

Bennington College

The Program

2020

TEX

Emerald Ash Borer

ASH TREE INVENTORY for EAB  
 MAIN DRIVE to MAINTENANCE

LOCATION	DIAMETER	CONDITION	ACTION
Behind sand shed	12" ±	all dead	
Right side of big oak	6" / clust WA	Small + healthy	monitor
Right side	8" white ash	looks good	monitor
"	9" WA	Good	monitor
"	6" WA	poor	monitor
"	12" double	Good except scars	monitor
"	6" WA	Fair	monitor
East side	6" in oaks	Good	monitor
"	5" "	Good	monitor
"	4" "	leaning	CUT
East side in oaks	4-6"	Small WA	monitor
East side in oaks	10"	poor	CUT
"	9"	Good	monitor
"	4-6" clust WA	"	"
"	6-7" (a)	1-good 1-poor	monitor CUT
"	12"	poor	CUT
ON ROAD SIDE island	12" ± x 2	leaning	CUT
East side	13"	Good	CUT FOR safety
near park	10"	Fair	monitor
"	13"	Good	?
"	12"	"	CUT ?
"	10"	"	CUT ?
"	10"	dead	CUT

By path  
 [10-12] TRASH  
 12-14"  
 10"  
 11"  
 Good  
 Dead  
 Good  
 CUT?  
 "

MAIN DRIVE  
 GOING DOWN ROAD  
 coming uphill

Right side of (a) to

Nov 22

ASH TREE INVENTORY for EAB

Central Campus Nov. 29, 2018

LOCATION	DIAMETER / Species	CONDITION	ACTION
Kipat	35" Green Ash	Healthy	Air Spade 12/3/18
Kipat	29" Green Ash	Healthy	Air Spade - 12/3 R <sub>x</sub>
Welmng	27" White Ash	Fair Health	R <sub>x</sub> prune?
Welmng	20" Green Ash	OK	R <sub>x</sub> - limit stress
Notes	27" Green Ash	Good Health	Just R <sub>x</sub> - limit stress
<del>Parkin (2)</del>	<del>5" Green Ash</del>	<del>Poor location</del>	<del>Make Trap Tree</del>
Parkin's Island	10" Green Ash	nic tree	Air Spade (12/3) R <sub>x</sub>
Island	10" "	" "	Air Spade (12/3) R <sub>x</sub>
Pans Borden	6" Green Ash	Fair	Air Spade (12/3) Trap Tree?
Pans Borden	7" Green Ash	Good	Air Spade (12/3) R <sub>x</sub>
PB North side	7" Green Ash	Fair Health	Air Spade (12/3) R <sub>x</sub>
PB Northside	7" Green Ash	Fair to Good	Air Spade (12/3) R <sub>x</sub>
PB Field	12" Green Ash	Good	Air Spade (12/3) R <sub>x</sub>
PB Northwest	13" Green Ash	Good	Air Spade (12/3) R <sub>x</sub>
PB Northwest	13" Green Ash	Good	Air Spade (12/3) R <sub>x</sub>
PB Northwest	11" Green Ash	Good	Air Spade (12/3) R <sub>x</sub>
Mark - Westside	10" Green Ash	Good	Air Spade (12/3) R <sub>x</sub>
Mark by building	11" Green Ash	Good	Air Spade (12/3) R <sub>x</sub>
Parkins - Westside	12" Green Ash	Good	Air Spade (12/3) R <sub>x</sub>
Parkins - by building	11" Green Ash	Good	Air Spade (12/3) R <sub>x</sub>
Dickinson Pond	15" White Ash	both Good / deep	Air Spade (12/3) R <sub>x</sub>
"	14" Green Ash	Good	"
"	16" Green Ash	Good	"
Park Way	24" White Ash	Dead	Remove?
Dickinson	12" White Ash	Dead	Remove?

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Field Island

Behind Barn, Path  
Between Fishman  
w/ maple

Blue Ash 8"

Healthy

R<sub>x</sub>

201

di

18

ASH TREE INVENTORY for EAB

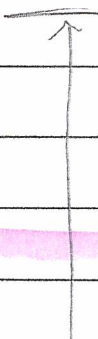
Frost House

LOCATION	DIAMETER	CONDITION	ACTION
Next to Road	6" white ash	FAIR	FX?
	12"	Poor - BK	<del>Remove</del> or TRAP
	30" ± (Big)	Good Health	TRX - ROOT FLAKE
	2 small	Fair condition	Remove? for
	18"	Poor condition	Remove?
	7"	"	"
Big ash by wall	36" + white ash	Fair to Good	FX / air spade
	19" white ash	Fair - damage	FX / 12/4
Ash in Field	15" white ash	Fair cond.	do nothing

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Frost House



ASH TREE INVENTORY for EAB

Roadways, etc

LOCATION	DIAMETER	CONDITION	ACTION
Across from Br-6	12" (meas 3)	poor →	cut - now
@ Y	12"	good	monitor
Shingle cut	10"	poor	cut
EVAPA lot	18"	good	monitor
" "	cluster 7-8	Fair to good	monitor/cut?
" "	14" - 5 trunks	poorish	cut?
" "	8" ±	leaning	cut
GAPA by road	12" WA	Fair	cut
" Longwood Field	4' Big white ash	poor	? ? ?
Jennings field	2-14" WA	good	monitor/cut
Hamble Room	12" WA	good	monitor
occurs path	10"	dead	cut
" "	14" WA / wing	poor	cut by GH
WEST ORG. PATH	14" ±	good	FX (TEX)
fac E	10" WA	good	monitor
Farmhouse	11" ± WA	poorish	monitor
Behind Jennings	up to 12" (a few WA)	one leaning → cut	others monitor
North Gate	20" WA (couple)	DEAD	monitor
BY parking lot	30" - 12"	NICE	FX (TEX)
- APRIAGE BARN	big silv. maple	overhangs CB	FX (TEX) ↓
- Big Oak	MAIN DRIVE	has damage	
face row	- couple WA		

OTHERS

poor to

poorish



ASH TREE INVENTORY for EAB  
 not from waiting w/ Mike

LOCATION	DIAMETER	CONDITION	ACTION
Woodpecker	damage 3 yrs ±	2020 ±	
TRAPS - Killpost	prepar studies		
Tex	FX on Spring	2019 2020 2021	
TRAP - tree on path to observatory	3 m diameter		
Discussion - 3 trees - drinkers	(✓ pond distance rd)		
path -	removed - have Mike ✓ for EAB - now found		
path - west side - RZ			
main drive	cut dead trees - look for EAB gallery		
TRAPS			
US - Biological Control	clusters of small ash		
	flag habitat / seedlings		
North Gate - FX			
CAPA budget annual			
Big Ash	42 1/2"		

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Mike

Tax + Note

Dut du Ehm  
Disearse



Dutch Elm



Client: 1125153

Printed on: 10/15/2018  
Created on: 10/15/2018

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The following program is recommended for certain trees and shrubs on your property. In addition to a thorough plant health care program, Bartlett Tree Experts recommends having a qualified arborist inspect your property periodically to assist you in identifying potential risks or hazardous conditions relating to your trees or shrubs. THIS IS NOT AN INVOICE.

### Pest Management

Perform a systemic root flare injection treatment to the following plants to help suppress Dutch elm disease.

- President's Elm 36" located at the Mattison Road, Shattsbury, VT
- Deane Carrige Barn elm 18" located at the grass island, side of Carrige Barn
- Deane Carrige Barn East elm 33" located at the East side of Carrige Barn
- Harlan Road Elms 21" & 25" located at the side of Harlan Road
- Orchard B House elms 11" & 16" located at the side of road, near orchard
- Deane Carrige Barn Valley Forge elms 10" & 10" located at the side of Carrige Barn
- Campus Drive elm 26" located at the side of Campus Drive
- Campus Drive South elm 26" located at the side of Campus Drive

Provide 1 treatment at 6,328.00 per treatment.

Estimated Treatment Date: 6/27/2019 thru 7/23/2019.

Total Amount: \$6,328.00

OTC HARD  
Management

Note

## Long Term Orchard Plan

2012

NY TE

Our vision is to keep the Orchard as a classic working traditional New England orchard. The focus is not to have a high production commercial style orchard but rather a scenic one which concentrates on its rural character and history while still producing natural usable apples and fruit. In addition to the apple trees we would also like to diversify by adding some other fruits that were not common to traditional New England orchards. I feel a balance of apples and other fruit will help the Orchard bridge the gap of being traditional and contemporary. These various fruits can be harvested by the student gardeners and by students in classes studying agriculture and horticulture. The apple varieties we have selected are both heirloom types and popular modern types that are suitable for our area and are not commonly found in supermarkets. These are early, mid and late season apples which can be eaten fresh but also store well or can be used for cooking or as cider apples. The student gardeners have made and sold cider in the past as part of their Purple Carrot Farm. As of 2013 most of the trees are original and are around 125 years old. Many of these trees have died off in the last 10 years and unfortunately many more will die in the next 10 years. Until recently the Orchard was a largely overlooked and neglected resource on the campus. I would like to change this. We would like to slowly phase in new trees to replace the old ones as they die out. By doing this we will keep the orchard as an orchard and the transition from old to new trees will be a gradual progression over time. Unfortunately a large established tree can die and be removed in one day and it will take many years for a new tree to grow to size to replace it. This is why we must begin the planting and replacement process as soon as possible, so the new trees can have a head start before all of the old ones are gone.

An additional goal is to define the boundaries of the yards of the Orchard houses with the actual fruit growing areas. We hope to do this by placing some split rail fencing and selected plants around the mowed areas of the houses. This might also be a good spot to plant berry bushes in. We could try blueberries. By defining the boundaries we will also give the residents their own private, quiet spaces to enjoy. We plan to remove some of the non fruit bearing trees from the main orchard growing areas and replace them with apples at calculated locations corresponding to the original rows of apple trees. By doing this we will have a more homogenized and defined fruit orchard. Our plan and work in the Orchard will evolve with time and is flexible to meet the needs of the college and community. I feel our ideas for the Orchard correspond perfectly with the overall Landscape Master Plan.

NATE

### Orchard plan for 2014

For 2014 we are focussing on planting the recently cleared area between Orchard House E and Orchard House D. I have measured and surveyed the area and we will be planting 5 apple trees here. 4 of these will be trees that are coming from Northern Nursery and will be good sized trees as we want to establish this area quickly and provide some privacy for the residents. 1 will be a smaller tree. We will also finish levelling and grading this area and seeding it with a meadow mix as it will eventually be brush hogged like the rest of the orchard.

We will also be getting 6 more apple trees to go into the main orchard to replace trees that are no longer there (between Jennings Cottage and the Farm House as well as across from Orchard House E near the pine tree that will be removed). One tree that was planted last year did not survive and will be replaced with the same species tree in the same location this spring. This will be a total of 11 apple trees that will be planted in 2014. In keeping with our vision of having some exotic and unique trees we will add 2 Jujubes in addition to the 4 Paw Paw trees we planted last year.

In 2013 we lost 1 older tree and half of several more. In the spring of 2013 we planted 7 apple trees and 6 have survived. Several of them were damaged by deer when they were first planted before they were fenced off. In the fall 2 young pear trees that the students had planted were also damaged and I fenced them off. We will have to monitor these and we may need to replace them. Larger trees are less vulnerable to animal damage and look better but because of the limited to what species we can get in the large size. Also the prices are much higher (often 4 to 8 times the cost of smaller younger trees) and these larger trees take more time to plant. All 4 Paw Paw trees have been growing and are healthy.

I hope to have Andy from Greater Heights Tree Service show me first hand on site how to prune both some of the older trees and younger trees. We hope to remove a lot of dead wood and damaged branches this year from the older trees as well as some minor pruning. I will also assess some trees that may need to be recabled. As these cables have pulled out old cracks that have healed are breaking apart again or have broken off the trees or split the trees in half.

As we discussed with Reed Hildebrandt some of the non fruiting trees are being removed from the orchard. The pine tree and the large willow tree that was entangled with the power lines between Orchard House B and C have been removed. I will also be removing 1 box elder tree and 1 small norway maple that are behind Orchard House C and near where the Jujubes will be planted. The other pine tree (across from Orchard House E) south of these will be taken down early 2014 and 1 apple tree will going into this area.

## Orchard plan for 2015

In 2015 we would like to focus on replanting the recently cleared area between Orchard House E (occupied by Allen Shawn and family) and Orchard House D (occupied by Hung Bul and family). This is an area that both the College and Reed Hilderbrand feels is important to plant apple trees as we want to tie this area into the Orchard. Currently it is a new meadow area but it will regrow if we don't plant it and care for it. It is important that this are larger trees and not whips because they will need to be large enough to survive the regrowth of brush in this area and also to prevent them from being brush hogged over and also to establish a barrier and parklike landscape around these houses. I have included a blueprint of our Landscape Plan. Unfortunately this was planned for 2014 but due to budget issues it was postponed and we had planned to reschedule the order for 2015.

We would also like to get 9 Apple trees (young whips) so we can continue our long term replanting plan for the Orchard. Unfortunately much of our order was postponed in 2014 so we are behind on achieving this vision. Per the long term plan the apple species we have selected for this are a mixture of traditional New England apples, heritage apples and more common modern apples. Some of these will be planted in the southern section of the Orchard where a removed (per 2014 plan) Pine tree in the Spring. I also removed the Box Elder tree behind Orchard C (per 2014 plan) that yielded us space for the Jubbe trees.

Unfortunately in the spring of 2014 we lost one Pear tree to animal damage. I would like to quickly replace this tree as I have fully reestablished this tree row and now there is a hole in the row. We also lost half of the apple near the Orchard house C driveway. I have done my best to even the remaining part out so we can get a few more years out of the tree. I would like to plant a younger tree by it so it will have a replacement started when it dies.

As in previous years I hope to have Andy from Greater Heights Tree Service show me first hand on site how to prune both some of the older trees and younger trees. I do have experience pruning young trees but would appreciate the opportunity to learn more, especially working with the older trees. We hope to remove a lot of dead wood and damaged branches this year from the older trees as well as some minor pruning. As per the 2014 plan did dead wood and prune several older trees. I will also assess some trees that may need to be recabled. As these cables have pulled out old cracks that have healed are breaking apart again or have broken off the trees or split the trees in half.

With the exception one new tree across from Orchard C all of our new trees did great in 2014. This tree got caught by the wind and needed to be tied to keep it straight and upright. The Paw Paw trees and Jubbe trees are doing great.

## Orchard plan for 2017

In the spring of 2016 I planted 2 small PawPaw trees giving us a total of 6 PawPaws. We lost one of the old Apple trees that was between Orchard C and Orchard F. It had animal damage around the roots, rot around the base and had been partly blown over. To make up for this I planted a large size Cortland Apple tree to take its place. I also planted 2 other large size Apple trees between Orchard B and D. I have been working on reestablishing these 2 rows. In total I planted 8 Apple trees, 2 of which were replacements for trees that died in the winter of 2015/2016. For the first time ever we spent a very long time pruning up the old Apple trees. This was a very long process as they had not been pruned in around 30 years. We were able to fully prune all of the trees (except the Pear trees) in the circle around Jennings Cottage/ the Farm House/ the Cow Barn. An old tree that is behind Orchard B was also pruned and cabled to hold its 2 leaders together.

During the summer of 2016 one of the old Apple trees near the Jennings Cottage died. Other than being one of the original old trees I do not know exactly what caused it to die, possibly the fact that we had a dry summer. Another original tree on the edge of the Orchard, near Orchard D also died. This tree had been declining for years had lost most of its branches and limbs so it finally succumbed to its old age. A mid-sized Apple tree in the Secret Garden also died. In addition we lost 2 young trees that were planted in the spring of 2016. All of these trees will be removed and replaced in the spring of 2017. The 2016 season was a tough year for Apple trees and was also a very bad crop year with only several trees on the entire campus bearing any fruit and those that did bear fruit bore only a small amount.

This winter we were able to prune all of the old trees in the circle between Orchard B and C and Orchard D, E and F. There is an original tree I hope to cable this summer as well as 2 original trees that I will be placing wooden supports under as the trees have become quite unbalanced as they have lost main leaders and central branches over the years and also suffer from trunk decay. We have ordered 14 Apple trees for planting in the spring of 2017. Generally we order less trees because some are larger sized which cost quite a bit more than the small trees. All of the 2017 trees are young and small or still whips. As mentioned 5 of these are replacements for trees we lost in 2016. The others will go into rows being reestablished and in areas on the edges of the Orchard around the houses and parameters. The trees are all heirloom varieties, 8 of which are coming from nurseries in Vermont, 1 from Maine, 2 from upstate New York and 3 from Oregon. 2 of the trees ordered are varieties that were originated in Vermont. We have decided to try some new methods this year. Previously almost all of the trees we have planted over the last 5 years have been on "full size rootstock", but this year 5 of the trees are on "semi-dwarf rootstock", which is one size smaller. This will allow us to still have relatively large sized, long living trees but they should bear apples sooner than the full sized trees that have been planted. Something else we are going to try is grafting some scion wood from 3 selected original trees onto bare rootstock. We will do 2 grafts per tree. We hope at least 1 of each graft will take. I have never done any grafting but Dane Whitman will assist me with it. Our ultimate goal is that we can eventually "clone" many of the original rare and heirloom apple varieties we are blessed with, and sustain our traditional orchard well into the future.

Melissa, Lex + Nate

Other Tree Work

## Tree Nursery

We have a tree orchard located near the Observatory/ Purple Carrot Farm. We have not utilized it much recently but the idea with this is to buy young trees (whips) for a very low price (\$5 to \$20 each) and allow them to grow in the nursery to a larger size when they will be less vulnerable to damage when planted on the campus. If they reach a transplant diameter caliper of 2 to 4 inches when they are planted on the campus, an equivalent tree purchased directly from a nursery/ grower would be much more costly (\$100 to \$400 each). This allows the college to save a significant amount of money which in turn allows us to buy more trees and hence plant more trees on the campus with our limited budget.

Areas where this has been done:

3 GREY BIRCH clusters planted near the Pond Path hedgeway/ Jennings Meadow  
7 CEDAR trees planted on the Silk Road Property and along the Bike Path going through the property  
1 AMERICAN SYCAMORE on the grass slope near the CAPA Lense Building (memorial tree)  
(We also planted a black gum and an oak tree in this location but they died)

## Other plantings

We have also planted several other trees and shrubs as memorials for people associated with the college.

We have planted trees and shrubs to be privacy barriers or to hide visual unpleasing equipment.

When construction has occurred (CAPA, Student Center, Commons etc.) we have had the land around it be designed and planted through by a landscape architect (Reed Hildebrandt)

We have also transplanted trees and shrubs from areas where they would need to be cut down (roadsides and construction sites) and relocated them to areas they will thrive in.

## Other treatments for overall tree health

We also have had trees air spaded around root crowns, deep root spading, soil injection fertilizers, soil amendments and extra water to trees applied to prepare them for construction shock or transplanting shock or when the growing conditions have warranted.

We also monitor tree structure and have removed damaged and dead limbs as well as had numerous trees cabled.

We remove trees that are hazardous including ones near the roadsides and buildings. We also do storm damage clean up. Much of the wood is reused as mainly firewood and some is used for saw logs and cut into lumber for use on campus.