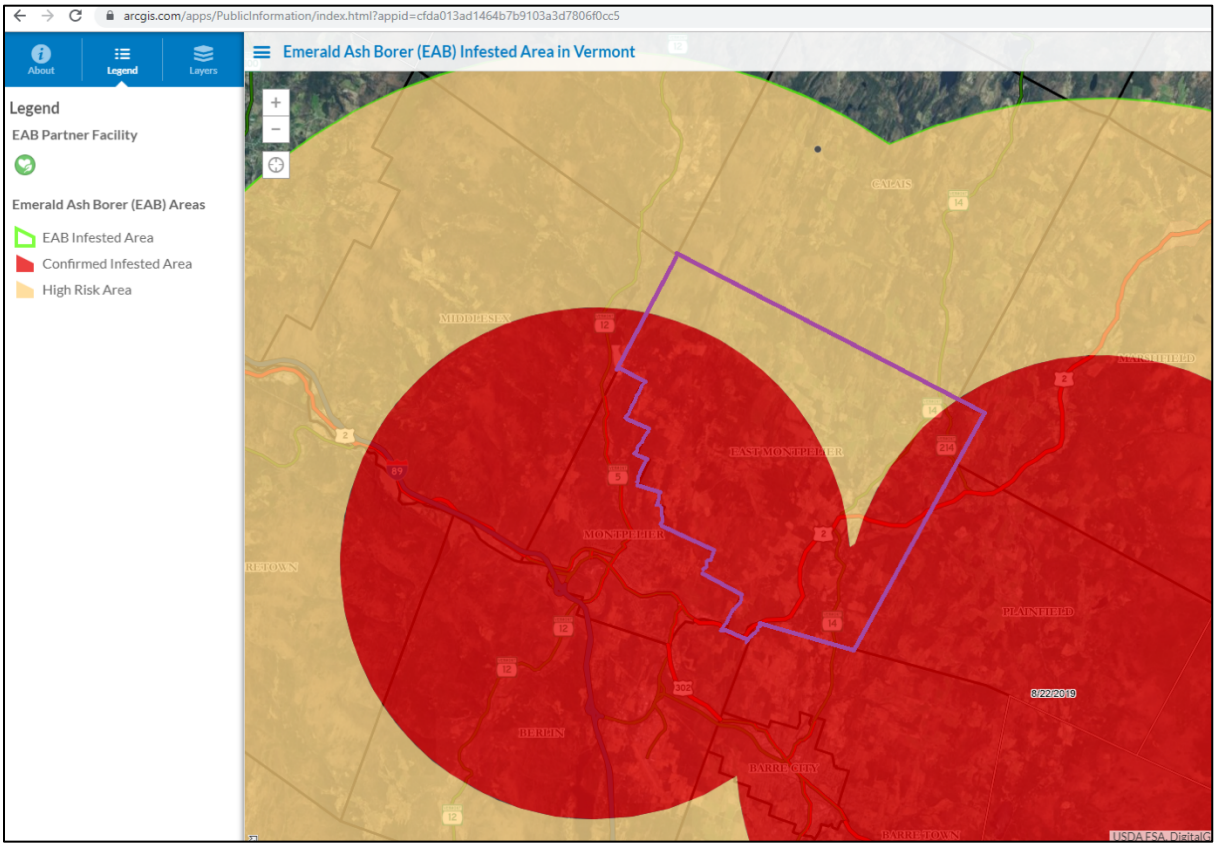
All Vermont towns have been encouraged to prepare for and manage the impacts of EAB and the loss of ash trees in our communities. Dead and dying ash trees along the public rights-of-way and in public places, such as parks and schools, pose a significant risk to public safety. The loss of ash trees will leave gaps, impacting the ecological, economic, and aesthetic benefits provided by the urban forest. Municipalities will bear the responsibility and costs of removing and/or treating public ash trees, as well as any replanting efforts. For more information about EAB Management, visit vtcommunityforestry.org/community-planning/tree-pests.

Ash trees killed by EAB become extremely brittle and break easily as they decline. Branches can fall on people and property in snowstorms and windstorms with a light breeze, or even on a calm clear day. Ash trees use a thin ring of conduction tissue to supply water from the roots to the entire tree. EAB grubs will damage these functional water "pipes" as they chew just beneath the bark inside trunks and branches. This causes the tree to dry quickly and the structural wood to become prone to cracking. Internal breaks in the structural wood that bear the weight

[1] An **epicormic** shoot or branch grows from an **epicormic** bud that lies underneath the bark of a trunk, stem, or branch of a plant.

of the tree are often hidden from view by tree bark. As such, limbs can break and fall at any point along the branch at any time. It is not uncommon to have sizeable limbs snap 30 feet or more off the ground on a calm day. The threat of falling limbs is not limited to just dead ash. A comparative study of ash trees conducted in Ohio by Purdue University shows that structural integrity of ash trees can begin to decline even when the trees are mostly green and have two thirds of the canopy still intact.

Figure 1. Map of Washington County EAB Infestation Area (current as of February 2020)



As shown in Figure 1, over two-thirds of East Montpelier (town boundary area in purple) is currently in the Confirmed Infestation Area, which is the area shown in red within five miles of an identified infestation. The remainder of the town is shaded yellow, which is the zone of High Risk, or those areas outside the Confirmed Infestation Area but within ten miles of a confirmed infestation. With EAB typically moving at a natural rate of approximately two miles per year, we expect that East Montpelier will be fully within the infestation area within the next few years.

The East Montpelier Ash Tree Management Plan will help East Montpelier with the management of its roadside ash trees as they are impacted by EAB. This plan includes both active and passive management strategies for live and dead roadside ash trees and considers as the role the Town and contractors will play in the management of these trees. In its current version, the plan is an interim plan. The plan will be finalized after completion of a pilot project to be undertaken mostly during summer of 2020.

Under the pilot project, described in further detail below, the Town will proactively remove ash trees at U-32 Middle & High School on Gallison Hill Road, both white ash trees in the hedgerow along the road and several green

ash trees that are landscape trees on campus. While the U-32 property is the project focus, the Town intends to extend tree removal up Gallison Hill Road and on nearby Wheeler and Schoolhouse roads. Experience with the pilot project should enhance the Town's ability to finalize the management plan. In part, the Town will have the benefit of additional citizen/landowner input. It is expected that even a "final" plan will need occasional revision over time as this dynamic infestation progresses in unanticipated ways.

OPTIONS

There are three recognized options for management of EAB currently available and outlined below. The final plan may integrate more than one of these options.

Preemptive Management

Ash trees along rural roads are removed prior to a local EAB infestation and, where appropriate, replaced with a diversity of tree species that do not host EAB. Since ash trees will continue to grow, on-going monitoring would be needed but on a more limited basis.

COST: The initial costs associated with this option will be high due to expenses associated with tree removal. However, limited annual cost for EAB management will be incurred after the implementation of this strategy.

Selective Management

High-value ash trees in selected areas (roadsides, popular public use areas, and villages) maybe managed actively and protected for future generations using injections of insecticide. Certain trees were identified as "historic" in the inventory because of their size, prominence and location. Other ash trees would be removed on a sequential basis based on priorities such as size, current health, or other variables. This may take place over a period of years. Ash trees in other public areas (e.g. the Town Forest and other forested town-owned lands) will generally be managed without a proactive removal approach (and may succumb to EAB infestation) or will be managed under the guidance of the Town Tree Warden. Ash trees are regularly monitored for their health and levels of EAB infestation over the long term. Insecticide treatment of EAB and ash tree removal may be undertaken where financially and culturally appropriate. Along rural roads, trees will be removed before or at early infestation to reduce risk and long-term cost.

COST: Treatment, removal, and replacement costs will be spread out over an extended period.

Reactive Management

Ash trees are managed and maintained the same as all other trees in the community. Hazard trees along the roadside will be removed as issues arise. Ultimately, most ash trees will die as the infestation spreads through the municipality.

COST: Although this strategy may cost nothing up front, significant costs will be incurred over a short period of time as ash die quickly. Additionally, the cost of the removal of dead ash trees is more expensive than removal of live trees due to decreased structural integrity of EAB-infested trees and the risk they pose to tree removal crews.

With a few exceptions, East Montpelier would address ash trees occurring only within public rights of way or on public properties such as schools where there could be danger to people or property.

Strategic Plan

The strategic planning portion of the Management Plan is guided by the community's vision of its roadsides as outlined in the Resilient Roads Report completed by VT Urban & Community Forestry Program, and the Town Plan.

Town Plan (references to trees)

Chapter 6 Transportation/Road Maintenance (page 67)

These efforts complement earlier programs to beautify roadsides by encouraging the growth of large trees such as maples and sometimes planting new trees. These efforts are led by the Town Forest Committee and the Tree Warden. The committee works with the Road Foreman and landowners when tree removals are considered within the town right-of-way.

Action 6.2.5: Protect roadside trees and plant additional trees where appropriate.

Action 6.2.6: Notify the public and allow public comment prior to significantly changing the character of any road through widening, cutting of live trees within the public right-of-way, or paving

Chapter 9. Natural and Scenic Resources, Page 111
In addition to East Montpelier's forests, approximately 59 miles of street and shade trees lie within the public right-of way. These trees fall under the responsibility of the Town Tree Warden. Mature trees lining our roadways contribute to roadside scenery. These cultural treasures, as well as trees surrounding other public spaces such as the school, cemeteries, and town offices, need to be managed as community resources. They provide shade, reduce dust, control soil erosion, and assist in traffic calming. The "Town Green", next to the Old Brick Church, will over time become a shady community gathering spot for local events. These amenities come with maintenance responsibilities.

East Montpelier is taking part in a Roadside Vegetation Assessment Project sponsored by the state Agency of Natural Resources Department of Forests, Parks and Recreation. The project will assist the town with developing strategies to improve and maintain roadside vegetation in order to help reduce runoff and erosion that contributes to stream sedimentation and pollution.

Chapter 9. Natural and Scenic Resources, Page 122:
The town has undergone considerable change to its scenic character in the past century, including changes in land use, advances in farm management techniques, development, loss of trees such as elms and chestnuts (while gaining overall in forested area), and loss of a number of older structures, including houses, barns, bridges, and stone walls.

Chapter 9. Natural and Scenic Resources, Page 125:
Roadsides
Narrow gravel roadways are an important part of East Montpelier's scenic and rural character. Some of these roadways are further enhanced by roadside features such as stone walls or old maple trees.

Significant Scenic Views Table, Page 126.

Significant Views in East Montpelier

The following are particularly significant views visible along public roads. (Road sections are shown on Map 12 Significant Scenic Views and Natural Resources)

Location	Description	Length (miles)	Scenic Resource Type
North Street and Sparrow Farm Road	Distant views to Worcester Range, Camels Hump, and Mount Ellen; foreground meadows, farm structures, large roadside trees	1	• Rural Agricultural and Forest Lands • Distant Views • Roadside Features • Historic Farm Structures
Cummings Road	Distant views to SW to Camels Hump and Mount Ellen; foreground meadows	0.1	• Distant Views • Rural Agricultural
Horn of the Moon, Jacobs and Sanders Circle Roads	Distant views to Worcester Range and Camels Hump, Foreground views to Long Meadow Hill and Horn of the Moon Pond, meadows, farm structures	1.2	• Distant Views • Rural Agricultural and Forest land • Historic Farm structures • Hilltops and Ridgelines • Water Feature
County Road south of Haggett Road	Distant view to east toward White Mountains, foreground agricultural field and White Cemetery	0.1	• Distant Views • Rural Agricultural and Forest land
Center Road South	Foreground open meadows on both sides of Center Road with views to the Green Mountains and middle-ground hills. Historic farmstead is on the north side of the road near top of hill.	0.3	• Distant Views • Rural Agricultural and Forest land • Historic Farm structures
Center Road North	Scenic road with several historic farms, a large sugarbush, mature roadside maple trees, diverse mix of open meadows and forest land; views to Sodom Pond and surrounding rural landscape	3.7	• Middle-ground views • Rural Agricultural and Forest land • Historic Farm structures • Roadside features • Water Feature
Sibley Road/ Putnam Road	Scenic road with three historic farmsteads and barns set in an open agricultural landscape	1.6	• Distant Views • Rural Agricultural and Forest land • Historic Farm structures
Intersection of Dodge, Putnam, Snow Hill and Vincent Flats Roads	Views to east along Snow Hill Road to Marshfield cliffs and the Spruce Mountain ranges; foreground pattern of fields and forests in the foreground with some residential structures. Views looking west to the historic Four Corners Schoolhouse.	0.4	• Distant Views • Rural Agricultural and Forest land • Historic structures • Hilltops and ridgelines

Clark Road south of East Hill Road	Distant views to west of Camels Hump and Worcester Range, foreground open meadows.	0.6	• Distant Views • Rural Agricultural and Forest Lands
East Montpelier Center (Hamlet)	A cluster of tightly knit homes and a working farm with The Old Meetinghouse Church as a focal point. Open agricultural meadows and forest land surround East Montpelier Center	0.5	• Historic Buildings • Rural Agricultural and Forest land • Hamlet
North Montpelier Village	A distinct village with historic homes, old factory buildings, and a former village store. North Montpelier Pond (partially in Calais) and Kingsbury Branch enhance views.	0.5	• Historic Buildings • Village • Water Features
East Montpelier Village	Historic center of town with numerous historic structures in a traditional village pattern. Old Brick Church, Dudley's Store, an old schoolhouse (now municipal offices), along with the Winooski River are important focal points.	0.7	• Historic Buildings • Village • Water Feature

Goals and Actions (page 146)

Action 6.2.5: Protect roadside trees and plant additional trees where appropriate.

Action 6.2.6: Notify the public and allow public comment prior to significantly changing the character of any road through widening, cutting of live trees within the public right-of-way, or paving.

Inventory

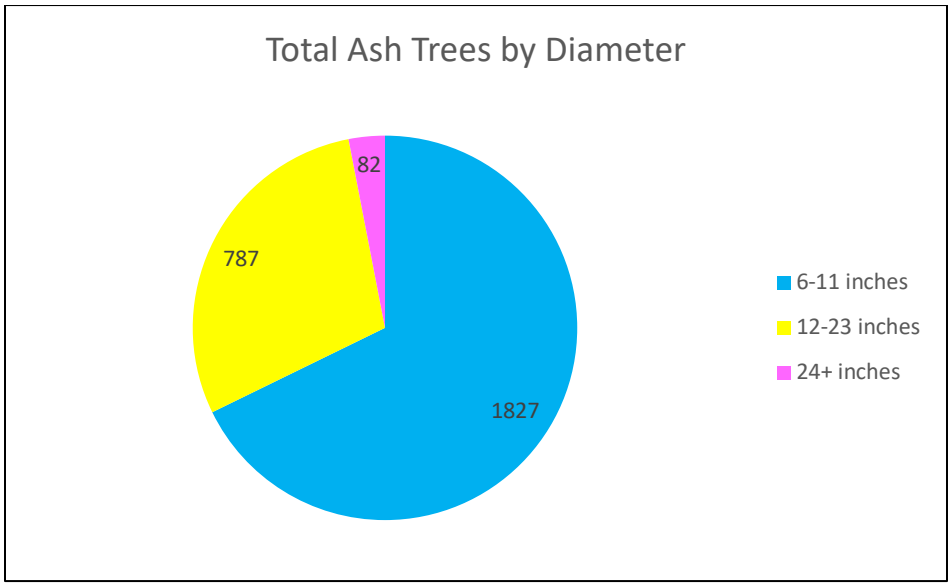
The first and most important step in managing a community's roadside trees and preparing for EAB is to conduct a tree inventory. A tree inventory is the process of counting, characterizing, and recording information about the public roadside trees. On May 11, 2019, the Vermont Urban and Community Forestry Program trained citizen volunteers on tree identification and use of GIS-based application (ArcGIS Collector) to inventory ash trees along the town roadsides; the work was completed by late July. Data collected on each tree includes: tree count, location, size, condition, removal priority, and ownership (Town ROW, utility ROW, or private). Trees considered particularly scenic were recorded as "historic" trees for consideration of insecticide treatment as an alternative to removal. The inventory covered approximately 62.2 miles of roads; federal and state highways were excluded. Town road right of ways are generally three rods (49.5 feet) in width, so the inventory extended 25 feet on either side of the road centerline. Where the utility right of way overlapped the road right of way, the tree was recorded as being in the utility right of way. The Town opted not to include trees smaller than a 6-inch DBH (diameter measured at breast height, or 4.5 feet above the ground). A small number of private trees outside the rights of way were inventoried, particularly if they appeared to pose a threat to the road (e.g., leaners).

Analysis

For East Montpelier's 62.2 miles of road, 42 miles were found to have ash trees present (approximately 66% of the roadway miles). In total 2,696 ash trees were inventoried. Almost all of the trees are white ash; a small

number of black ash were found in wetland areas next to a couple roads. In Central Vermont, green ash is not indigenous, although it is occasionally used as a landscape tree, as was the case at U-32.

Figure 2. Ash Trees by Diameter Chart



The inventory found that 85% of the ash trees along the roadside are in good condition; 14% of the trees are in fair-to-poor condition; and 1% are dead (unrelated to EAB). Although the intent was to also record any sign of EAB presence, including woodpecker holes, blonding on the bark, D-shaped exit holes, bark splitting, epicormic shoots, and canopy dieback, no evidence of EAB was uncovered fortunately. A map showing condition and priority of trees is included on page 17.

Diameter	Dead	Poor/Fair	Good	Grand Total
6-11 inches	17	243	1567	1827
12-23 inches	12	118	657	787
24+ inches	1	15	66	82
Grand Total	**30**	**376**	**2290**	**2696**

Of the trees that where inventoried we found 8% to be located in the utility ROW (see table below). Trees located in a shared ROW generally will be removed by the utility providers, which in East Montpelier are Green Mountain Power, Washington Electric Co-op, and Consolidated Communications (where not sharing a power pole). There may, however, be circumstances where ash trees are more of a threat to the road than the utility lines, or where the utility schedule for ash-tree removal is several years off. Coordination between the utilities and the Town will be important. A map showing ash tree ownership is included on page 15.

Ownership				
Diameter	PRIVATE LAND OWNER	TOWN ROW	UTILITY ROW	Grand Total
6-11 inches	24	1686	117	1827
12-23 inches	20	679	88	787
24+ inches	3	72	7	82
Grand Total	**47**	**2437**	**212**	**2696**

In some cases, trees inventoried as within the town right-of-way may actually fall outside; the offsets from the road centerline to each tree were not physically measured.

A summary of roads with ash trees present by their diameter is included below. A map showing ash tree diameter along roadways is included on page 14.

	Diameter Class			
Road Name	6-11 inches	12-23 inches	24+ inches	Grand Total
Barnes Rd.	54	42	4	100
Bliss Rd	84	42	3	129
Brazier Rd	131	80	4	215
Butterfield Rd	2			2
Center Rd	64	38	2	104
Cherry Tree Hill Rd	11	3		14
Chickering Rd	10	7	1	18
Coburn Rd	7			7
County Rd	132	38	2	172
Cummings Rd	65	18	4	87
Daggett Rd	1	1		2
Dillon Rd	3			3
Dodge Rd	19	23	7	49
Doner Rd	11	4		15
E Hill Rd	6	4	1	11
Factory St	17	5		22
Fitch Rd	25	12	2	39
Foster Rd	3			3
Gallison Hill Rd	32	21	1	54
Gould Hill Rd	8			8
Green Rd	34	20	4	58
Guyette Rd	110	27	1	138
Haggett Rd	7	5		12
Hammett Hill Rd	5	2	2	9
Horn of the Moon Rd	198	75	4	277
Jacobs Rd	107	13	2	122
Johnson Rd	10	13	3	26

Road Name	6-11 inches	12-23 inches	24+ inches	Grand Total
Lyle Young Rd	61	12	7	80
Markham Rd	7	3		10
Murray Rd	36	21		57
North St	102	77	8	187
Partridge Run	2	1		3
Perkins Rd	36	3		39
Powder Horn Glen Rd	1			1
Putnam Rd	10		3	13
Sanders Cir	53	7	3	63
Schoolhouse Rd	46	26		72
Sibley Rd	23	9		32
Snow Hill Rd	24	28	3	55
Sodom Pond Rd	56	13		69
Sparrow Farm Rd	80	55	3	138
Taylor Farm Rd	8	17		25
Taylor Rd	8	1	1	10
Templeton Rd	42	3	2	47
Towne Hill Rd		1	1	2
Vincent Flats Rd	23	5	2	30
Wheeler Rd	29	8	1	38
Grand Total	**1827**	**787**	**82**	**2696**

Actions

This management plan is an interim plan to cover the next two years of activities. Actions under this plan will include:

- **May – July 2019.** Tree inventory (completed).
- **December 5, 2019.** Committee field trip to validate "historic" trees for possible insecticide treatment (competed).
- **January 13, 2020.** Apply for a U.S. Forest Service grant for the U-32 pilot project through Vermont Community and Urban Forestry Program. Grant is a $15,000 grant to be matched by the Town and will cover tree removal and replacement tree planting. Insecticide treatment funded by the Town can be used toward the match. (Grant application appended)
- **January 13, 2020.** Hearing held pursuant to state law, 24 V.S.A §2509(a) for removal of shade trees as envisioned in the pilot project.
- **February 10, 2020.** Town notified of grant award, services to include:
    - Remove at least 10 and up to 21 ash trees along Gallison Hill Road at the U-32 Middle & High School (U-32) campus and at least 50 and up to 107 ash trees within the public right-of-way on nearby roadways.
    - Plant at least 6 and up to 8 trees as replacement trees on the U-32 campus.

  - Provide information at State site visits and in final report about the costs, potential future contractors and overall management challenges and opportunities for tree removals elsewhere in its jurisdiction.
- **February 11, 2020.** Tree Warden Paul Cate approves tree removal subject to certain conditions. (Decision appended)
- **March - April 2020.** Enter into agreements (e.g., disposal of wood, brush and wood chips, removal of invasives, insecticide treatment option, site cleanup) with landowners where pilot project tree removal will occur; RFP/Contracting for pilot project.

  Public outreach, including opportunity for citizens to request insecticide treatment of additional trees in rights of way not originally identified as "historic" during the inventory.
- **Mid-May to mid-June 2020.** Insecticide treatment. Trees that have been categorized as historic will be evaluated for feasibility of a systemic trunk injection. A total of 8 trees were categorized as historic during the inventory. A map showing historic ash trees along roadways is included on page 18 of this Plan. The trees identified during the public outreach and those identified during the inventory will be reviewed to determine whether they merit the cost of treatment (inventoried trees were reviewed in December 2019 and some declassified as historic). Further, the Town will consider including one or two of the healthy ash trees in the U-32 hedgerow in the long-term treatment program.
- **June – August 2020.** Remove ash trees on U-32 Middle & High School property on Gallison Hill Road as a part of a demonstration/educational opportunity for students and general public to reduce risk, teach the public, and inform future decision making and plan revision. This will include ash trees within the road right-of-way as well as several green ash trees that were used as landscape trees in the parking area during the last school renovations. Last fall (2019), Green Mountain Power removed ash trees across the road from the school as well as several within the road right-of-way next to the soccer field.

  For campus trees that are removed, work with the school administration and possibly students to select replacement tree species. The pilot project will fund purchase and installation of at least 6 trees. The Town has asked the school whether it would be interested in funding additional tree removal and possibly removal of invasive plants used in the landscaping, with the Town's assistance.

  Remove ash trees on the remainder of Gallison Hill Road and on Wheeler and Schoolhouse roads within the limits of available funds, with a priority of removing high-risk trees.
- **September 30, 2020.** Report to grantors on progress per terms of grant agreement.
- **March 2021.** Deadline for pilot project completion.
- **April – June 2021.** Evaluate pilot project and results of public outreach during prior year to decide on next steps and finalization of management plan.

Landowners must be notified if trees are to be removed on their property including in the right-of-way. The Committee will also prioritize finding a local contractor to remove trees. It will be our policy to minimize to the extent possible damage to other tree species when removing ash. Property owners own the trees and may utilize the wood as they wish. If property owners do not wish to retain the wood, the Committee would like to find local

sources for the wood such as firewood for nearby landowners, or as chips to be used in institutional wood chip boilers such as at East Montpelier Elementary School, U-32 or Goddard College.

To reduce costs, right-of-way trees that lean away from the road may be marked to be left, especially if the adjacent private property is forested.

Landowners willing to commit to long-term treatment of healthy right-of-way trees will have that option in accordance with state law.

Management

The sequence and timing of future tree removals will be determined by cost and availability of contractors. East Montpelier plans on meeting with local arborists to discuss costs and how best to dispose of all trees.

The Town will advise landowners for planting new trees and managing existing vegetation as appropriate to help create a diversified age profile and increase the health and vibrancy of the roadsides and public spaces. Currently, tree planting strategy is focused on planting native species with the exception of those with known susceptibility to pathogens or invasive insect threats. The Town hopes to engage landowners and neighbors in supplemental plantings within the rights of way. Generally, where ash trees are removed, the Town will encourage managing for other existing trees to fill the spaces rather than attempting to plant new trees in areas with a dense root system in place.

Public Education and Outreach

Public education in advance of tree removal is critical because a significant number of trees will be removed from the town roadsides, and this will be unsettling absent a full understanding of the background. It will be important to convey to townspeople the potential dangers of ash trees both near roadways and near their own homes. In addition to the demonstration project at U-32, the Committee plans to post information on Front Porch Forum and to hold a public forum near the time of the demonstration project.

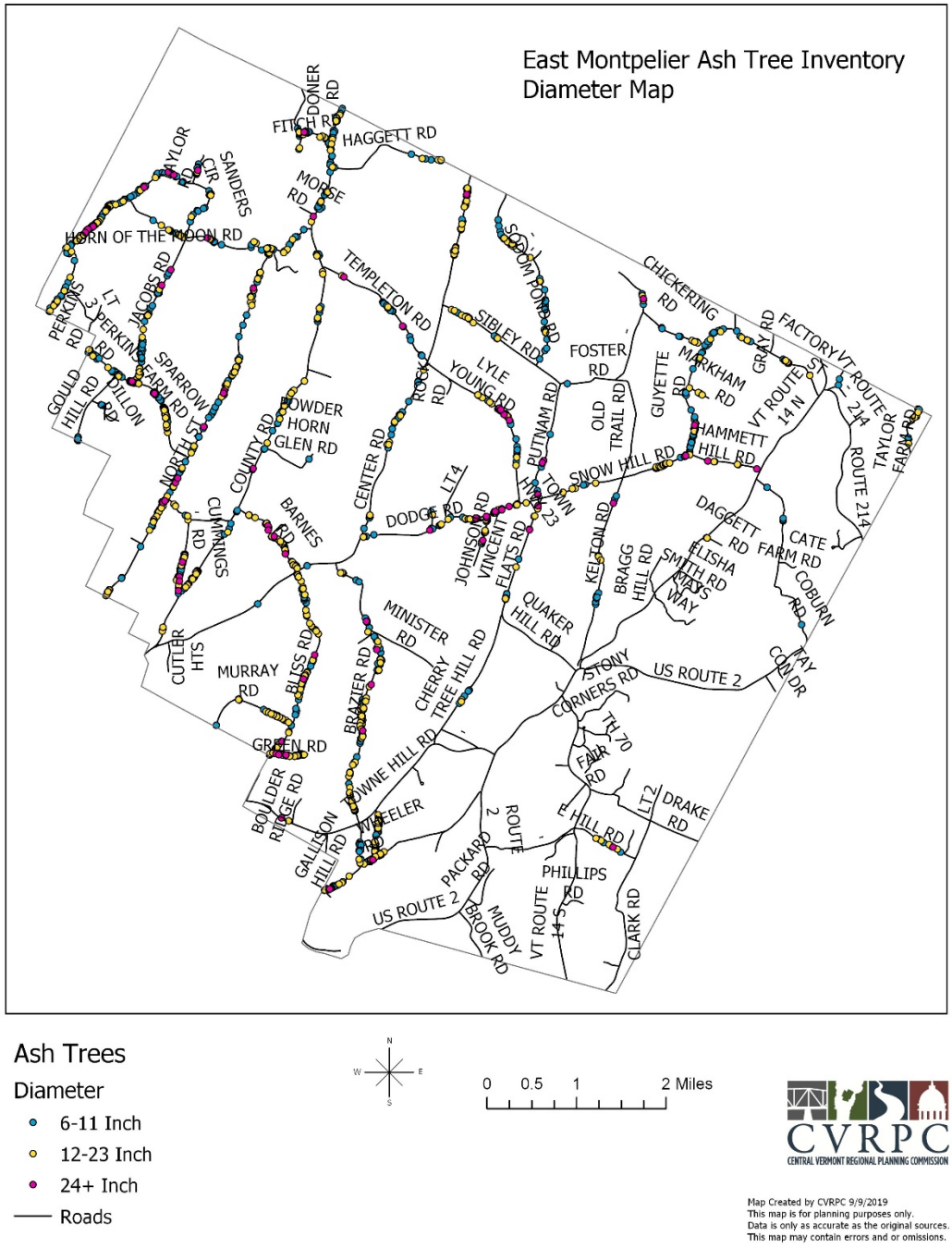
Responsibilities

The following Town staff will be responsible for this Management Plan
1) Bruce Johnson, Town Administrator
2) Guthrie Perry, Town Road Foreman
3) Paul Cate, Tree Warden

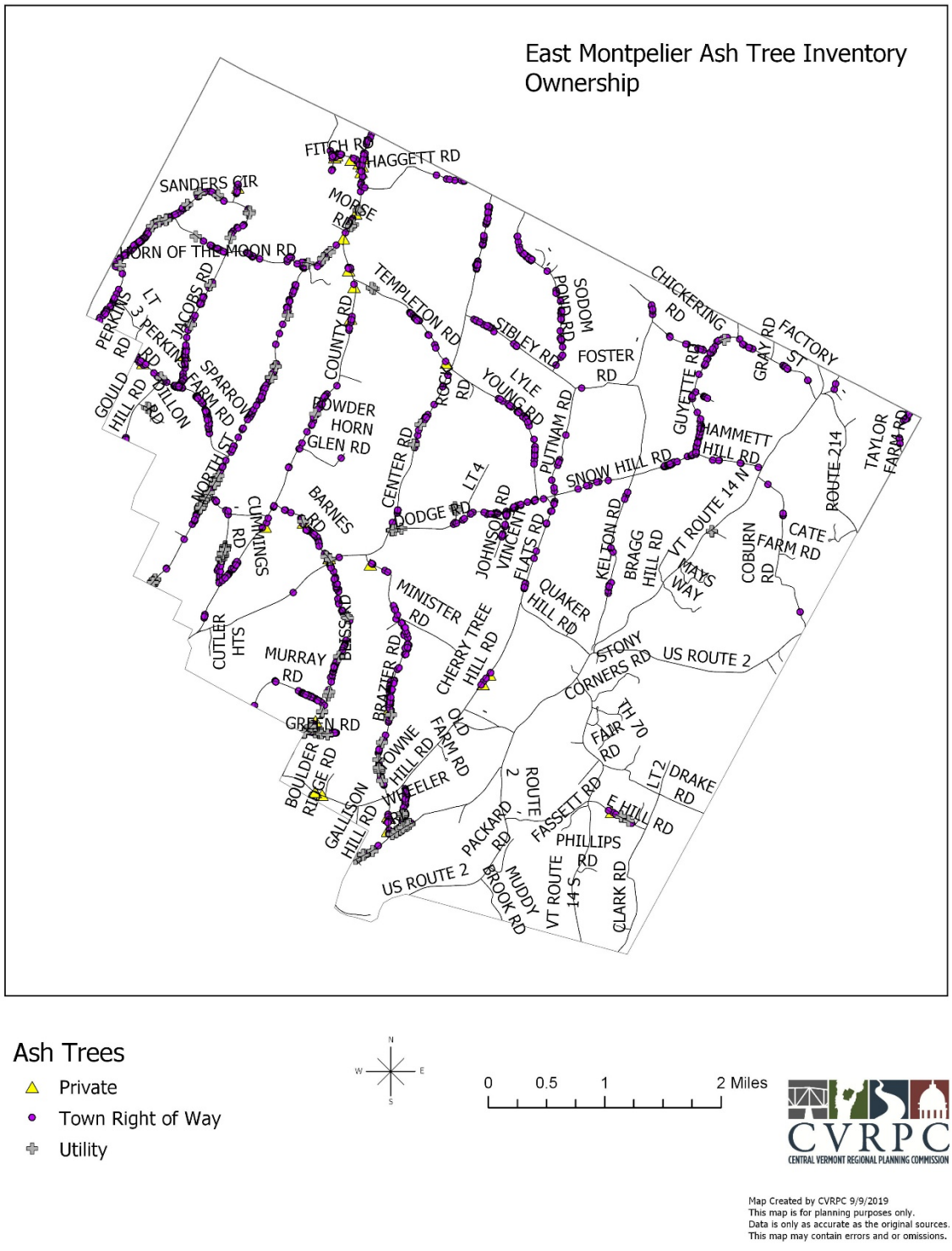
Funding

The following funding sources will be utilized for this Management Plan
1) Grant funding of $15,000 for tree removal
2) Town equivalent match to grant, which will include insecticide treatment of “historic” trees in town, tree removal, and planting of replacement trees at U-32

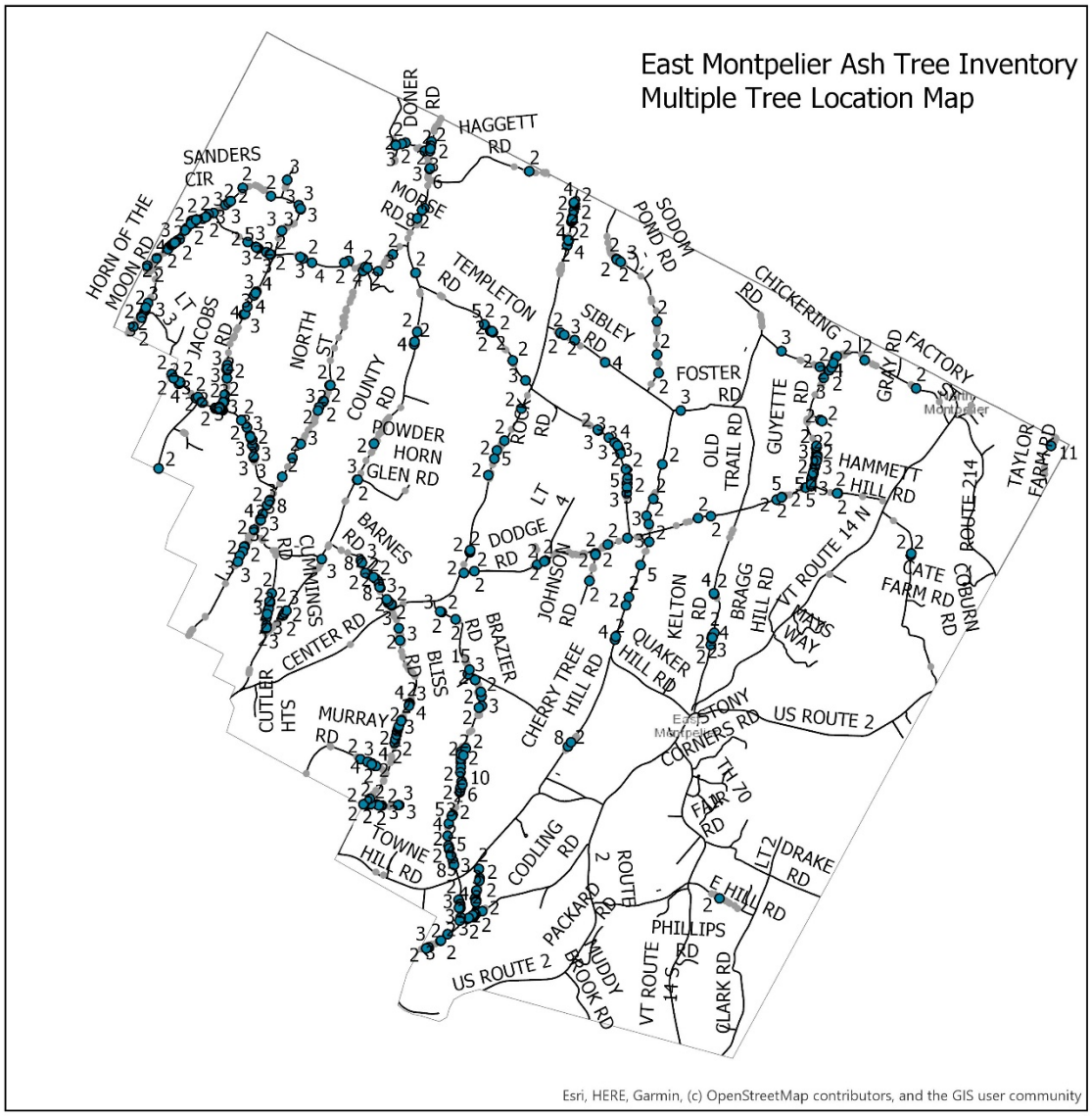
Map 1. Tree Diameter



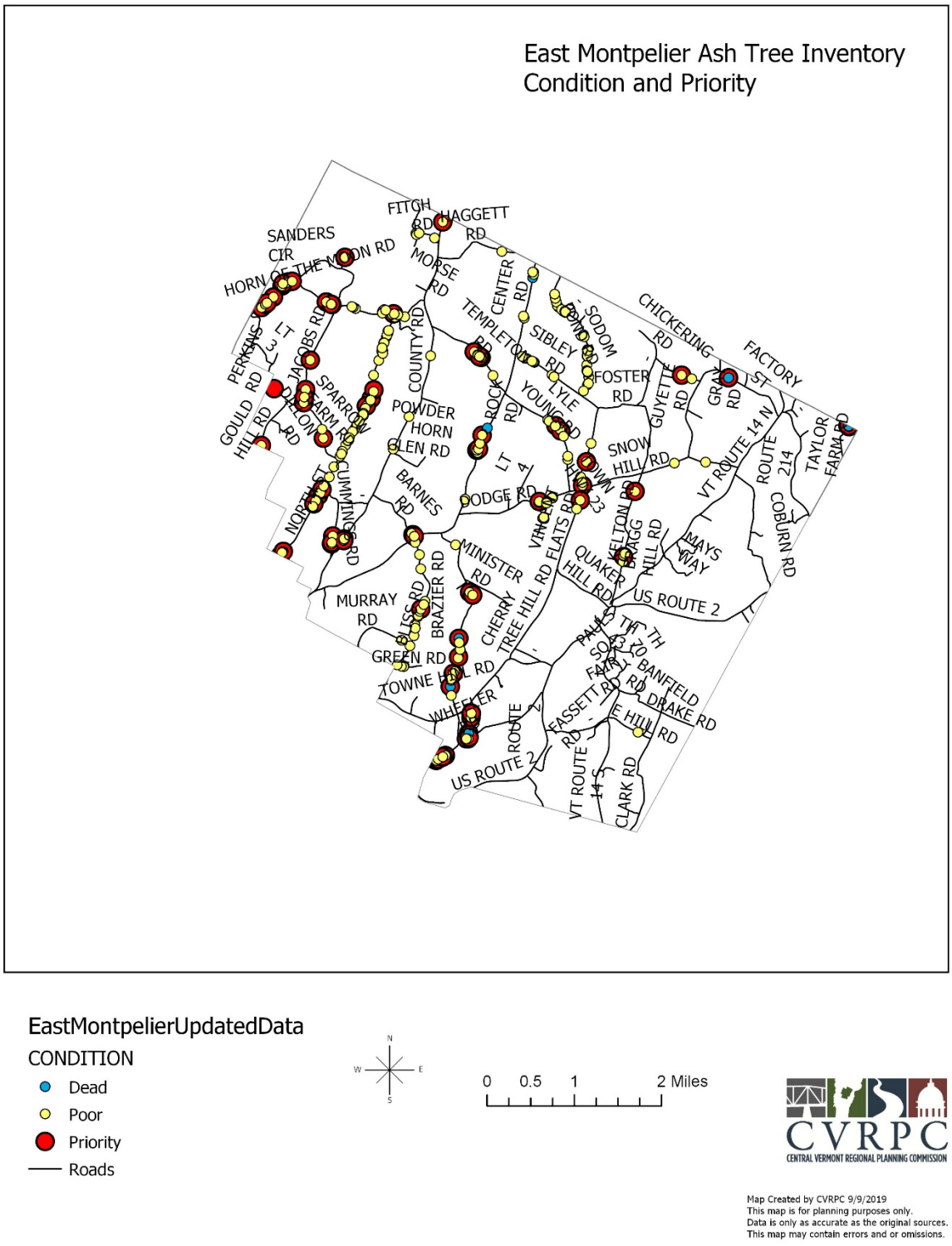
Map 2. Ownership



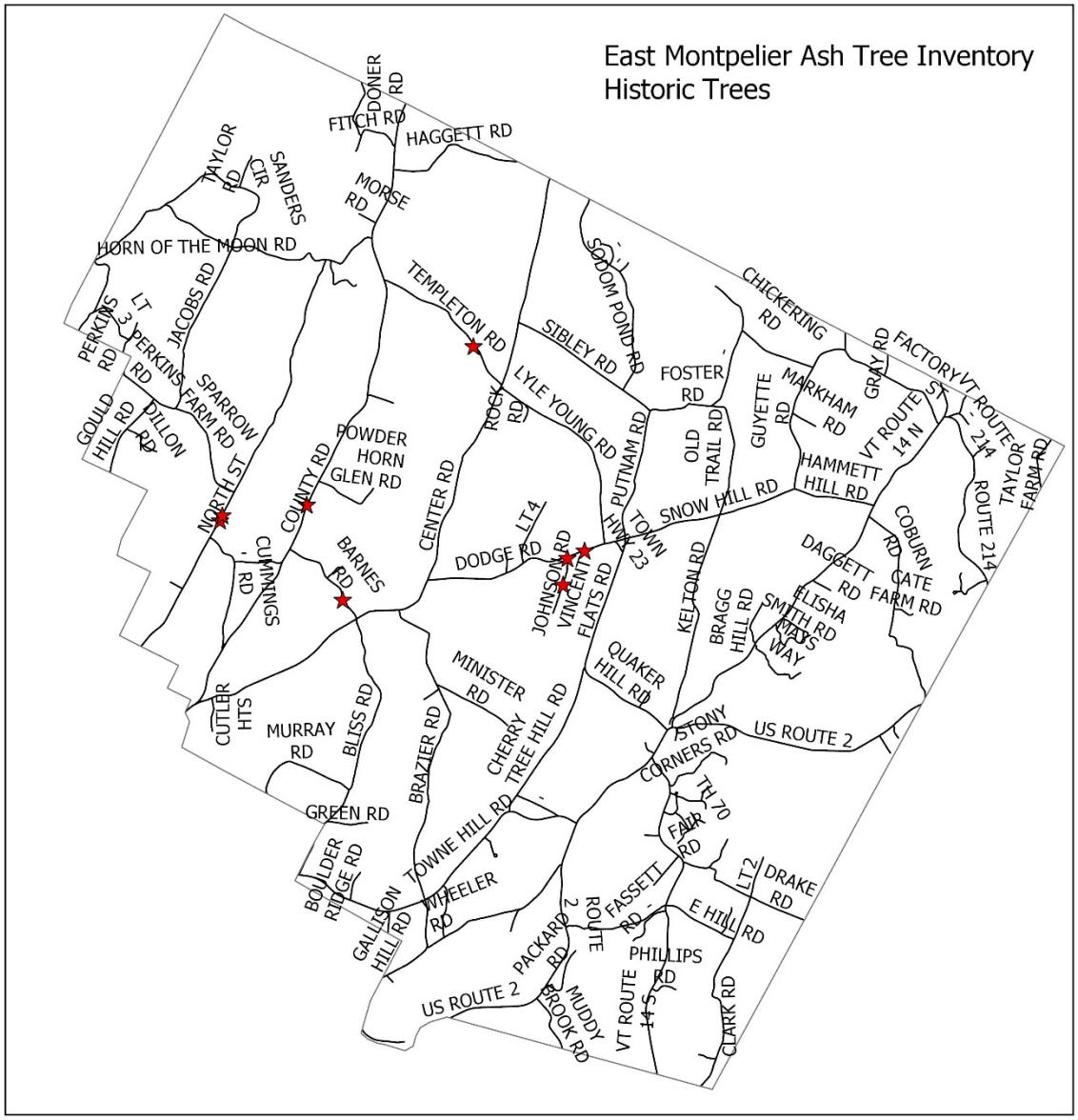
Map 3. Multiple Tree Location



Map 4. Condition and Priority



Map 5. Historic Tree Locations



Budget and Schedule (to be completed for final plan)

5 Year Tree Care Budget Projection and Schedule

			2021		2022		2023		2024		2025		5 YR TOTAL
Activity	Diameter class	Cost/ tree	# of trees	Total cost	# of trees	Total cost	# of trees	Total cost	# of trees	Total cost	# of trees	Total cost	
Tree Removal	6-11”												
	12-23”												
	24”+												
Tree Treatment	6-11”												
	12-23”												
	24”+												
Activity totals													

Appendix 1

VERMONT URBAN & COMMUNITY FORESTRY P R O G R A M

Emerald Ash Borer Management Grant Application

Funding: maximum $15,000

SECTION 1: Applicant Information

MUNICIPALITY OR ORGANIZATION: Town of East Montpelier

ADDRESS: 40 Kelton Road, PO Box 157, East Montpelier, VT 05651

PROJECT CONTACT PERSON: Bruce Johnson, Town Administrator

PHONE: 802-223-3313 X 204

EMAIL: manager@eastmontpeliervt.org

D-U-N-S NUMBER*: 10 887 3704

FINANCIAL CONTACT PERSON: Bruce Johnson, Town Administrator

PHONE: 802-223-3313 X 204

EMAIL: manager@eastmontpeliervt.org

SECTION 2: Project Information

PROJECT TITLE: **Emerald Ash Borer Management Pilot Project for East Montpelier's Rural Roadsides**

SUMMARY OF PROJECT:

This project will begin the implementation of the Draft East Montpelier Ash Tree Management Plan with a pilot project entailing the removal of ash trees along Gallison Hill Road at the U-32 Middle & High School (U-32) campus and nearby roadways, along with replacing landscape ash trees on campus with new species. It will also provide valuable information about the costs, potential future contractors and overall management for tree removals elsewhere in town as we proceed.

GRANT FUNDING REQUESTED: $15,000

TOTAL PROJECT COST: $30,000

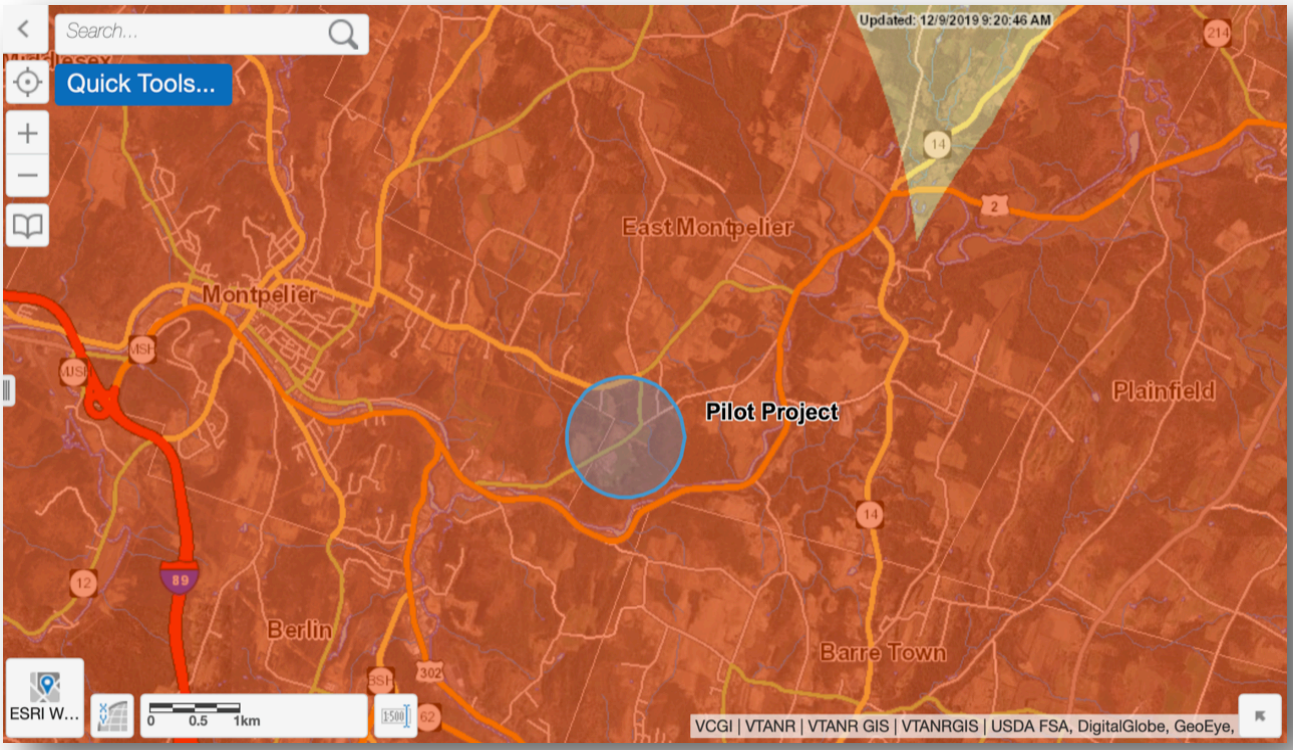


Figure 2. Pilot Project Location within Confirmed Infested Area. ***Credit: ANR Natural Resources Atlas***

The Infested Area is split into Confirmed Infested Areas and High-risk Areas. Confirmed Infested Areas (shaded in orange) are within 5 miles of a known infestation. While symptoms may not be obvious, it is likely that EAB is present in much of this area. High Risk Areas (shaded in yellow) extend 5 miles from the outer edge of a Confirmed Infested Area. EAB is likely expanding into, and present in some of this area.

SECTION 3: Community Context (25 points)

In July 2017, the East Montpelier Selectboard created the nine-member Rural Road Vegetation Assessments Project Advisory Committee, now the **Resilient Roads Committee (RRC or Committee).** The Committee includes the town's Tree Warden, Road Foreman, a selectboard member, and three members of the Planning Commission. The Committee worked with Joanne Garton, VTFP&R Urban and Community Forestry Program, to develop the **Rural Road Resilient Right-of-Ways Vegetation Assessment** (https://eastmontpeliervt.org/wp-content/uploads/2019/12/EMontpelier_ResilientROWActionPlan_FinalSmall.pdf).

With the confirmation of the Emerald Ash Borer (EAB) in Central Vermont in February 2018, the RRC was given responsibility for the development and execution of the town's ash tree management plan. With assistance from Ms. Garton and the Central Vermont Regional Planning Commission (CVRPC), an inventory of all ash trees over 6" within all town roadway rights-of-way was conducted. A training session on May 11, 2019 included information on EAB, the identification of white, black, and green ash trees, and entering data using mobile phones or iPads and the ARC GIS Collector App. Many community members came to the training session for the inventory. Most of the inventory was completed between May and July 2019. A total of 2,696 trees were inventoried.

The Committee completed a **Draft Ash Tree Management Plan** in October of 2019 with assistance from CVRPC. The Plan outlines data from the inventory (see below) and identifies alternative approaches that the town may take to address the threat of EAB. A copy of the plan is included with this application in **Appendix A**.

Inventory Data

Table 1 shows tree locations by diameter class. Most trees were in the town road right of way (ROW), but where trees were both within the road and utility rights of way, they were categorized as Utility ROW trees. The town's two electrical utilities, Washington Electric Coop (WEC) and Green Mountain Power (GMP), will need to address those trees. Additionally, a few significant trees on private property were noted either because they were close to houses; potentially hazardous to the roadway; or aesthetically noteworthy. Table 2 shows tree condition by size class. Figure 3 is an overall map of the town showing inventoried ash trees by diameter. Other details can be found in the Draft Ash Tree Management Plan.

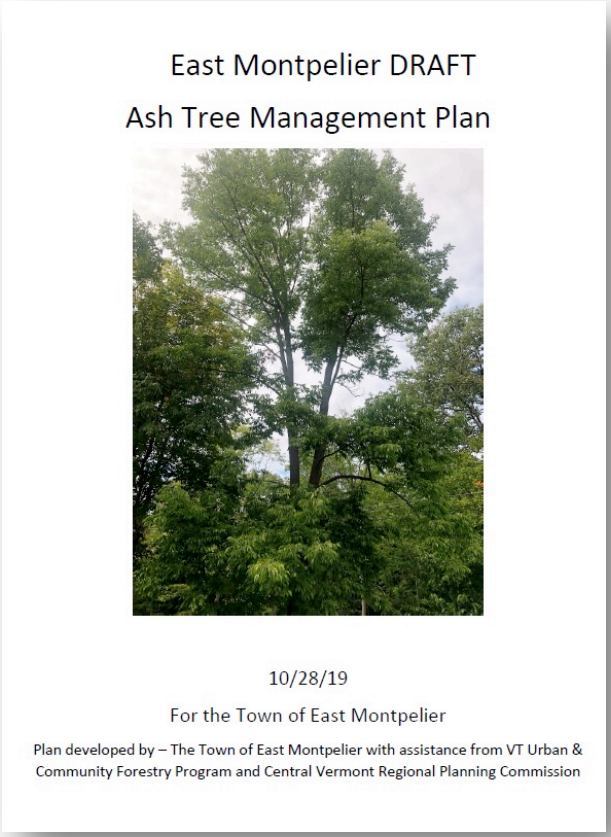


Figure 3. East Montpelier Ash Tree Management Plan.

Table 1. Tree Location and/or Ownership

	Ash Tree Ownership			
Tree Diameter (inches, DBH)	**Town ROW**	**Utility** (GMP, WEC, Comcast)	**Private Landowner**	**Totals**
6-11	**1686**	**117**	**24**	**1827**
12-23	**679**	**88**	**20**	**787**
24+	**72**	**7**	**3**	**82**
Grand Total	**2,437**	**212**	**47**	**2,696**

Table 2. Tree Condition

Tree Diameter (inches, DBH)	**Dead**	**Poor/Fair**	**Good**	**Totals**
6-11	**17**	**243**	**1,567**	**1,827**
12-23	**12**	**118**	**657**	**787**
24+	**1**	**15**	**66**	**82**
Grand Total	**30**	**376**	**2,290**	**2,696**

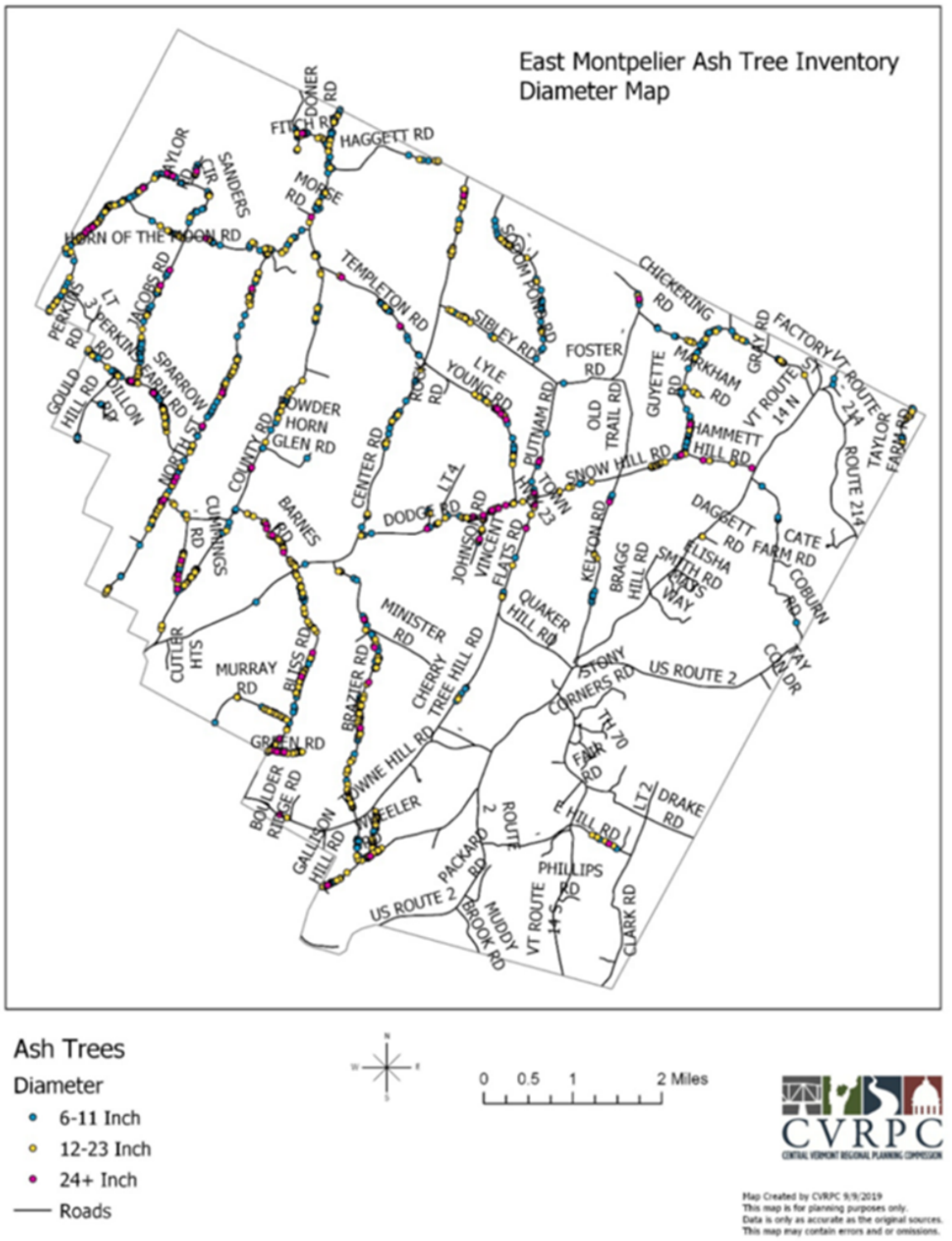


Figure 4. Ash Tree Inventory Map

Ash Tree Management Approaches

Although specific management approaches will require more research and public review, the following alternative approaches are identified in the management plan. The proposed Pilot Project will be helpful in defining a strategy for the remainder of town roadways. The town expects that it will take preemptive management as budgets and public opinion allow, making efforts to minimize damage to nearby trees that are not ash. The Committee has also identified several "historic" trees that it will seek to protect using injections or other approved prophylactic treatments. The Committee is in close communication and is coordinating with nearby towns such as Calais, other towns which have begun to address the issue, and the two electrical utilities with line ROWs in East Montpelier.

1. **Preemptive Management**

   Ash trees along rural roads would be removed prior to a local EAB infestation and, where appropriate, replaced with tree species not susceptible to EAB. Since ash trees will continue to grow, on-going monitoring and removal would be needed.

2. **Selective Management**

   High-value ash trees in selected areas (roadsides, popular public-use areas, and villages) can be managed actively and protected for future generations using insecticide injections or other approved prophylactic treatments. Certain trees were identified as "historic" in the inventory because of their size, prominence and location. Other ash trees would be removed on a sequential basis, over a period of years, considering size, current health, or other variables. Ash trees in other public areas (e.g. the Town Forest and other forested town-owned lands) will generally be managed without a proactive removal approach (and may succumb to EAB infestation) or will be managed under the guidance of the Town Tree Warden. Along rural roads, trees will be removed before or at early infestation to reduce risk and long-term cost.

3. **Reactive Management**

   Ash trees will be managed and maintained the same as other tree species on public property. Hazard trees along the roads will be removed as needed. Ultimately, most ash trees are anticipated to die as the infestation spreads through the municipality.

   With a few possible exceptions, East Montpelier would address ash trees occurring only within public right of ways or on public properties such as schools where there could be danger to people or property.

Public Information and Engagement

To date the primary public engagement work has been sponsoring the ash training in May 2019. Numerous posts on **Front Porch Forum** provided information about both EAB and the inventory. Recently the Committee has begun to post additional information on Front Porch Forum, and the Committee is planning to place updates in future issues of our local newspaper, the **East Montpelier Signpost**, which comes out bi-monthly. The town maintains a website with information on RRC activities (https://eastmontpeliervt.org/boards-commision/roadside-vegetation-management/). The Committee is also planning a public forum on January 13, 2020 which will be combined with a public hearing addressing the removal of trees as part of this Project should the project be funded.

SECTION 4: What do you plan on doing? (25 points)

The Project will include Six Priority Elements, detailed below:

1. Removal of Ash Trees within the Town Road Right-of-Way at the U-32 Campus

U-32 serves the five rural towns surrounding Montpelier: Berlin, Calais, East Montpelier, Middlesex and Worcester. About 750 students and nearly 100 teachers, administrators, health officers, and buildings & grounds personnel attend or work at U-32, making the campus the major hub of activity for the town throughout the school year. As such it provides a very public venue which will allow the Committee to engage with a large number of residents about the issue of EAB. The U-32 administration is very supportive of the project (see U-32 letter of support, included with this application in **Appendix B**). A total of 21 trees 6-inch DBH and larger and about 15-20 smaller trees have been flagged along the roads at the U-32 campus. Tree removal will be put out to bid with the stipulation that any contractor must be licensed, willing to protect healthy adjacent trees, and willing to safely remove trees in a public location. The bidding process will allow us to find contractors for future projects, and to determine a reasonable cost for such a project. Traffic control along the roads will be handled by town road crew members or by the contractor. The contractor will be responsible for chipping the tops and placing log length or smaller wood in a designated storage area. We will explore two options for making use of the wood: 1) Depositing logs in a designated public area where it will be available to townspeople; or 2) allowing the contractor to sell logs with a payment to the town to be used for a town fund dedicated to the removal or preservation of ash trees. Work will take place during the summer when students are not at the school and when traffic along the road may be lighter. Public engagement efforts, however, will take place while school is in session and prior to tree removal (see below). U-32 students studying forestry-related topics may participate in the project with supervision from their teachers, perhaps removing the trees smaller than 6 inches DBH.

2. Removal of Ash along Nearby Roads, Prioritizing Hazard Trees

For this pilot, the RRC is planning ash tree removals on the U-32 campus and along Gallison Hill, Wheeler and Schoolhouse Roads. For the roadway sections outside of U-32 property, Table 4 (below) shows a total of 107 trees in three size categories all within the non-utility town ROW. If the selected contractor bid doesn't allow removal of all 107 ash trees, the RRC will prioritize trees for removal based on their health condition and public hazard rating (e.g. lean over roads, buildings or walkways). Conversely, if the bids support more tree removal, the town may extend the project to other roads. Landowners may opt for treatment of trees at their own expense if they can assure the town that they are willing to do so as a long-term commitment.

Figure 5. Ash Tree Inventory at Pilot Project Area

3. Replacement Plantings on the U-32 Middle & High School Campus

Ash trees were one of three tree species used in recent landscaping of the parking lot area during a major school renovation. Several of these trees will be replaced (see Figure 5 original landscaping plan below). The landscaping plan shows 17 ash trees, 14 of which remain.

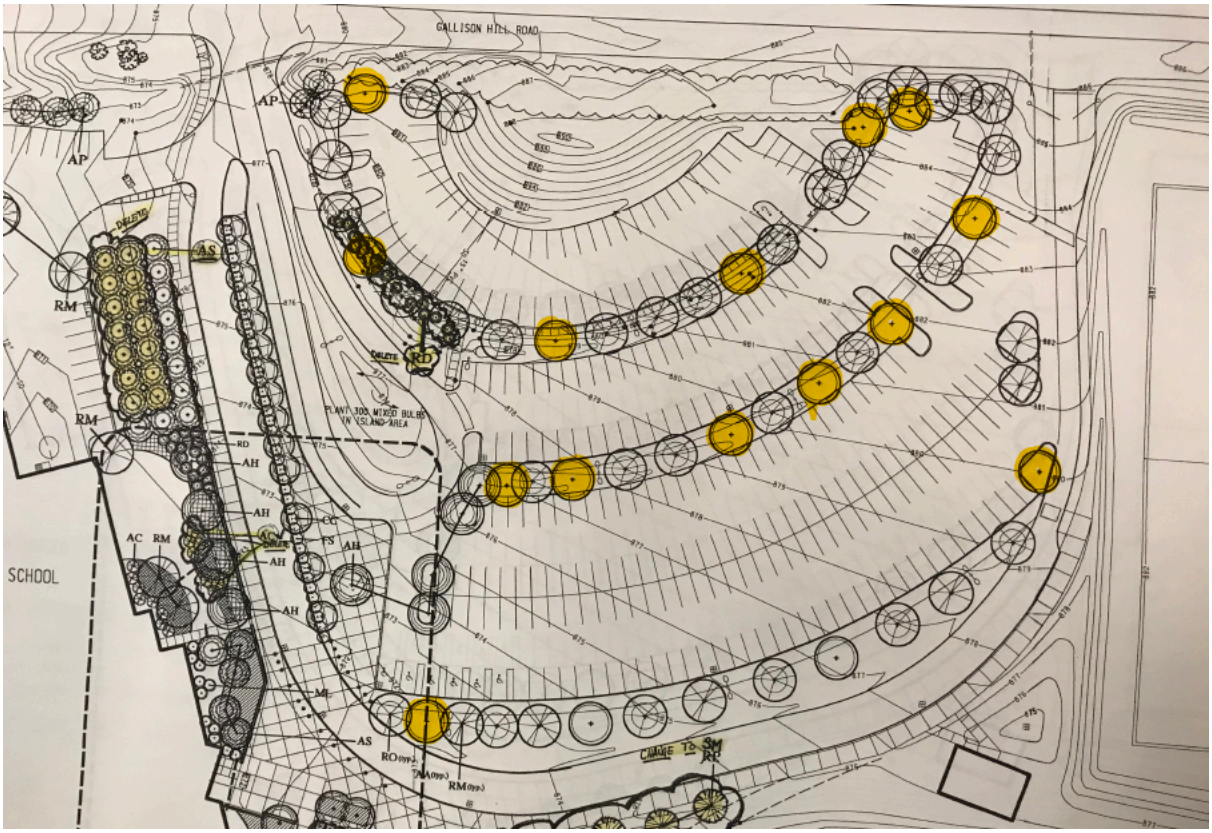


Figure 6. U-32 landscape plan showing ash trees in yellow.

We do not believe trees would survive or be appropriate within the roadside hedgerow. There would be too much shade and competition, and preparing a suitable hole for a new tree would damage nearby roots. U-32 will approve any plantings and the grounds manager will assume responsibility for on-going maintenance. Students and school staff will be involved in the species selection and planting. A total of 4-8 new red maple trees, or other suitable species, will be planted at 2-2.5" caliper. Estimated costs include soil preparation, planting and a 3-year guarantee. In some cases, removal of existing stock in poor condition may be required. The RRC has members with considerable horticultural, silvicultural and landscape design expertise to guide the tree selection and planting process. Preliminary discussions with U-32 administrators indicate that some student assistance may be available for planting as well as for necessary maintenance while trees become established. U-32 may elect to replace or treat the remaining trees, and the RRC would provide technical support; additionally, the landscape plan shows use of winged burning bush, which is an invasive, non-native plant species for which the RRC would recommend and support replacement by the school.

4. **Treatment of Ash Trees Identified as Prominent or Historic**

One or more trees town wide may be selected for treatment with insecticides. Several "historic" trees were recorded during the 2019 inventory work. No grant funds will be used for these prophylactic treatments, which may need to be continued in perpetuity. One or more of the ROW trees at U-32 may be treated.

5. **Engagement of U-32 Students and Townspeople**

This highly visible project will jumpstart public engagement efforts with students, teachers, and town residents. Education of townspeople will be critical. On January 13, 2020, the Resilient Roads Committee will host a public forum and hearing at U-32. The forum will provide an opportunity for the Committee to inform townspeople about the threats posed by EAB, the management approaches we are considering, and to introduce the pilot project. Attendees will be able to ask questions and provide their opinions. The second part of the evening will be a public hearing, as required by state law, addressing the removal of the ash trees on the campus and along nearby roads. The Town's Tree Warden, Paul Cate, will conduct the hearing and make a decision on tree removal considering the testimony and comments received.

In advance of and following the public hearing, the Committee will communicate frequently with the public via Front Porch Forum. The RRC will also be providing information at Town Meeting in March, and through our local newsletter, the **East Montpelier Signpost**. Following the project, the RRC will hold a follow-up forum to assess public reactions to the project and help guide completion of the ash tree management plan.

6. Removal of Invasive Species

Buckthorn, honeysuckle and other non-native, invasive plant species occur within the hedgerow where the ash trees will be removed. The project will provide an opportunity to remove these at the same time. Smaller plants will be removed by digging or extracting with a weed wrench. Larger plants will be girdled or cut stem treated with glyphosate or similar herbicides, if acceptable to the landowner. In order to minimize any exposure to nearby plants or soil, foliar spray treatment will not be used.

Table 3. Summary of Priority Actions & Measurable Results

	Action	Description	Measurable Results
1	Remove Ash Trees within the Town Right-of-Way at the U-32 Campus	Town will hire a contractor to remove marked trees, chip tops, and store useable wood in designated area; students may remove trees smaller than 6-inch DBH.	40 ash trees removed
2	Removal of Ash along Nearby Roads Prioritizing Hazard Trees	Remove Priority trees and as many other ash trees as budget allows along Gallison Hill, Wheeler, and Schoolhouse Roads	Number of Priority Trees Removed: 7 Number of Ash removed overall: 100
3	Replacement Plantings at the U-32 Campus	Replacement landscape trees will be planted on the U-32 campus; involve students in planting.	A minimum of 4-8 trees planted with student assistance; school may elect to replace or treat remaining trees
4	Treatment of Ash Trees Identified as Prominent or Historic	Town will hire licensed applicator	I or 2 at U-32 ROW; 2-6 town wide
5	Engagement of U-32 Students and Townspeople	Hold Public Forum and Hearing; Involve students in the project; Post information on Front Porch Forum; Follow-Up public meeting to assess successes and failures	Number. of students & school officials participating in the project: 20 Public Reactions to the Project
6	Remove Invasive Species	Remove invasive species from areas where ash trees are removed	Areas free of invasive species: at least the 1,200 feet at U-32

Table 4. Sizes of Ash Trees on Gallison Hill, Wheeler, and Schoolhouse Roads

Road Name	6-11" DBH	12-23" DBH	24+ DBH	Grand Total
Gallison Hill Rd. (U-32)	9	11	1	21
Gallison Hill Rd. (non U-32)	15	3	0	18
Schoolhouse Rd. (Town)	44 (4)	22 (2)	0	66
Schoolhouse Rd. (WEC)	3	3	0	6
Wheeler Rd. (Town)	22 (1)	0	1	23
Wheeler Rd. (Comcast)	19 (1)	7 (1)	0	26
Total	112	46	2	160

Number of trees that are classified as hazard trees are in parentheses (e.g., of the 22 trees on Wheeler Rd. smaller than 12 inches, one is a hazard tree.).

Use of Harvested Ash Wood

The Committee would prefer that wood be used locally to the extent possible. We recognize that a contractor who can market the wood might offer a better price for the job. So we will ask contractors to provide detailed options of how the wood will be used. We expect to find a location where any residual wood can be placed and made available to townspeople. Both our elementary and high school are heated by wood chip boilers, but we do not expect to be able to work out the logistics for that transfer with this project. Additionally, there is a sawmill in town that might be interested in the wood. Landowners, of course, will be able to request that any wood on their property be left for their own use.

Considerations for wood use includes the following:

- **Cordwood or Chunk Firewood**

  The Tree Warden and the RRC, on the warden's behalf, will prepare written agreements to share with landowners interested in using wood from public trees as firewood, addressing the need for keeping and using the wood locally (and within the quarantined area).
  Based on studies indicating that 38% of Vermont households burn wood for at least some space heating, it is expected that of East Montpelier's approximately 1,000 households, 380 burn wood. Several businesses and institutions rely to some extent on either chunk wood or chips for some of their heating needs.

- **Whole Tree Chips**

  A growing number of schools, businesses and other institutions burn whole tree chips or similar biomass for winter heating. Scientists and researchers familiar with EAB confirm that no further processing of whole-tree chips is necessary.

- **Ash Lumber, Sawlogs and Bolewood**

  East Montpelier has only one commercial sawmill, Fontaine Sawmill on Route 14 just north of East Montpelier Village. A representative of RRC will contact the mill's owner during the winter to ensure that staff is aware of EAB and restrictions of ash wood and related materials.

RRC representatives have contacted the two local utilities, Green Mountain Power (GMP) and Washington Electric Cooperative (WEC). GMP and WEC each contract with private arborists for most tree removals and tree maintenance work and will typically dispose of harvested ash wood as either chips or chunk firewood.

New Plantings for Replacement of Removed Ash Trees

New tree planting will be focused on the U-32 campus. A number of ash trees will be removed from islands between the parking areas. We plan to replace 4-8 landscape ash trees, although the school may elect to replace more. Trees will be planted with assistance from the students and staff at the school.

Trees to be planted will be approximately 2.5" caliper and planted by a certified landscape professional with a minimum of a 3-year guarantee. Expected costs will be approximately $500/tree. Ongoing maintenance will be handled by U-32 grounds personnel. Examples of suitable replacement species native to the area include red maple, red or white oak, and paper or river birch.

We do not plan to replace trees removed from roadside areas. In all cases the roadside environments are dense hedgerows or wooded areas, which have a variety of healthy native tree species including shrubs, understory and overstory trees. Newly planted trees are unlikely to survive within these shaded environments. Moreover, preparing appropriate holes will likely to result in damage to the roots of healthy trees.

SECTION 5: How do you plan on doing it? (25 points)

The following table outlines steps to be taken, an approximate timeline and who is responsible.

Table 5. Action Steps, Timeline, Responsible Parties

Tasks		Timeline	Responsible Party	Notes
1	Public Outreach	Ongoing	RRC	Public outreach will begin on January 13, 2020 with a public information forum and hearing, and will continue with updates on Front Porch Forum and the **East Montpelier Signpost**
2	Landowner Outreach	Spring 2020 and Ongoing as needed	Tree Warden/ RRC	Landowners will be contacted to determine any preferences for use of wood or preservation of trees (treatment at expense of landowner) and to enter into a written agreement
3	Develop RFP for Contractors	Winter and Spring 2020	RRC/ Selectboard	RRC will expand its existing list of potential contractors and solicit advice from foresters, the state urban forestry department and towns with similar experience. All contractors must be insured and able to remove trees with limited damage to other healthy trees
4	Treatment of Historic Trees	Summer 2020	Contract	RRC has approached the City of Montpelier tree warden about the City providing this service at cost
5	Planting Details for U-32 Campus	Spring 2020	RRC/ U-32 Staff	Determine specific trees to be removed or treated at U-32; obtain at least 3 proposals for planting trees from local nurseries/landscapers.
6	Interview and Select Contractor	Spring 2020	RRC/ Selectboard	Selection will be based on clear criteria identified in the RFP.
7	Tree Removal	Summer of 2020 through Winter 2021	Contractor with oversight by RRC; Assistance by town road crews with road closure as needed.	Work at U-32 will take place during summer months when school is not in session with the exception of work conducted by students with faculty supervision. Work along other roads can occur at the contractor's schedule, coordinating with town officials if road closures are needed. All trees on the U-32 campus have been flagged; the contractor will be expected to identify and remove ash trees along all other roadways.
8	Invasive Species Removal	Summer 2020	RRC and/or Volunteers	RRC members may need to treat stems to prevent sprouting or coppicing.
9	Tree Planting	Fall 2020	RRC/ U-32 Staff and Students/Landscaper	RRC and U-32 staff and students will mark locations for new trees and oversee planting with the landscaper.
10	Project Evaluation and Report	February-March 2021	RRC/ Town Administrator	Final Report and Evaluation

Key:

- RRC is Resilient Roads Committee; East Montpelier Selectboard has oversight of all actions
- Contractor(s) is the arborist, logger, or forester selected to remove trees

SECTION 6: Who will carry out the plan? (25 points)

The Resilient Roads Committee (RRC) will be responsible for overseeing the project with assistance from the Selectboard, Town Administrator, town road crew, and U-32 staff and students. Most tree removal will be done under contract with a logger or arborist. The Tree Warden will oversee the contract work; act as landowner liaison; and continue his work as a member of the RRC.

Resilient Roads Committee Members

RRC members (listed alphabetically) include:

Jennifer Boyer, a long-time naturalist, has been involved in East Montpelier organizations and activities since 1986. She currently participates in the East Montpelier Signpost newsletter, East Montpelier Trails, Inc. (a non-profit volunteer for trails in East Montpelier), the East Montpelier Historical Society, as well for the town's Resilient Roads Committee. She created and maintains websites for the first three groups.

Paul Cate is a retired forester and naturalist and the Tree Warden for East Montpelier. He serves on the East Montpelier Town Forest Committee which is responsible for managing the Town Forest. He has conducted many harvesting projects on private property within and outside East Montpelier and has provided numerous educational workshops.

Jeffrey Cueto is Chairman of the Resilient Roads Committee. A civil engineer and hydrologist, Jeff is retired from the Vermont Agency of Natural Resources where he worked in water quality. He is a member of the East Montpelier Development Review Board and a supervisor of the Winooski Natural Resources Conservation District.

Carl Etnier is an East Montpelier Selectboard Member, through which he serves on other committees, including the town's Board of Tax Abatement and Board of Civil Authority. Carl is also active on the town's Energy Committee. Carl hosts talk radio shows on WDEV in Waterbury, on WGDR in Plainfield and WGDH in Hardwick. He has a B.S. in botany and crop ecology, an M.A. in liberal education, and a Ph.D. in sustainable wastewater treatment.

Steve Justis earned a B.S. in Horticulture and an M.S. in Plant Pathology. He has served as Tree Warden for the City of Montpelier and Plant Pathologist for the Vermont Agency of Agriculture. Steve has managed grants through USDA's Agricultural Marketing Service, Foreign Agricultural Service, Farm Service Agency and Rural Development, as well as numerous projects funded by the Vermont Housing & Conservation Board/Vermont Farm & Forest Viability Program. Steve is a member of the East Montpelier's Development Review Board.

Mark Lane serves on the Town Forest, Cemetery and Resilient Roads Committee, as well as being a member of the town's Development Review Board. He attended U-32 Middle & High School and is self-employed as a logger.

John ("Jack") Pauly retired from the State of Vermont after more than 39 years of service as a programmer and systems developer. A graduate of the University of Massachusetts, Jack served three years in the U.S. Coast Guard. He currently serves on the East Montpelier Planning Commission and he is member of the Resilient Roads Committee (RRC).

Guthrie Perry is the town's Road Foreman, where he oversees maintenance of 62 miles of Class 2 and Class 3

roads. Guthrie serves on multiple town committees, including the Resilient Roads Committee and the Town Garage Facility Improvements Committee.

Jean Vissering is a retired landscape architect and a member of the East Montpelier Planning Commission as well as the Resilient Roads Committee. In the past she worked for the State of Vermont Department of Forest, Parks, and Recreation; served on the Montpelier Tree Board, and has managed several planting projects within East Montpelier.

The **Town Treasurer** and the **Town Administrator** will handle all financial transactions, including review of all bids for contracted services or purchases related to this project.

Section 7: Budget

A Project Component	B Grant Request	C Match		D Total Project Cost
		Cash	In-Kind/ Donations	
Personnel (salary and fringe)			$6,000	
Materials/Supplies		$2,500		
Equipment (purchases of $5,000 or more)				
Services	$15,000	$1,500		
Travel				
Other			$5,000	
Total	$15,000	$4,000	$11,000	$30,000

Budget Explanation: Provide additional information that will help clarify your budget request. For example, partner contributions or details on expected expenditures.	**Personnel:** town administrator, treasurer, road foreman and crew **Materials/supplies:** outreach materials, landscape trees, pesticides for invasive species control **Services:** tree removal contract; insecticide for ash-tree treatment (cost share only) **Other:** time donation by volunteers, RRC members, students

Note: The Total Grant Request (bottom of Column B) must be at least 50% of Total Project Cost, bottom of column D. Remaining balance of Total Project Cost is Applicant Match and may be divided in any way between cash and in-kind/ donations.

Additional Requirements and Attachments

We understand and commit to the following additional requirements of this Emerald Ash Borer Management Grant program:

- ☐ A pre- and post- project interview with VT UCF staff;
- ☐ At least one site visit with VT UCF staff to removal and replanting sites;
- ☐ Sharing any RFP language developed for contracted services of ash tree removals or replanting efforts;
- ☐ Providing VT UCF staff with information about selected contractors, and dates of removals and replanting efforts;
- ☐ Sending at least one municipal staff member to a training on EAB management and safely working with ash trees, which will be organized by the VT UCF program and held within the grant period; and
- ☐ Developing and sending out a press release about the award to local or area news publications informing readership of the receipt of the funded grant from VT UCF along with details of the project's purpose, actions, and anticipated timeline.

Required attachments for a complete proposal package:
https://vtcommunityforestry.org/programs-0/financial-assistance/eab-management-grants

- ☐ Completed Risk Assessment Questionnaire
- ☐ Municipality Insurance Certificate, refer to FPR Insurance Guidance for coverage minimums
- ☐ Ash inventory or survey results or summary
- ☐ Emerald Ash Borer Management Plan, or documented management strategy

Send completed proposal packet to:

Vermont Department of Forests, Parks and Recreation
Urban & Community Forestry Program
1 National Life Drive, Davis 2
Montpelier, VT 05620
jenny.lauer@vermont.gov

PROPOSALS DUE: by midnight Friday, January 17th, 2020

Appendix 2

TOWN OF EAST MONTPELIER
TREE WARDEN

In the matter of:

Town of East Montpelier
Request to Remove Ash Trees on U-32 Middle & High School Campus and along Gallison Hill, Wheeler, and Schoolhouse Roads

24 V.S.A. §§ 2508-2509 Review

Procedural History and Applicant Request

1. The Town of East Montpelier Resilient Roads Committee has applied for a grant from the U.S. Forest Service through the Vermont Urban & Community Forestry Program to remove ash trees on the U-32 Middle & High School campus and within the town road rights of way on Gallison Hill, Wheeler, and Schoolhouse Roads. The purpose of the project is to proactively remove trees that are susceptible to infestation by emerald ash borer (EAB) (*Agrilus planipennis*), an invasive, non-native beetle that is decimating ash tree populations throughout much of the eastern half of the United States. EAB was first identified in the town of Orange in Central Vermont in February 2018 and has subsequently been confirmed nearby to East Montpelier in Montpelier, Plainfield, and Barre Town.
2. The East Montpelier Selectboard voted in favor of supporting the grant application on January 6, 2020. By letter dated January 13, 2020, U-32 Middle & High School indicated its support of the project as well.
3. Public shade trees, including those within a public road right of way, are subject to preservation and management by town tree wardens under state law, 24 V.S.A. § 2502:

   > Shade and ornamental trees within the limits of public ways and places shall be under the control of the tree warden. The tree warden may plan and implement a town or community shade tree preservation program for the purpose of shading and beautifying public ways and places by planting new trees and shrubs; by maintaining the health, appearance, and safety of existing trees through feeding, pruning, and protecting them from noxious insect and disease pests and by removing diseased, dying, or dead trees which create a hazard to public safety or threaten the effectiveness of disease or insect control programs. (24 V.S.A. § 2502)

4. The Town requested a review by the Town Tree Warden under the provisions of state law, 24 V.S.A. § 2508, which authorizes tree wardens to determine the necessity of public shade tree removal:

   > Unless otherwise provided, a public shade tree shall not be cut or removed, in whole or in part, except by a tree warden or his or her deputy or by a person having the written permission of a tree warden. (24 V.S.A. § 2508)

On December 24, 2019, the Town duly noticed a hearing pursuant to 24 V.S.A. § 2509(a); the hearing was convened before the Tree Warden Paul Cate on January 13, 2020 at U-32 Middle & High School:

> (a) A public shade tree within the residential part of a municipality shall not be felled without a public hearing by the tree warden, except that when it is infested with or infected by a recognized tree pest, or when it constitutes a hazard to public safety, no hearing shall be required. (24 V.S.A. § 2509)

5. During summer of 2019, as an initial step in developing a management plan for addressing the roadside ash tree threat, the Resilient Roads Committee completed an inventory of ash trees within the rights of way of all Class 2 and 3 roads in town. The inventory's GIS database contains over 2,600 ash trees 6-inch DBH (diameter at breast height, or 4.5 feet above the ground) and larger, and 85% of those trees are currently considered to be in good health. No occurrence of EAB was found, although it may be present; early stages of infestation are somewhat difficult to discern.

6. The project would constitute the Town's first preemptive, large-scale removal of ash trees and help the Town determine whether it will continue taking a proactive approach to remove the trees before they pose a threat to public safety or become more difficult and costlier to remove. Dying and dead ash trees are very brittle, and arborists typically need to use specialized equipment and measures to safely remove the trees.

7. The project contains several elements. With respect to tree removal, there are three areas. On U-32 Middle & High School property within, or immediately adjacent to, the Gallison Hill Road right of way, an estimated 21 trees, 6-inch DBH and larger, would be removed, with the exception of perhaps one or two exemplary trees that may be preserved through the use of insecticides. Use of insecticides to prevent EAB mortality is a common but expensive alternative; treatments must continue at 2- or 3-year intervals as long as EAB is present, and EAB extirpation is not presently seen as likely. Ash trees smaller than 6-inch DBH would also be removed. The Committee would remove invasive plant species, such as buckthorn and honeysuckle, within the right of way and plans to work with U-32 to develop a long-term management plan for the hedgerow to optimize its diversity, health and appearance.

8. The second area would extend the ash-tree removal to the remainder of Gallison Hill Road in town, as well as nearby Wheeler and Schoolhouse roads. The Town would work with individual landowners regarding contractor access, if needed; determination of the fate of logs and brush, such as leaving logs for use as firewood; and the landowner's option to preserve ash trees if willing to take on the responsibility of insecticide treatment. The full extent of tree removal will depend on contractor bids. At a minimum, high-risk ash trees, those dead or dying or leaning over the road, would be removed. One hazard ash tree was identified on Wheeler Road and 6 on Schoolhouse Road. Full removal would include 18 additional ash trees on Gallison Hill Road, 24 ash trees on Wheeler Road, and 72 ash trees on Schoolhouse Road. On Wheeler Road, an additional 26 ash trees (two hazard trees) were identified along the north side of the road within the telephone company

right of way, and the Town may approach the company about removing those trees in coordination with this project.

9. The third area involves green ash trees that were used for landscaping during the most recent school renovation project. The Committee obtained a copy of the landscape plan from the school. The plan indicates that 17 ash trees were planted; the Committee determined that 14 remain. The Committee envisions planting at least 4-8 replacement trees not in the *Fraxinus* family; that would necessitate removal of a minimum of one of the existing ash trees, and potentially 8 trees. Further, more trees may be replaced if the school chooses to participate financially or if the planting costs are lower than expected. Green ash trees are particularly susceptible to EAB infestation compared to white ash, which is the dominant roadside ash species in town.

Findings and Conclusions

Pursuant to the requirements of state law as enumerated above, the proposed removal of healthy, non-infested shade trees is subject to the jurisdiction of the Town Tree Warden, who must determine whether it is in the public interest. There are no specific criteria set forth in the law.

As Town Tree Warden, I have considered the January 13, 2020, grant application, the testimony received at the January 13, 2020, hearing, and one post-hearing filing received (email of Nona Estrin, landowner on Schoolhouse Road, January 14, 2020). I have a specific knowledge of ash tree structural characteristics when dead or in decline and background knowledge of tree diseases and insect infestation, including EAB.

Testimony received at the hearing was generally supportive. Before the hearing, a presentation on ash trees and EAB was provided by Joanne Garton, a staff member of the Vermont Community and Urban Forestry Program at the Department of Forests, Parks, and Recreation. This was followed by a presentation by the Resilient Roads Committee to explain the project under consideration. A questions-and-answers session followed both presentations.

Comments and testimony included 1) whether replacement planting in the hedgerows should be undertaken, possibly transplanting trees from nearby forested properties or as a cooperative project between the landowners and the Town; 2) whether sub 6-inch-DBH ash trees could be retained and managed by the landowner if beneficial for screening of homes; and 3) beneficial alternate uses of the wood for firewood or landscape wood chips, for example. Ms. Estrin stated that the forested area on her property to the west of Schoolhouse Road:

> …is a very sensitive natural area with highly unusual lime loving ferns and other plants including showy orchis, both Goldies fern and narrow leafed spleenwort. This rich remnant of hardwood Cobble has been documented by the upper Winooski Valley naturalists, and the field naturalist graduate program at University of Vermont. It resembles Walter Smith's in many ways, but is steeper and therefore more fragile.

> Any cutting on the west side should not extend beyond the easement and should be done in winter to prevent irreparable damage. I will be happy to help in whatever way I can marking the sensitive areas, and will be in touch when we return February 1.

Proactive removal of live ash trees, based on the experience of other states, like Michigan, which have had EAB infestations back to at least 2002, is prudent and reasonable, and therefore in the public interest. Ash trees decline rapidly once infested with EAB, and removal of dead and dying trees becomes much more dangerous and expensive. Removal at a scheduled pace, as currently envisioned by the Town, also provides a more manageable approach compared to having to remove many ash trees over a shorter period when the decline becomes widespread in East Montpelier and regionally. The trees at the school along the roadway represent a particularly significant risk to public safety due to the facts that the road is heavily travelled and that the property is a school property.
State law provides landowners with the option of treating healthy right-of-way shade trees for preservation as an alternative to removal, assuming, of course, that the tree's location does not constitute an undue public safety risk:

> The tree warden may remove or cause to be removed from the public ways or places all trees and other plants upon which noxious insects or tree diseases naturally breed. However, where an owner or lessee of abutting real estate shall annually, to the satisfaction of such warden, control all insect pests or tree diseases upon the trees and other plants within the limits of a highway or place abutting such real estate, such trees and plants shall not be removed. (24 V.S.A. § 2504)

I am conditioning my decision to explicitly provide for this treatment option, which would be at the landowner's burden.

With respect to Ms. Estrin's concerns, I expect that the work can be kept within the road right of way and outside of the sensitive area. Nonetheless, I am conditioning my decision on the Town and contractor coordinating the work with Ms. Estrin and asking that Ms. Estrin delineate the area prior to initiating work so that the contractor can take special precautions to avoid disturbance. Given that, I do not believe that it necessary to schedule work to occur during the winter.

DECISION

I hereby authorize this project to proceed as proposed conditional on the Town:

1) providing landowners with reasonable advanced notice of the work schedule and an opportunity to enter into a written agreement on the conduct of the work, including special access, disposal of logs and brush, and cleanup of the work site;

2) where necessary, measuring a tree's offset from the road centerline to assure that the tree is actually within the right of way;

3) giving landowners the option of long-term insecticide treatment for EAB at that landowner's expense if preferred as an alternative to tree removal, with no responsibility on the Town's part to arrange for the

treatments and potentially an obligation on the part of the landowner to demonstrate to the Town that the treatments are being made;

4) making specific prior arrangement with Ms. Estrin to a) delineate the mentioned sensitive area for the contractor in order to help avoid disturbance outside the right of way and b) arrange for a meeting between the contractor, Town, and Ms. Estrin prior to the tree removal; and

5) insuring that the contractor takes reasonable precautions to avoid damage to existing trees that are nearby.

Dated this 11th day of February 2020.

By: /s/

Paul Cate, Tree Warden
Town of East Montpelier

NOTICE OF RIGHT TO APPEAL: In accordance with 24 V.S.A. § 2509(b), interested parties may appeal this decision to the East Montpelier Selectboard. Appeals must be filed, in writing, within 14 days of the date of this decision.