

ZONING

57 Attachment 3

Town of Monroe

Listing of Landmark, Native, Protected and Specimen Trees  
[Added 4-7-2025 by L.L. No. 1-2025]

As required by the Town of Monroe Tree Preservation Local Law, Article XX, the Monroe Conservation Commission (MCC) is tasked with developing a listing of Landmark, Native, Protected and Specimen trees.

This following listings were compiled by the MCC and will be maintained and updated by the MCC on an as needed basis, and is subject to review and approval by the Town of Monroe Planning Board or the Monroe Town Board.

Landmark Tree

A Landmark Tree is defined in the Monroe Town Law Chapter 57-3, as follows:

*A particular tree determined by the Town Board upon the recommendation of the Town of Monroe Conservation Commission to be significant to the community on the basis of age, specimen quality, historical significance or other unique characteristic. A landmark tree may be an outstanding example of a tree that has some historical connection with the community's past. Such trees shall be designated "landmark trees" by the Town Board by resolution.*

No designated Landmark Tree shall be removed or threatened in any way detrimental to its viability or prominence without review and approval by the Planning Board by resolution.

Landmark Trees, to the extent to which they may exist in the Town, will require a local inventory (organized by the MCC) yet to be performed, identification/nomination by a Town resident, or identification by the Monroe Historical Society.

*The tree in following table is the only tree in the Town of Monroe currently identified as a Landmark Tree "on basis of age, specimen quality, historical significance" but it has not yet been designated a "Landmark Trees" by the Town Board by resolution.*

Landmark Trees in Orange County, NYS

Number	Species	Location	Significance
LM-001	Copper Beech (European beech cultivar, Fagus sylvatica,)	East side of Sapphire Elementary School building, Harriman Heights Road	?? DBH, Estimated 350 years old. Heritage Tree status. <i>More historical information needed</i>
LM-002			

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Number	Species	Location	Significance
LM-003			
LM-004			

### Native Tree

A Native Tree is defined in the Monroe Town Law Chapter 57-3, as follows:

*A particular tree determined by the Town Board upon the recommendation of the Town of Monroe Conservation Commission as uncultivated flora indigenous to the geographic region of Orange County or such larger region as is otherwise appropriate, which have adapted over time to various environmental and social influences such as soil types and hydrology, microclimates and human influence.*

The attached list of **Orange County NY - Native Trees** is derived from the *New York Flora Atlas* produce by the New York Flora Association (NYFA) (<https://newyork.plantatlas.usf.edu/> > Advance Search). The list shows only the flora listed as "Native" and "Trees" in Orange County in the *New York Flora Atlas*. Not all the trees listed in the attached list exist in the Town of Monroe, but the list is assumed to include all native trees likely to be growing in the Town of Monroe.

### Protected Tree

A Protected Tree is defined in the Monroe Town Law Chapter 57-3, as follows:

*Any living tree species designated by the New York State Department of Environmental Conservation in the "New York Natural Heritage Program: New York Rare Plant Status List" as endangered, threatened, rare, or vulnerable; or any living tree species designated by the Town of Monroe as protected because of its uniqueness or vulnerability as a result of environmental stress. A list of protected tree species, whether on the list designated by the Town Board or on the New York State Natural Heritage Program: New York Rare Plant Status List, will be developed by the Town of Monroe Conservation Commission and appended to this chapter, after approval of the same by the Town Board by resolution.*

The following list was derived from the *2022 Rare Plants Status List* produced by the New York Natural Heritage Program ( [www.nynhp.org](http://www.nynhp.org) ). The list shows only the rare/endangers trees in Orange County in the *Rare Plant Status List*. (They are also identified in the attached list of **Orange County NY - Native Trees**). It is unlikely that all of these rare/endangered/threatened trees exist in the Town of Monroe, but the list is assumed to include all such trees likely to be growing in the Town of Monroe.

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No designated Protected Tree (rare, endangered or threatened) shall be removed or impacted in any way detrimental to its viability or prominence without review and approval by the Planning Board by resolution.

### Protected Trees in Orange County, NYS

Number	Common Name	Scientific Name	Status
R-1	River Birch	Betula nigra.	Rare
R-2	Atlantic White Cedar	Chamaecyparis thyoides	Threatened
R-3	Virginia Pine	Pinus virginiana	Endangered
R-4	Wafer Ash	Ptelea trifoliata var. trifoliata	Endangered
R-5	Jack Pine	Pinus banksiana	Rare

### Specimen Tree

A Specimen Tree is defined in the Monroe Town Law Chapter 57-3, as follows:

*A tree with a trunk 24 inches or more at DBH, or any living tree species designated as a specimen tree by the Town of Monroe Town Board by resolution and upon recommendation of the Monroe Conservation Commission. Specimen trees of less than 24 inches at DBH shall have a particularized characteristic benefiting the public health, welfare or safety.*

No designated Specimen Tree shall be removed or threatened in any way detrimental to its viability or prominence without review and approval by the Planning Board or Monroe Conservation Commission.

Specimen Trees shall be designated by one or more of the following methods:

- Local inventory (organized by the MCC) [yet to be performed/completed](#)
- Identification/nomination by a Town resident
- Identified during site survey for a Tree Plan as required for all proposed construction/development projects
- Identified by MCC site inspection for proposed construction/development projects

Trees listed in the following table are trees located within approximately 20 feet of edge of a roadway, unless otherwise stated. Where trees could be accessed for measurement the DBH is shown. Trees that could not be accessed but by sight were estimated to be 24" DBH or more, the DBH has an asterisk.

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The trees in following table were identified to start this process and to establish the best way to identify and document “specimen trees”.

**Specimen Trees in the Town of Monroe**

Number	Street	Location	Species	DBH
LM-001	Conklin Road	East side front yard 133 Conklin Road	Northern Red Oak (Quercus rubra)	45"
LM-002	Conklin Road	Center front yard 133 Conklin Road	White Oak (Quercus alba)	30"
LM-003	Conklin Road	West side front yard 133 Conklin Road	White Oak (Quercus alba)	28"
LM-004	Conklin Road	East edge of road, 600' south of intersection with Orchard Hill Road	White Oak (Quercus alba)	60" *
LM-005	Conklin Road	North side of road at 133 Conklin Road	Sugar Maple with extensive burl outgrowths (Acer saccharum)?	40"
LM-006	Sapphire Road	North edge of road, 100' west of intersection with Orchard Hill Road	Eastern Cottonwood (Populus deltoides)	60" *

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<b>Orange County NY - Native Trees</b> (Derived from New York Flora Atlas, rev. 1/2/2024, <a href="https://newyork.plantatlas.usf.edu/">https://newyork.plantatlas.usf.edu/</a> )			
<b>Scientific Name</b>	<b>Common Name</b>	<b>Status NYS</b>	<b>Habitat</b> (click cell for full text)
<i>Acer negundo</i> var. <i>negundo</i>	box elder, ash-leaved maple		A weedy tree originally native and rare in south central New York now widespread having spread from cultivation. Floodplain forests, banks of rivers, weedy successional forests, disturbed areas, and urban areas.
<i>Acer nigrum</i>	black maple		Mostly restricted to calcareous or rich soils. Floodplain forests, rich mesic forests, and limestone forests.
<i>Acer pensylvanicum</i>	striped maple		A small understory tree that does well in cool microclimates. Forests with a northern affinity, slopes in ravines, and rocky forests.
<i>Acer rubrum</i> × <i>A. saccharinum</i> = <i>A. ×freemanii</i>	Freeman's maple		This hybrid can be a dominant tree in floodplain and low swamp forests, as well as scattered in various peatlands.
<i>Acer rubrum</i> var. <i>rubrum</i>	common red maple		Occurs in a wide variety of habitats and soil types. Wet swamps to dry forests and young successional habitats this is a very wide spread and common tree.
<i>Acer saccharinum</i>	silver maple		Floodplain forests and banks of larger streams and rivers. This species is also widely cultivated.
<i>Acer saccharum</i>	sugar maple		A widespread and common large tree. It is a little picky about its habitat preferences. In northern or cool habitats it grows with other hardwoods notably beech and yellow birch as well as hemlock. The soils are at least slightly deep or rich. In more southern areas it does well at the toe of the slope in deep rich soils. It also occurs in thin soils over limestone.
<i>Acer spicatum</i>	mountain maple		A small understory tree of northern or cool habitats. Ravine slopes, cool swamps, northern hardwood, and mixed hardwood forests.
<i>Alnus incana</i> ssp. <i>rugosa</i> × <i>A. serrulata</i> = <i>A. ×fallacina</i>	deceptive alder		
<i>Betula alleghaniensis</i>	yellow birch		Cool mesic forests and swamps. A widespread tree in NY it is dominant or co-dominant in some types of northern hardwood forests as well as cool swamps.
<i>Betula cordifolia</i>	mountain paper birch		Cool high elevation coniferous and mixed coniferous-deciduous forests. Sometimes forming almost pure stands after a disturbance event. Occasionally occurring with <i>B. papyrifera</i> but mostly replacing it at higher elevations.
<i>Betula lenta</i>	black birch		A tree of young forests, rocky slopes, and talus slopes in mesic to dry soils. It is most common in warmer parts of NY and is an early successional species in mesic forests.
<i>Betula nigra</i>	river birch	Rare	Riverbanks and low wet areas. Also commonly cultivated. With us primarily in southeastern NY.
<i>Betula papyrifera</i>	paper birch		A tree of thin poor soils, talus and rocky slopes, and edges of forests and woodlands. In mesic forests it is an early successional species starting in forest clearings, after fire, or logging. Most common at higher elevations and in the northern parts of NY. It can co-occur with <i>B. cordifolia</i> but usually drops out at the highest elevations.
<i>Betula populifolia</i>	gray birch		Woodlands, pine barrens, edges of forests, bluffs, successional fields, thickets, disturbed ground, and road sides on thin often rocky poor soils. Responds well to disturbance including fire.
<i>Carya cordiformis</i>	bitternut hickory		Floodplain forests and wet-mesic to mesic hardwood forests often low on slopes. A tree primarily of bottomlands in well-drained to wet soils but also occurs less frequently and in smaller numbers in drier habitats on upper slopes and hilltops.

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<i>Carya glabra</i>	pignut hickory		Rocky summits, woodlands, and dry to mesic forests of a southern affinity. Mostly in dry rocky sites and when abundant perhaps indicating that the soils are calcareous or not very acidic.
<i>Carya ovata</i> var. <i>ovata</i>	shagbark hickory		Of the hickories that occur in New York, <i>Carya ovata</i> grows in the widest range of forested habitats. It occurs with <i>C. glabra</i> in dry to mesic warm forests of a southern affinity, with <i>C. cordiformis</i> in low bottomland forests, as well as in rich mesic forests, dry calcareous forests, and sometimes on hummocks in swamps.
<i>Carya tomentosa</i>	mockernut hickory		Mesic to dry-mesic forests of a southern affinity.
<i>Castanea dentata</i>	American chestnut		Dry to mesic forests often associated with <i>Quercus</i> spp. The introduced chestnut blight kills the trees and mature trees are now rather scattered and rare. Still, stump sprouts and small trees are not uncommon although they soon become infested with the blight.
<i>Chamaecyparis thuyoides</i>	Atlantic white cedar	Threatened	Acidic swamps mostly restricted to the coast but also occurring in a few inland sites. Often forms dense monospecific stands.
<i>Cornus florida</i>	flowering dogwood		Understories of hardwood forests, forest edges, and woodlands in mesic to dry soils. Also in cultivation.
<i>Fagus grandifolia</i>	American beech		Mesic forests. A major component of northern hardwood forests where it is often in association with sugar maples. Beech occurs from sea level in coastal Long Island to high elevation forests in the mountains of northern New York.
<i>Fraxinus americana</i>	white ash		Dry to mesic and occasionally wetter forests and in more open habitats like barrens, woodlands, and rocky summits. Also appearing as an early successional tree in old fields. Commonly produces abundant seedlings in both closed and open sites.
<i>Fraxinus nigra</i>	black ash		Swamps, rich wet forests, and edges of streams.
<i>Fraxinus pennsylvanica</i>	green ash		Margins of streams and rivers, floodplain forests, low wet woods, and occasionally swamps although in larger swamps <i>F. nigra</i> is usually the dominant <i>Fraxinus</i> present.
<i>Juglans cinerea</i>	butternut		In certain parts of its range in New York, it is primarily associated with talus slopes. Elsewhere in New York, it is associated with rich mesic hardwood forests on valley bottoms and lower slopes sometimes on calcareous bedrock and soils. Often it occurs in small patches of only a few trees. Butternut canker is killing this species and it is difficult to find individuals that are not infected.
<i>Juglans nigra</i>	black walnut		Cultivated and apparently native. Native Americans may have been responsible for bringing this tree to parts of New York. Floodplain forests, low and rich mesic hardwood forests, and successional forests. Also, often found in large patches near old home sites. Does best in deep alluvial soils where it can become a dominant tree. It is also somewhat weedy and once established sometimes creates monospecific stands.
<i>Juniperus virginiana</i> var. <i>virginiana</i>	eastern red cedar		Rocky summits, bluffs above ravines and lakes, ledges, alvars, successional fields, pastures, and maritime and coastal sandy areas. Grows best in open sites with thin rocky or sandy dry soils and dies back if other trees shade it out. In parts of New York, it is associated with calcareous bedrock or soils and in general is somewhat of a calciphile.
<i>Larix laricina</i>	tamarack		Bogs, cool northern swamps, rich peatlands, and cool mesic forests at high elevation. Predominately a plant of cool northern wetlands it is local in distribution in the warmer and more southern parts of New York.
<i>Liquidambar styraciflua</i>	sweetgum		Cultivated and native. Native populations are restricted to southeastern New York including Long Island. Swamps, successional forests, and edges of forests.

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<i>Liriodendron tulipifera</i>	tulip tree, tulip poplar, yellow poplar		Mesic to wet-mesic hardwood forests. In all but the most southern parts of New York this tree is often an indicator of deep rich mesic circumneutral soils growing primarily in valley bottoms (excluding the lowest floodplains) and on lower slopes. In the most southern parts of the state it also grows in more acidic drier sites and occurs in a wider array of forested habitats.
<i>Morus rubra</i>	red mulberry		Fairly local and populations are often small. Rich dry to dry-mesic forests often on calcareous bedrock or soils. Not weedy like <i>M. alba</i> .
<i>Nyssa sylvatica</i>	blackgum, sourgum		Swamps, wet depressions, wet woods, and borders of ponds and streams. Also in dry upland sites. Sometimes these upland sites are associated with seasonal springs or seeps. In the upland sites, populations are sometimes very small.
<i>Ostrya virginiana</i>	hop hornbeam, ironwood		An understory small tree it occurs in a variety of forested environments, woodlands, and rocky openings. It does best in thin forests and woodlands in rich dryish thin rocky soils and over calcareous bedrock. In these habitats it can become a dominant understory tree.
<i>Picea glauca</i>	white spruce		Cultivated and occasionally naturalizing as well as native in the northern parts of New York in mesic cool forests. Sometimes in wetter soils.
<i>Picea mariana</i>	black spruce		Bogs, swamps, edges of streams, wet depressions in cool northern forests, and high elevation forests. In the warmer parts of New York it is restricted to bogs and cool swamps.
<i>Picea rubens</i>	red spruce		A component of northern mixed coniferous-hardwood forests with <i>Betula alleghaniensis</i> , <i>Fagus grandifolia</i> , and <i>Acer saccharum</i> . In northern and cool areas it usually grows in thin mesic soils dropping out in the richer deeper soils where hardwoods dominant. Ascends to high elevation sites and also occurs occasionally near or in wetlands especially in the warmer and more southern parts of New York where it is a rare species.
<i>Pinus banksiana</i>	Jack pine	Rare	Primarily occurs in sandstone barrens in Clinton County on thin dry soils over bedrock. Otherwise restricted to northern New York as a native tree.
<i>Pinus resinosa</i>	red pine		Cultivated, planted in large plantations, and native. In central and western New York it occurs on steep south and west facing slopes and bluffs in dry rocky soils. In other parts of New York it occurs primarily on deep sandy soils or in pine barrens.
<i>Pinus rigida</i>	pitch pine		Common in pine barrens on deep sandy soils with a frequent fire regime. Also on dry rocky soils or thin soils over bedrock on hilltops, bluffs, crests, and steep south and west facing slopes.
<i>Pinus strobus</i>	white pine		Occurs in a wide variety of wet to dry habitats including mesic forests, dry rocky forests on slopes, successional fields and shrublands, lake edges, hummocks in swamps, rises in bogs, and elsewhere. Usually needing disturbances or openings to establish and therefore in many forests it is only a small component of the tree canopy. On lake edges and in areas regenerating from clearing or other disturbances it sometimes forms pure stands.
<i>Pinus virginiana</i>	Virginia pine	Endangered	Occurs in dry uplands sterile sandy barrens, old fields
<i>Platanus occidentalis</i>	eastern sycamore		Predominately a tree of riparian habitats including floodplain forests and thickets, edges of streams, and sand and gravel bars in streams. Occasionally isolated trees are found growing on lower to upper slopes away from streams.
<i>Populus balsamifera</i> × <i>P. deltoides</i> = <i>P. ×jackii</i>	balm-of-Gilead		
<i>Populus deltoides</i> ssp. <i>deltoides</i>	eastern cottonwood		Floodplain and low forests, streambanks, gravel and sand bars in streams, ditches, swamps, and occasionally on upper and middle slopes of hardwood mesic forests.

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Populus grandidentata	big-toothed aspen		Successional forests, logged forests, burned forests, forest edges, openings in forests, successional fields, and roadsides.
Populus tremuloides	trembling aspen, quaking aspen		Successional forests, logged forests, burned forests, forest edges, openings in forests, successional fields, and roadsides.
Prunus nigra	Canada plum		
Prunus pensylvanica	pin cherry, fire cherry		Edges of forests, successional forests, logged areas, burned areas, forest openings, rocky summits, rock outcrops, cliffs, ledges, and bluffs.
Ptelea trifoliata var. trifoliata	hoptree, wafer ash	Endangered	Well drained rich soils, forest edges & rocky slopes, disturbed areas
Quercus alba	white oak		Dry to mesic forests. Tolerant of a wide variety of soil types it is lacking in the most xeric woodlands, in cool habitats, and in the richest deepest soils. Some forests were previously selectively logged for this species and perhaps as a result white oak is less frequent than it was formerly.
Quercus alba × Q. montana = Q. xsaullii	Saul's oak		
Quercus bicolor	swamp white oak		Swamps, wet depressions, and thickets. Often in swamps on ridges and hill tops. Always in at least seasonally wet soils this species is often absent from deep alluvial soils where Quercus macrocarpa occurs.
Quercus coccinea	scarlet oak		Dry to dry-mesic forests and woodlands. Predominately on very dry ridges, hilltops, crests, and upper slopes. Perhaps a fire dependent species it can often form dense monospecific stands, and sometimes in the driest situations, the trees appear dwarfed.
Quercus ilicifolia	scrub oak, bear oak		Pine and other barrens, rocky summits, openings in woodlands, and utility rights-of way. Often on upper slopes, crests, and hilltops in dry acidic thin, sandy, or rocky soils.
Quercus montana	chestnut oak		Dry to dry-mesic acidic forests and woodlands. A good indicator of thin dry acidic soils it usually occurs on upper slopes, crests, ridges, and hill tops often with an understory of ericaceous shrubs including Kalmia latifolia, Vaccinium spp, and Gaylussacia baccata.
Quercus muehlenbergii	yellow oak, chinquapin oak		Dry to mesic forests and woodlands on calcareous soils or bedrock including alvars, limestone woodlands and forests, and mesic forests in rich deep soils.
Quercus palustris	pin oak		Cultivated as well as native. It occurs primarily in small acidic swamps and forested depressions.
Quercus prinoides	dwarf chestnut oak		Pine and other barrens, rocky summits, opening in woodlands, and utility rights-of way. Often on upper slopes, crests, and hilltops in dry acidic thin, sandy, or rocky soils. Occurs in very similar habitat to Q. ilicifolia but is less common and populations are often not very abundant.
Quercus rubra	northern red oak		The most widespread oak species in New York. Dry to mesic forests in a variety of soil types. It occurs in the coolest climates of any species of oak in New York as well as in warmer more southern forest types.
Quercus velutina	black oak		Dry to mesic forests. Prefers two main habitats: dry ridges and upper slopes sometimes with Q. coccinea; and deep slightly acidic often sandy mesic soils on mid to lower slopes.
Rhus typhina	staghorn sumac		A pioneer species. Old fields, edges of fields, roadsides, shrubby thickets, open stream banks, and edges of forests.
Salix nigra	black willow		Edges of rivers and streams, wet thickets, marshes, low and floodplain forests, and edges of lakes.

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Sassafras albidum	sassafras		Mesic to dry forests, edges of forests, woodlands, talus slopes, bluffs, sand dunes, dry stream banks, pastures, hedge rows, successional fields, and road banks. Often in sandy or gravelly soils.
Thuja occidentalis	northern white cedar, arbor vitae		Calcareous cliffs and ledges, rocky summits, alvars, fens, and rich swamps. Grows in both xeric and wet, often cool sites. Mostly confined to calcareous soils and bedrock. In northern and cooler parts of New York it become less of a calciphile. In swamps it can form dense impenetrable stands.
Tsuga canadensis	eastern hemlock		A component of mesic cool northern forests throughout New York. In these sites it more often occurs with hardwoods and Pinus strobus than with other conifers. Also commonly on hummocks in swamps where it can sometimes form dense pure stands; often in pure stands, in ravines and on north and east facing lower slopes; and on rocky outcrops and bluffs.
Ulmus americana	American elm		Wet thickets, stream edges, swamps, roadsides, mesic to wet forests, and forest edges. In wet to mesic often nutrient rich soils. Still a rather common tree even after the introduction of Dutch Elm Disease although perhaps not as significant of a component of bottom land and wet-mesic forests and not growing as large as in the past.
Ulmus rubra	slippery elm		Dry to mesic forests, forest edges, openings in forests, rock outcrops, and stream sides generally in calcareous sites.

# Tree Diameter Measurement

New York State Department of Environmental Conservation

Urban and Community Forestry Grant Program Round 15

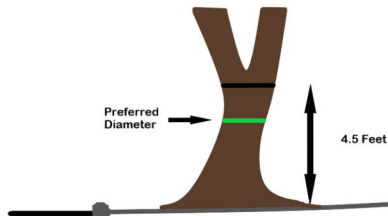
Guidelines for Awardees and Consultants

The purpose of this document is to provide consistency regarding how a tree diameter is measured for Department of Environmental Conservation (DEC) Urban and Community Forestry (UCF) grant projects.

Tree diameter is usually measured at 4.5 feet (ft) above ground level. Measurement at this height is referred to as diameter at breast height or DBH. DBH can be measured with a specially calibrated tape measure called a diameter tape (d-tape) available from most arborist or forestry supply dealers. For a tree with a clear gradually tapering trunk, measuring DBH is straightforward, but there are several circumstances in which questions arise about how to measure DBH.

This guide can be used to solve some of the more common complications when measuring a tree's DBH. Communities can use this guide when developing their Scope of Work for consultants and it will be used by DEC regional staff for grant inspections. We have generally used the simplest and most widely accepted methods recommended in other sources such as the US Forest Service (USFS), International Society of Arboriculture (ISA) and the Federal Emergency Management Administration (FEMA).

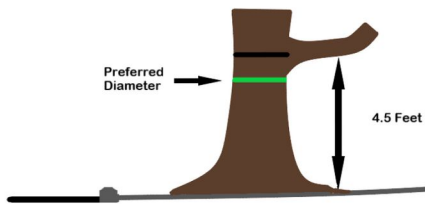
## Abnormal Trunk Taper



**The tree tapers in such a way that the diameter at a point below 4.5 ft is actually smaller than the diameter at 4.5 ft.** Measure the diameter at the smallest point and record the height at which diameter was measured on the data sheet.

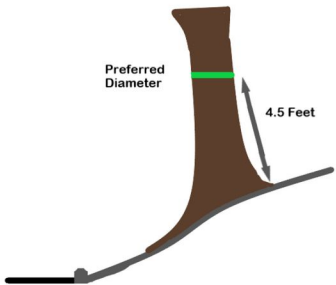
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### Branches and Bumps at DBH



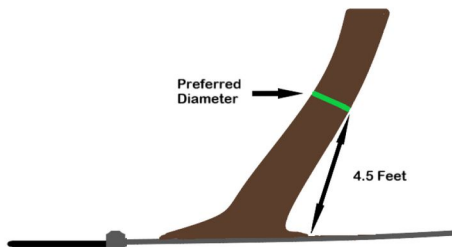
**Tree has branches or bumps which interfere with DBH measurement.** Measure DBH below the branch or bump. The USFS measures DBH immediately above point where bumps or branches cease to affect diameter of the stem. The underlying concept is to measure the diameter that would be closest to the expected DBH if branches or other irregularities were not present. Record the height at which the diameter measured.

### Trees on Slopes



When measuring trees on slopes, measure the diameter 4.5 ft from the ground on the upper side of the slope. This method is commonly used, easier, and less subject to error than other options.

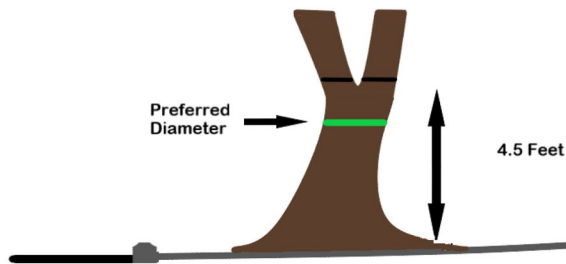
### Trees with Lean



Trees that are leaning should be measured 4.5 ft up the stem in the direction of the lean.

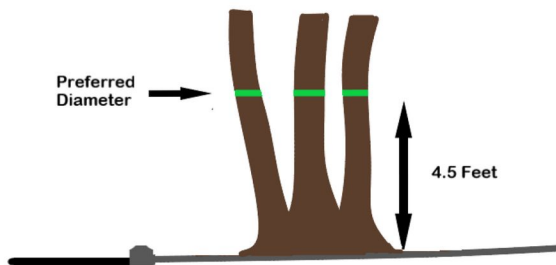
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### Tree forks at or below DBH



**Tree that forks below DBH or near DBH.** The measurement is recorded at the narrowest part of the main stem below the fork. The height of the DBH measurement and the fork should be noted (e.g., 3 ft diameter @ 2 ft [Forks @ 4 ft]).

### Multi-stems 6" or higher above ground level



**For trees that split into several trunks higher than 6" above ground level there are three acceptable methods to determine DBH. Whichever method is used should be detailed in the Scope of Work.**

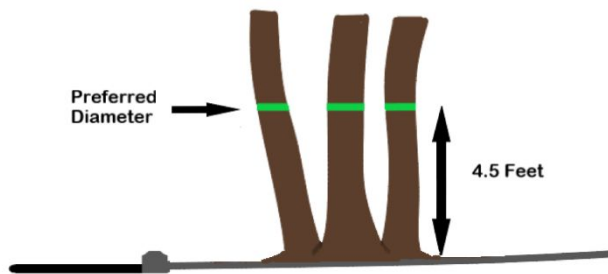
**Method 1-** Measure the DBH of each trunk. The DBH for the tree is found by taking the square root of the sum of all squared stem DBHs rounding to the nearest whole number. Example: You have three stems that measure 5", 6" and 8" so the DBH would be  $\sqrt{(5^2+6^2+8^2)} = \sqrt{(25+36+64)} = \sqrt{125} = 11"$ . It should be noted in the comments that it is a multi-stem tree.

**Method 2-** Measure the DBH of each trunk and find the average number.  $(5+6+8) / 3 = 6"$ . It should be noted in the comments that it is a multi-stem tree.

**Method 3-** Measure DBH of each trunk separately, using the principals shown above. Add the DBHs together for the total and list that number in the DBH column and list the individual DBHs in the "Comments." *This is the least preferred and has caused some confusion when the larger total DBH number is used for benefits calculations and analysis since these are not "large trees" like the number would indicate.*

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### Multi-stems within 6" of ground level



**Trees that fork at or within 6" of grade are treated as multiple trees.** This method is consistent with the USFS and FEMA. It should be noted in the comments that they are part of a cluster.