P.L.P.
LEASEHOLD STEWARDSHIP PLAN

FOR

LOTS 51 & 52
RITCHIE

PREPARED BY

RICHARD E. CARY
CERTIFIED FORESTER

2003-04

PLP
LEASEHOLD FOREST STEWARDSHIP PLAN

MEMBER: Ritchie

LOTS 51 & 52
10.1 Acres

This report is based on an examination of subject property in October 2003. In addition to providing information and recommendations for the member/leaseholder, this forest survey and plan is important to the goal of integrating leaseholds with the comprehensive management plan for conservation of all PLP lands.

The objectives of the lot inspection and plan are to 1) contribute to the inventory and knowledge of PLP forest resources. 2) document present forest conditions by which future changes in the health and diversity of the forest can be measured, 3) provide recommendations for long term stewardship of the leasehold that will contribute to PLP management objectives of maintaining an aesthetic forest, sustaining various forest values and the diversity of plants and animals, and 4) to identify hazard trees that pose an above normal risk to personal safety or damage to the camp and outbuildings.

The plan is intended to cover a ten-year period. It is recommended that a re-inspection and plan revision be made every ten-fifteen years. There is no obligation to undertake any of the recommendations. These are provided as a guideline for directing resources in event tree removal or other management activities are to be undertaken on the leasehold. The plan gives an overview of existing conditions and options to consider. It is anticipated that if there is interest in pursuing recommendations, or if more explanation is desired, that further consultation at the site will be necessary. Further guidance or assistance is available as needed to implement recommendations.

Remember that, in accordance with PLP Bylaws, final approval by the General Manager is required before removing any trees recommended in this plan. Other major activities, such as erecting deer exclosure fences, also require approval of the General Manager.

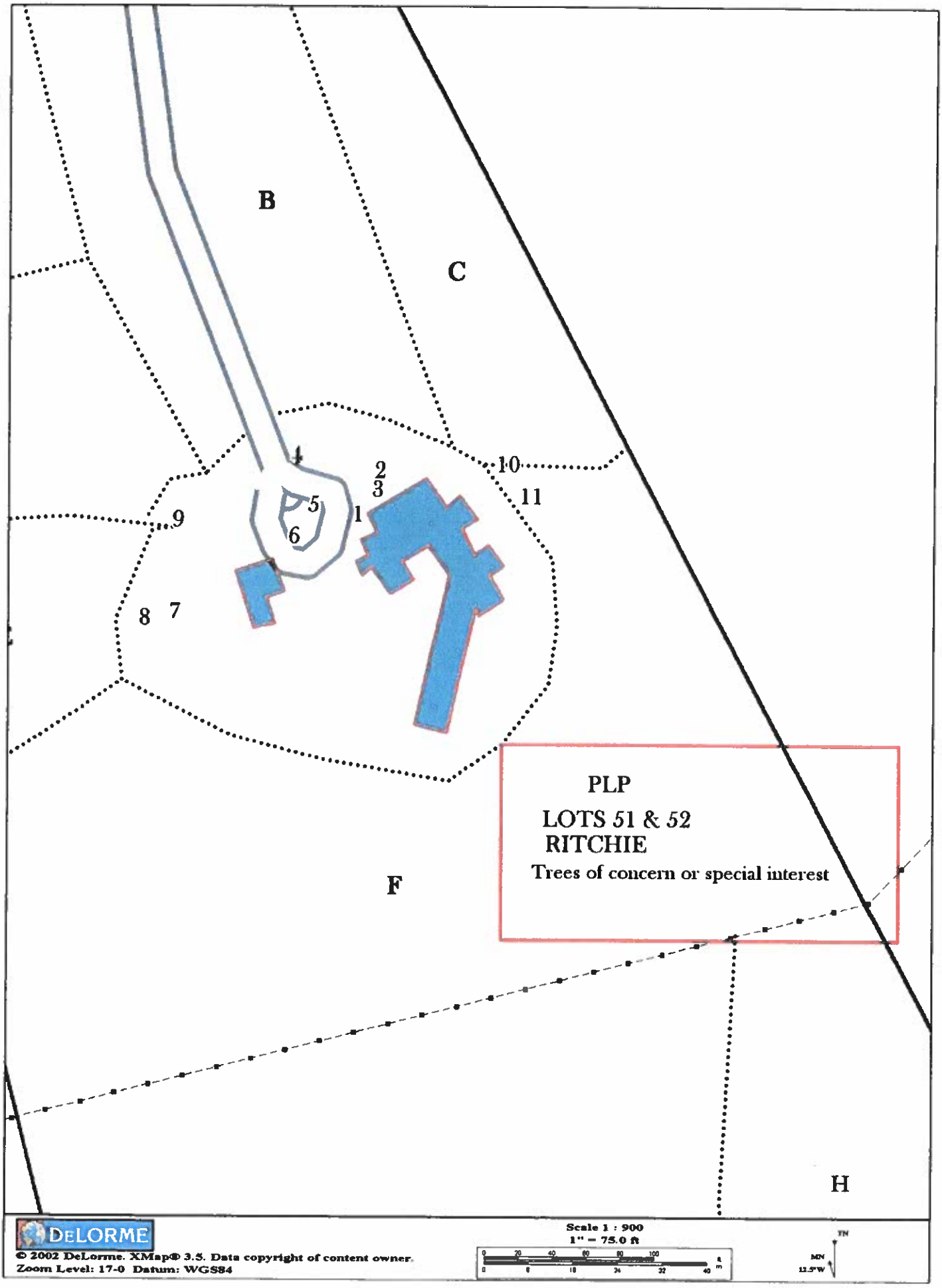
R. E. Cary
Certified Forester
May 2004

TREES OF CONCERN OR SPECIAL INTEREST
(As indicated on attached map)

1) Four stemmed red maple 12-18 inches in diameter. Broken top in smaller stem (toward camp) still hanging. Large stem toward drive has a hole and decay at about 15 feet. Two stems have been cabled. Not urgent to remove. Consider in 5-10 years or possible add cableing. Removal of this tree will benefit camp by providing more light and air.
2) Four red maples. 13 inch maple toward drive has old wound with internal decay and old branch stubs on upper bole and dieback. Adjacent 8 inch tree also in declining condition. Not urgent to remove. Monitor condition. Plan to remove in 5-10 years. Consider removing all four trees and replant with a specimen tree if desired. Sugar maple suggested.
3) Two red maples 14 inch diameters. Dead limbs over roof-remove. Declining foliage. Candidate for removal but not urgent. Removal will benefit camp by providing more light and air.
4) Red maple 18 inches in diameter. Old scarface at base with decay. Other evidence of internal decay including old branch stub wounds on upper bole. Ok for now but monitor foliage for signs of declining health.
5) Black cherry 14 inches w/ basketball hoop. Injury at base. Dead limb over drive should be removed ASAP or do not park under it. Would be good to remove entire tree (base stub could be left to support b-ball hoop) to give growing room to adjacent 20.5 inch diameter white pine that is being crowded by this cherry.
6) Black cherry 13 inches in diameter. Internal decay at base and stem. Forks at about 12 feet. Large canker with decay on one stem-very weak point. Suggest removal of this tree soon.
7) Black cherry 16 inches in diameter. Advanced decay in base. Severe, weak, canker at 10 feet. High priority for removal. Could fall onto garage
8) Double red maple, 18 inch stems. Scars on face of trees up to about 18 feet. One stem forks at about that height. Very advanced decay, very poor condition. Would be good to remove for safety. Most likely will not fall onto shed but removal suggested soon to eliminate that risk.

    Note: After removal of 7&8, suggest planting Norway spruce, sugar maple or red oak.
9) Red maple 16 inches in diameter, nearly dead. Double stemmed at about 24 feet. Advanced internal decay, fungi evident. Subject to snapoff in wind. Risk to shed, driveway or parked cars. High priority for removal-do ASAP.
10) Blue spruce 6 inch diameter. Noted for interest
11) Blue spruce 8 inch diameter. Noted for interest

It should be recognized that all trees are a potential hazard and there is no guarantee that a tree not on this list will not break or be blown over under adverse weather conditions. In some cases apparently healthy trees may in fact have advanced interior decay, root rot, or other weakness that will cause the tree to fail without exhibiting external symptoms. Even perfectly healthy trees are subject to failure under adverse weather conditions. This report identifies only those trees observed that exhibit external signs of abnormal weakness and hazard to facilities.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PLP
LOTS 51 & 52
RITCHIE
Trees of concern or special interest
DeLORME
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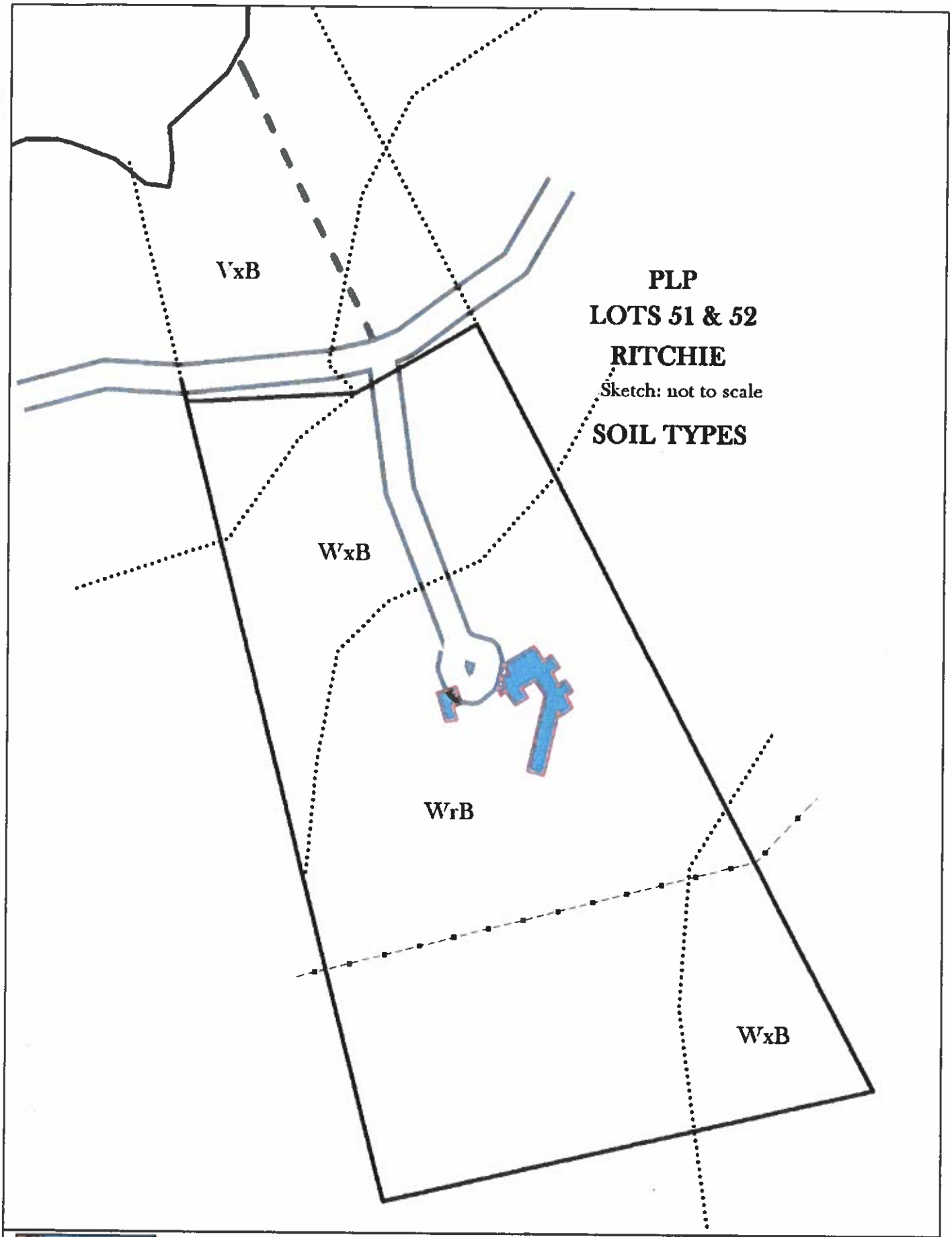
Zoom Level: 17-0 Datum: WGS84
Scale 1 : 900
1" = 75.0 ft

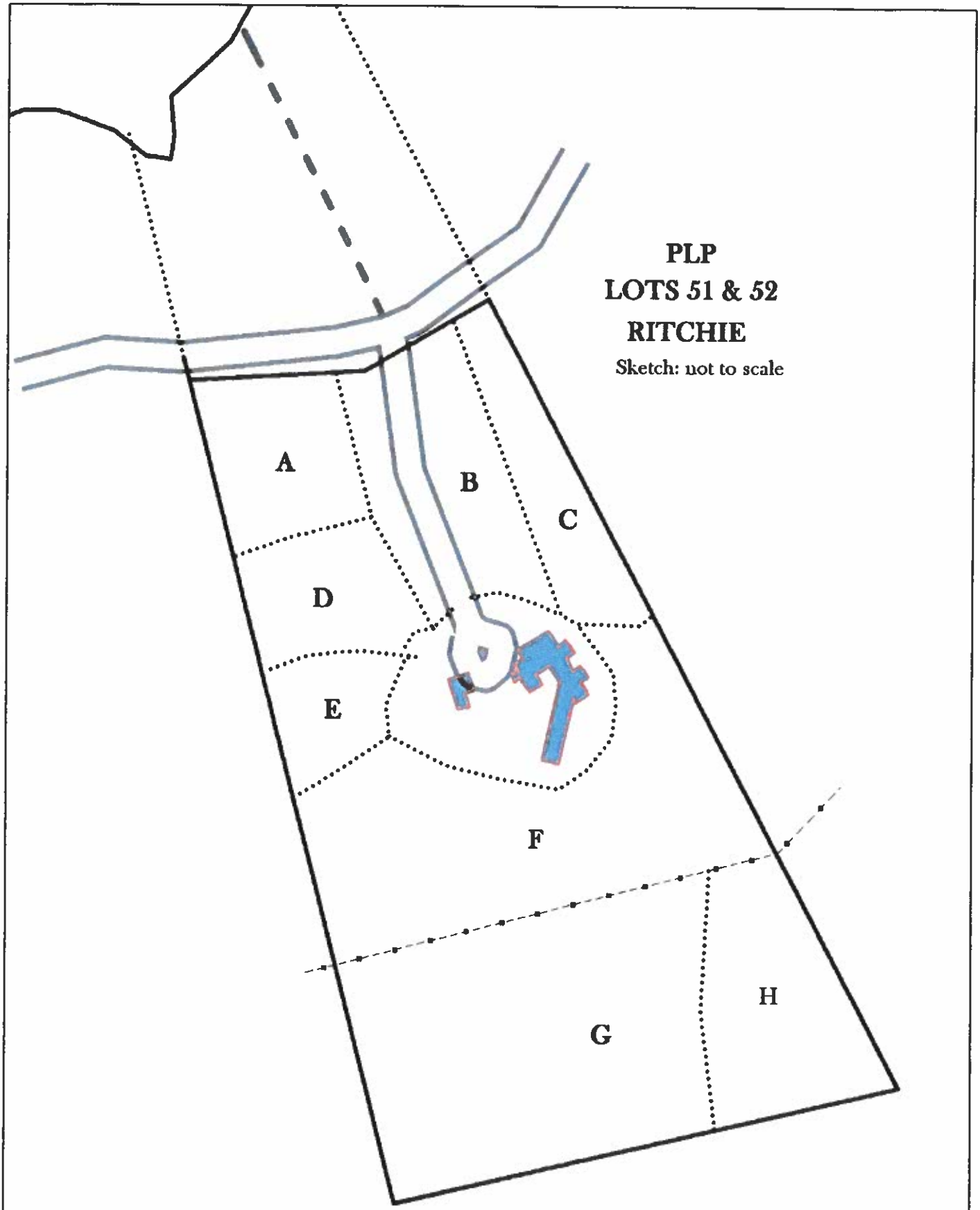


PLP
LOTS 51 & 52
RITCHIE
Sketch: not to scale

SOIL TYPES

Scale 1 : 1,800
1" = 150 ft

TN
MN
13.9°W



Scale 1 : 1,800
1" = 150 ft

GENERAL FOREST CONDITIONS AND RECOMMENDATIONS

The property (approximately 10.1 acres) has been divided into several sections, plus the curtilage area around the camp buildings, based on general forest cover vegetation as indicated on the attached map and briefly described below.

In the early 1900's this area was mostly treeless as result of forest fires subsequent to the original logging in the late 1800's. Extensive planting, primarily Norway spruce, along the driveway corridor was apparently done in this old burn area at the time the membership was created (1924). Most other trees forming the second growth forest seeded in naturally.

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UNIT A

Description: This area is mixed conifers with red maple. Some rhododendron. The northwest part of unit, with some wet pockets, is Volusia extremely stony silt loam type (VxB on map). The soil type in remainder of unit is Wurtsboro extremely stony loam (WxB)

Tree species: red spruce 34%, red maple 24%, white pine 22%, hemlock 10%, black cherry 7%, black gum 2%.

Tree Diameters: Average = 10.0 inches. 2-6 inches = 0%, 6-12/44%, 12-18/24%, 18-24/27%, 24+/5%.

Basal Area: 137 square feet per acre overall. Trees 12+ inches = 77

Trees per acre: 252 overall. Trees 12 inch + = 63

Recommendation: No activity planned.

UNIT B

Description: This is the Norway spruce plantation area in the driveway corridor mixed with other species that grew in naturally. A much needed thinning of the previously very dense/overstocked stand of spruce was done about ten years ago. Some ground cover of club mosses, ferns. Rather prolific growth of mosses is developing.

Soil type is mostly Wurtsboro extremely stony loam (WxB)

There is a long driveway that slopes to the main road and ultimate drainage to the lake. There are no diversions so storm water is funneled down this driveway with resulting erosion of the driveway, sedimentation to road ditches and subsequently the lake.

Tree species: Norway spruce 55%, red maple 27%, white pine 10%, black cherry 5%, hemlock and pitch pine 2% each.

Tree Diameters: Average = 10.9 inches. 2-6 inches = 0%, 6-12/35%, 12-18/48%, 18-24/15%, 24+/2%.

Basal Area: 155 square feet per acre overall. Trees 12+ inches = 100

Trees per acre: 237 overall. Trees 12 inch + = 91

Recommendation: Past thinning was good. Some additional light thinning can be done periodically to remove suppressed trees and to release crowns of the largest/most dominant trees to sustain their growth and vigor. This is not critical. However if it is desired to start new spruce seedlings in the understory, this thinning should be done first to provide added sunlight to the forest floor necessary for growth of tree seedlings.

Do some grading on the driveway to create broad based dips and water diversions to divert stormwater off the drive for prevention of erosion and sedimentation.

UNIT C

Description: Red maple with spruce,hemlock and pine. Club mosses, low blueberry,partridge berry. Some beech, spruce and pine seedlings.

Tree species: red maple 41%, white pine 18%, red spruce 15%, hemlock 11%, cherry 9%, juneberry 7%.

Tree Diameters: Average = 9.0 inches. 2-6 inches = 2%, 6-12/45%, 12-18/36%, 18-24/11%, 24+/5%.

Basal Area: 110 square feet per acre overall. Trees 12+ inches = 58

Trees per acre: 250 overall. Trees 12 inch + = 52

Soil: Wurtzboro extremely stony loam innorth part and Worth extremely stony sandy loam on south part.

Recommendations: No activity planned

UNIT D

Description: Predominantly red maple and black cherry. Ground cover of club mosses, grasses, fern and low blueberry. Scattered spruce saplings and seedlings of hemlock and white pine.

Tree species: red maple 59%, black cherry 21%, red spruce and white pine 6% each, juneberry, hemlock and pitch pine 3% each.

Tree Diameters: Average = 8.3inches. 2-6 inches = 3%, 6-12/50%, 12-18/41%, 18-24/6%, 24+/0%.

Basal Area: 113 square feet per acre overall. Trees 12+ inches = 53

Trees per acre: 302 overall. Trees 12 inch + = 52

Soil: Wurtzboro extremely stony loam

Recommendations: Thin dense groups of spruce and pine saplings. Protect natural seedlings of white pine from deer by enclosing in a wire cage.

UNIT E

Description: Small area of hemlock and red maple. Some club moss but ground cover is generally lacking due to dense shade.

Tree species: red maple 44%, hemlock 28%, red spruce 17%, yellow birch 6%, juneberry 6%.

Tree Diameters: Average = 7.5inches. 2-6 inches = 6%, 6-12/61%, 12-18/33%, 18-24/0%, 24+/0%.

Basal Area: 180 square feet per acre overall. Trees 12+ inches = 64

Trees per acre: 180 overall. Trees 12 inch + = 64

Soil: Wurtzboro extremely stony loam and Worth extremely stony sandy loam.

Recommendations: No activity planned

UNIT F

Description: Lightly stocked area of maple-cherry-pine. Ground cover of club moss, low blueberry and ferns. Some dense white pine sapling areas especially southwest part of unit. One black oak about 20 inch diameter is of interest and of special value for wildlife food. .

Tree species: red maple 35%, white pine 29%, cherry 27%, red spruce 4%, hemlock, yellow birch and black oak <2% each.

Tree Diameters: Average = 11.1inches. 2-6 inches = 2%, 6-12/21%, 12-18/50%, 18-24/17%, 24+/10%.

Basal Area: 104 square feet per acre overall. Trees 12+ inches = 80

Trees per acre: 155 overall. Trees 12 inch + = 68

Soil: Worth extremely stony sandy loam.

Recommendations: Thin dense white pine sapling area to release/give room to grow the dominant preferred trees to be nurtured to maturity. Consider planting red oak or sugar maple in the opening (s. central part of unit) near the wood pile. Some selected white pine seedlings can be protected from deer by enclosing in wire cages. If additional trees are desired in the understory, plant red or Norway spruce seedlings.

UNIT G

Description. This is the area south of the power line that is in general similar to unit F. This lot is unusual in that it, along with the adjacent Amick lot, are the only ones that extend south of the power line. The precise property line could not be located and no data was gathered in this area. Cherry 12-20 inch diameter, red maple 12-20, white pine 8-18 with juneberry and red spruce. Ground cover of ferns, low blueberry, deer tongue grass, club mosses, and goldthread. Soil type is Worth extremely stony sandy loam.

Recommendations: No activity planned. Manage in association with adjacent PLP forestland currently classed as a biodiversity-wildlife habitat management area. It is anticipated that when the PLP Forest Conservation Plan for this section of plp forestland is revised that this unit will be inventoried at that time and management recommendations made that will be consistent with management of the adjacent plp woodland.

UNIT H

Description: This is also part of the lot that is south of power line. Predominantly white pine 12-20 inches in diameter with red maple and cherry. Haircap moss, ferns, grass and club moss ground cover. Soil type is Wurtzboro extremely stony loam

Recommendation: No Activity recommended. Keep as natural area in association with adjacent PLP lands, including part of this same white pine stand, that is in a natural area/bio-reserve classification.

LAKESIDE

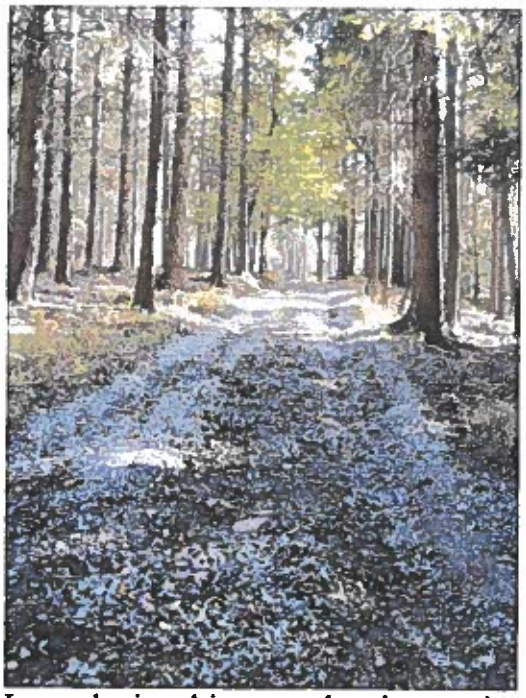
Although the lakeside area is not part of the leasehold, a review of this area is being done in conjunction with the leasehold examinations. If any improvements are recommended, the member may choose to adopt this area and manage it in conjunction with the leasehold. Generally PLP does not have the time or resources to undertake forest improvement activities in this lakeshore zone other than removal of hazard trees that may fall into the roadway.

Description: Dominant tree cover is predominantly hemlock and red maple. Understory hemlock sapling growth is dense in many areas.

Recommendations: Do a crop tree release thinning in dense areas of hemlock saplings to release them and give room to grow. The tallest and most vigorous trees should be selected and then remove competing/interfering trees around the selected crop tree.

Camp –view from drive

Camp –view from rear –large pines surrounding



Long sloping driveway-showing erosion
View from road to camp

View from road to lake

UNIT B view from drive toward camp

UNIT B

UNIT D

View north from camp toward unit D

VIEWS OF UNIT F

TREE PLANTING INFO

Planting – Native species:

- **Deciduous:** There is no need to plant non-native species on leaseholds. There are many native species to consider. Sugar maple and red oak are most frequently recommended on well drained sites. Deciduous trees should be planted as saplings 8ft in height or more to avoid deer browsing. It is advisable to protect stems of these trees during fall months since buck deer seem to target these type trees for rubbing antlers during the rutting season that can kill sapling trees. If seedlings are planted, they will need protection from deer browsing by use of tree shelters tubes or low visibility wire cages.
    - **Sugar Maple-** this species is very shade tolerant, the primary reason for recommending it for understory planting. Offers fall coloring for aesthetic diversity. Overall, it is generally absent to rare at PLP although there are areas where it is locally common and a welcomed addition.
    - **Red oak.** – this species is moderately tolerant to shade. It is of high value for wildlife food (from acorns). These are main reasons for planting. There is also an effort to increase the amount of this species at PLP for its wildlife food value. Currently this species is generally absent to rare at PLP although there is a region where it occurs at relative frequency as an associated species. At PLP, it is not a common/predominant species at any location but it is the most common of various other oak species at PLP.
    - **Red maple-** this is the most common native species at PLP (and throughout PA). Not usually suggested for planting. Less tolerant of shade, but may be the best choice in wet areas. It is tolerant of many soil types ranging from dry upland to wetlands.
- **Conifer (Evergreens)**
    - **Red spruce**. This tree is common, is the only native species not being browsed by deer so it survives where many other species do not. It is very shade tolerant although best growth is in full sun. The major limitation for planting is that it is not commercially available from nurseries. Also, growth is very slow relative to other spruces and evergreens. If transplanted from locations at PLP, it may be a good choice. Generally free of insect and disease although needle cast disease and spruce gall aphid may occasionally be a problem but not usually fatal or detrimental.
    - **White pine.** Common at PLP. Deer browsing prevents natural regeneration of this species in most areas. Fast growing, moderately shade tolerant. Because it is browsed by deer, planted seedlings need protection from deer until they are above deer reach. The white pine weevil commonly causes damage by killing the top leader-new top growth which results in deformity of the tree although is not usually fatal. If present, this can be controlled by application of approved insecticide on the top portion of the tree at time of bud break, usually early to mid April. The white pine weevil is most damaging on trees in open sunny areas. It is usually not a problem of trees in shaded areas. If nursery balled and burlapped stock is selected for planting, choose specimens that have not been heavily sheared in order to have a more natural appearance, rather than a "Christmas tree" appearance.

- **Hemlock.** This species is not being recommended for planting at this time because of the threat of being attacked by the hemlock woolly adelgid that can kill this species. Planting nursery grown stock increases the risk of importing this insect. Otherwise, it would be a good choice in many situations, primarily because it is very shade tolerant and good for screening. It is browsed by deer, so if planted should be protected in wire cages.
- **Balsam fir.** Not often recommended but may be a good choice in poorly drained areas. At PLP it is only found around some swamp areas but when planted will grow on most sites. Because of deer browsing, natural seedlings of this species at PLP do not survive. If planted, protection from deer browsing and also "buck rubs" is required.

Planting- exotic species. Only planting of non-native trees that blend well with the natural vegetation are recommended. The question may logically be raised "why plant any exotic species rater than native?" The general answer is that: Some native species are not available from nurseries so a close substitute should be found. Some species similar to natives in appearance perform better from a growth or landscaping perspective or resistance to deer browsing. In general, spruce species are not usually browsed by deer, but at PLP there is no guarantee that they won't be.

- **Deciduous species.** There is no need to prescribe non-native species for planting on leaseholds. Occasionally some non-native species have been planted by members, but this should be avoided and done only as experimental.
- **Conifers (evergreens)** There are several evergreen species acceptable for planting as follows:
  - **Norway spruce.** This is the most commonly non-native species recommended for planting. The primary reason is that it is very similar in appearance to the native spruce so it blends well. It is shade tolerant. It is readily available from nurseries. It is not usually browsed by deer so it can be planted as a low cost seedling without protection or alternatively as a balled and burlapped 6-8 ft high size tree without protection. It is generally insect and disease free. Relative to the native red spruce, it grows at much faster rate, gets larger. It will reach height, under good growing conditions, similar to white pine making it the second tallest growing specie at PLP. This should be kept in mind when planting this species. Norway spruce is more common at PLP than some native species. It is not unusual to find some at leaseholds. It is the most common tree in the Tennis court-ball field-EZ Street area as well as a plantation along the Tunk Point access road as well as some other plantations at PLP. Bottom line is that this is a good substitute for naturalizing with the native red spruce.

- **Serbian spruce.** This is sometimes recommended for planting, primarily in areas in close proximity to camps in place of Norway spruce for landscape purposes because it does not get as large and has interesting form for landscape diversity. It is narrower in form than either the native red spruce or Norway spruce and it does not get as tall. At maturity may reach 50 ft. in height with a width of 15 feet. It generally blends well with native spruce in color and texture although it does have a blue coloring on the underside of the needles, much like blue spruce. Generally this does not show. On some specimens, limbs curl up showing this feature but it is subtle, not undesirable and adds diversity for landscaping purpose. This specie is not recommended for general reforestation purposes, just for landscaping near camps where a tree of moderate size and of aesthetic and screening value is important. Growth is best in full or part sun. This specie is subject to damage from the white pine weevil, especially if grown in full sunlight. (see above-white pine).
- **Blue spruce.** (native to Colorado) Not usually recommended for planting but is a possible alternative in some situations provided that the green variety, as opposed to the blue color variety that is highly prized for landscaping, is not used. The blue color is a genetic variation. Many of the Colorado blue spruce are actually dark green in color and mix well with the native landscape at PLP. However, it may be hard to find the green variety in nurseries & garden centers since it is the "blue" that is usually in demand. There are some of this species on leaseholds from plantings in the past but it is not common.
- **White spruce.** Not usually recommended, but may be an acceptable choice in some situations, especially poorly drained soils. Slow growing, but may be suitable where a large tree is not desired. Form and growth rate much like the native red spruce but more like Colorado blue spruce (green variety) in appearance. Stiff needles are light bluish-green, usually less than 1 inch in length. A few of this species are known on leaseholds from past plantings but it is rare at PLP.

GLOSSARY

Basal Area – the cross sectional area of a single tree stem measured at 4.5 feet above ground. Basal area per acre equals the square foot area occupied by tree stems. This provides a measure of tree density indicating if a stand is overstocked, understocked, or adequately stocked with trees.
Bole – A trunk or main stem of a tree
Butt – the base of a tree

Crop Tree – a tree selected to be retained and nurtured as a future component of the forest for timber, wildlife or aesthetic value.
Crop Tree Release – removal of competing trees around a selected crop tree in order to sustain the growth and development of the crop tree
Canopy- the overhead foliar cover in a forest stand.
Conifer – a cone bearing tree, mostly evergreens.
Crown – The part of the tree bearing live branches and foliage.
Crown class – a category of tree based on its crown position relative to those of adjacent trees. Types of crown class area the following:

- **codominant** a tree whose crown helps to form the general level of the main canopy, receiving full light from above but comparatively little from the sides.
- **dominant** a tree whose crown extends above the general level of the main canopy receiving full light from above and partial light from the sides.
- **emergent** a tree whose crown is completely above the general level of the main canopy, receiving full light from above and from all sides.
- **intermediate** a tree whose crown extends into the lower portion of the main canopy but shorter in height than the codominants and receiving little direct light from above and none from the sides.
- **suppressed (overtopped)** a tree whose crown is completely overtopped by the crowns of one or more neighboring trees.

Decline – The decrease in tree health and vigor.
Deciduous – trees that shed their leaves in fall / winter
Dieback- Top dying. The progressive dying from the extremity of any part of a plant.
Dominant- the extent to which a given species or life form predominates in a community because of its size, abundance, or cover

Fragipan- A subsurface horizon (soil layer) with very low organic matter, high bulk density, is slowly permeable to water, and is considered root restricting,

Groundcover – the herbaceous plants (including grasses and ferns) and the lowest shrubs occupying an area.
Growing stock – all the trees growing in a forest, or a specified part of it, meeting specified standards of size, quality, and vigor and generally expressed in terms of number or volume.

Herbaceous – a class of vegetation dominated by non-woody plants known as herbs.

Needle cast (leaf cast) - Any untimely shedding of foliage. Any disease causing untimely shedding of foliage.

Overstory- The portion of the trees forming the uppermost canopy

Permeability – the ease with which gases, liquids, or plant roots penetrate or pass through a bulk mass of soil or a layer of soil.

Regeneration – the act of renewing tree cover (reforestation) by establishing young trees naturally or artificially.

Release- a treatment designed to free young (or adjacent) trees from undesirable, usually overtopping, competing vegetation.

Sapling- A young tree larger than a seedling but smaller than a small pole sized tree (less than 6 inches in diameter).

Seedling – A young plant gown from seed (generally less than ½ inch in diameter or 4 feet in height)

Seep- water escaping or emerging from the ground along an extensive line or surface, as contrasted with a spring where the water emerges from a localized spot.

Snag – a standing dead tree from which the leaves and most of the branches have fallen

Stand - A contiguous group of trees sufficiently uniform in age-class distribution, composition, and structure, and growing on a site of uniform quality, to be a distinguishable unit.

Stand improvement – an intermediate treatment made to improve the composition, structure, condition, health, and growth of stands.

Stocking – The amount of trees growing on a given area, particularly in relation to what is considered optimum. **Overstocked-** more trees per acre than considered optimum for best growth and development of trees on the site. **Understocked-** fewer trees per acre than considered desirable to fully occupy the stand. **Adequately or fully stocked-** The optimum number of trees to fully occupy the stand.

Thinning – A cultural treatment made to reduce stand density of trees primarily to improve growth, enhance forest health, or recover potential mortality.

Understory- the forest vegetation growing under an overstory

Windthrow – tree or trees felled or broken off by wind. *Synonym* blowdown, windfall

10f prism #plots 3 acres date Property Ritcie unit A

Diameter	w pine			red spruce			red maple			bl cherry			hemlock			black gum												TOTAL	TOTAL	TOTAL
	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	BA/acre	trees/ac	PERCENT %
2		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
4		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
6		0.0	0	5	16.7	85	1	3.3	17		0	0		0.0	0		0	0		0	0		0	0		0.0	0	20.0	102	14.6
8		0.0	0	4	13.3	38		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	13.3	38	9.8
10		0.0	0	2	6.67	12	3	10	18	2	6.7	12	1	3.3	6		0	0		0	0		0	0		0.0	0	26.7	49	19.5
12		0.0	0	3	10	13	4	13	17	1	3.3	4		0.0	0	1	3.33	4		0	0		0	0		0.0	0	30.0	38	22.0
14		0.0	0		0	0	1	3.3	3		0	0		0.0	0		0	0		0	0		0	0		0.0	0	3.3	3	2.4
16		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
18	5	16.7	9		0	0	1	3.3	2		0	0	2	6.7	4		0	0		0	0		0	0		0.0	0	26.7	15	19.5
20	3	10.0	5		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	10.0	5	7.3
22		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
24	1	3.3	1		0	0		0	0		0	0	1	3.3	1		0	0		0	0		0	0		0.0	0	6.7	2	4.9
26		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
28		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
30		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
32		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
34		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
36		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
38		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
40		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
42		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
total		30	15		46.7	148		33	57		10	16		13.3	11		3.33	4.24		0	0		0	0		0	0	137	252	100
%		22			34			24			7			10			2			0			0			0		100		
	9			14			10			3			4			1			0			0			0				%
%2-6		0			0			0			0			0			0			####			###			#####				0
%6-12		0			79			40			67			25			0			####			###			#####				44
%12-18		0			21			50			33			0			100			####			###			#####				24
%18-24		89			0			10			0			50			0			####			###			#####				27
%24+		11			0			0			0			25			0			####			###			#####				5
		100			100			100			100			100			100			####			###			#####				100

BA 12+ 77 tr/ac 12+ 63 tr/ac 8 inch+ = 150 BA trees 8inch+= 117 ave diam 8+inch trees 12 ave diameter 10.0

10f prism #plots 4 acres date Property Ritcie unit B

Diameter	Norway spruce count	Norway spruce BA/acre	Norway spruce trees/ac	white pine count	white pine BA/acre	white pine trees/ac	black cherry count	black cherry BA/acre	black cherry trees/ac	red maple count	red maple BA/acre	red maple trees/ac	hemlock count	hemlock BA/acre	hemlock trees/ac	pitch pine count	pitch pine BA/acre	pitch pine trees/ac											TOTAL BA/acre	TOTAL trees/ac	TOTAL PERCENT %
2		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0		0.0	0	0.0
4		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0		0.0	0	0.0
6	3	7.5	38.3		0	0		0	0	1	2.5	13		0.0	0		0	0		0	0		0	0		0.0	0		10.0	51	6.5
8	3	7.5	21		0	0	1	2.5	7	1	2.5	7		0.0	0		0	0		0	0		0	0		0.0	0		12.5	36	8.1
10	9	22.5	41		0	0	1	2.5	5	3	7.5	14		0.0	0		0	0		0	0		0	0		0.0	0		32.5	60	21.0
12	12	30.0	38		0	0		0	0	3	7.5	10		0.0	0		0	0		0	0		0	0		0.0	0		37.5	48	24.2
14	6	15.0	14		0	0		0	0	2	5	5		0.0	0		0	0		0	0		0	0		0.0	0		20.0	19	12.9
16		0.0	0	1	2.5	2	1	2.5	2	5	13	9		0.0	0		0	0		0	0		0	0		0.0	0		17.5	13	11.3
18	1	2.5	1	2	5	3		0	0	1	2.5	1		0.0	0		0	0		0	0		0	0		0.0	0		10.0	6	6.5
20		0.0	0	3	7.5	3		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0		7.5	3	4.8
22		0.0	0		0	0		0	0	1	2.5	1	1	2.5	1		0	0		0	0		0	0		0.0	0		5.0	2	3.2
24		0.0	0		0	0		0	0		0	0		0.0	0	1	2.5	1		0	0		0	0		0.0	0		2.5	1	1.6
26		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0		0.0	0	0.0
28		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0		0.0	0	0.0
30		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0		0.0	0	0.0
32		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0		0.0	0	0.0
34		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0		0.0	0	0.0
36		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0		0.0	0	0.0
38		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0		0.0	0	0.0
40		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0		0.0	0	0.0
42		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0		0.0	0	0.0
total		85	155		15	8		7.5	14		43	59		2.5	1		2.5	0.8		0	0		0	0		0	0		155	237	100
%		55			10			5			27			2			2			0			0			0			100	
	34			6			3			17			1			1			0			0			0					
%2-6		0			0			0			0			0			0			####			###			#####					0
%6-12		44			0			67			29			0			0			####			###			#####					35
%12-18		53			17			33			59			0			0			####			###			#####					48
%18-24		3			83			0			12			100			0			####			###			#####					15
%24+		0			0			0			0			0			100			####			###			#####					2
		100			100			100			100			100			100			####			###			#####					100

BA 12+ 100 tr/ac 12+ 91 tr/ac 8 inch+ = 186 BA trees 8inch+= 145 ave diam 8+inch trees 12 ave diameter 10.9

10f prism | #plots | 4 | acres | date | Property | Ritchie | unit | C

	cherry			red spruce			juneberry			red maple			hemlock			wh pine											TOTAL	TOTAL	TOTAL
Diameter	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	BA/acre	trees/ac	PERCENT %
2		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
4		0.0	0		0	0	1	2.5	29		0	0		0.0	0		0	0		0	0		0	0		0.0	0	2.5	29	2.3
6		0.0	0	3	7.5	38	2	5	26	2	5	26		0.0	0		0	0		0	0		0	0		0.0	0	17.5	89	15.9
8		0.0	0	2	5	14		0	0	6	15	43		0.0	0		0	0		0	0		0	0		0.0	0	20.0	57	18.2
10	1	2.5	5	1	2.5	5		0	0	2	5	9		0.0	0	1	2.5	5		0	0		0	0		0.0	0	12.5	23	11.4
12	2	5.0	6		0	0		0	0	3	7.5	10	2	5.0	6	2	5	6		0	0		0	0		0.0	0	22.5	29	20.5
14	1	2.5	2		0	0		0	0	2	5	5	1	2.5	2	1	2.5	2		0	0		0	0		0.0	0	12.5	12	11.4
16		0.0	0		0	0		0	0	2	5	4		0.0	0		0	0		0	0		0	0		0.0	0	5.0	4	4.5
18		0.0	0		0	0		0	0	1	2.5	1	1	2.5	1	1	2.5	1		0	0		0	0		0.0	0	7.5	4	6.8
20		0.0	0		0	0		0	0		0	0	1	2.5	1		0	0		0	0		0	0		0.0	0	2.5	1	2.3
22		0.0	0		0	0		0	0		0	0		0.0	0	1	2.5	1		0	0		0	0		0.0	0	2.5	1	2.3
24		0.0	0		0	0		0	0		0	0		0.0	0	2	5	2		0	0		0	0		0.0	0	5.0	2	4.5
26		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
28		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
30		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
32		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
34		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
36		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
38		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
40		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
42		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
total		10	13		15	57		7.5	54		45	97		12.5	11		20	17.2		0	0		0	0		0	0	110	250	100
%		9			14			7			41			11			18			0			0			0		100		
	4			6			3			18			5			8		0			0			0					%	
%2-6		0			0			33			0			0			0			#####			###			#####				2
%6-12		25			100			67			56			0			13			#####			###			#####				45
%12-18		75			0			0			39			60			38			#####			###			#####				36
%18-24		0			0			0			6			40			25			#####			###			#####				11
%24+		0			0			0			0			0			25			#####			###			#####				5
		100			100			100			100			100			100			#####			###			#####				100

BA 12+ 58 | tr/ac 12+ 52 | tr/ac 8 inch+ = 132 | BA trees 8inch+= 90 | ave diam 8+inch trees 11 | ave diameter 9.0

10f prism #plots 3 acres date Property Ritchie unit D

Diameter	w pine			red spruce			cherry			juneberry			hemlock			red maple			pitch pine									TOTAL	TOTAL	TOTAL
	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	BA/acre	trees/ac	PERCENT %
2		0.0	0		0	0		0	0		0	0		0.0	0	0	0	0		0	0		0	0		0.0	0	0.0	0	0.0
4		0.0	0		0	0		0	0		0	0		0.0	0	1	3.33	38.3		0	0		0	0		0.0	0	3.3	38	2.9
6	2	6.7	34		0	0		0	0	1	3.3	17		0.0	0	5	16.7	85		0	0		0	0		0.0	0	26.7	136	23.5
8		0.0	0	1	3.33	10	1	3.3	10		0	0		0.0	0	4	13.3	38		0	0		0	0		0.0	0	20.0	57	17.6
10		0.0	0		0	0		0	0		0	0		0.0	0	3	10	18		0	0		0	0		0.0	0	10.0	18	8.8
12		0.0	0	1	3.33	4	2	6.7	8		0	0		0.0	0	2	6.67	8		0	0		0	0		0.0	0	16.7	21	14.7
14		0.0	0		0	0	3	10	9		0	0		0.0	0	4	13.3	12	1	3.33	3		0	0		0.0	0	26.7	25	23.5
16		0.0	0		0	0	1	3.3	2		0	0		0.0	0		0	0		0	0		0	0		0.0	0	3.3	2	2.9
18		0.0	0		0	0		0	0		0	0		0.0	0	1	3.33	2		0	0		0	0		0.0	0	3.3	2	2.9
20		0.0	0		0	0		0	0		0	0	1	3.3	2		0	0		0	0		0	0		0.0	0	3.3	2	2.9
22		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
24		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
26		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
28		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
30		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
32		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
34		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
36		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
38		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
40		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
42		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
total		6.667	34		6.67	14		23	30		3.3	17		3.3	2		66.7	203		3.33	3.12		0	0		0	0	113	302	100
%		6			6			21			3			3			59			3			0			0		100		
	2			2			7			1			1			20			1			0			0				%	
%2-6		0			0			0			0			0			5			0			###			#####				3
%6-12		100			50			14			100			0			60			0			###			#####				50
%12-18		0			50			86			0			0			30			100			###			#####				41
%18-24		0			0			0			0			100			5			0			###			#####				6
%24+		0			0			0			0			0			0			0			###			#####				0
		100			100			100			100			100			100			100			###			#####				100

BA 12+ 53 tr/ac 12+ 52 tr/ac 8 inch+ = 128 BA trees 8inch+= 83 ave diam 8+inch trees 11 ave diameter 8.3

10f prism #plots 1 acres date Property Ritchie unit E

	red maple			hemlock			yellow birch			juneberry			red spruce												TOTAL	TOTAL	TOTAL
Diameter	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	BA/acre	trees/ac	PERCENT %
2		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0
4	1	10.0	115		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	10.0	115	5.6
6	2	20.0	102		0	0		0	0	1	10	51	2	20.0	102		0	0		0	0		0	0		0.0	0	50.0	255	27.8
8	1	10.0	29	1	10	29	1	10	29		0	0	1	10.0	29		0	0		0	0		0	0		0.0	0	40.0	115	22.2
10	2	20.0	37		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	20.0	37	11.1
12	1	10.0	13	2	20	25		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	30.0	38	16.7
14	1	10.0	9	1	10	9		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	20.0	19	11.1
16		0.0	0	1	10	7		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	10.0	7	5.6
18		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
20		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
22		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
24		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
26		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
28		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
30		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
32		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
34		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
36		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0
38		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.
40		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
42		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
total		80	304		50	71		10	29		10	51		30.0	131		0	0		0	0		0	0		0	0	180	585	100
%		44			28			6			6			17			0			0			0			0		100		
	8			5			1			1			3			0			0			0			0					
%2-6		13			0			0			0			0			####			####			###			#####				6
%6-12		63			20			100			100			100			####			####			###			#####				61
%12-18		25			80			0			0			0			####			####			###			#####				33
%18-24		0			0			0			0			0			####			####			###			#####				0
%24+		0			0			0			0			0			####			####			###			#####				0
		100			100			100			100			100			####			####			###			#####				100

BA 12+ 60 tr/ac 12+ 64 tr/ac 8 inch+ = 215 BA trees 8inch+= 120 ave diam 8+inch trees 10 ave diameter 7.5

10f prism #plots 6 acres date Property Ritchie unit F

Diameter	red maple			cherry			red spruce			w pine			hemlock			yellow birch			black oak									TOTAL	TOTAL	TOTAL
	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	count	BA/acre	trees/ac	BA/acre	trees/ac	PERCENT %
2		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
4		0.0	0		0	0	1	2	23		0	0		0.0	0		0	0		0	0		0	0		0.0	0	2.0	23	1.9
6	1	2.0	10.2	1	2	10		0	0	1	2	10		0.0	0		0	0		0	0		0	0		0.0	0	6.0	31	5.8
8	2	4.0	11		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	4.0	11	3.8
10	1	2.0	4	3	6	11	1	2	4	1	2	4		0.0	0		0	0		0	0		0	0		0.0	0	12.0	22	11.5
12	4	8.0	10	7	14	18		0	0	1	2	3		0.0	0	1	2	3		0	0		0	0		0.0	0	26.0	33	25.0
14	8	16.0	15		0	0		0	0	1	2	2	1	2.0	2		0	0		0	0		0	0		0.0	0	20.0	19	19.2
16	1	2.0	1	2	4	3		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	6.0	4	5.8
18		0.0	0		0	0		0	0	4	8	5		0.0	0		0	0		0	0		0	0		0.0	0	8.0	5	7.7
20	1	2.0	1		0	0		0	0	2	4	2		0.0	0		0	0		0	0		0	0		0.0	0	6.0	3	5.8
22		0.0	0	1	2	1		0	0		0	0		0.0	0		0	0	1	2	1		0	0		0.0	0	4.0	2	3.8
24		0.0	0		0	0		0	0	3	6	2		0.0	0		0	0		0	0		0	0		0.0	0	6.0	2	5.8
26		0.0	0		0	0		0	0	2	4	1		0.0	0		0	0		0	0		0	0		0.0	0	4.0	1	3.8
28		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
30		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
32		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
34		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
36		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
38		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
40		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
42		0.0	0		0	0		0	0		0	0		0.0	0		0	0		0	0		0	0		0.0	0	0.0	0	0.0
total		36	53		28	43		4	27		30	28		2.0	2		2	2.55		2	0.76		0	0		0	0	104	155	100
%		35			27			4			29			2			2			2			0			0		100		
	18			14			2			15			1			1			1			0			0				%	
%2-6		0			0			50			0			0			0			0			###			#####				2
%6-12		22			29			50			13			0			0			0			###			#####				21
%12-18		72			64			0			13			100			100			0			###			#####				50
%18-24		6			7			0			40			0			0			100			###			#####				17
%24+		0			0			0			33			0			0			0			###			#####				10
		100			100			100			100			100			100			100			###			#####				100

BA 12+ 80 tr/ac 12+ 68 tr/ac 8 inch+ = 101 BA trees 8inch+= 96 ave diam 8+inch trees 13 ave diameter 11.1