TOWN OF COLCHESTER

Emerald Ash Borer Assessment and Plan

Developed by: Colchester Department of Public Works

December 2023

Hetzler, Paul. "Emerald ash borer: Public Enemy No. 1 for Invasive Species Awareness Week." *North Country Public Radio,* 22 February, 2015. https://blogs.northcountrypublicradio.org/allin/2015/02/22/emerald-asn-borer-public-enemy-no-1-for-invasive-species-awareness-week/. Accessed 14 March, 2022.

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EXECUTIVE SUMMARY

The Emerald Ash Borer (EAB) is an invasive insect from Asia that is killing ash trees in North America. It was first found in the United States in southeast Michigan in 2002. By 2018, EAB had spread to Vermont, and by May of 2021 EAB was confirmed to be in Colchester. The USDA Emerald Ash Borer website reports that, "Today, EAB infestations have been detected in 36 states and the District of Columbia" and that; "EAB is the primary cause of our nation's extensive ash decline. Since its discovery, EAB has killed tens of millions of ash trees and has cost municipalities, property owners, nursery operators, and forest product industries tens of millions of dollars." **Since the arrival of EAB, communities in North America have been unable to successfully eradicate EAB after it has been detected.**

Once EAB has infested an ash tree, the probability of the tree dying is greater than 99%. Symptoms of EAB are difficult to assess during the early phases of an infestation, making initial infestations hard to determine. Once EAB symptoms become present, it is estimated that EAB has already been present for 3-5 years and the ash tree is in danger of declining rapidly and dying over the next 2-3 years. In these later phases of deterioration, the ash trees become a hazard to property, infrastructure, and to the general public, as the trees become extremely brittle and break easily as their health declines.

The Department of Public Works has completed an inventory, identifying 446 ash trees within the Town's right-of-way and other Town owned property frequented by the public. Absent cost-effective treatment measures, the most effective and expedient means to remove the public safety risks are to remove all of these trees as quickly as possible. While the removal must be done both quickly and comprehensively, replanting of these trees can be accomplished over a longer period time, and can and should be done more selectively. Of the 446 trees to be removed, 116, or 26% will be replaced as part of this plan. The completion of the overall plan is expected to take approximately 8 years, assuming the optimization of grant opportunities, with a total cost of approximately $495,000 (with inflation). The plan would be funded through a mixture of grant funds, supplemented and leveraged by local funds.

ASSESSMENT

Emerald Ash Borer Overview

The *Agrilus planipennis*, commonly known as the Emerald Ash Borer (EAB), is a small metallic green beetle about a half inch long, which is known to attack and kill native North American *Fraxinus* (Ash) species. The wood boring beetle was likely introduced to North America in the 1990's in ash wood used for shipping pallets and packing materials from Asia. EAB were first discovered in the United States in Detroit, Michigan in 2002. As of 2018, EAB have spread into 36 U.S. states, the District of Columbia, and 5 Canadian provinces. EAB infestation has been detected in Chittenden County and in May 2021 EAB was newly detected in Colchester. This new detection was discovered by a volunteer Forest Pest First Detector.

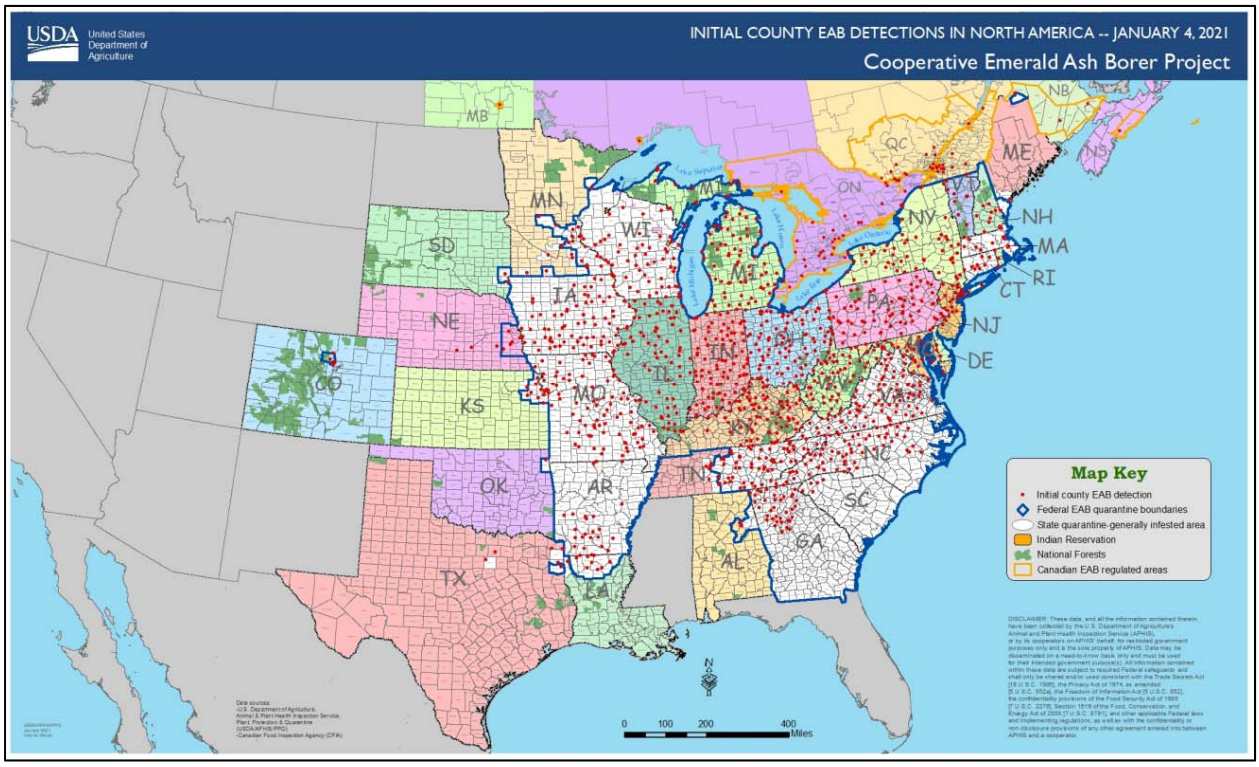

Figure 1: Initial County EAB Detections in North America (January 4, 2021).

The adult EAB feed on the leaves of the ash tree before depositing eggs on the bark of the tree. Once hatched, the larvae burrow through the bark and into the inner bark layer of the tree. The larvae feed on the phloem and outer xylem, essentially disrupting the vascular system of the tree resulting in canopy thinning, rapid decline, and eventually death of the tree.

Identifying Ash Trees and Signs of Infestation

Ash trees are identified by their compound leaves and opposite branching pattern, where twigs and buds grow directly across from each other as opposed to staggered or alternate branching. Additionally, the bark on a mature ash tree has a distinct diamond-shaped ridge pattern. The bark on a young tree is relatively smooth.

Figure 2: Ash leaves, ash tree bark, and ash seeds (left to right).

Ash trees may have EAB for a few years before outward symptoms begin to appear. However, increased woodpecker foraging may be an early sign of infestation. Typically, the first noticeable signs are delayed leaf-out in spring, thinning canopy or crown, bark splits, and epicormic shoots, but these symptoms only become apparent when the infestation has become moderate to high. Other signs of infestation are S-shaped galleries and D-shaped exit holes. The EAB adults typically begin to emerge from ash trees in late May and will continue to emerge, mate, and lay eggs through late summer (August-September).

Figure 3: D-shaped exit hole, canopy thinning, epicormic shoots,
S-shaped galleries, and woodpecker foraging (left to right).

Emerald Ash Borer's Threat

The high rate of reproduction of the beetle can lead to high population levels in just a few years following the initial infestation. Trees can be killed within two years when heavily infested, and a dead ash tree can become extremely brittle and break easily as it declines. Additionally, EAB can travel half a mile per year, with the potential to expand its range of infestation up to several miles per year during the adult beetles' flight period (June-August). Human activities expedite EAB spread through shipments of infested nursery stock and firewood.

The arrival of EAB, including the anticipated fast-paced spread of the infestation and the rapid deterioration of infested ash trees, has a high potential for a variety of negative impacts to a community. These include the loss of all ash trees resulting in aesthetic impacts, a reduction in the overall tree canopy's abilities to regulate surface temperatures, improve air and water quality, store carbon, and increase property values. Another significant concern is the overall public safety risk associated with this type of an infestation. The overall health of an ash tree infected by the EAB deteriorates very rapidly, resulting in

falling trees and branches. This can be particularly dangerous in public areas such as transportation corridors, parks, and other public areas frequented by large numbers of people.

The Town of Colchester consists of 36.3 square miles. With the majority of the community forested, it is estimated that there are thousands of ash trees within the community. The majority of the forested areas are privately owned, and are outside of the Town's direct control. While these private lands could be regulated under ordinances requiring protective or preventative measures, the regulation, monitoring, and enforcement associated with such a program would be extremely expensive, while at the same time, very ineffective. **This situation serves as the primary reason why communities in North America have not been able to successfully eradicate EAB after it has been detected.**

With the inability to successfully eradicate the EAB, and thereby preserve the ash trees within the community as well as the societal and environmental benefits they provide, the focus must be turned entirely toward eliminating, or significantly reducing the threat to public safety on publicly owned lands. However, recognizing that these remedial efforts are expensive, and that public lands present varying levels of risk, an approach that considers both the costs and benefits of these efforts is warranted. To ensure the viability and cost efficiency of the plan, it must be limited to those public lands where there is a significant public presence such as transportation corridors, parks, and other heavily used public areas. These areas stand in contrast to those publicly owned lands, such as natural areas where hundreds of acres of forest land exist, with relatively low numbers of visitors.

Ash Tree Inventory

In 2022, the Town coordinated with the Vermont Urban & Community Forestry Program and student volunteers from the University of Vermont (UVM) to begin an ash tree inventory within the Town right-of-way, (ROW) and other public lands with significant public usage. Town owned lands, including wooded and forested areas, make up approximately 1,100 acres. The ash tree inventory focused on approximately 860 acres of Town owned land where a dead or deteriorating tree would present a significant public safety risk (see Appendix A). During October and November of 2022, the UVM student volunteers were able to complete a large portion of the ash tree inventory. Following this work, the Town of Colchester hired Greenleaf Forestry to inventory the remaining areas during May and June of 2023.

Both the UVM student volunteers and Greenleaf Forestry personnel collected the ash tree inventory on the Vermont Urban & Community Forestry "Vermont Municipal Tree Inventory" tool. This is a web-based ArcGIS Map, available to collect tree inventory data within any Town. The ash tree inventory included the species, diameter at breast height (DBH), and condition of the tree. A shapefile of the data can be downloaded from the Vermont Center for Geographic Information.

The Vermont Municipal Tree Inventory is available at the following website:
https://anrmaps.vermont.gov/websites/MuniTrees/

A total of 446 ash trees were inventoried within the Town ROW and higher risk public lands. A summary of the ash tree inventory is provided in the tables below. A majority of the trees were found to be in good

condition and within the range of 6 to 12-inches in diameter at breast height. The inventory shows that most trees are relatively young and in good condition. See Appendix B for maps of the ash tree inventory.

Table 1: Number and percentage of ash trees based on the ash tree condition.

	Tree Condition				Total
	Good	Fair	Poor	Dead	
Number of Trees	319	77	35	15	446
Percentage of Trees	72%	17%	8%	3%	100%

Table 2: Number of ash trees based on the ash tree condition and diameter at breast height.

Diameter at Breast Height (DBH)	"Good" Ash Tree Condition	"Fair" Ash Tree Condition	"Poor" Ash Tree Condition	"Dead" Ash Tree Condition	Total
	Number of Trees	Number of Trees	Number of Trees	Number of Trees	
0-3"	46	3	5	3	57
3-6"	55	15	8	2	80
6-12"	132	33	12	7	184
12-18"	55	20	6	3	84
18-24"	29	5	3	0	37
24-30"	1	1	0	0	2
30-36"	0	0	1	0	1
36-42"	1	0	0	0	1
Total	319	77	35	15	446

Condition Definitions

Good

- Full canopy: 75-100% live foliage
- No dieback of branches over 2" diameter
- No significant structural defects (cankers, seams, decay, etc.)
- Minimal to no mechanical damage to trunk
- No suckering (root or water)
- Form, foliage color, and leaf size is characteristic of the species

Fair

- Thinning canopy: 50-75% live foliage
- New growth medium to low amount, or stunted
- Significant mechanical damage to trunk, new or old
- Insect/disease that is affecting tree
- Foliage may be off-color, or exhibit early fall color; leaves may be smaller or sparser than normal
- Form not representative of species

Poor

- Tree is declining: 25-50% live foliage
- Visible dead branches over 2" diameter in canopy
- Significant dieback of other branches
- Severe mechanical damage to trunk, usually including decay resulting from damage
- New foliage small, stunted, or minimal amount
- Foliage may be off-color, or exhibit early fall color; leaves may be smaller and sparser than normal

Dead

- No signs of life with new foliage
- Bark may be beginning to peel

Also included in the scope of work for Greenleaf Forestry was a review of the data collected by the UVM student volunteers. Where they found discrepancies, they modified the data. Additionally, Greenleaf Forestry did a review for ash trees that might have significant landscape presence or special value. No ash trees were observed with significant landscape presence or special value. However, they did identify four residential roads that have a significantly high ash tree presence. These roads are Edgewood Drive, Wall Street, Abigail Drive, and Winchester Place.

EAB MANAGEMENT OPTIONS

There are a limited number of management options available for consideration. These include do nothing, public education and outreach, treatment, tree removal, and replanting. These options are further explained and evaluated below.

Do Nothing

Under this option, the Town would take no steps to manage EAB in Colchester beyond the current reactive approach of removing dead or fallen trees when these conditions become known. The infestation would continue to spread at an exponential rate, exposing the community to increasingly greater risks.

Education & Outreach

The vast majority of the forested land within the Town is privately owned where providing direct mitigation is not practical. An EAB education and outreach plan directed toward these private property owners would likely represent the most effective means to manage EAB on private lands.

Treatment

Chemical control treatment can be used to preserve ash trees at risk of an infestation. Typically, treatment is not appropriate for those trees already infested. There are various chemical options to choose from: Soil-Applied Systemic Insecticides, Trunk-Injected Systemic Insecticides, Noninvasive Systemic Basal Trunk Sprays, and Protective Cover Sprays. These options can be effective, but require reapplication every 1-3 years for the life of the tree. While treatments are available that do not require skilled or licensed applicators, the overall scale and reoccurring nature of these treatments makes them impractical for existing maintenance staff to perform. Therefore, contracting these services would be necessary.

On average, the direct costs for each individual treatment is approximately $155 per tree. This does not include the administrative costs associated with procurement, contract management, and public relations targeted at areas scheduled for treatment. With an average cost of approximately $705 for removal of a tree, the trees would only be able to be treated 4-5 times before removal becomes a more cost-effective option to eliminate the threat.

An exception would be for those trees determined to have heritage, historic, memorial, or otherwise significant purpose, was healthy, and properly located. At the time of this plan, no ash trees in Colchester have been identified as heritage, historic, memorial, or otherwise significant.

Tree Removal

The most cost effective and expedient way of mitigating the public safety risks associated with EAB in high risk public areas, is to completely remove the trees. Given the rate of spread and rapid deterioration of infested trees, trees would be removed regardless of their current health. It is estimated that the cost of removing all 446 ash trees would be approximately $315,000 (current dollars).

Replanting

Where ash trees are removed, the replacement of these trees becomes an option for consideration. Guided by the Town's Street Tree Master Plan, similar trees and species native to the area can be selected. The replacement trees restore the many societal and environmental benefits lost from the removal of the ash trees, yet do not present the prior risks associated with the ash trees. Replacing all 446 ash trees is estimated to cost approximately $535,200 (current dollars).

EAB MANAGEMENT PLAN

Purpose

The purpose of this plan is to eliminate, or significantly reduce, the public safety risks related to EAB throughout the community on both public and private property through remedial efforts and public education and outreach.

Applicability

The remedial efforts contained in the EAB plan are applicable to only those public lands owned by the Town of Colchester, as specifically identified in this plan (see Appendix A). These remedial efforts do not apply to private lands, lands owned by the Town of Colchester that are specifically excluded from this plan, state and/or federal lands, or any other lands that are not specifically included in this plan.

Administration

The EAB plan will be administered by the Department of Public Works, with coordination with the Town Manager's Office, other Town departments, the Colchester Selectboard, and the Town's Tree Warden when needed.

Authority

The authority for the implementation of the remedial efforts contained in this plan are defined under 19 V.S.A. §904, 24 V.S.A. §2291 (3), and 24 V.S.A §2502-2511.

Management Strategy

The overall management strategy represents a proactive approach to eliminating, or significantly reducing, the public safety risks associated with EAB on Town owned property where there are higher risks due to the frequency or degree of public exposure to the risks. Education and outreach efforts shall be used to mitigate risks and slow the spread of EAB on privately owned property within the community. Overall plan implementation costs to the community will be minimized through a variety of funding and implementation strategies.

Treatment

Provide treatment only for ash trees that have been identified as heritage, historic, memorial, or otherwise significant and determined to be in good condition. At this time, no such trees have been identified.

Tree Removal

Proactive removal of all ash trees, regardless of the condition, is recommended for the following reasons:

- The fast-paced spread of the EAB infestation to ash trees.
- The rapid deterioration of an infested ash tree, which becomes extremely brittle and breaks easily as it declines.
- Once EAB has infested an ash tree, the probability of the tree dying is greater than 99%.

- A dead ash tree is a potential hazard to property, infrastructure, and public safety.
- The likelihood of all 446 ash trees becoming a hazard in a short period of time is high.

Dead and deteriorating ash trees should be removed as the first priority of the EAB Plan. These trees present the highest potential for public safety hazards associated with falling trees and branches. There are 127 trees, or approximately 28% of the total ash tree inventory, that fall into this category. Using recent cost estimates, the estimated cost of removing the dead and deteriorating ash trees is approximately $92,000 (current dollars).

With the remaining 319 ash trees, or 72% of the ash tree inventory, reportedly in "good" condition, an opportunity exists to create a multi-year implementation plan to better manage the overall financial needs of the plan. Using recent cost estimates for tree removal, the estimate to remove the remaining 319 ash trees is approximately $223,000 (current dollars), for a total estimated cost of removal at approximately $315,000. (current dollars)

Prioritization for removal of ash trees is recommended based on the following criteria:

Table 3: Prioritization of Preemptive Ash Tree Removal

Criteria	Reasoning	Order of Importance
Stress	EAB prefer stressed ash trees for infesting and laying eggs.	Prioritization for tree removal would be based on the condition of the tree following an order of dead to poor to fair to good.
Location	EAB tend to infest open-growth, sunny locations. Additionally, high-trafficked areas face potential danger from the effects of hazardous trees.	Prioritization of removal would also be based on population density and/or amount of street traffic, with frequently traveled street, sidewalk, bike paths and parks taking precedence.
Species	EAB prefer specific trees over other trees.	Removal efforts would focus on Green Ash, followed by Black Ash, White Ash, and Blue Ash.

Replanting

Following the removal of all ash trees in the project area, replanting is recommended. However, while an effective removal strategy must be comprehensive, a replanting plan can and should be more selective.

Using recent cost estimates for tree planting, the estimated cost of replanting all 446 ash trees is approximately $535,200. Further, the trees to be removed exist in a variety of different settings whereby their replacement has varying degrees of value and/or benefit. Therefore, tree replacement is not recommended in the following circumstances:

- areas where ash trees are relatively isolated,
- areas where very few ash trees are to be removed from the same vicinity, or
- areas where ash trees are along the perimeter of an already heavily wooded area.

Areas where replanting is recommended include four residential roads that have a significant ash tree presence. These roads are Edgewood Drive, Wall Street, Abigail Drive, and Winchester Place.

Approximately 93 ash trees exist on these four roads, where replanting costs would be approximately $111,600 (current dollars). Additionally, Airport Park contains 23 ash trees that would be removed and should be replaced for an estimated cost of $27,600 (current dollars), for a total replanting cost of approximately $139,200.

Replanting efforts will be consistent with the Town's Street Tree Master Plan, which recommends the use of similar trees and species native to the area. One of the objectives of the Street Tree Master Plan is to increase the diversity of tree species throughout the Town. This will reduce the risk of infestation or disease damaging the majority of the Town's street tree inventory at one time. The goal for street tree diversity is to avoid having any one genus be greater than 10% or any one species be greater than 5% of the total inventory of street trees in Colchester.

Public Education and Outreach

The vast majority of the forested land within the Town is privately owned where providing direct mitigation is not practical. An EAB education and outreach plan directed toward these private property owners would likely represent the most effective means to manage EAB on private lands, and is recommended in this plan.

Education and Outreach related to EAB management could be provided in the Town newsletter and on the Town website, with an outreach strategy that directs property owners towards existing resources from subject matter experts:

- Emerald Ash Borer Network (http://www.emeraldashborer.info/)
- Vermont Invasives (http://vtinvasives.org/)
- Vermont Urban & Community Forestry Program's EAB management webpage (https://vtcommunityforestry.org/municipal-assistance/emerald-ash-borer-management)

These websites have an extensive library of resources, including videos, infographics, and brochures.

Funding and Financial Plan

The recommended funding for the EAB plan would consist of a combination of grant funds and local matching funds. Grant opportunities would be primarily through the Vermont Urban & Community Forestry program, and would include, but may not be limited to;

- Urban & Community Forestry Grant. This grant opportunity has no cost share requirement, with a minimum $5,000 award and a maximum $50,000 award. This work must take place in or directly serve "disadvantaged communities" as defined by the federal Council on Environmental Quality's Climate & Economic Justice Screening Tool, the U.S. Department of Housing and Urban Development's Opportunity Zones dataset, or the U.S. Department of Housing & Urban Development's dataset for low to moderate income (LMI) areas. In Colchester, these areas are along Route 15, Route 2 (south of Severance Corners), and Blakely Road (East of I-89). There are 55 trees in that area, 50 of which are in good condition and 5 that are dead or deteriorating. Of the 55 trees in that area, 50 of them are slated for replacement along Edgewood Drive and

Winchester Place. This grant is only available for the next three years. Applications for $105,000 of funding would be submitted over the next three years for tree removal and replanting work within these designated areas.

- Growing Urban Forests in the Face of Emerald Ash Borer Grant. This grant opportunity has a 1:1 cost share requirement, with a minimum $5,000 award and a maximum $50,000 award. This work must take place within a 1-mile radius of designated areas through the VT Agency of Commerce & Community Developments Designation Programs. This includes Designated Downtowns, Village Centers, New Town Centers, Growth Centers, and Neighborhood Development Areas. In Colchester, these areas are surrounding Severance Corners and areas adjacent to Winooski. This grant requires that any trees removed also be replaced. There are 43 trees in that area that are slated for removal and replacement along Abigail Drive and Wall Street, 42 of which are in good condition and 1 that is dead or deteriorating. The State anticipates that this grant opportunity will be available annually moving forward. To maximize this grant opportunity, applications totaling $40,000 would be submitted, requiring $40,000 in local match, for tree removal and replanting work within these designated areas.

- Communities Caring for Canopy Grant. This grant opportunity has a 1:1 cost share requirement, with a minimum $5,000 award and a maximum $20,000 award. This grant is applicable to all areas within Colchester. The State anticipates this grant opportunity will be available annually moving forward. These funds can be used for tree removal, as well as tree planting. This funding would be directed to the remaining 348 ash trees from the inventory, 227 of which are in good condition and 121 that are dead or deteriorating. These funds would also be used to replant the 23 ash trees to be removed at Airport Park. To maximize this grant opportunity, over the next eight years, applications totaling $155,000 would be submitted, requiring $155,000 of local match, for tree removal and replanting work within these designated areas.

The primary source of local match funds would be through an annual request for year end fund balances from the Town's general fund. In the absence of these funds, local match funds would be requested through the annual general fund budget process. Existing operating budgets and capital plans are not sufficiently funded to absorb the costs associated with the EAB plan, and therefore their use is not recommended.

The overall financial plan and implementation schedule is structured to:

1) prioritize the removal of dead and deteriorating ash trees to remove the public safety risk as quickly as possible,
2) to maximize the availability and use of potential grant funds, and
3) to minimize inflationary impacts by advancing the overall plan as quickly as possible.

While there is no guarantee that grant awards would occur every year, the following table shows the optimization of grant opportunities and the minimization of inflationary impacts. The proposed schedule

reflects a scenario where all dead and deteriorating ash trees will be removed within the first three years of the plan.

	Communities Canopy All Colchester $5K is minimum award, $20K max $50-$70 program funding, every year		Growing Urban Forests Growth Center $5K is minimum award, $50K max $125K program funding, every year		Urban & Community Forestry Fort / Route 15 $5K is minimum award, $50K max $630K spread over the next 3 years				
	Grant Funding	Local Share	Grant Funding	Local Share	Grant Funding	No Local Share	Grant Funding	Local Share	Annual Total
Year 1	$ 20,000.00	$ 20,000.00	$ 40,000.00	$ 40,000.00	$ 50,000.00	$ -	$ 110,000.00	$ 60,000.00	$ 170,000.00
Year 2	$ 20,000.00	$ 20,000.00			$ 50,000.00	$ -	$ 70,000.00	$ 20,000.00	$ 90,000.00
Year 3	$ 20,000.00	$ 20,000.00			$ 5,000.00	$ -	$ 25,000.00	$ 20,000.00	$ 45,000.00
Year 4	$ 20,000.00	$ 20,000.00				$ -	$ 20,000.00	$ 20,000.00	$ 40,000.00
Year 5	$ 20,000.00	$ 20,000.00				$ -	$ 20,000.00	$ 20,000.00	$ 40,000.00
Year 6	$ 20,000.00	$ 20,000.00				$ -	$ 20,000.00	$ 20,000.00	$ 40,000.00
Year 7	$ 20,000.00	$ 20,000.00				$ -	$ 20,000.00	$ 20,000.00	$ 40,000.00
Year 8	$ 15,000.00	$ 15,000.00				$ -	$ 15,000.00	$ 15,000.00	$ 30,000.00
	$ 155,000.00	**$ 155,000.00**	**$ 40,000.00**	**$ 40,000.00**	**$ 105,000.00**	**$ -**	$ 300,000.00	$ 195,000.00	$ 495,000.00

The above table reflects the following assumptions:

- Tree replanting along Edgewood Drive, Wall Street, Abigail Drive, Winchester Place, and within Airport Park.
- Annual inflation estimated at 4%.
- In an effort to optimize grant opportunities, there may be some good condition trees that are removed prior to deteriorating trees.

Implementation

Annually, the Department of Public Works (DPW) will submit grant applications which align with authorized spending limits for the fiscal year. The work contained in this plan exceeds the resource allocations of DPW's maintenance crews. With funding available, DPW will solicit bid proposals from qualified tree removal and tree planting contractors, and will provide project management services.

Citations

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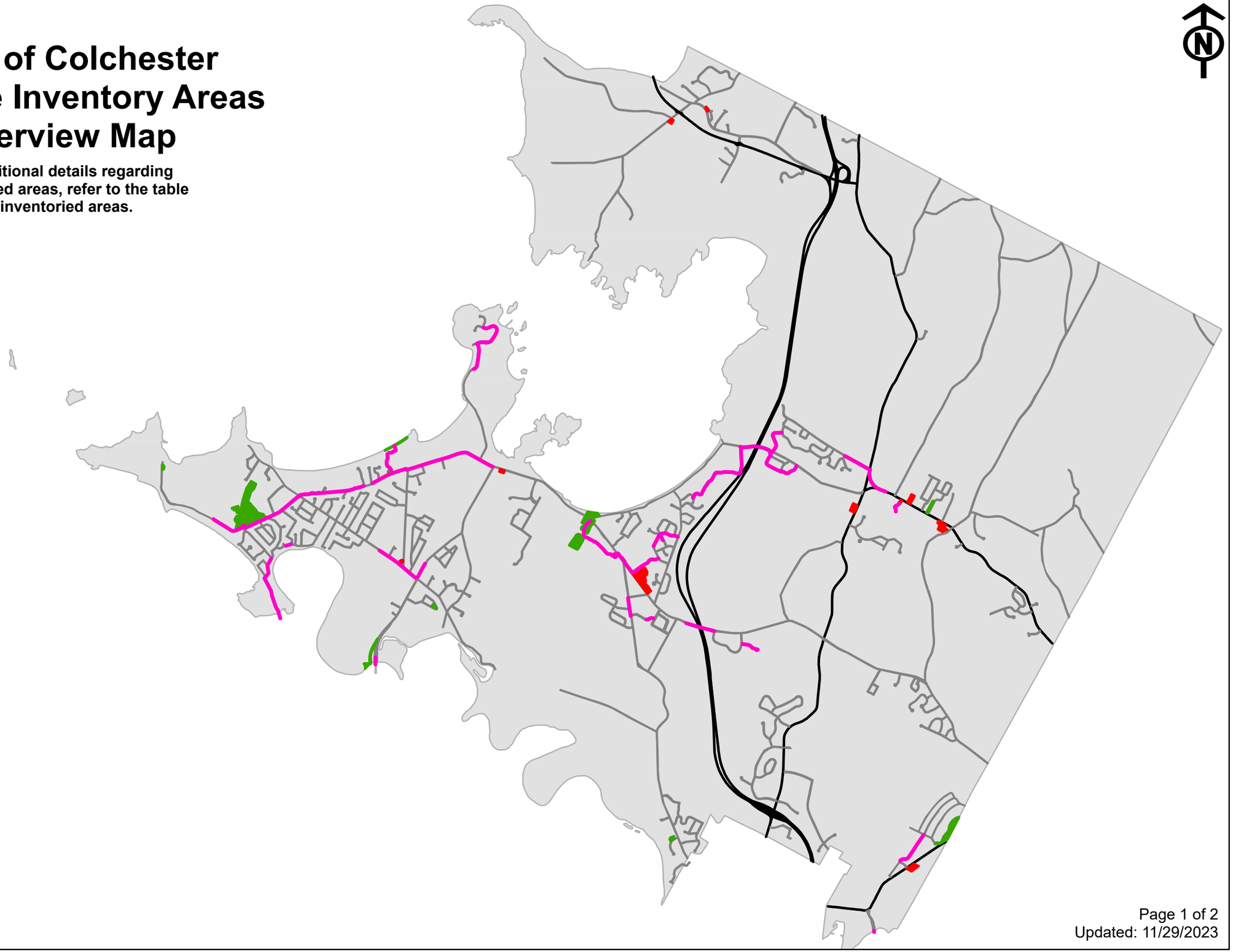
Appendix A: Ash Tree Inventory Area Overview Map

Town of Colchester
Ash Tree Inventory Areas
Overview Map

For additional details regarding inventoried areas, refer to the table of inventoried areas.



Legend

Ash Tree Inventory Areas

- Shared Use Path
- Town Facilities
- Parks
- Town Right-of-Way

Other Legend Items

- State Road
- Colchester Town Boundary

Updated: 11/29/2023

Document Path: I:\Town Manager\Emerald Ash Borer\GIS Maps\EAB Plan Mapping\Ash Tree - Inventory Area Map.mxd

Town of Colchester
Ash Tree Inventory Areas

	Location Name	Address / Location Description	Ash Tree Inventory Expectation
Parks	Rossetti Nature Area (parking lot and beach front)	150 Holy Cross Road	Anything within - or first or second row of trees lining the boundary of - limits of the polygon for the property
	Airport Park	500 Colchester Point Road	
	Causeway Bike Path Parking	178 Mills Point Road	
	Heritage Park	55 Heritage Lane	
	Bayside Park	3 parcels at intersection of West / East Lakeshore Drive and Blakely Road	
	Bonanza Park	Small park east of 239 Bonanza Park	
	Heineberg Fishing Access / Bilado Park	878 VT-127 (Heineberg Drive)	
	Fort Ethan Allen Parade Grounds	Adjacent to southwest portion of Dalton Drive	
	Valleyfield Park	Between 12 and 78 Valleyfield Drive	
Town Facilities	Champlain Cemetery	North of Brosseau Lane (on Jasper Mine Road)	Anything within - or first or second row of trees lining the boundary of - limits of the polygon for the property
	Center Fire Station (Clay Point Road)	227 Clay Point Road	
	Malletts Bay Cemetery	903 West Lakeshore Drive	
	Methodist Cemetery / Fire Department	45 Main Street	
	Munson Cemetery	3231 Roosevelt Highway	
	Library / Meeting House / Historical Society / Village Cemetery	828 to 898 Main Street	
	Malletts Bay Fire Station	844 Church Road	
	Police Station / Town Office & Garage / Rescue	687 to 883 Blakely Road	
	Fort Ethan Allen Cemetery	850 College Parkway	
	Colchester Fire District 3	428 Main Street	
Shared Use Paths	Colchester Point Road (shared use path)	Along Colchester Point Road from Broadlake Road to intersection at Porters Point Road	First or second row of trees lining the trail / shared use path / pedestrian bridge.
	Holy Cross Road (shared use path)	Along Holy Cross Road from intersection at Porters Point Road to Church Road	
	Rossetti Nature Area (trail)	150 Holy Cross Road (trail from parking lot to beach)	
	West Lakeshore Drive (shared use path)	Along West Lakeshore Drive from intersection at Church Road to Prim Road	
	Marble Island Road (shared use path)	Along Marble Island Road from Irish Cove to intersection with Mariner Heights	
	Vincenza Way (shared use path)	Connecting Vincenza Way to River Road	
	Windemere Way to Burlington (shared use path)	Along Windemere Way, then along fishing access and travels through the woods to a bridge to Burlington	
	Porters Point Road (shared use path)	Along Porters Point Road from intersection with Heineberg Drive to 441 Porters Point Road	
	Prim Road (shared use path)	Along Prim Road from intersection with Porters Point Road to driveway of 1110 Prim Road	
	Heineberg Drive (pedestrian bridge)	Along Heineberg Drive (near Heineberg Fishing Access / Bilado Park)	
	Bayside Park (shared used path)	Starting at upper Bayside Park traveling through school property to Blakely Road	
	Blakely Road (shared use path)	Along Blakely Road from 425 Blakely Road (Middle School) traveling through the woods between the elementary school and Colchester Rescue to Julie Drive	
	Julie Drive (shared use path)	Wooded path from Julie Drive to Fox Run	
	Laura Lane (shared use path)	Wooded path from Laura Lane to Fox Run	
	Fox Run (shared use path)	Along Fox Run to intersection with Williams Road	
	Bayview Road to Bay Road (shared use path)	Wooded path from Bayview Road to Bay Road	
	Bay Road (shared use path)	Along Bay Road crossing Bay Road to a wooded path to Hollow Creek Road	
	Stone Drive (shared use path)	Along Stone Drive to Granite Creek Road	
	Creek Farm Road (shared use path)	Along Creek Farm Road starting at Deer Lane and ending at intersection with Route 2 (Roosevelt Highway)	
	Main Street (shared use path)	Along Main Street / Route 2 from American Legion Post to Union Memorial School	
	Village Park (trail)	Portion of trail behind 428 Main Street	
	Blakely Road (pedestrian bridge)	Along Blakely Road from Edgewood Drive to Shadow Cross Farm (over Interstate 89)	
	Hawkes Way (shared use path)	Along Hawkes Way	
	Nice Way to Hummingbird Drive (shared use path)	Wooded path from Nice Way to Hummingbird Drive	
	Mallets Bay Avenue (shared use path)	Along Malletts Bay Avenue from Thomas Drive to Hummingbird Drive	
	Hercules Drive (trail)	Wooded trail from Hercules Drive to Sunny Hollow Nature Area	
	Winchester Place (shared use path)	Along Winchester Place between Barnes Avenue and VT National Guard Road	
	Lime Kiln Road (pedestrian bridge)	Bridge over Winooski River on Lime Kiln Road	
Town Right-of-Way	Various locations throughout the Town	Various locations throughout the Town	Anything within - or first or second row of trees lining the boundary of - limits of the polygon for the public right-of-way (ROW).

Updated: 11/29/2023

Appendix B: Ash Tree Inventory
Overview Maps

Town of Colchester
Ash Tree Inventory
Overview Map

Legend

Town Ash Tree Inventory

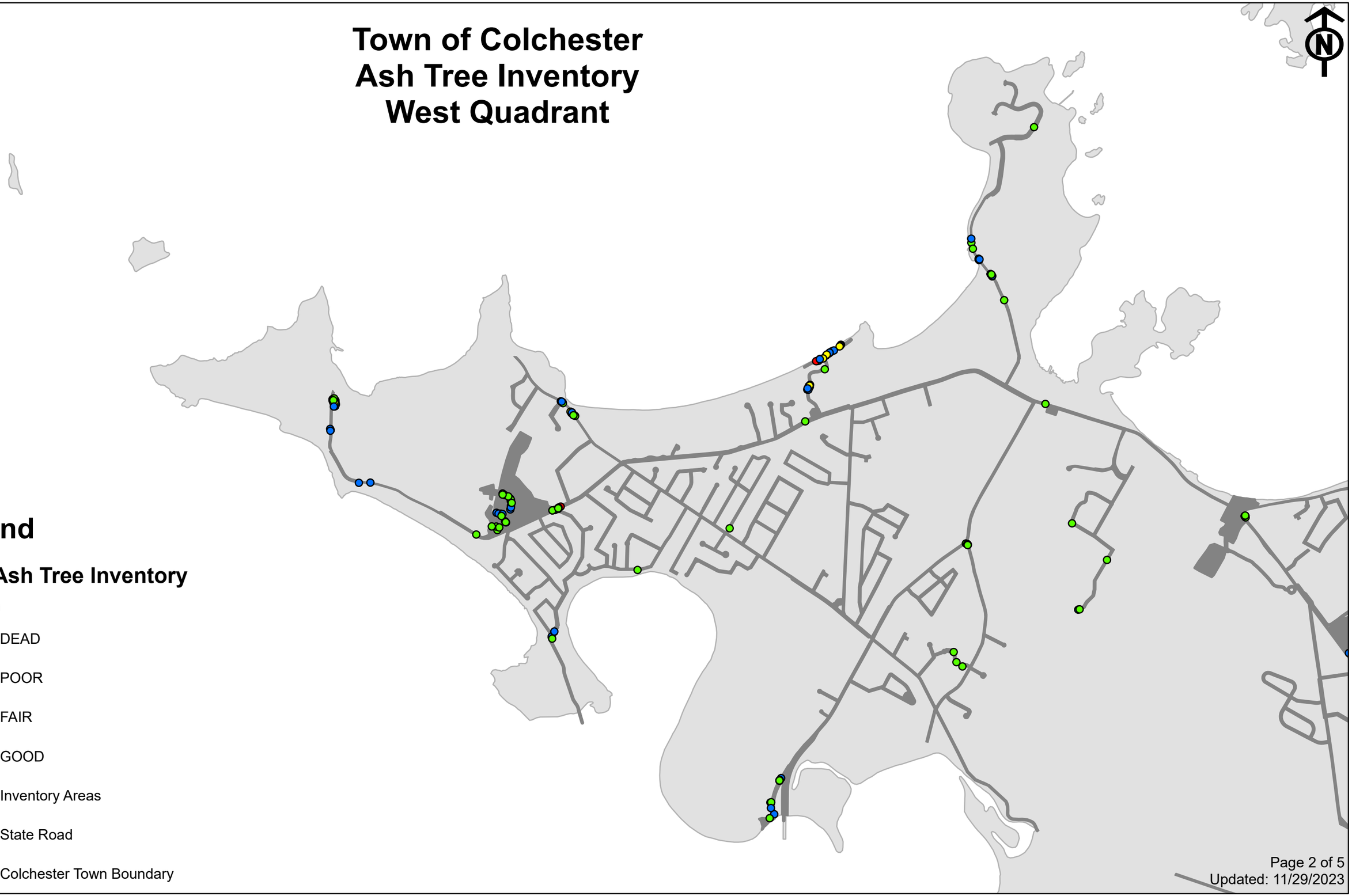
Condition

- DEAD
- POOR
- FAIR
- GOOD
- Inventory Areas
- State Road
- Colchester Town Boundary

Updated: 11/29/2023

Document Path: I:\Town Manager\Emerald Ash Borer\GIS Maps\EAB Plan Mapping\Ash Tree - Overview Map.mxd

Town of Colchester
Ash Tree Inventory
West Quadrant



Legend

Town Ash Tree Inventory

Condition

- DEAD
- POOR
- FAIR
- GOOD
- Inventory Areas
- State Road
- Colchester Town Boundary

Updated: 11/29/2023

Document Path: I:\Town Manager\Emerald Ash Borer\GIS Maps\EAB Plan Mapping\Ash Tree - Overview Map - West.mxd

Town of Colchester
Ash Tree Inventory
South Quadrant

Legend

Town Ash Tree Inventory

Condition

- DEAD
- POOR
- FAIR
- GOOD
- Inventory Areas
- State Road
- Colchester Town Boundary

Updated: 11/29/2023

Document Path: I:\Town Manager\Emerald Ash Borer\GIS Maps\EAB Plan Mapping\Ash Tree - Overview Map - South.mxd

Town of Colchester
Ash Tree Inventory
East Quadrant

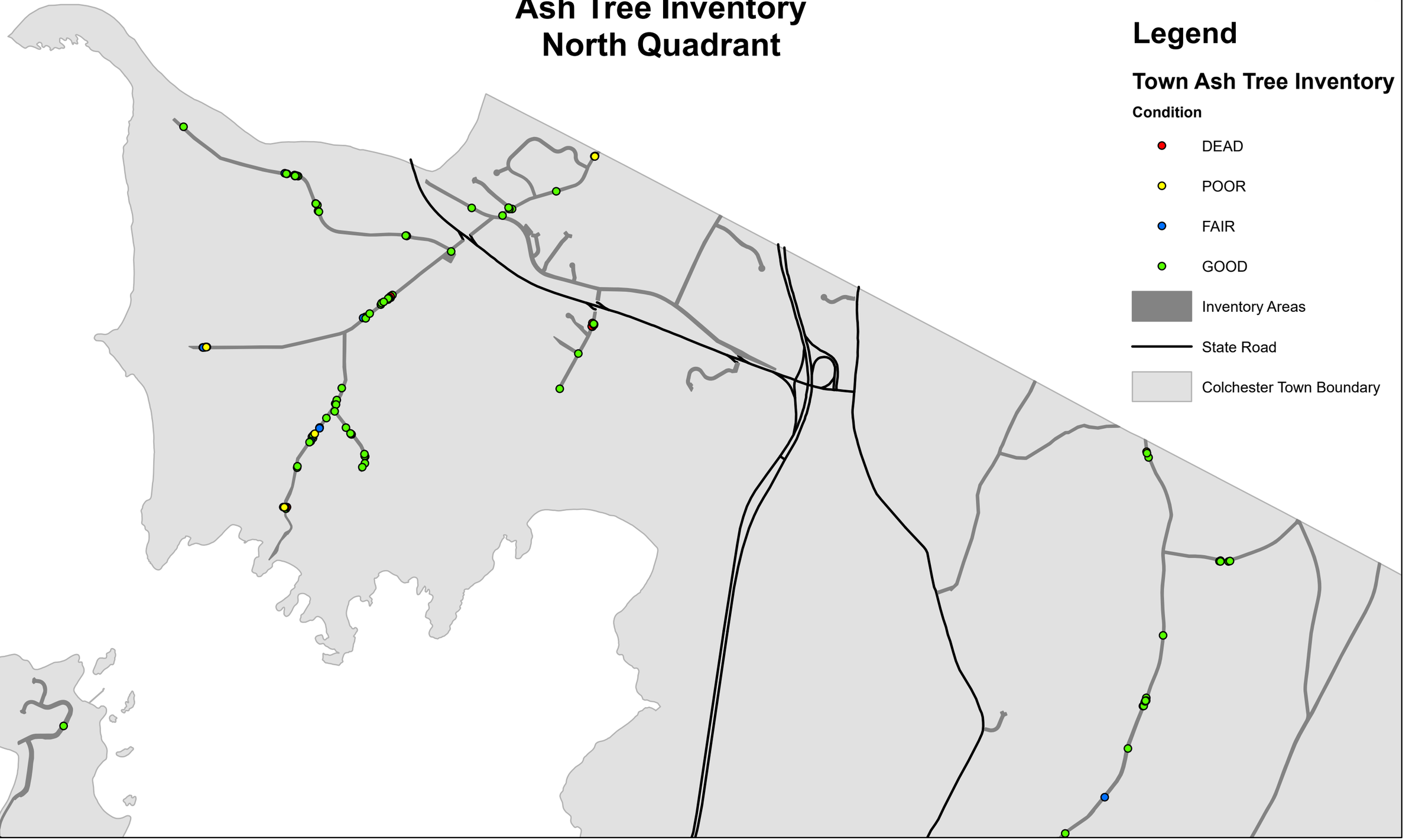
Legend

Town Ash Tree Inventory

Condition

- DEAD
- POOR
- FAIR
- GOOD
- Inventory Areas
- State Road
- Colchester Town Boundary

Town of Colchester
Ash Tree Inventory
North Quadrant



Legend

Town Ash Tree Inventory

Condition

- DEAD
- POOR
- FAIR
- GOOD
- Inventory Areas
- State Road
- Colchester Town Boundary

Document Path: I:\Town Manager\Emerald Ash Borer\GIS Maps\EAB Plan Mapping\Ash Tree - Overview Map - North.mxd