

TOWN OF WEAVERVILLE
Tree Board Meeting
Wednesday January 8, 2025, 6:00 p.m.
Agenda

	Pg	
1. Call to Order		Chairman Kantner
2. Adoption of Agenda	1	Chairman Kantner
3. Adopt 2025 Meeting Schedule	2	Chairman Kantner
4. Approval of Minutes- December 4, 2024.....	4	Chairman Kantner
5. Tree Conservation Proposed Regulations	7	Planning Director Eller
6. Continued CODE Chapter 32, Species List trees and vegetation	15	Chairman Kantner
7. RFQ Tree Inventory presentation/review	28	Member Jeff Colavecchia
8. Adjournment		

**TOWN OF WEAVERVILLE
Tree Board AGENDA ITEM**

MEETING DATE: January 8, 2025
SUBJECT: Tree Board Meeting Schedule for 2025
PRESENTER: Town Clerk
ATTACHMENTS: Boards and Council Meeting Schedule

DESCRIPTION/SUMMARY OF REQUEST:

A meeting schedule of all the Boards and Committees including Town Council upcoming calendar meetings for 2025.

Adopt and approve the 2025 meeting schedule for the Tree Board.

TOWN of WEAVERVILLE

2025 Council and Boards Meeting Schedule Master

Meeting Type	recurring day	Time	January	February	March	April	May	June
Town Council Workshop	3rd Tuesday	6:00 PM	1/21/25	2/18/25	3/18/25	4/15/25	*5/13/2025	6/17/25
Town Council Budget Workshops		6:00 PM			#1- 3/18	#2- 4/15	#3- 5/13	#4 6/3/2025
Town Council Meetings	4th Monday	6:00 PM	1/27/25	2/24/25	3/24/25	4/28/25	*5/19/25	6/23/25
Planning Board	1st Tuesday	6:00 PM	1/7/25	2/4/25	3/4/25	4/1/25	5/6/25	6/3/25
Board of Adjustment	2nd Monday	6:00 PM	1/13/25	2/10/25	3/10/25	4/14/25	5/12/25	6/9/25
ABC Board	1st Wed. Quarterly	10:00 AM			3/5/25			6/4/25
Tree Board	1st Wed.	6:00 PM	*1/8/2025	2/5/25	3/5/25	4/2/25	5/7/25	6/4/25
Meeting Type	recurring day	Time	July	August	September	October	November	December
Town Council Workshop	3rd Tuesday	6:00 PM	7/15/25	8/19/25	9/16/25	10/21/25	11/18/25	*12/9/2025
Town Council Meetings	4th Monday	6:00 PM	7/28/25	8/25/25	9/22/25	10/27/25	11/24/25	*12/15/2025
Planning Board	1st Tuesday	6:00 PM	7/1/25	8/5/25	9/2/25	10/7/25	*11/6/2025	12/2/25
Board of Adjustment	2nd Monday	6:00 PM	7/14/25	8/11/25	9/8/25	10/13/25	11/10/25	12/8/25
ABC Board	1st Wed. Quarterly	10:00 AM			9/3/25			12/3/25
Tree Board	1st Wed.	6:00 PM	7/2/25	8/6/25	9/3/25	10/1/25	11/5/25	12/3/25
Town Council Workshops are generally held the 3rd Tues. of month at 6:00 p.m.								
Town Council Regular Meetings are generally held the 4th Mon. of month at 6:00 p.m.								
Planning Board Meetings are generally held the 1st Tues. of month at 6:00 p.m.								
Board of Adjustment Meetings are generally held the 2nd Mon. of month at 6:00 p.m.								
ABC Board on a quarterly basis beginning March- 1st Wed. at 10:00 a.m.								
Tree Board Meetings are generally held on the 1st Wed. of the month at 6:00 p.m.								
* Adjusted date due to holiday or other conflict or Special Called meeting								
Election Day- Tues. November 4, 2025								



Tree Board - Dec 04 2024 Minutes

Wednesday, December 4, 2024 at 6:00 PM

Town Council Chambers, Town Hall

The Tree Board held a regular meeting on Wednesday, December 4, 2024 at 6:00 p.m. in Town Council Chambers, 30 S. Main Street, Weaverville, N.C.

1. Call to Order

Present: Chairman Russ Kantner, Pauline Griffith, Inger Stallmann Jorgensen, Jeff Colavecchia, Caroline Lord, Gary Harmon, and Greg Sanfilippo.

Absent: Caleb Hudson

Staff Present: Tamara Mercer, Town Clerk

2. Adopt or Amend Agenda

Without objection, Chairman Kantner moved to adopt the agenda.

Carried unanimously.

3. Approval of Minutes

Without objection Ms. Stallmann Jorgensen moved to approve and adopt the meeting minutes of November 6, 2024.

Carried unanimously.

4. Code Chapter 32, Species List- trees and vegetation

- 4.1 General discussion began wherein Ms. Griffith questioned why perennials were not included in the preferred species list as there are invasive perennials. Further discussion regarding vines such as winter

creeper and other invasive species and grasses sold at garden centers were noted.

In response to Mr. Harmon's question regarding not allowing invasive species to be planted, Ms. Mercer stated that as far as code enforcement, fines, or penalties, these were not defined in the code, and as such would need to be addressed by the Attorney's Office and Planning Department for code enforcement. The purview of the Tree Board as a recommending body, is to revise the species list with a favorable recommendation presented to Town Council. It is upon the Town Council to consider the adoption of an updated species list.

Also noted by Ms. Griffith was the need for a comprehensive species list addressing soil types, sub straights, dampness, shade, loams, slopes and native bird friendly plants versus non-native types.

Mr. Harmon noted the Red Oak were adversely impacted by the Helene storm and due to climate change. Grant opportunities maybe found at www.retreet.org and United Way, stated Ms. Griffith.

After further deliberations, Ms. Griffith volunteered to research the species list categories for: vines, small, medium and large shrubs, and ferns. Ms. Stallmann Jorgensen volunteered to work on the grasses, sedges, and ground cover species list. Mr. Harmon volunteered to concentrate on the trees categories for small to medium and medium to large trees.

Recommendations to be discussed at the January 8, 2025, Tree Board meeting.

Mr. Harmon pointed out his notes in the excel spreadsheet for the changes of species names, website links notations, and possible removal of non-native species on the list.

5. Prioritize section of Town to conduct Tree Inventory

- 5.1 Chairman Kantner reviewed the importance of conducting the tree inventory especially in the aftermath of Hurricane Helene's destruction of the tree canopy. Discussion ensued regarding the Main Street Nature Park, which is contiguous to the Town Hall facility, invasive plants, and public education, and the pollinator garden in the Nature Park which is maintained by the Garden Club.

Ms. Stallmann commented that Lake Louise Park should have more shade trees to enhance the summer environment creating a more positive impact.

Chairman Kantner polled the board members as to their priority focus and there was general consensus to begin at Lake Louise Lakeshore Drive with the Phase I location from the waterwheel to the Outdoor Recreation courts and Phase II inventory would be the Town's property from Lake Louise to the open space past the Public Works facility on Quarry Road.

Ms. Lord also suggested that the inventory surrounding Lake Louise would include tree plaque identifiers. An emphasis on conducting the tree inventory includes identifying heritage trees.

Mr. Colavecchia volunteered to draft an RFQ (request for quote) for contracting for a tree inventory, the deliverables to include methodology specs, and GIS mapping locations. The tree survey within the defined area should include size, species, location, and overall health and condition of the Town's trees.

6. Other Business- Board member appointment re-visit

Ms. Mercer reviewed the timeline for a possible Tree Board appointments at the upcoming Town Council's January meeting in 2025.

Chairman Kantner noted that February 24 - 28 is native species week, and this information will be dispersed in order to educate the public through the Town's social media posts. Upcoming seminars will also be posted in the social media accounts for December which address the topics of conservancy and forest recovery in the wake of Hurricane Helene, notably a December 18th seminar by EcoForesters.

7. Adjournment

- 7.1 There being no further business, Chairman Kantner adjourned the meeting at 7:20 p.m.

Tamara Mercer, Town Clerk

TOWN OF WEAVERVILLE
TREE BOARD AGENDA ITEM

Date of Meeting: Wednesday, January 8, 2025
Subject: Study of Tree Conservation Regulations
Presenter: Planning Director
Attachments: Staff Report, Sec. 20-2309 Conservation Subdivision Standards,
Report on Undeveloped Parcels

Description:

The current goals of the Comprehensive Land Use Plan (CLUP), last updated in November 2023, call for the consideration of tree conservation regulations. The goal of considering the tree conservation regulation was also given number 2 (medium) priority within the CLUP giving staff the direction to accomplish or address the stated goal within 24 months.

Continuing on the previous month's conversation, additional information is being provided related to recently enacted conservation subdivision standards and large undeveloped or underutilized parcels within municipal borders.

Action Requested:

None.

Previously prepared for the Planning Board in order to provide a recommendation to Town Council on an action item within the Comprehensive Land Use Plan.

TOWN OF WEAVERVILLE
PLANNING BOARD AGENDA ITEM

Date of Meeting: Tuesday, January 7, 2025
Subject: Study of Tree Conservation Regulations
Presenter: Planning Director
Attachments: Staff Report, Sec. 20-2309 Conservation Subdivision Standards,
Report on Undeveloped Parcels

Description:

The current goals of the Comprehensive Land Use Plan (CLUP), last updated in November 2023, call for the consideration of tree conservation regulations. The goal of considering the tree conservation regulation was also given number 2 (medium) priority within the CLUP giving staff the direction to accomplish or address the stated goal within 24 months.

Continuing on the previous month's conversation, additional information is being provided related to recently enacted conservation subdivision standards and large undeveloped or underutilized parcels within municipal borders.

Action Requested:

Staff is seeking a conversation with the Board so an ordinance amendment may be drafted for review at a future meeting.

Sources: Town of Weaverville Code of Ordinances; Comprehensive Land Use Plan

Comprehensive Land Use Plan Stated Goal and Background Information

The current goals of the Comprehensive Land Use Plan (CLUP), last updated in November 2023, call for the study and consideration of tree conservation regulations. The goal of considering tree conservation regulations was also given number 2 (medium) priority within the CLUP giving staff the direction to accomplish or address the stated goal within 24 months.

Exiting Conditions – Landscaping Regulations, Conservation Subdivision, and Vegetation

Current town ordinance requires development of a certain type or scope to comply with landscape regulations. These regulations include the submittal of a landscape plan, landscaping requirements that require at least 5% of the subject property to be landscaped, street tree requirements, and landscaping requirements for off street parking and loading areas. These landscape regulations do provide a credit for existing trees of a certain size to be preserved instead of planting new required trees so there exists a build in incentive if it is chosen by the property owner.

Not included for spatial considerations, the landscaping regulations may be found at the following link: https://library.municode.com/nc/weaverville/codes/code_of_ordinances?nodeId=PTIICOOR_CH20PLDE_PTIIIZORE_ARTIVLARE

These landscape regulations are not applicable to land used for the following purposes.

- Single-family residences
- Duplex residences
- Properties located within the C-1 central business district

In January 2024 the town implemented conservation subdivision standards which were incorporated into the subdivision ordinance. These standards now require that all subdivisions of 25 lots or more be comprised of at least 25% of conservation area and set the standards for how this open space may be used. These stands, in part, require that this open space may be used for the conservation of natural resources; and/or agriculture, horticulture, or silviculture.

The town also has a vegetation ordinance which is overseen by a combination of municipal staff and the Tree Board. The primary focus of the vegetation ordinance is on trees and vegetation within public street rights-of-way, town parks, and town owned property. These regulations are not applicable to private property. The newly reestablished Tree Board meets on a semi-monthly basis to discuss public tree care. A Tree Board is a requirement of the Arbor Day Foundation which administers the Tree City USA program the town has applied for and received for many years now.

Town of Weaverville, North Carolina

Staff Report: Parking Standards

Prepared August 2024

Sources: Town of Weaverville Code of Ordinances; Comprehensive Land Use Plan

Not included for spatial considerations, the landscaping regulations may be found at the following link: https://library.municode.com/nc/weaverville/ordinances/code_of_ordinances?nodeId=1291170

Other Jurisdictions

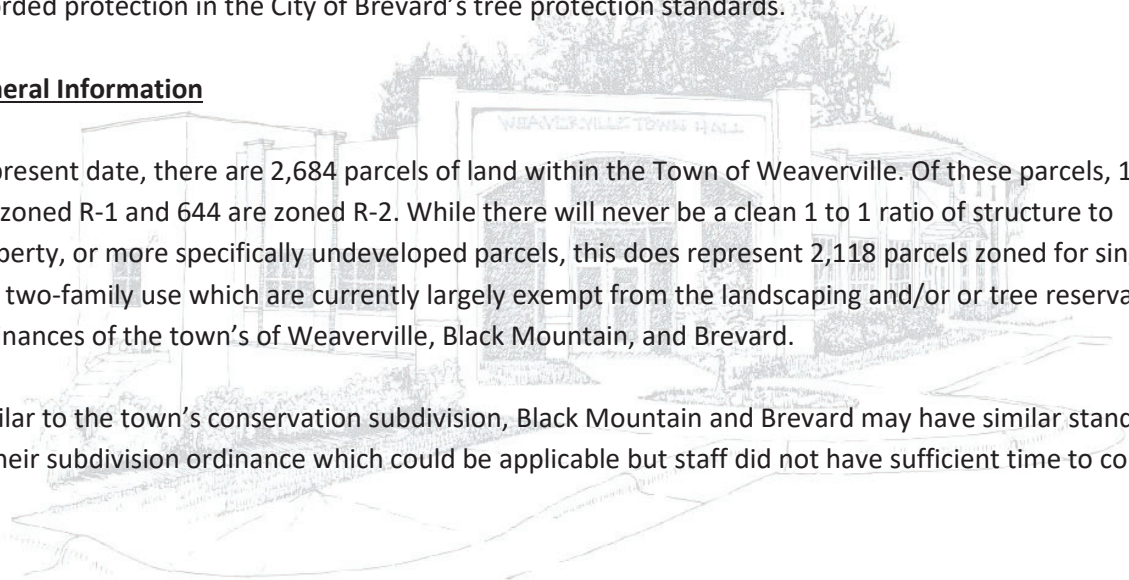
Similar to the town's regulations, The Town of Black Mountain does not apply their landscape regulations to single- and two-family residential uses and provide an exemption to properties located in their central business district. They also allow variances from their landscaping requirements based upon subjective standards which are heard by the Board of Adjustment.

The Town of Brevard also exempts properties developed for single family and duplex uses. Where Brevard and Weaverville differ is that Brevard has a Main Street National Historic District, which is administered by Transylvania County Planning and Development. Trees within this historic district are afforded protection in the City of Brevard's tree protection standards.

General Information

At present date, there are 2,684 parcels of land within the Town of Weaverville. Of these parcels, 1,474 are zoned R-1 and 644 are zoned R-2. While there will never be a clean 1 to 1 ratio of structure to property, or more specifically undeveloped parcels, this does represent 2,118 parcels zoned for single- and two-family use which are currently largely exempt from the landscaping and/or tree reservation ordinances of the town's of Weaverville, Black Mountain, and Brevard.

Similar to the town's conservation subdivision, Black Mountain and Brevard may have similar standards in their subdivision ordinance which could be applicable but staff did not have sufficient time to confirm.



Sec. 20-2309. Conservation subdivision standards.

The following additional standards shall apply to all subdivisions proposing 25 lots or more:

- (a) Open space shall:
 - (1) Comprise a minimum of 25 percent of the project area. Floodplain areas are allowed to be calculated for both density and open space requirements.
 - (2) Be composed of (in order of which lands should be designated as open space first): primary conservation area, secondary conservation area, and any remaining lands necessary.
 - (3) Be designated so that a minimum of 50 percent of the proposed open space is contiguous and, where possible, adjoins open space or other protected areas (including protected forests or wildlife areas) outside the project area.
 - (4) Be accessible by safe and convenient pedestrian access from all adjoining lots (except in the case of farmland or other resource areas vulnerable to trampling damage or human disturbance).
 - (5) Be used as follows:
 - i. Conservation of natural resources, archaeological resources or historical resources;
 - ii. Agriculture, horticulture or silviculture, provided all applicable best management practices are used to minimize environmental impacts;
 - iii. Passive recreation
 - iv. Active recreation provided impervious surfaces are limited to a maximum of 12 percent of the total open space area;
 - v. Nonstructural stormwater management practices;
 - vi. Easements for drainage, access, and utility lines; and
 - vii. Water, septic and sewer systems.
- (b) Open space ownership. The applicant must identify current and future owners of open space responsible for maintaining the area and/or facilities. The responsibility for maintaining the open space and its facilities shall be borne by the owner. If a homeowners' association is the owner:
 - (1) Membership in the association shall be mandatory and automatic for all homeowners in the subdivision and their successors; and
 - (2) The association shall have lien authority to ensure the collection of dues from all members.
- (c) Open space management. The applicant shall submit an open space management plan which includes:
 - (1) A statement allocating maintenance responsibilities and establishing guidelines for the upkeep of open space and its facilities.
 - (2) Cost estimates for maintenance, operation and insurance needs for the open space.
 - (3) A means by which funds will be obtained for all management expenses.
 - (4) A provision allowing the subdivision administrator to approve plan change; and
 - (5) Criteria for plan enforcement.
- (d) Legal instrument for permanent protection. Open space shall be protected in perpetuity by a binding legal document recorded with the deed. The document shall be one of the following:

-
- (1) Permanent conservation easement in favor of either:
 - (i) A land trust or similar conservation oriented non-profit organization with legal authority to accept such easements. The organization shall be bona fide and in perpetual existence and the conveyance instruments shall contain an appropriate provision for retransfer in the event the organization becomes unable to carry out its functions; or
 - (ii) A governmental entity with an interest in pursuing goals consistent with the intentions of this section.
 - (2) Permanent restrictive covenant for conservation purposes.
 - (3) Equivalent legal tool providing permanent protection, subject to approval by the Town Attorney. The instrument shall include all restrictions contained in Section 20-2309 conservation subdivision standards and any further restrictions the applicant chooses to place on the use of the open space.
 - (e) Open space density bonus. Base density is determined by the zoning district in which the subdivision is located. Conservation subdivisions proposing more than the minimum required open space may be eligible for increased densities. The following table outlines the criteria for density bonuses. Lands under conservation easement shall not be counted when determining density bonuses.

Open Space Density Bonuses:

Percent Open Space (%)	25-30	31-40	41-50	>50
Percent Housing Density Increases (%)	N/A	10	15	20

- (f) Structure Placement. Structures should be placed as closely to internal roads as permitted. Structures may be:
 - (1) Located in the side yard setback of other structures within the development required by the zoning district; and
 - (2) Placed as closely together as permitted by the North Carolina State Building Code.

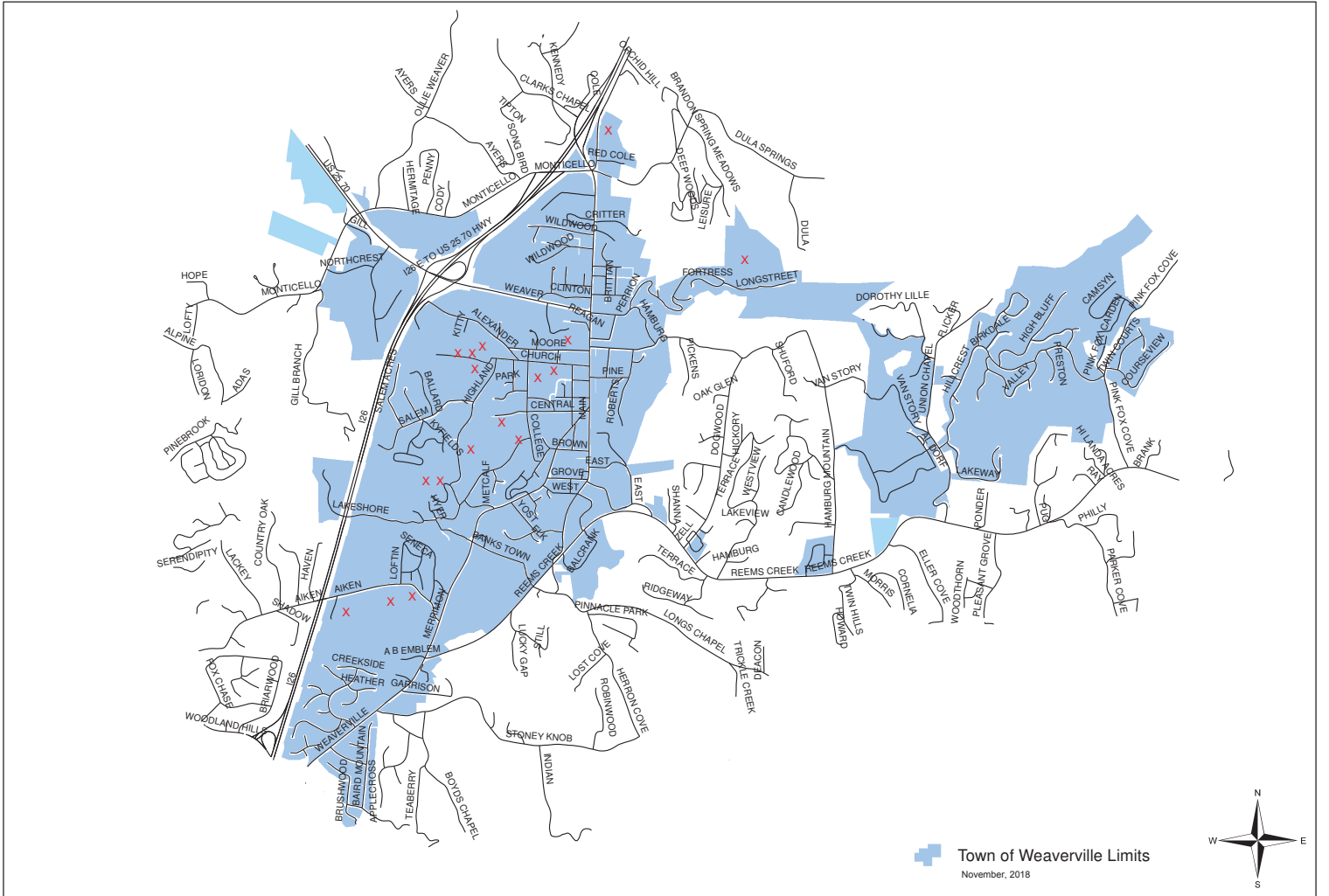
(Ord. of 1-22-2024(1), § 8)



Undeveloped or Underutilized Parcels of Size within Municipal Borders				
Address	PIN	Zoning District	Acres	Units
105 Church	9742-08-0900	R-1	3.55	15
11 Lakeshore	9742-16-0551	R-2	5.51	32
123 Highland	9732-95-2862	R-1	12.22	53
210 Aiken	9732-83-8176; 9732-83-6223	R-3	5.96	48
300 Aiken	9732-82-3831	R-3	12.66	101
41 N. Buncombe School	9743-33-5799	R-3	3.47	28
68 Highland	9742-06-4501	R-1	7.11	31
93 Church	9742-08-6733	R-1	2.93	13
96 Church	9742-98-9331	R-1	4.87	21
99 Church	9742-08-3833	R-1	3	13
Unaddressed Central	9742-06-9911	R-1	6.5	28
Unaddressed Church	9742-28-1340; 9742-27-2925	R-1	2.56	11
Unaddressed College	9742-17-9929	R-1	2.1	9
Unaddressed Highland	9732-96-8026	R-1	5.07	22
Unaddressed Moore	9742-28-5986	R-1	2.29	10
Unaddressed Perrion	9743-61-3054	R-1	33.32	145
Unaddressed Hickory	9732-72-5148	R-3	33.75	270
			Total Acres:	146.87
			Total Units:	850

Listed units are a theoretical maximum based solely upon the minimum lot area of the zoning district and the acreage present on the subject parcel. Other variables such as minimum lot width, minimum street frontage, setbacks, existing easements, road construction or topography have not been accounted for. Hence the need for preliminary plat engineering. For instance, 108 Church Street recently before the Board carried a theoretical maximum of 12 lots but was only able to achieve 5. 50% of the units listed probably represents a more accurate assessment of units that may translate to the ground.

Properties previously subject to some form of development approval have not been included.



**TOWN OF WEAVERVILLE
TREE BOARD AGENDA ITEM**

MEETING DATE: January 8, 2025
SUBJECT: Tree Board Chapter 32 Species List
PRESENTER: Chairman Kantner
ATTACHMENTS: **reference** excel spreadsheet, due to data base size and format, it will not be attached here

DESCRIPTION: Tree Board to conduct review of species list

Continued from Dec. 4th meeting, the species plant list revision.

Weaverville approved plants list from Chapter 32, vegetation has been assigned to various Tree Board members for individual review. Their recommendations to be brought before the Board for further deliberations.

On 12/4/2024 the species list was tabbed to include the trees according to size, as well as the plant list format. Board members seek to cull this list to exclude/include some plantings no longer relevant to our region, and seek additional input from arborists, foresters, the general public, and landscapers in the aftermath of our region hit by Hurricane Helene as a great loss of the tree canopy has occurred.

Botanical Name	Common Name	Expected Height
Small Shrubs (up to approximately 4' tall)		
<i>Ceanothus americanus</i>	New Jersey Tea	3
<i>Diervilla lonicera</i>	Northern Bush-honeysuckle	3
<i>Fothergilla gardenii</i>	Dwarf Witchalder	4
<i>Hypericum frondosum</i>	Cedarglade St. Johnswort	3
<i>Hypericum prolificum</i>	Shrubby St. Johnswort	4
<i>Xanthorhiza simplicissima</i>	Yellowroot	2
Medium Shrubs (approximately 5-10' tall)		
<i>Aronia arbutifolia</i>	Red Chokeberry	8
<i>Aronia melanocarpa</i>	Black Chokeberry	5
<i>Callicarpa americana</i>	American Beautyberry	6
<i>Calycanthus floridus</i>	Sweetshrub	9
<i>Corylus americana</i>	Hazelwood	10
<i>Cornus amomum</i>	Silky Dogwood	7
<i>Euonymus americanus</i>	Hearts-a-Bustin'	8
<i>Fothergilla latifolia</i> (<i>F. major</i>)	Mountain Witchalder	6
<i>Hydrangea arborescens</i>	Wild Hydrangea	6
<i>Hypericum densiflorum</i>	Bushy St. Johnswort	6
<i>Itea virginica</i>	Virginia Sweetspire	10
<i>Kalmia latifolia</i>	Mountain Laurel	6
<i>Lindera benzoin</i>	Spicebush	10
<i>Photinia melanocarpa</i>	Black Chokeberry	8
<i>Photinia pyrifolia</i>	Red Chokeberry	5
<i>Physocarpus opulifolius</i>	Ninebark	10
<i>Rhododendron calendulaceum</i>	Flame Azalea	10
<i>Rhododendron minus</i> (<i>R. carolinianum</i>)	Carolina Rhododendron	6
<i>Rhododendron catawbiense</i>	Catawba Rhododendron	8
<i>Rhododendron cumberlandense</i>	Cumberland Azalea	8
<i>Rhododendron periclymenoides</i>	Pinxterbloom	8
<i>Rhus copallinum</i> (<i>R. copallina</i>)	Shining Sumac	8
<i>Rosa carolina</i>	Carolina Rose	5
<i>Rosa palustris</i>	Swamp Rose	8

[Ceanothus americanus \(Mountain Snowbell, New Jersey Tea\) | North Carolina Extension Gardener Plant Toolbox](#)

[Diervilla lonicera \(Northern Bush-honeysuckle\) - FSUS \(unc.edu\)](#)

[Fothergilla gardenii \(Coastal Witch-alder, Dwarf Fothergilla\) | North Carolina Extension Gardener Plant Toolbox](#)

[Hypericum frondosum \(Cedarglade St. Johnswort, St. John's wort\) | North Carolina Extension Gardener Plant Toolbox](#)

[Hypericum prolificum \(Common St. John's Wort, Shrubby St. John's Wort, St. John's Wort\) | North Carolina Extension Gardener Plant Toolbox](#)

[Xanthorhiza simplicissima \(Brook-feather, Parsley-leaved Yellowroot, Scurvyroot\) | North Carolina Extension Gardener Plant Toolbox](#)

[Aronia arbutifolia \(Chokeberry, Red Chokeberry\) | North Carolina Extension Gardener Plant Toolbox](#)

[Aronia melanocarpa \(Black Berried Aronia, Black Chokeberry\) | North Carolina Extension Gardener Plant Toolbox](#)

[Callicarpa americana \(American Beautyberry, American Mulberry, Beautyberry\) | North Carolina Extension Gardener Plant Toolbox](#)

[Calycanthus floridus \(Bubby Bush, Carolina Allspice, Common Sweetshrub, Spicebush\) | North Carolina Extension Gardener Plant Toolbox](#)

[Corylus americana \(American Filbert, American Hazelnut, Hazelnut\) | North Carolina Extension Gardener Plant Toolbox](#)

[Cornus amomum \(Kinnikinnik, Pale Dogwood, Red Willow, Silky Cornel, Silky Dogwood\) | North Carolina Extension Gardener Plant Toolbox](#)

[Euonymus americanus \(Hearts A'busting, Strawberry Bush\) | North Carolina Extension Gardener Plant Toolbox](#)

[Fothergilla latifolia \(Large Fothergilla, Large Witch-alder\) | North Carolina Extension Gardener Plant Toolbox](#)

[Hydrangea arborescens \(Hills of Snow, Hortensia, Hydrangea, Sevenbark, Severed\) | North Carolina Extension Gardener Plant Toolbox](#)

[Hypericum densiflorum \(Bushy St. John's Wort, Dense St. John's Wort\) | North Carolina Extension Gardener Plant Toolbox](#)

[Itea virginica \(Itea, Virginia Sweetspire, Virginia Sweet Spire, Virginia Willow\) | North Carolina Extension Gardener Plant Toolbox](#)

[Kalmia latifolia \(Calico Bush, Ivy Bush, Laurel, Mountain Ivy, Mountain Laurel, Swamp Laurel\) | North Carolina Extension Gardener Plant Toolbox](#)

[Lindera benzoin \(Northern Spicebush, Spicebush, Spice Bush\) | North Carolina Extension Gardener Plant Toolbox](#)

Now *Aronia melanocarpa* - see above

Now *Aronia arbutifolia* - see above

[Physocarpus opulifolius \(Atlantic Ninebark, Common Ninebark, Eastern Ninebark\) | North Carolina Extension Gardener Plant Toolbox](#)

[Rhododendron calendulaceum \(Flame Azalea\) | North Carolina Extension Gardener Plant Toolbox](#)

[Rhododendron minus \(Carolina Rhododendron, Dwarf Rhododendron, Minus, Mountain Rhododendron\) | North Carolina Extension Gardener Plant Toolbox](#)

[Rhododendron catawbiense \(Catawba Rhododendron, Mountain Rosebay, Purple Mountain Rose\) | North Carolina Extension Gardener Plant Toolbox](#)

[Rhododendron cumberlandense \(Cumberland Azalea\) | North Carolina Extension Gardener Plant Toolbox](#)

[Rhododendron periclymenoides \(Pinxterbloom Azalea, Pinxter Flower, Wild Azalea\) | North Carolina Extension Gardener Plant Toolbox](#)

[Rhus copallinum \(Dwarf Sumac, Flameleaf Sumac, Shining Sumac, Winged Sumac\) | North Carolina Extension Gardener Plant Toolbox](#)

[Rosa carolina \(Carolina Rose, Pasture Rose\) | North Carolina Extension Gardener Plant Toolbox](#)

[Rosa palustris \(Swamp Rose\) | North Carolina Extension Gardener Plant Toolbox](#)

<i>Sambucus canadensis</i>	Elderberry	10	Sambucus canadensis (American Elder, American Elderberry, Common Elderberry)
<i>Spiraea virginiana</i>	Virginia Meadowsweet	8	Spiraea virginiana (Virginia Spiraea) - FSUS (unc.edu)
<i>Viburnum acerifolium</i>	Mapleleaf Viburnum	6	Viburnum acerifolium (Maple Leaf Viburnum, Mapleleaf Viburnum) North Carolina Extension Gardener Plant Toolbox
<i>Viburnum dentatum</i>	Southern Arrowwood	10	Viburnum dentatum (Arrow-wood Viburnum, Arrowwood Viburnum, Southern Wild Raisin)
<i>Viburnum nudum</i>	Possumhaw Viburnum	8	Viburnum nudum (Possumhaw Viburnum, Smooth Witherod, Southern Wild Raisin)
Tall Shrubs (over approximately 10' tall)			
<i>Alnus serrulata</i>	Hazel Alder	12	Alnus serrulata (Alder, Hazel Alder, Smooth Alder, Tag Alder) North Carolina Extension Gardener Plant Toolbox
<i>Castanea pumila</i>	Allegheny Chinquapin	14	Castanea pumila (Allegheny Chinquapin, American Chinquapin, Chinquapin, Co.
<i>Cephalanthus occidentalis</i>	Buttonbush	15	Cephalanthus occidentalis (Buttonbush, Button Bush) North Carolina Extension Gardener Plant Toolbox
<i>Clethra acuminata</i>	Cinnamon Clethra	12	Clethra acuminata (Cinnamonbark Clethra, Cinnamon Clethra, Mountain Pepper)
<i>Hamamelis virginiana</i>	Common Witchhazel	15	Hamamelis virginiana (Common Witchhazel, Common Witch Hazel, Southern W.
<i>Ilex decidua</i>	Possumhaw	30	Ilex decidua (Possumhaw, Possum-haw, Possum Haw Holly, Possumhaw Holly,
<i>Ilex montana</i>	Mountain Winterberry	30	Ilex montana (Mountain Holly, Mountain Winterberry) North Carolina Extension Gardener Plant Toolbox
<i>Lindera benzoin</i>	Spicewood	12	Lindera benzoin (Northern Spicebush, Spicebush, Spice Bush) North Carolina Extension Gardener Plant Toolbox
<i>Prunus virginiana</i>	Chokecherry	20	Prunus virginiana (Chokecherry, Choke Cherry, Common Chokecherry) North Carolina Extension Gardener Plant Toolbox
<i>Rhododendron arborescens</i>	Sweet Azalea	18	Rhododendron arborescens (Smooth Azalea, Sweet Azalea) North Carolina Extension Gardener Plant Toolbox
<i>Rhododendron maximum</i>	Rosebay Rhododendron	20	Rhododendron maximum (Great Rhododendron, Max, Rosebay Rhododendron)
<i>Rhododendron vaseyi</i>	Pinkshell Azalea	12	Rhododendron vaseyi (Pinkshell Azalea) North Carolina Extension Gardener Plant Toolbox
<i>Rhododendron viscosum</i>	Swamp Azalea	15	Rhododendron viscosum (Clammy Azalea, Swamp Azalea, Swamp Honeysuckle)
<i>Rhus glabra</i>	Smooth Sumac	12	Rhus glabra (Smooth Sumac) North Carolina Extension Gardener Plant Toolbox
<i>Rhus typhina</i>	Staghorn Sumac	20	Rhus typhina (Staghorn Sumac) North Carolina Extension Gardener Plant Toolbox
<i>Vaccinium corymbosum</i>	Highbush Blueberry	12	Vaccinium corymbosum (Highbush Blueberry, Smooth Highbush Blueberry) North Carolina Extension Gardener Plant Toolbox
<i>Viburnum cassinoides</i>	Witherod	15	Viburnum cassinoides (Blue Haw, Northern Wild Raisin, Swamp Haw, Wild Raisin)
<i>Viburnum prunifolium</i>	Blackhaw Viburnum	16	Viburnum prunifolium (Blackhaw, Black Haw, Blackhaw Viburnum, Nannyberry)
<i>Viburnum rufidulum</i>	Rusty Blackhaw Viburnum	15	Viburnum rufidulum (Rusty Blackhaw, Rusty Black Haw, Rusty Blackhaw Viburnum)
Small to Medium Trees (to approximately 50 ft. tall)			
<i>Amelanchier arborea</i>	Downy Serviceberry	25	Amelanchier arborea (Alabama Serviceberry, Downy Serviceberry, Juneberries,
<i>Amelanchier laevis</i>	Allegheny Serviceberry	25	Amelanchier laevis (Allegheny Serviceberry, Coastal Plain Serviceberry, June Berry)
<i>Asimina triloba</i>	Pawpaw	25	Asimina triloba (Common Pawpaw, Pawpaw) North Carolina Extension Gardener Plant Toolbox
<i>Carpinus caroliniana</i>	American Hornbeam	30	Carpinus caroliniana (American Hornbeam, Blue Beech, Hornbeam, Ironwood,
<i>Cercis canadensis</i>	Redbud	25	Cercis canadensis (American Judas Tree, American Redbud, Eastern Redbud, Redbud)
<i>Chionanthus virginicus</i>	Fringetree	25	Chionanthus virginicus (American Fringetree, American Fringe Tree, Fringetree,
<i>Cladrastis kentukea</i>	Yellowwood	50	Cladrastis kentukea (American yellowwood, Yellowwood) North Carolina Extension Gardener Plant Toolbox

Cornus alternifolia	Alternateleaf Dogwood	25	Cornus alternifolia (Alternate-leaf Dogwood, Alternateleaf Dogwood, Pagoda Dogwood) North Carolina Extension Gardener Plant Toolbox
Cornus florida	Flowering Dogwood	25	Cornus florida (Flowering Dogwood) North Carolina Extension Gardener Plant Toolbox
Cornus kousa x florida*	Chinese x Flowering Dogwood hybrid	25	
Crataegus phaenopyrum	Washington Hawthorn	25	Crataegus phaenopyrum (Hawthorn, Thornapple, Washington Hawthorn) North Carolina Extension Gardener Plant Toolbox
Frangula caroliniana	Carolina Buckthorn	35	Frangula caroliniana (Carolina Buckthorn) North Carolina Extension Gardener Plant Toolbox
Halesia carolina (<i>H. tetraptera</i>)	Mountain Silverbell	40	Halesia carolina (Carolina Silverbell, Common Silverbell, Little Silverbell, Mountain Silverbell) North Carolina Extension Gardener Plant Toolbox
Ilex opaca	American Holly	30	Ilex opaca (American Holly, Holly, Winterberry) North Carolina Extension Gardener Plant Toolbox
Juniperus virginiana	Eastern Red Cedar	50	Juniperus virginiana (Eastern Redcedar) North Carolina Extension Gardener Plant Toolbox
Malus angustifolia	Southern Crabapple	25	Malus angustifolia (Narrowleaf Crab, Narrowleaf Crabapple, Southern Crabapple) North Carolina Extension Gardener Plant Toolbox
Malus coronaria	Sweet Crabapple	20	Malus coronaria (American Crabapple, Garland Crab, Sweet Crabapple, Wild Crabapple) North Carolina Extension Gardener Plant Toolbox
Magnolia acuminata	Mountain magnolia	40	Magnolia acuminata (Cucumber Magnolia, Cucumber Tree, Cucumber-tree, Cucumber Magnolia) North Carolina Extension Gardener Plant Toolbox
Magnolia tripetala	Cucumber Tree	30	Magnolia tripetala (Umbrella Magnolia, Umbrella-tree) North Carolina Extension Gardener Plant Toolbox
Ostrya virginiana	Eastern Hophornbeam	40	Ostrya virginiana (American Hop-hornbeam, Eastern Hop Hornbeam, Hop Hornbeam) North Carolina Extension Gardener Plant Toolbox
Oxydendrum arboreum	Sourwood	30	Oxydendrum arboreum (Lily of the Valley Tree, Sorrel Tree, Sourwood) North Carolina Extension Gardener Plant Toolbox
Prunus americana	American Plum	25	Prunus americana (American Plum, American Wild Plum, Wild Plum) North Carolina Extension Gardener Plant Toolbox
Ptelea trifoliata	Hoptree	20	Ptelea trifoliata (Hoptree, Hop-tree, Stinking Ash, Wafer-ash) North Carolina Extension Gardener Plant Toolbox
Robinia viscosa	Clammy Locust	40	Robinia viscosa (Clammy Locust) - FSUS (unc.edu)
Salix sericea	Silky Willow	12	Salix sericea (Silky Willow) North Carolina Extension Gardener Plant Toolbox
Sassafras albidum	Sassafras	40	Sassafras albidum (Cinnamon Wood, Common Sassafras, Mitten Tree, Sassafras) North Carolina Extension Gardener Plant Toolbox
Stewartia ovata	Mountain Stewartia	20	Stewartia ovata (Mountain Camellia, Mountain Stewartia, Summer Dogwood) North Carolina Extension Gardener Plant Toolbox
Symplocos tinctoria	Horse Sugar	30	Symplocos tinctoria (Horsesugar, Horse-sugar, Sweetleaf) North Carolina Extension Gardener Plant Toolbox
Medium to Large Trees (over approximately 50 ft. tall)			
Acer negundo	Boxelder	60	Acer negundo (Ash-Leaf Maple, Ashleaf maple, Boxelder, Box elder) North Carolina Extension Gardener Plant Toolbox
Acer rubrum	Red Maple	70	Acer rubrum (Carolina Maple, Red Maple, Scarlet Maple, Soft Maple, Swamp Maple) North Carolina Extension Gardener Plant Toolbox
Acer saccharinum	Silver Maple	80	Acer saccharinum (River Maple, Silverleaf Maple, Silver Maple, Swamp Maple) North Carolina Extension Gardener Plant Toolbox
Acer saccharum	Sugar Maple	80	Acer saccharum (Hard Maple, Leucoderme, Northern Sugar Maple, Sugar Maple) North Carolina Extension Gardener Plant Toolbox
Aesculus flava	Yellow Buckeye	70	Aesculus flava (Big Buckeye, Sweet Buckeye, Yellow Buckeye) North Carolina Extension Gardener Plant Toolbox
Betula alleghaniensis	Yellow Birch	75	Betula alleghaniensis (Golden Birch, Swamp Birch, Yellow Birch) North Carolina Extension Gardener Plant Toolbox
Betula nigra	River Birch	70	Betula nigra (Black Birch, Red Birch, River Birch, Water Birch) North Carolina Extension Gardener Plant Toolbox
Carya cordiformis	Bitternut Hickory	75	Carya cordiformis (Bitter Hickory, Bitternut, Bitternut Hickory, Bitter Pecan, Pig-nut) North Carolina Extension Gardener Plant Toolbox
Carya glabra	Pignut Hickory	80	Carya glabra (Broom Hickory, Coast Pignut Hickory, Pignut, Pignut Hickory, Red Pignut) North Carolina Extension Gardener Plant Toolbox
Carya ovata	Shagbark Hickory	75	Carya ovata (Common Shagbark Hickory, Shagbark Hickory) North Carolina Extension Gardener Plant Toolbox
Carya pallida	Sand Hickory	90	Carya pallida (Pale Hickory, Sand Hickory) North Carolina Extension Gardener Plant Toolbox
Carya tomentosa	Mockernut Hickory	85	Carya tomentosa (Big-bud Hickory, Mockernut Hickory, Squarenut, White Heart Hickory) North Carolina Extension Gardener Plant Toolbox

Castanea dentata**	American Chestnut	115 (potential)
Celtis occidentalis	Hackberry	60
Diospyros virginiana	Persimmon	55
Fagus grandifolia	American Beech	80
Fraxinus americana	White Ash	80
Fraxinus pennsylvanica	Green Ash	80
Juglans nigra	Black Walnut	100
Liquidambar styraciflua	Sweetgum	75
Liriodendron tulipifera	Tuliptree	100
Magnolia fraseri	Umbrella Tree	60
Morus rubra	Red Mulberry	60
Nyssa sylvatica	Black Gum	60
Pinus echinata	Shortleaf Pine	100
Pinus strobus	Eastern White Pine	80
Pinus virginiana	Virginia Pine	70
Platanus occidentalis	Sycamore	100
Prunus serotina	Black Cherry	80
Quercus alba	White Oak	90
Quercus coccinea	Scarlet Oak	70
Quercus falcata	Southern Red Oak	75
Quercus imbricaria	Shingle Oak	80
Quercus montana	Chestnut Oak	75
Quercus muehlenbergii	Chinkapin Oak	70
Quercus rubra	Red Oak	75
Quercus stellata	Post Oak	80
Quercus velutina	Black Oak	90
Salix nigra	Black Willow	80
Tilia americana	American Linden or Basswood	80
Tsuga canadensis***	Eastern Hemlock	90
Tsuga caroliniana***	Carolina Hemlock	65
Ulmus alata	Winged Elm	80

[Castanea dentata \(American Chestnut, Chestnut\) | North Carolina Extension Gardener Plant Toolbox](#)

[Celtis occidentalis \(American Hackberry, Beaverwood, Common Hackberry, False Hackberry\) | North Carolina Extension Gardener Plant Toolbox](#)

[Diospyros virginiana \(American Persimmon, Common Persimmon, Date Plum, Florida Persimmon\) | North Carolina Extension Gardener Plant Toolbox](#)

[Fagus grandifolia \(American Beech, Beech, Beechnut Tree, Red Beech, Ridge Beech\) | North Carolina Extension Gardener Plant Toolbox](#)

[Fraxinus americana \(American Ash, White Ash\) | North Carolina Extension Gardener Plant Toolbox](#)

[Fraxinus pennsylvanica \(American Ash, Canadian Ash, Green Ash, Red Ash, Water Ash\) | North Carolina Extension Gardener Plant Toolbox](#)

[Juglans nigra \(Black Walnut\) | North Carolina Extension Gardener Plant Toolbox](#)

[Liquidambar styraciflua \(American Sweet Gum, Redgum, Red Sweet Gum, Sweetgum\) | North Carolina Extension Gardener Plant Toolbox](#)

[Liriodendron tulipifera \(Canary Whitehood, Canoewood, Lyre Tree, North American Tuliptree\) | North Carolina Extension Gardener Plant Toolbox](#)

[Magnolia fraseri \(Earleaf Cucumber Tree, Earleaf Magnolia, Earleaf Umbrella Tree\) | North Carolina Extension Gardener Plant Toolbox](#)

[Morus rubra \(Common Mulberry, Mulberry, Red Mulberry\) | North Carolina Extension Gardener Plant Toolbox](#)

[Nyssa sylvatica \(Blackgum, Black Gum, Black Tupelo, Common Tupelo Tree, Cottonwood\) | North Carolina Extension Gardener Plant Toolbox](#)

[Pinus echinata \(Old-Field Pine, Rosemary Pine, Short-Leaf Pine, Shortleaf Pine, Virginia Shortleaf Pine\) | North Carolina Extension Gardener Plant Toolbox](#)

[Pinus strobus \(Eastern White Pine, North American White Pine, Northern White Pine\) | North Carolina Extension Gardener Plant Toolbox](#)

[Pinus virginiana \(Jersey Pine, Possum Pine, Scrub Pine, Spruce Pine, Virginia Pine\) | North Carolina Extension Gardener Plant Toolbox](#)

[Platanus occidentalis \(American Plane Tree, American Sycamore, Buttonball Tree\) | North Carolina Extension Gardener Plant Toolbox](#)

[Prunus serotina \(Black Cherry, Wild Cherry, Wild Rum Cherry\) | North Carolina Extension Gardener Plant Toolbox](#)

[Quercus alba \(American White Oak, Eastern White Oak, Forked-leaf White Oak\) | North Carolina Extension Gardener Plant Toolbox](#)

[Quercus coccinea \(Black oak, Scarlet oak\) | North Carolina Extension Gardener Plant Toolbox](#)

[Quercus falcata \(Oaks, Southern Red Oak, Swamp Red Oak, Swamp Spanish Oak\) | North Carolina Extension Gardener Plant Toolbox](#)

[Quercus imbricaria \(Laurel, Oaks, Shingle Oak\) | North Carolina Extension Gardener Plant Toolbox](#)

[Quercus montana \(Basket Oak, Chestnut Oak, Oaks, Rock Chestnut Oak, Rock Chestnut\) | North Carolina Extension Gardener Plant Toolbox](#)

[Quercus muehlenbergii \(Chinkapin Oak, Chinquapin Oak, Oaks\) | North Carolina Extension Gardener Plant Toolbox](#)

[Quercus rubra \(American Red Oak, Eastern Red Oak, Mountain Red Oak, Northern Red Oak\) | North Carolina Extension Gardener Plant Toolbox](#)

[Quercus stellata \(Oaks, Post Oak\) | North Carolina Extension Gardener Plant Toolbox](#)

[Quercus velutina \(Black Oak, Eastern Black Oak, Yellow Oak\) | North Carolina Extension Gardener Plant Toolbox](#)

[Salix nigra \(Black Willow\) | North Carolina Extension Gardener Plant Toolbox \(North Carolina\)](#)

[Tilia americana \(American Basswood, American Linden, Basswood, Bee Tree, Carolina Linden\) | North Carolina Extension Gardener Plant Toolbox](#)

[Tsuga canadensis \(Canada hemlock, Canadian Hemlock, Eastern Hemlock, Hemlock\) | North Carolina Extension Gardener Plant Toolbox](#)

[Tsuga caroliniana \(Carolina Hemlock\) | North Carolina Extension Gardener Plant Toolbox](#)

[Ulmus alata \(Cork Elm, Small Leaf Elm, Wahoo, Winged Elm, Witch Elm\) | North Carolina Extension Gardener Plant Toolbox](#)

Vines	
<i>Bignonia capreolata</i>	Cross Vine
<i>Campsis radicans</i>	Trumpet Flower
<i>Clematis virginiana</i>	Clematis (Virgin's Bower)
<i>Lonicera sempervirens</i>	Coral Honeysuckle
<i>Parthenocissus quinquefolia</i>	Virginia Creeper
<i>Wisteria frutescens</i>	American Wisteria
Ground Covers	
<i>Antennaria plantaginifolia</i>	Pussytoes
<i>Asarum canadense</i>	Wild Ginger
<i>Carex</i> sp.	Sedges (see below)
<i>Chrysogonum virginianum</i> var. <i>australe</i>	Green-and-Gold
<i>Iris cristata</i>	Dwarf Crested Iris
<i>Meehania cordata</i>	Creeping Mint
<i>Pachysandra procumbens</i>	Allegheny Spurge
<i>Phlox stolonifera</i>	Creeping Phlox
<i>Tiarella cordifolia</i>	Heartleaf Foamflower
<i>Viola</i> sp.	Violets
Grasses & Sedges	
<i>Andropogon gerardii</i>	Big Bluestem
<i>Andropogon virginicus</i>	Broomsedge
<i>Arundinaria gigantea</i>	Giant Cane
<i>Carex flaccosperma</i>	Blue Wood Sedge
<i>Carex platyphylla</i>	Blue Satin Sedge
<i>Carex plantaginea</i>	Seersucker Sedge
<i>Carex stricta</i>	Tussock Sedge
<i>Carex pensylvanica</i>	Oak Sedge
<i>Carex appalachica</i>	Appalachian Sedge
<i>Chasmanthium latifolium</i>	River Oats
<i>Danthonia compressa</i>	Oat Grass

[Bignonia capreolata \(Crossvine, Cross-Vine, Trumpet Flower\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Campsis radicans \(Cow-itch, Cow Vine, Devil's Shoestring, Foxglove Vine, Hellvine\)](#)
[Clematis virginiana \(Devil's Darning Needles, Old Man's Beard, Virgin's-Bower, '\)](#)
[Lonicera sempervirens \(Coral Honeysuckle, Honeysuckle, Trumpet Honeysuckle\)](#)
[Parthenocissus quinquefolia \(Virginia Creeper, Virginia-creeper, Woodbine\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Wisteria frutescens \(American Wisteria, Kentucky Wisteria, Texas Wisteria\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Antennaria plantaginifolia \(Everlasting, Ladies' Tabacco, Mouse Ear, Plantain-Leaf\)](#)
[Asarum canadense \(Canadian Wild Ginger, Common Wild Ginger, Wild Ginger\)](#)

[Carex | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Chrysogonum virginianum \(Green and Gold\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Iris cristata \(Crested Iris, Dwarf Crested Iris, Iris\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Meehania cordata \(Meehania\) - FSUS \(unc.edu\)](#)

[Pachysandra procumbens \(Allegheny Spurge, Mountain Pachysandra\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Phlox stolonifera \(Creeping Phlox, Star Rock Phlox\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Tiarella cordifolia \(False Miterwort, Foamflower\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Andropogon gerardii \(Big Bluestem, Bluestem, Broomsedge, Turkey Foot\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Andropogon virginicus \(Beard Grass, Bluestem, Broomsedge, Broomstraw, Old-World Broomgrass\)](#)
[Arundinaria gigantea \(Canebreak Bamboo, Giant Cane, River Cane\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Carex flaccosperma \(Blue Wood Sedge, Meadow Sedge, Sedges, Thinfruit Sedge\)](#)
[Carex platyphylla \(Broad Leaf Sedge, Sedges, Silver Sedge\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Carex plantaginea \(Broad-leafed Sedge, Plantain-leafed Sedge, Sedges, Seersucker Sedge\)](#)
[Carex stricta \(Tussock Sedge\) - FSUS \(unc.edu\)](#)

[Carex pensylvanica \(Oak Sedge, Pennsylvania Sedge, Plantainleaf Sedge, Rush, '\)](#)

[Carex appalachica \(Appalachian Sedge\) - FSUS \(unc.edu\)](#)

[Chasmanthium latifolium \(Indian Wood Oats, Inland Sea Oats, Northern Sea Oats\)](#)
[Danthonia compressa \(Mountain Oat-grass\) - FSUS \(unc.edu\)](#)

<i>Avenella flexuosa</i> (<i>Deschampsia flexuosa</i>)	Wavy Hair Grass
<i>Elymus hystrix</i>	Bottle Brush
<i>Muhlenbergia capillaris</i>	Muhly Grass
<i>Panicum virgatum</i>	Switch Grass
<i>Erianthus giganteum</i> (<i>Saccharum giganteum</i>)	Giant Plume Grass
<i>Schizachyrium scoparium</i>	Little Bluestem
<i>Sorghastrum nutans</i>	Indian Grass
<i>Tridens flavus</i>	Purple Top
<i>Tripsacum dactyloides</i>	Eastern Gamma Grass
Ferns	
<i>Adiantum pedatum</i>	Maidenhair Fern
<i>Athyrium filix-femina</i>	Southern Lady Fern
<i>Dryopteris marginalis</i>	Marginal Wood Fern
<i>Onoclea struthiopteris</i> (<i>Matteuccia struthiopteris</i>)	Ostrich Fern
<i>Osmundastrum cinnamomeum</i> (<i>Osmunda cinnamomea</i>)	Cinnamon Fern
<i>Osmunda regalis</i>	Royal Fern
<i>Polystichum acrostichoides</i>	Christmas Fern
<i>Thelypteris noveboracensis</i>	New York Fern

[Avenella flexuosa \(Common Hairgrass\) - FSUS \(unc.edu\)](#)

[Elymus hystrix \(Bottle Brush Grass, Bottlebrush Grass\) | North Carolina Extension](#)
[Muhlenbergia capillaris \(Gulf Muhly, Hairgrass, Muhly Grass, Mule Grass, Pink Muhly\)](#)
[Panicum virgatum \(Panic Grass, Panic Grasses, Switchgrass, Switch Grass, Tall Panic Grass\)](#)

[Erianthus giganteus \(Giant Plumegrass, Giant Plume Grass, Sugarcane, Sugarcane\)](#)
[Schizachyrium scoparium \(Little Bluestem, Prairie Beardgrass, Prairie Beardgrass\)](#)
[Sorghastrum nutans \(Indiangrass, Yellow Indiangrass\) | North Carolina Extension](#)
<https://plants.ces.ncsu.edu/plants/tridens-flavus/>
[Tripsacum dactyloides \(Eastern Gamagrass, Fakahatchee grass, Gama Grass\) | NC Extension](#)

[Adiantum pedatum \(Common Maidenhair, Northern Maidenhair, Northern Maidenhair\)](#)
[Athyrium filix-femina \(Common Lady Fern, Lady Fern\) | North Carolina Extension](#)
[Dryopteris marginalis \(Evergreen Woodfern, Leather Wood Fern, Marginal Shag Fern\)](#)

[Onoclea struthiopteris \(Fiddlehead Fern, Ostrich-Feather Fern, Ostrich Fern, Shag Fern\)](#)
[Osmundastrum cinnamomeum \(Cinnamon Fern\) | North Carolina Extension Garden](#)
[Osmunda regalis \(Flowering Fern, Royal Fern\) | North Carolina Extension Garden](#)
[Polystichum acrostichoides \(Christmas Dagger, Christmas Dagger Fern, Christmas Fern\)](#)
[Thelypteris noveboracensis \(New York Fern\) | North Carolina Extension Garden](#)

* Hybrid is resistant to dogwood anthracnose that can infect *Comus florida*.

** Experimental hybrids with a high percentage American chestnut genes now available.

*** Requires treatment to protect from hemlock wooly adelgid.

[Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[olina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[ohn's Wort\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[ot, Shrub Yellowroot, Yellowroot, Yellow wort\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[rdener Plant Toolbox \(ncsu.edu\)](#)

[Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[, French Mulberry, Sour-bush\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[ebush, Sweet Betsy, Sweet Bubby Bush, Sweetshrub, Sweet Shrub\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[rolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[ogwood, Swamp Dogwood\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[tension Gardener Plant Toolbox \(ncsu.edu\)](#)

Note name change to *F. latifolia*

[r Bark, Smooth Hydrangea, Wild Hydrangea\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[heepkill, Spoonwood\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

Now *Aronia mealanocarpa* - see above

Now *Aronia arbutifolia* - see above

[rk, Ninebark, Nine Bark\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[ener Plant Toolbox \(ncsu.edu\)](#)

Note name change to *R. minus*

[ple Rhododendron, Rose Bay\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[on Gardener Plant Toolbox \(ncsu.edu\)](#)

[alea\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

Note misspelling on original list

[er Plant Toolbox \(ncsu.edu\)](#)

[ox\) \(ncsu.edu\)](#)

[erry, Elderberry\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[rolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Arrowwood\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[aisin, Wild Raisin\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[mmon Chinquapin, Dwarf Chestnut\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[on Gardener Plant Toolbox \(ncsu.edu\)](#)

[rbush, Mountain Sweet-pepperbush\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Witch Hazel, Witch Hazel, Witch-Hazel\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Swamp Holly\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[ion Gardener Plant Toolbox \(ncsu.edu\)](#)

[Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[, White Laurel\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Plant Toolbox \(ncsu.edu\)](#)

[\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[x \(ncsu.edu\)](#)

Should we allow southern Highbush? V.

Formosum

[orth Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[in, Withe-rod, Witherod Viburnum\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[, Plum Leaf Viburnum\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[um, Rusty Nannyberry, Southern Black Haw, Southern Blackhaw Viburnum\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Serviceberry, Service-tree, Shadblow, Shadbush\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[rry, Smooth-leaved serviceberry, Smooth Shadbush\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[ner Plant Toolbox \(ncsu.edu\)](#)

[Musclewood, Muscle Wood, Water Beech\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[dbud\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[, Fringe Tree, Grancy Greybeard, Old Man's Beard, Sweetheart Tree, White Fringetree\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[ension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Dogwood\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[t Toolbox \(ncsu.edu\)](#)

Should we allow hybrids?

[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Plant Toolbox \(ncsu.edu\)](#)

Note name change to H. carolina
[Gardener Plant Toolbox \(ncsu.edu\)](#)

[Plant Toolbox \(ncsu.edu\)](#)

[le, Wild Crab, Wild Crabapple\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[abapple\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[cumbertree Magnolia\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Gardener Plant Toolbox \(ncsu.edu\)](#)

[beam, Hop Horn Beam, Ironwood, Leverwood, Wooly Hop hornbeam\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[\(ncsu.edu\)](#)

[s, White Sassafras\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[| North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[ension Gardener Plant Toolbox \(ncsu.edu\)](#)

[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Maple\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Water Maple, White Maple\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[e\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Hickory, Red Hickory, Swamp Hickory, White Hickory\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Hickory, Small Fruited Hickory, Smoothbark Hickory, Swamp Hickory, Sweet Pignut Hickory, Switch Hickory\) | North Carolina Extension Gardener Plant To](#)

[\(ension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Plant Toolbox \(ncsu.edu\)](#)

[t Hickory, White Hickory\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Gardener Plant Toolbox \(ncsu.edu\)](#)
[Green Elm, Hackberry, Nettle Tree, Northern Hackberry](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Eastern Persimmon, Jove's Fruit, Persimmon, Possum Apples, Possumwood, Simmon, Winter Plum](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Black Birch, White Beech](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Gardener Plant Toolbox \(ncsu.edu\)](#)
[Paper Ash](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Boxelder](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Blackgum, Sweet Gum, Sweetgum Tree](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[American Whitewood, Tulip Poplar, Tulip Tree, Western Poplar, Whitewood, Yellow Poplar, Yellow-Poplar](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Cucumber Tree, Fraser Magnolia, Mountain Magnolia](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Black Cotton Gum, Nyssa, Pepperidge, Sour Gum, Tupelo](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Loblolly Shortleaf Yellow Pine](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Shortleaf Yellow Pine, Soft Pine, White Pine](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Pitch Pine](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Black Gum, Buttonwood, Eastern Sycamore, Sycamore](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[White Oak, Northern White Oak, Oaks, Quebec Oak, White Oak](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Black Oak, Water Oak](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Black Oak](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Black Oak Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Northern Red Oak, Oaks, Red Oak](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Basswood, Lime Tree, Linden, White Basswood, White Wood](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Black Spruce, Spruce Pine](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

Note species epitaph misspelled in
appendix
Should we add U. americana hybrids?

[Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[ne, Trumpet Creeper, Trumpet Vine\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[Woodbine\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[e, Woodbine\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[aved Everlasting, Plantain-Leaved Pussytoes, Plantain Pussytoes, Pussytoes\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[| North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

Should we remove this and only reference individual species?
Why specify a variety?

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[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Gardener Plant Toolbox \(ncsu.edu\)](#)

[Gardener Plant Toolbox \(ncsu.edu\)](#)

Many are non-native.

[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[-field Broomstraw\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[e\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)
[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[ker Sedge\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Sedge, Sedges, Seersucker Sedge\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[ts, River Oats, Wild Oats, Wood-oat\) | North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

note name change to *Avenella flexuosa*

[on Gardener Plant Toolbox \(ncsu.edu\)](#)

[Fair Grass, Pink Muhly, Pink Muhly Grass, Purple Muhly](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Manic Grass, Thatchgrass, Wild Redtop](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

Note name change to *E. giganteum*

[Grass](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[on Gardener Plant Toolbox \(ncsu.edu\)](#)

[North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[Hidenhair Fern](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[on Gardener Plant Toolbox \(ncsu.edu\)](#)

[Wild Fern, Marginal Woodfern, Marginal Wood Fern](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

Note name change to *O. struthiopteris*

Note name change to *Osmundastrum cinnamomeum*

[ner Plant Toolbox \(ncsu.edu\)](#)

[as Fern](#) | [North Carolina Extension Gardener Plant Toolbox \(ncsu.edu\)](#)

[ner Plant Toolbox \(ncsu.edu\)](#)

Add *Sitobolium punctilobulum* (hay-scented fern)?

**TOWN OF WEAVERVILLE
Tree Board AGENDA ITEM**

MEETING DATE: January 8, 2025
SUBJECT: Tree Inventory RFQ
PRESENTER: Jeff Colavecchia & Town Clerk
ATTACHMENTS: Tree Inventory/ Survey RFQ

DESCRIPTION/SUMMARY OF REQUEST:

The Town of Town of Weaverville is seeking qualified vendors to conduct a comprehensive inventory of public trees, develop an urban forest management plan, and provide recommendations for tree conservation, risk management, and long-term sustainability. The project will support data-driven decision-making to enhance urban tree health, mitigate risks, and improve ecological services.

Adopt and approve the Request for Quote services for tree inventory, first phase to begin at the Lake Louise portion of the Town Park and rights-of-way.

Request for Quotation (RFQ)

Tree Inventory and Conservation Services for Town of Weaverville

Issue Date: [Insert Date]

Due Date for Quotations: [Insert Date and Time]

1. Purpose

The Town of Town of Weaverville is seeking qualified vendors to conduct a comprehensive inventory of public trees, develop an urban forest management plan, and provide recommendations for tree conservation, risk management, and long-term sustainability.

The project will support data-driven decision-making to enhance urban tree health, mitigate risks, and improve ecological services.

2. Scope of Work

The selected vendor will:

A. Tree Inventory

- Identify and document all trees on public lands, including streets, parks, and public facilities.
- Record key data attributes, including:
 - Species and botanical name.
 - Diameter at Breast Height (DBH) and height.
 - Tree age classification (young, mature, over-mature).
 - Condition assessment (health, structural integrity, canopy condition).
 - Presence of pests or disease.
 - GPS coordinates for GIS mapping.

B. Conservation Assessment

- Evaluate the ecological value of significant trees (landmark or heritage trees with ≥ 24 " DBH).
- Identify areas for potential planting, emphasizing species diversity and climate resilience.
- Utilize tools like iTree Eco for ecosystem service calculations, such as carbon sequestration, air quality improvement, and stormwater management.

C. Risk Assessment and Management

- Conduct ISA Basic Tree Risk Assessments.
- Prioritize high-risk trees needing immediate attention (pruning, removal, or treatment).
- Recommend invasive species management strategies.

D. Public Engagement and Training

- Offer training sessions for municipal staff or community volunteers in data collection and tree care (optional).
- Present findings in a public forum, including educational outreach materials for residents.

3. Deliverables

1. **Digital Inventory Dataset:**
 - GIS-compatible data (shapefiles, geodatabase) and Excel/CSV files.
 - Integration with the town's existing mapping systems.
2. **Final Report:**
 - Summary of tree data, including maps and detailed conservation priorities.
 - Risk assessment analysis and maintenance recommendations.
 - Ecosystem services valuation report using tools like iTree Eco.
3. **Public Presentation:**
 - Visual presentation for town officials and residents highlighting key findings, risks, and recommendations.
4. **Management Plan (optional)**
 - Urban forest management plan detailing short- and long-term strategies for tree health, diversity, and canopy coverage goals.

4. Vendor Qualifications

Vendors must demonstrate the following:

- ISA Certified Arborist(s) and Tree Risk Assessment Qualification (TRAQ).
- Experience in municipal tree inventories and conservation planning.
- Proficiency in GIS and data analysis tools.
- Knowledge of local ecosystems and urban forestry best practices.

5. Submission Requirements

Vendors must submit the following by [Insert Date and Time]:

- Cover letter with company background and relevant experience.
- Resumes of key personnel involved in the project.
- Project methodology, including conservation strategies and risk assessment techniques.
 - Itemized cost proposal, including any optional services (e.g., public outreach or additional analysis).
 - References from at least three municipalities or similar projects.

6. Evaluation Criteria

Submissions will be evaluated based on:

- Experience and expertise in urban forestry and conservation (30%).
- Proposed methodology and innovation (25%).
- Cost and overall value (20%).
- References and past performance (15%).
- Commitment to public engagement and education (10%).

7. Submission Instructions

Submit sealed or electronic proposals to:

Tamara Mercer
 Town Clerk
 Town of Weaverville

30 S. Main Street, Weaverville, NC 28787
P.O. Box 338 Weaverville, NC 28787
828-
tmercerc@weavervillenc.org

8. Questions and Clarifications

Direct any questions to [Contact Name] at [Email Address] by [Insert Question Deadline].
All Responses subject to public records law.

9. Terms and Conditions

- The Town of Town of Weaverville reserves the right to reject any or all submissions.
- All deliverables will become the property of the Town.
- The selected vendor must adhere to all applicable local, state, and federal regulations and provide proof of liability insurance.

Authorized by:

[Name]-
[Title]-
[Date]-