

Truro Subdivision

Counties Cumberland, Colchester

1968



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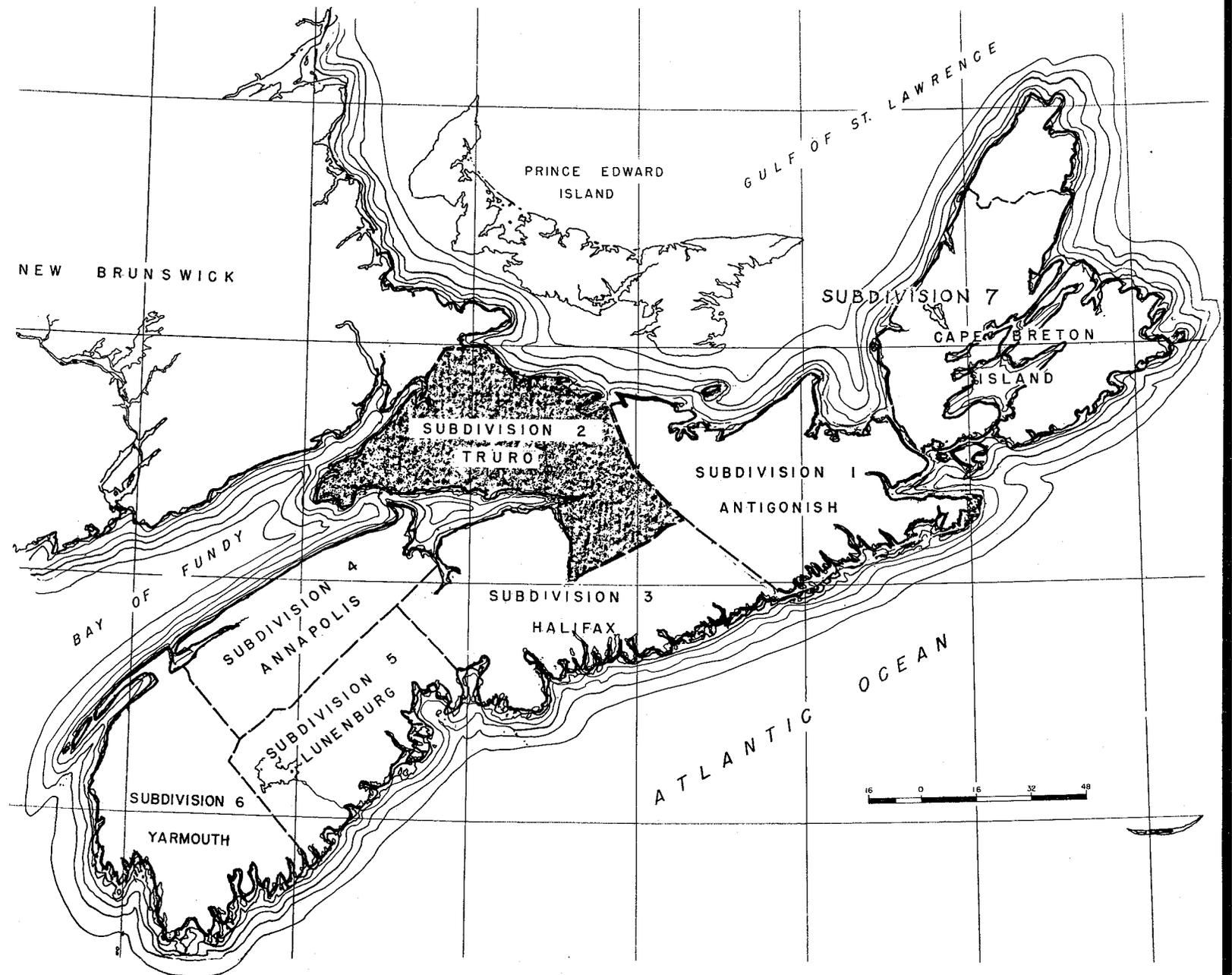
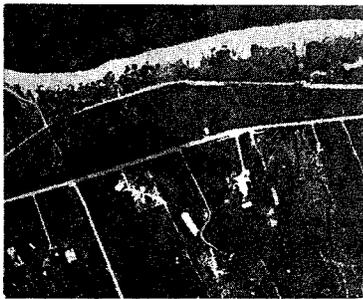
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EDITED AND PREPARED BY EXTENSION DIVISION

DEPARTMENT OF LANDS AND FORESTS
PROVINCE OF NOVA SCOTIA

Subdivision II : 1968

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Provincial Forest Inventory Subdivisions



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I Introduction

This is one in a series of seven reports on the current status of the forest resource of Nova Scotia. It presents data for a single subdivision of the provincial forest inventory which commenced in 1964-65. The seven inventory subdivisions, with their counties and municipalities, are shown at right.

These are the same subdivisions used in the 1953-1958 provincial forest inventory (Frontispiece). Each contains roughly one-seventh of the total area of the province. To complete the photography, fieldwork, mapping and compilations for one of these units takes approximately two years. But because all four work phases are proceeding simultaneously on several units, each subdivision takes the equivalent of one year to complete. Thus the inventory is to operate on a seven-year cycle of remeasurement, producing on the average one subdivision report a year, and a new report on each subdivision every seven years.

This regularity is one advantage of the continuing forest inventory system over methods used so far in Nova Scotia. Another advantage is that fresh data on growth and yield are obtainable at any time from a system of permanent plots being concurrently established throughout the province.

<u>Subdivision</u>	<u>Counties</u>	<u>Municipalities</u>
I Antigonish	1. Pictou 2. Antigonish 3. Guysborough	1. Pictou 2. Antigonish 3. St. Mary's 4. Guysborough
II Truro	1. Cumberland 2. Colchester	1. Cumberland 2. Colchester
III Halifax	1. Hants 2. Halifax	1. West Hants 2. East Hants 3. Halifax
IV Annapolis	1. Annapolis 2. Kings	1. Annapolis 2. Kings
V Lunenburg	1. Queens 2. Lunenburg	1. Queens 2. Lunenburg 3. Chester
VI Yarmouth	1. Digby 2. Yarmouth 3. Shelburne	1. Clare 2. Digby 3. Yarmouth 4. Argyle 5. Barrington 6. Shelburne
VII Cape Breton Island	1. Inverness 2. Victoria 3. Richmond 4. Cape Breton	1. Inverness 2. Victoria 3. Richmond 4. Cape Breton

The initial inventory cycle is due for completion in 1972 with the publication of the report on Subdivision VI, Yarmouth. By this time remeasurement of the early subdivisions is to have begun again for the second cycle.

II Background

TWO EARLY SURVEYS

The current series of reports constitutes the fourth description of Nova Scotia's forest resource published since 1800.

The first such report was prepared by Titus Smith as a result of his walking survey of 1801-02, which was sponsored by Lieutenant-Governor Wentworth of Nova Scotia.

The next, entitled Forest Conditions of Nova Scotia, was published in 1912. It was prepared by Dr. B. E. Fernow of the University of Toronto Forestry Faculty. He was hired to survey the resource after the lumbermen of western Nova Scotia pressed the government for such a step.

Dr. Fernow's survey was the first to collect the type of information which we might today expect from a forest inventory. His report included data on species distribution, standing volumes, growth rates and wood consumption. Accompanying these data were small-scale forest type maps. There was also an assessment of the regrowth on burned areas, and recommendations for action

to preserve and improve the resource.

All this information was collected from people who had an intimate association with the woods: lumbermen, woodlot owners, farmers, trappers and others. Considering how few of his conclusions were based on actual measurement, Fernow's report is truly a remarkable document.

THE 1958 INVENTORY

Some forty years passed before the province again took stock of its forests. With the passing of the Canada Forestry Act in 1952 by the Federal Government, money was provided on a 50:50 basis between the Federal and Provincial Governments to carry out another forest inventory. This survey was carried out between 1953 and 1957, and the results of the survey appeared in a book entitled The Forest Resources of Nova Scotia, published by the Department of Lands and Forests in 1958. It provided the first complete set of large-scale photographs and forest type maps. It also produced the most comprehensive information yet obtained on species, acreages and volumes.

THE 1965 INVENTORY

Although the present provincial inventory is the fourth assessment in Nova Scotia's history, it is the first to be carried out on a continuing basis. One of the recommendations arising out of the 1958 inventory was that such a continuing system be instituted to replace the intermittent type of survey. With the formation of the Voluntary Economic Planning Program a few years later, the Forestry Sector revived this recommendation and urged its prompt adoption.

Accordingly, in the winter of 1964-65 the Department of Lands and Forests convened a meeting of all foresters in Nova Scotia. Also invited were specialists from consulting firms, the Federal Department of Forestry, and the University of Maine.-- The proposal of a continuing forest inventory program for Nova Scotia was set before them, and won approval. Out of this meeting and previous discussions at various levels in the Department came a decision to adopt the system. A seven-year cycle of remeasurement was chosen.

Large-scale forest inventories are usually done by outside forestry consultants working under contract. The present survey is unusual in that, except for help from a forestry consultant in drawing up the original specifications, it is being carried out by Department personnel.

This arrangement has several advantages. One is that it allows Department specialists, who have easier access to the forests than would an outside agency, to check their work more frequently. Another advantage is that it provides employment for Nova Scotia rangers and other personnel. Most important, it produces a core of trained local technicians who are familiar with our forests, and who will become more so with time and experience. The Department can draw on this accumulated knowledge whenever necessary.

REASONS FOR A FOREST INVENTORY

In any well-run business, an annual stock-taking is necessary to determine the profit position. The forest resource must also be assessed from time to time. However, unlike the business inventory, which is a simple count of merchandise, the forest inventory

must measure a living, changing stock. This means that the information soon goes out of date. Taking inventory of the forest resource is further complicated by the need to consider varying levels of utilization in the woodmarket. For instance, a chemical pulp mill may use low-grade pulpwood of many species, while a veneer mill may use only high-quality logs of yellow birch and hard maple. Yet the data must be collected and compiled in such a way that both users can extract useful information.

The forest type maps and aerial photographs being produced from this inventory should benefit both public and private land managers in their efforts. They should prove useful in locating areas that require reforestation, harvest cutting, and forms of silviculture. They should also assist provincial fire fighters, owners wishing to locate roads, cruisers assessing smaller ownerships, and other resource managers.

Another unusual feature of the present inventory is that forest type maps for private forest lands are being produced. This is not done in most provincial inventories, except on a shared-cost basis with the owners. Ordinarily the landowner can obtain forest data, but no forest type maps. However, Nova Scotia's unusually high ratio of private woodland to Crown woodland (about 3:1) makes it necessary to produce such maps for both land classes.

Because this report is basically a summary, it omits much detailed information such as stock tables, volume estimates by forest types, and volumes for temporary sample plots. These and other data are however available at the Truro office of the Department of Lands

and Forests.

LIMITS OF INVENTORY DATA

It should be pointed out that the inventory was designed to give volumes on a municipality basis. Therefore, using the volume data for areas smaller than the 300,000 acres of a municipality falls outside the accuracy limits of the inventory, and may not give reliable volume estimates.

Applying the volume data to a smaller area would require supplementary field work on the part of the owner. The smaller the ownership, the more supplementary work would have to be done.

III Method

GENERAL

As mentioned before, the present inventory is using the same seven subdivisions employed in the 1958 provincial forest inventory. One subdivision consists of two to four counties. This size was chosen as a reasonable working unit on the basis of the work entailed in training, organizing and supervising the necessary staff.

For each subdivision, data will be presented by the subdivision and the municipalities. Information will also be given by four ownership classes: Federal Crown, Provincial Crown, private land of 1,000 acres or more, and private land under 1,000 acres.

To carry out such an inventory, it has been necessary to rely on the staff and facilities of various

agencies. These included the Department's Divisions of Forestry, Surveys and Mapping, and Extension; as well as the Province's Department of Mines, the Queen's Printer, and the Division of Administrative Services. The early stages required the use of computer facilities in Halifax, Toronto, Montreal and the University of Maine. This co-operative involvement is illustrated below:

Aerial photography	Done under contract to private firms
Specifications	Survey Division and Inventory Section
Checking photos	Survey Division and Inventory Section
Photo interpretation	Inventory Section
Establishment of Plots	Inventory Section
Mapping	Survey Division Inventory Section Department of Mines Private firm
Programming, data processing and compilations	Division of Administrative Services, and private firms (initially)
Report	Inventory Section Extension Division Queen's Printer

The inventory program calls for the random location of 300 to 600 temporary line plots for one subdivision each year. These plots are established at the rate of eight per map sheet, each sheet covering $7\frac{1}{2}$ minutes of latitude by $7\frac{1}{2}$ minutes of longitude. The plots run at right angles to the local watersheds, and are one mile long by 16.5 feet wide. The number required may be revised as the result of progressive determinations of

standard errors, provided this will improve accuracy without exceeding cost limits.

The desired accuracy calls for volume estimates on a municipality which come within ten per cent at a probability level of nine out of ten times. That is, if a particular number of sample plots was established ten times, the volume estimates would be within plus or minus ten per cent nine of the ten times; the tenth could range outside plus or minus 10 per cent.

SCHEDULE

The inventory can be divided into seven phases. In the general sequence in which they are performed, these are as listed at right:

Aerial photography
 Interpretation of photographs
 Establishment of temporary sample plots
 Establishment of permanent sample plots
 Mapping
 Processing of data
 Report

Because of the inherent complexity of an inventory program and the need to rely on various agencies and their facilities, a workschedule is of prime importance in meeting completion dates.

The schedule of completion dates developed for the present inventory is as shown in the table below.

Subdivision	Photography	Photo-Interpretation	Fieldwork	Compilations and Report	Mapping
Antigonish	1964	1965	1965	1968	1968
Lunenburg	1965	1966	1966	1968	1968
Halifax	1966	1967	1967	1968	1969
Truro	1967	1968	1968	1969	1970
Annapolis	1967	1969	1969	1970	1971
Cape Breton Island	1969	1970	1970	1971	1972
Yarmouth	1970	1971	1971	1972	1973

AERIAL PHOTOGRAPHY

Specifications for photography are generally based on the latest recommendations of the Federal Inter-Departmental Committee on Air Surveys. The scale is 1:15,840 (1 inch = 20 chains), with a permissible variation of plus or minus five per cent. Tilt is not to exceed 2.5 degrees; crab is not to exceed 3 degrees.

The flight lines run as nearly east and west as possible, with a maximum allowable departure of seven per cent of picture width. Forward overlap averages 60 per cent plus or minus 4 per cent; lateral overlap 20 per cent plus or minus 10 per cent. In the event of re-photography, the unsatisfactory lines or portions thereof shall be re-flown along the original lines of flight.

The specifications call for Cronor type 136 film on topographic safety base, or its equivalent or superior. This is black-and-white panchromatic film. Infrared (heat-sensitive) film was tried during the summer of 1964 in the Antigonish Subdivision, but the results were disappointing.

Kodak has developed a new type of printing paper, Kodak No. 1902, which is required in the specifications. Prints are supplied on this paper on request. It has a plastic texture and resists curling and moisture.

Photography of Subdivision I was done during spring and summer of 1964. The fall color-change period is ideal, but weather limitations make photographing in spring, and sometimes summer, necessary. Winter photography is avoided if possible.

Negatives of the Antigonish Subdivision are numbered by the contracting firm according to the system used by the National Air Photo Library. At the start of each film roll the following information is given: film roll number, line number, photo number, flight line direction, camera type and lens, day, month, year, altitude, and job number. Successive negatives on a film roll show only roll number and photo number except where a new flight line begins. Then the detailed annotations are made, omitting date and camera information. Each photograph was also marked on the back by Department personnel for filing purposes.

For the 1965 and subsequent photography the Department requested additional annotations on the negatives to show: the subdivision, amended flight line number, photo number, and day, month and year of the photography. This annotation always appears on the west edge of each negative and photograph. The flight lines are numbered consecutively from south to north commencing with line number one. The negatives and photographs are numbered consecutively from west to east along the flight line commencing with negative number one. These changes speed the orienting and filing of pictures.

As the photos are received they are inspected to see whether they meet the specifications.

Flight reports are kept on file in Halifax and Truro. Additional information can be supplied on request. Index maps are available from the Surveys and Mapping Division in Halifax.

The Department of Lands and Forests retains the rights and title to the negatives and other working materials. These negatives are stored at the National Air Photo Library in Ottawa, from which contact prints, enlargements, reductions and mosaics are available for a fee.

PHOTO-INTERPRETATION

Since only the central portion of each photograph is effective, the first step in interpretation is to mark off the net area to be classified. This is done by drawing the four midlines of the north, south, east, and west overlaps. The effective area so defined equals one-third to one-half the photo area.

Each prospective photo-interpreter must pass a Zeiss test for stereoscopic vision before being assigned to this project. With the aid of an Abrams height finder, a parallax wedge, an air-photo circular slide rule, and crown closure scales, the photo-interpreter proceeds to classify forest types.

Until the interpreter is proficient in this work, he is encouraged to check classifications frequently against actual ground types.

During the first winter, photo-interpretation was checked by the consultant. It is now being supervised by an experienced department specialist.

To achieve consistent interpretation in the Antigonish Subdivision, 20 to 30 pairs of photographs were selected, ground-checked and typed to illustrate typical forest types in the Subdivision. These stereograms, which were prepared by highly skilled photo-interpreters, acted as standards for classifying the variations

encountered in species composition, height, density, and site.

Further use of stereograms is therefore indicated. In time these can form a valuable reference library for succeeding projects.

On completion of field work, the typing is revised with new knowledge obtained from the plots themselves and from information recorded by the cruiser on his way to and from the plots.

Photo interpretation is not a science but a highly skilled art. The photo interpreter must have a knowledge of forest stands and their composition, and be able to relate this knowledge to photographic images in identifying forest stands. Pre-typing the photos, running field checks through the area, and then correcting from the field checks is the best way to become proficient in the work. This requires much study of the types under stereoscope in the field and in the office.

CLASSIFYING FOREST LAND

There are differences between classifying forest land on the photograph and on the ground. The ground classification is in two instances more detailed. Thus although only three crown closure classes are used in typing photographs, five are recognized in typing temporary and permanent sample plots. Similarly, the photo-interpreter uses three site classes, but the cruiser six. On the other hand, height classes and cover type classes are identical in both systems. Age classes apply only to field typing.

To illustrate these similarities and differences, all the definitions used by photo-interpreters and cruisers in classifying forest lands are compared below.

Cover Type Classes

Photograph	Field
Softwood (S) -- Less than 25% hardwood by volume	Same
Mixedwood (M) -- 26% to 74% hardwood by volume	Same
Hardwood (H) -- More than 75% hardwood by volume	Same

These cover types are separated on the basis of relative volume indications, except in stands of regeneration age, where relative stocking is used. In young stands a combination of relative volume and stocking is used.

Crown Closure Classes

Photograph	Field
(Crown Closure Classes)	(Stand Density Classes)
1. Up to 40% crown closure	1. Up to 40% density
2. 41% to 60% crown closure	2. 41% to 60% density
	3. 61% to 80% density
3. 61% to 100% crown closure	4. 81% to 100% density
	5. Overstocked

Here the photo classes are separated using crown closure aids. The field classes employ the Nova Scotia Site

Quality Normal Yield Tables for Softwoods (normal density concept), which make use of basal area. Hence the two extra field classes.

Height Classes

Photograph	Field
A. Up to 15 feet	Same
B. 16 feet to 30 feet	Same
C. 31 feet to 50 feet	Same
D. 51 feet and over	Same
E. Uneven heights, non-classifiable	Same

Age Classes

Photograph	Field
Not classified	A. Up to 20 years
	B. 21 to 40 years
	C. 41 to 60 years
	D. 61 to 80 years
	E. 81 to 100 years
	F. Over 100 years
	UA. Unevenaged

Age classes are not classified on the photographs because it is very difficult to do so accurately. An attempt to do this on the Antigonish Subdivision gave interpretations which were only about 60 per cent correct. Consequently age classes do not appear on the maps, and age classification has been discontinued from the photo-interpretation programme.

Site Classes

<u>Photograph</u>	<u>Field</u>
III Good or above average	I
	II
	III
IV Average	Same
V Poor or below average	V
	VI

Site quality is determined in the field on the basis of the height-age relationships of dominant and co-dominant trees. That is, the heights of the taller trees at given ages provide a measure of the tree-growing capacity of the site. Height-age curves constructed from the Nova Scotia Site Quality Normal Yield Tables for Softwoods are used for this.

Recent Burn

<u>Photograph</u>	<u>Field</u>
A single class for burns occurring within last 10 years; denoted by symbol (++)	Same

Recent Clearcut

<u>Photograph</u>	<u>Field</u>
A single class for clearcuts occurring within last 10 years; denoted by symbol CC	Same

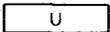
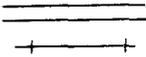
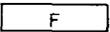
These are the categories used in classifying forest land. Map symbols denoting these categories or classes are used to distinguish the types so classified. For example, the multiple symbol S2C distinguishes a softwood type containing less than 25 per cent hardwood by volume, having a crown closure of from 41 to 60 per cent with heights of 31 to 50 feet, and growing on an average site of IV. Because of the prevalence of site class IV, stands in this category are not so indicated in the map symbols. All other site classes are designated. (E.g. a similar stand on a site class II would be identified by the symbol S2CIII).

The minimum size of forest type in this classification is three acres; any type smaller than this is merged with an adjacent type.

CLASSIFYING NON-FOREST LAND

Non-forest land is that which, because of present usage, past burns, drainage conditions, exposure, or lack of soil, are not likely to become productive forest land. It is classified the same on photographs and in the field. The classification and map symbols are as follows:

Bog and Open Muskeg	
Treed Bog or Muskeg	
Alders and Brush	
Rock Barren	
Agricultural and Marsh Land	

Urban	
Roads and Railroads	
Transmission Lines	 
Water Flowage	
Tidal Flats	

FIELD WORK

Temporary Sample Plots

For better statistical analysis of volume data, the plots were located on a random basis. As the controlling block for this procedure, map sheets from the Crown Land Forestry Series (7½ minutes latitude by 7½ minutes longitude: about 32,000 acres) were used.

The maximum number of plots per full map sheet at first was set at 10. The ideal system would be to employ as many plots as would be required to provide accurate estimates for every ownership on each map sheet. But, because of limitations imposed by economy, time and weather, this is impractical in a province-wide inventory. Therefore the number of temporary sample plots per map sheet was reduced to eight.

Before the start of fieldwork each spring, the temporary plots must be located and plotted. To fix the starting points of plots, a transparent dot grid having numbered coordinates is used in conjunction with a table of random numbers. For each map sheet, numbers

are selected from the table and translated into latitude and longitude references. The locations so defined are then examined for their suitability as starting points. To be suitable, a location must lie within the boundary of that map and permit the running of a one-mile strip in some direction without encountering salt water or leaving the subdivision. Locations not satisfying those requirements are eliminated. The first eight suitable points on any given sheet determine the starting points of the eight sample plots for that map.

Once these points are settled, the course of each plot is determined. The guide here is that the plot strips should wherever possible cross the main trend of drainage. This minimizes bias. Magnetic bearings are used. Proceeding clockwise, the cardinal directions are considered first. If none of the four yields a suitable line, 45-degree offsets are next investigated. This procedure is repeated around the azimuth circle until a satisfactory course is found.

When a course for the eight points on each map sheet has been selected, the sample plots are located on a base map and on the aerial photographs. Also located on these maps and photos are the boundaries of land ownerships in the area. These are plotted as accurately as possible from the latest known information.

The dimensions of each line plot are one mile long by 16.5 feet wide (two acres). The forest types and other land classification traversed by this strip are recorded to the nearest one-tenth chain. A separate sheet is used for each forest and non-forest class encountered.

Along each strip all living trees in the four-inch DBH class and greater are calipered for diameter, and recorded by species and diameter class on tally sheets. At five points along each strip (0, 20, 40, 60, 80 chains) detailed measurements are made on three selected sample trees.

Selecting these trees is done on the basis of the three nearest trees of commercial species and merchantable size. The following data are recorded for each: species, DBH, crown class, tree condition class, total height, merchantable height, actual age, projected age, top merchantable diameter outside bark, and stump height. Where no suitable trees occur within the strip, outside samples may be measured.

Diameters are measured outside bark with a diameter tape, and recorded to the nearest tenth-inch class.

Crown class is decided on the basis of four classes defined in Forest Terminology of the Society of American Foresters: dominant, codominant, intermediate, and suppressed. For a detailed description of each class, see section IV.

Tree condition classes are assessed according to whether trees are normal, or show excessive crook, excessive rot, and seams or scars.

Heights are measured with a cloth tape and Spiegel Relaskop and recorded to the nearest one-foot class. Merchantable height is determined on the basis of form, branching, visible defects, or a four-inch top diameter outside bark.

Tree ages are found by means of increment borings made

at breast height (4.5 feet above ground level). Actual age is estimated by adding 10 years to this age. Where initial suppression results in an abnormally high age count, a correction is made by projecting for rings of normal (free-growing) width in place of the narrow rings to arrive at a normal age.

The sample tree data are used to indicate the proper volume tables and formulae to use in calculating tree and plot volumes.

Four ownership classes are recorded, as follows:

Crown land (provincial)

Ownerships of 1,000 acres and more

Ownerships under 1,000 acres

Military reservations and parks (Federal)

The cruiser, party chief and forester are responsible for editing the sheets to ensure that they are properly completed and that fieldwork is satisfactory.

PERMANENT SAMPLE PLOTS

An important part of the inventory program is the establishment of approximately 1,750 permanent sample plots between 1965 and 1971. Unlike the temporary plots, which are employed to give volume estimates at a given point in time and then abandoned, these permanent plots are designed for repeated measurement on a province-wide basis.

The acreages and volumes given in this report are obtained from temporary sample plots. These figures represent the net result, up to the time of measurement, of all the factors which added or subtracted wood during the life of the stands sampled. On the credit side, growth added volume. On the debit side, the factors of cutting, disease, insects, animals, storms and overcrowding subtracted volume. What the temporary plots reveal is the net result of this interplay to a given date. They give a static picture.

But because of the continuous interaction of growth and drain, this picture goes rapidly out of date. Therefore information on growth and drain and yield must be obtained on a continuing basis. In a sense the temporary plots do this--every seven years. Their data, however, comes each time from different trees and different areas, due to the random nature of the sampling. So a separate but complementary system is needed.

Permanent sample plots fill this need. They are established at random, accurately located on maps, and can be recognized in the field by blue paint markings and a metal centre post.

On each plot all living trees 3.6 inches and larger at breast height are marked at the 4.5-foot level and numbered with blue paint. These identification marks permit later re-measurements to be made on the same trees and ensure that diameter will be taped at the same level every time. A truer comparison of growth can thus be made. As an extra precaution, a metal number tag is nailed to the base of each tree.

Once the trees have been numbered and marked, detailed measurements begin. The data collected are essentially the same as those collected for the sample trees on temporary plots. However, age is not ascertained for each tree, but only for enough trees to show average age--or the range of ages, as the case may be.

Trees in the one-inch to three-inch diameter classes are not numbered, but are tallied to the nearest one-inch class. This tally provides valuable information on patterns of mortality and ingrowth in the smaller diameter classes.

Each permanent sample plot is to be re-measured five years after its establishment, and every five years thereafter. Thus a cyclic pattern of re-measurement is to apply. No general assessment of the growth and yield information so obtained is contemplated until the first cycle of re-measurement has been completed, about 1971. However, the plot information will be compiled, and volume summaries will be available at the Inventory Section office in Truro.

The permanent sample plots are being established randomly on all ownerships. All landowners are urged to treat these plots as they would any of their other forest holdings. That is, if plans call for logging a stand in which a plot is located, the plot area should be cut as well. If this impartiality is not observed, the estimates will be biased.

MAPPING

The objective is to produce forest type maps of the whole province for distribution on request. These will be available in three scales: one inch to twenty chains, one inch to forty chains and one inch to eighty chains. This requires 500 to 600 maps in each case, the smaller scales being on smaller sheets for easier handling.

The making of these maps entails many steps. These reduce to three main ones: preparing a special base map negative of one inch to twenty chains from the latest topographic and tenure information, transferring to this negative the forest types obtained from aerial photographs, and eventually producing a positive print showing all this information plus a legend.

At this point, negatives for the two smaller scales are made by photographic reduction from the original. These yield two scaled-down positives of the original positive. The three positives are then used to produce white prints in the three scales.

Careful editing is essential at each stage of mapping to ensure that all information is accurate, that type lines match between adjacent sheets, and that presentation is consistent throughout.

PROCESSING AND COMPILING DATA

Compiling acreages, volumes, volume tables and reports used to be one of the slowest parts of an inventory program. It was more time-consuming than the fieldwork. But in recent years a reversal has been taking place.

Mechanical tabulation is steadily shortening the office work. Computers are being used to make necessary compilations, to print out tables, and to store information. These steps are now being done at fantastic speeds compared to previous standards. Data, recorded and stored on tapes, can be instantly recalled. This technique replaces the slower method of having the machine scan every card in order to locate data of current interest.

PROGRAMMING THE COMPUTER

To use these techniques, every detail of the reporting and compiling process must be programmed into "computer language". This requires that the programmer be completely informed.

The key punch operator can then punch onto cards the tally sheet information obtained from the temporary plots. One card receives the tally information, another the sample tree data, and a third miscellaneous information. All three are identified by the subdivision, county, municipality, ownership, plot number, forest and land classification, and so on. Editing follows, and any incorrectly recorded data is queried and rejected by the computer. Corrections are made where necessary. The cards are then ready for the extraction of desired information. Following a set of instructions, the computer proceeds to run the programs, as follows:

1. The sample tree programme is used to provide summaries of individual tree data, which in turn provide the basic information for preparing local volume tables. The print-out of these data is by species groups. It gives the number of trees in each diameter class (DBH), as well as average values for DBH, total height, merchantable height, stump height, merchantable top diameter

outside bark, and for actual and projected ages.

These data are presented for the following species groups:

1. White spruce
2. Red spruce, black spruce, larch, Jack pine
3. Balsam fir
4. Hemlock and cedar
5. White pine, red pine, scotch pine
6. Sugar maple, red maple, white birch, yellow birch, grey birch, elm, white ash, black ash, cherry, beech, others
7. Aspen, balsam poplar.

2. From the sample plot data, the acreages of the various forested and non-forested categories are next obtained. The procedure here is to total the sampled area for each land class, find the proportion which each land class occupies of the total area sampled, and apply this proportion at the municipality level by using the land and water acreages given for each municipality in the 1955 inventory.

For example, if it were found in a certain municipality that the total sample area for roads was 200 acres out of a total sample of 1,000 acres for all land classes, then the area occupied by roads would be calculated as being 200/1000 times the total area of that municipality as given in the 1955 inventory.

3. Volume summaries are obtained.

Published data, consisting of gross and gross merchantable cubic foot volumes are listed in section VIII.

Non-published data, as outlined below, are available from the Inventory Section, Truro, Nova Scotia.

- (a) Volume summaries are listed by line number for all forest (field) types.
- (b) Volume summaries are listed by line number for all like forest (photo) types.
- (c) Volume summaries are listed by municipality for all like forest (photo) types.
- (d) Modified stock tables are produced for each forest (photo) type in a municipality.
- (e) Tabulations are made of the results of the statistical analysis for each forest (photo) type and county.

AREA AND VOLUME ESTIMATES

Two groups of tables are compiled for the subdivision and each municipality therein: (a) area summaries, and (b) volume estimates in cubic feet. These tables appear in section VIII.

IV Summary of Findings

This section presents the main findings of the present inventory in Subdivision II, and compares them with those of the 1955 forest inventory in the same subdivision, on the basis of area and volume.

FOREST CONDITIONS IN THE SUBDIVISION: 1968

SITE

Site evaluation is a complex problem involving species, drainage, fertility, exposure, climate, and so on. Although six classes are recognized in the inventory, on the photographs these were reduced to three groups: Site Quality IV (the most common site), those better than Site Quality IV (i.e; I, II, III), and those poorer than Site Quality IV, (i.e; V, VI). It should be noted that in selecting sample trees for site evaluation no attempt is made to use the superior trees; the basis is rather the three nearest dominant or co-dominant trees at each sampling point.

Approximately 88 per cent of the forest area of the subdivision is in Site Quality IV. The poorer site qualities comprise 4.0 per cent of the forest area, and the better site qualities 8.0 per cent.

DENSITY

Stand density is a measure of the degree to which an area is occupied by trees. In field classification the reference point is "normal density" as given in the Nova Scotia Site Quality Normal Yield Tables for Soft-

woods. These tables employ the basal area concept, which refers to the aggregate area of wood surface in square feet per acre at breast height of all trees in the two-inch class (in this case) and larger.

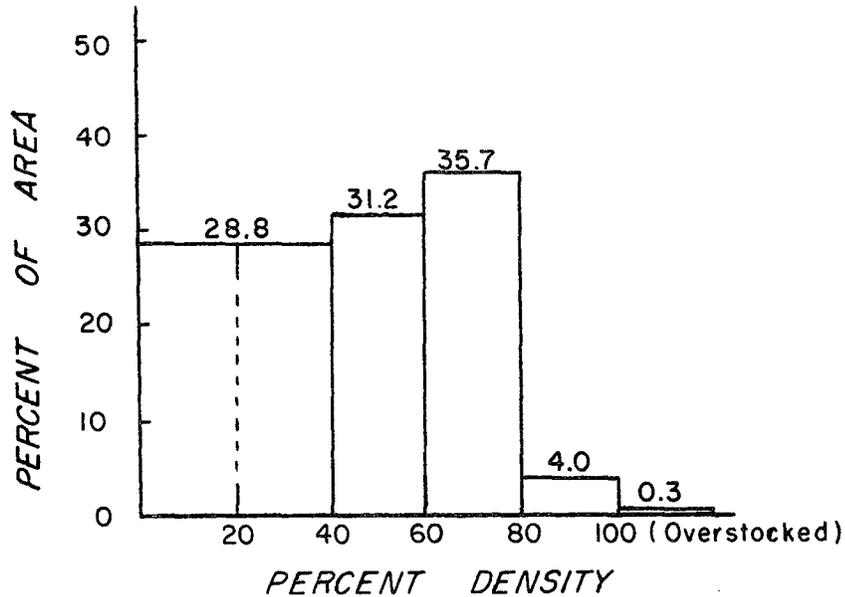
Normal density in a stand of given age-class and site quality is defined in the tables as that basal area which obtains when the site is fully occupied by trees. For convenience, basal area is usually measured by counting trees with an angle gauge designed to relate DBH and per-acre density. Density is expressed as a percentage above (overstocked) or below (understocked) the normal, which is designated as 100 per cent.

Since basal area cannot be determined from the photographs, another measure must be used to relate field classifications of density to photo classifications. Crown closure serves this purpose. (The relationship between Crown Closure Classes and Stand Density Classes in this inventory is shown on page eight.)

Using crown closure scales, the photo-interpreter determines the proportion of the type area covered by a downward projection of the crowns, and expresses this as a percentage of full coverage. The stand can then be assigned to one of three Crown Closure Classes.

Chart I on page 16 shows the pattern of stand density in the subdivision. It should be noted that because of a long history of man-made and natural disturbances, our wild stands are very clumpy in nature. A density classification can describe such stands in approximate terms only.

CHART I: PER CENT AREA BY DENSITY CLASSES,
TRURO SUBDIVISION, 1968



Forested Area 1,615,060 Acres.

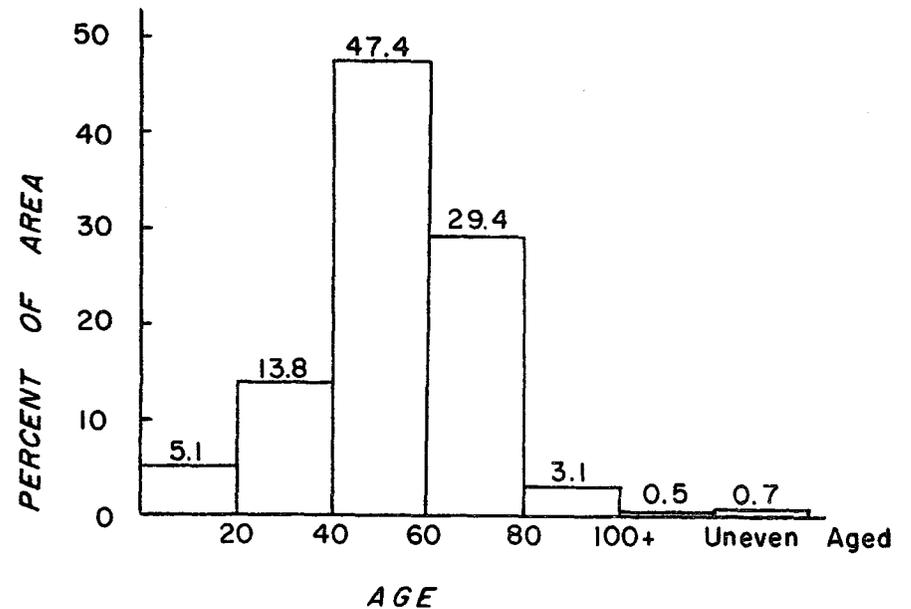
AGE

There are six 20-year age classes and one unevenaged class. To prevent the latter from being used as a catch-all for doubtful cases, cruisers are asked to use it only as a last resort. That is, wherever possible every stand must be assigned to a definite age class. This helps ensure that stands classified

as unevenaged are truly so.

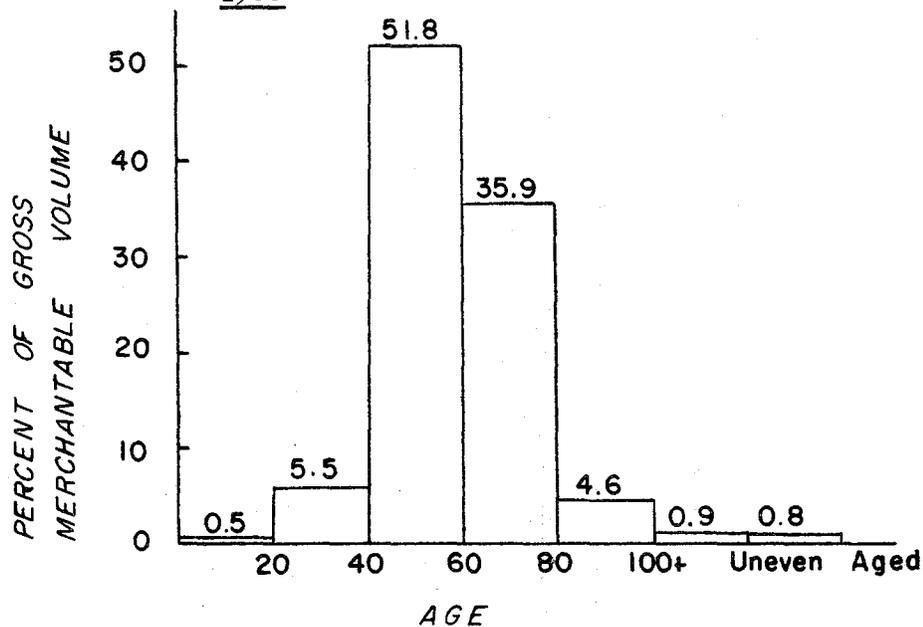
The distribution of age classes by area and gross merchantable volume in the subdivision are shown in Chart II below, and Chart III on page 17.

CHART II: PER CENT OF AREA BY AGE CLASSES,
TRURO SUBDIVISION, 1968



Forested Area 1,615,060 Acres.

CHART III: PER CENT OF GROSS MERCHANTABLE VOLUME BY AGE CLASSES, TRURO SUBDIVISION, 1968



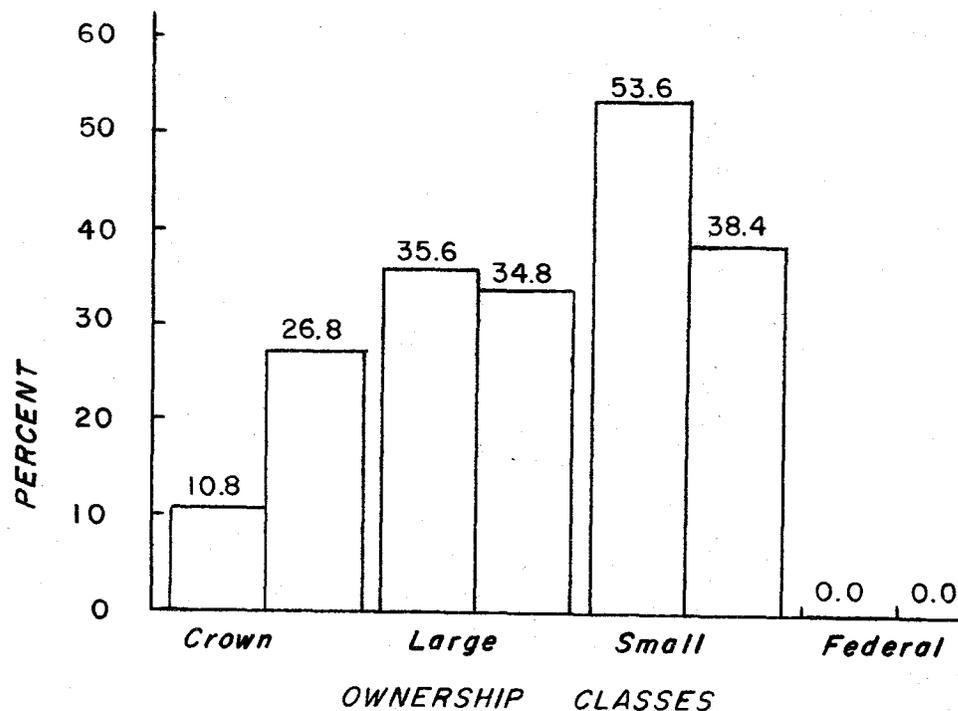
Gross Merch. Vol. 1,386,130,000 Cubic Feet

OWNERSHIP

Data for the present inventory were compiled using ownerships as one of the major groupings. Ownerships were divided into four classes: Small private holdings (less than 1,000 acres), large private holdings (1,000 acres and larger), Crown (Provincial), and Crown (Federal) holdings. These ownerships were plotted in the spring of 1968 from the best available information. The likelihood of tenure changes since then should be borne in mind.

The relationships between ownerships, area, age class, and gross merchantable volume (cu. ft.) in the subdivision are shown in Charts IV, V and VI.

CHART IV: PER CENT OF AREA AND GROSS MERCHANTABLE VOLUME BY OWNERSHIP CLASSES, TRURO SUBDIVISION, 1968



Total Forested Area 1,615,060 Acres

Gross Merch. Vol. 1,386,130,000 Cubic Feet.

CHART V: PER CENT OF FORESTED AREA BY AGE CLASS AND OWNERSHIP CLASS, TRURO SUBDIVISION, 1968

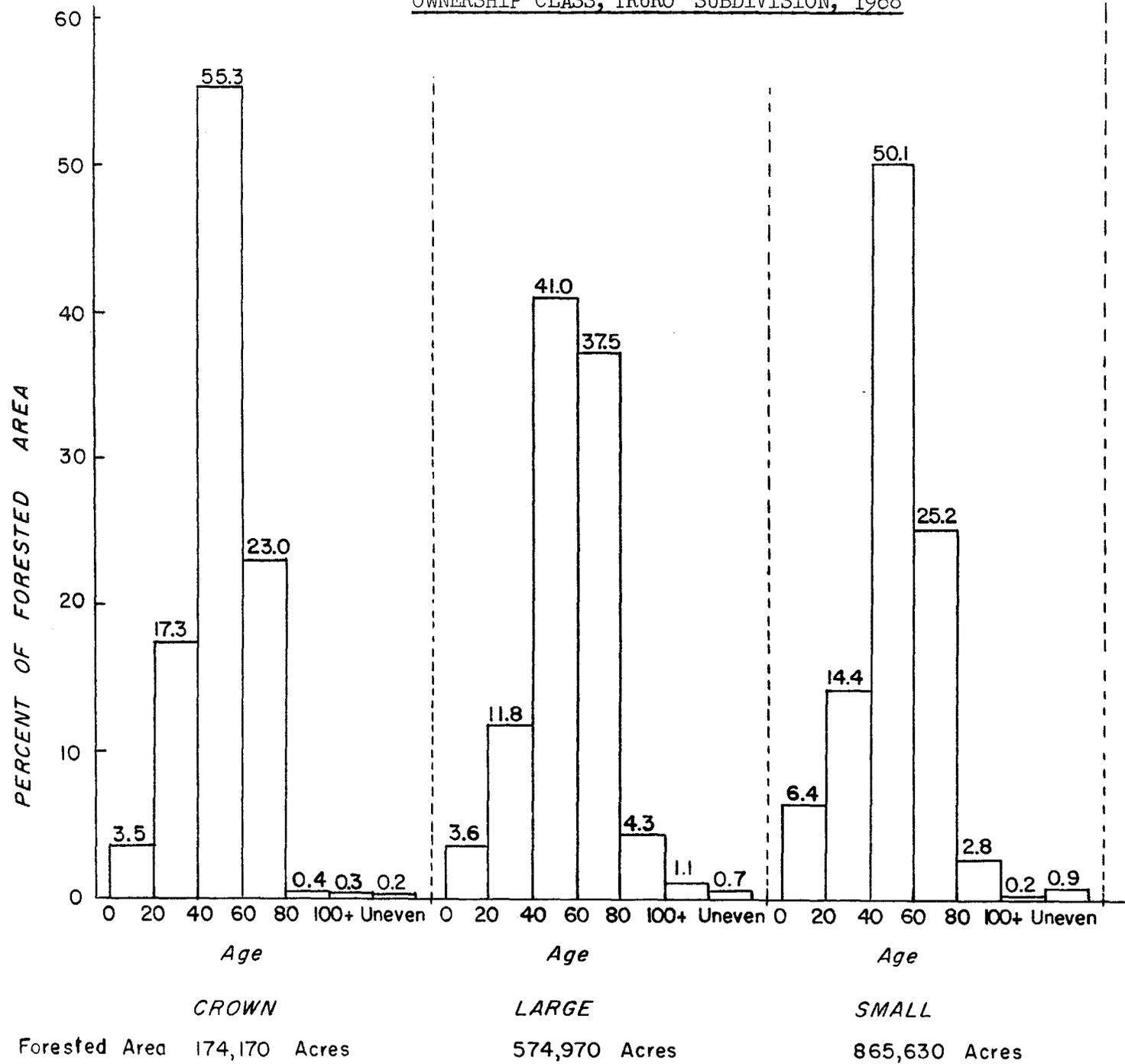
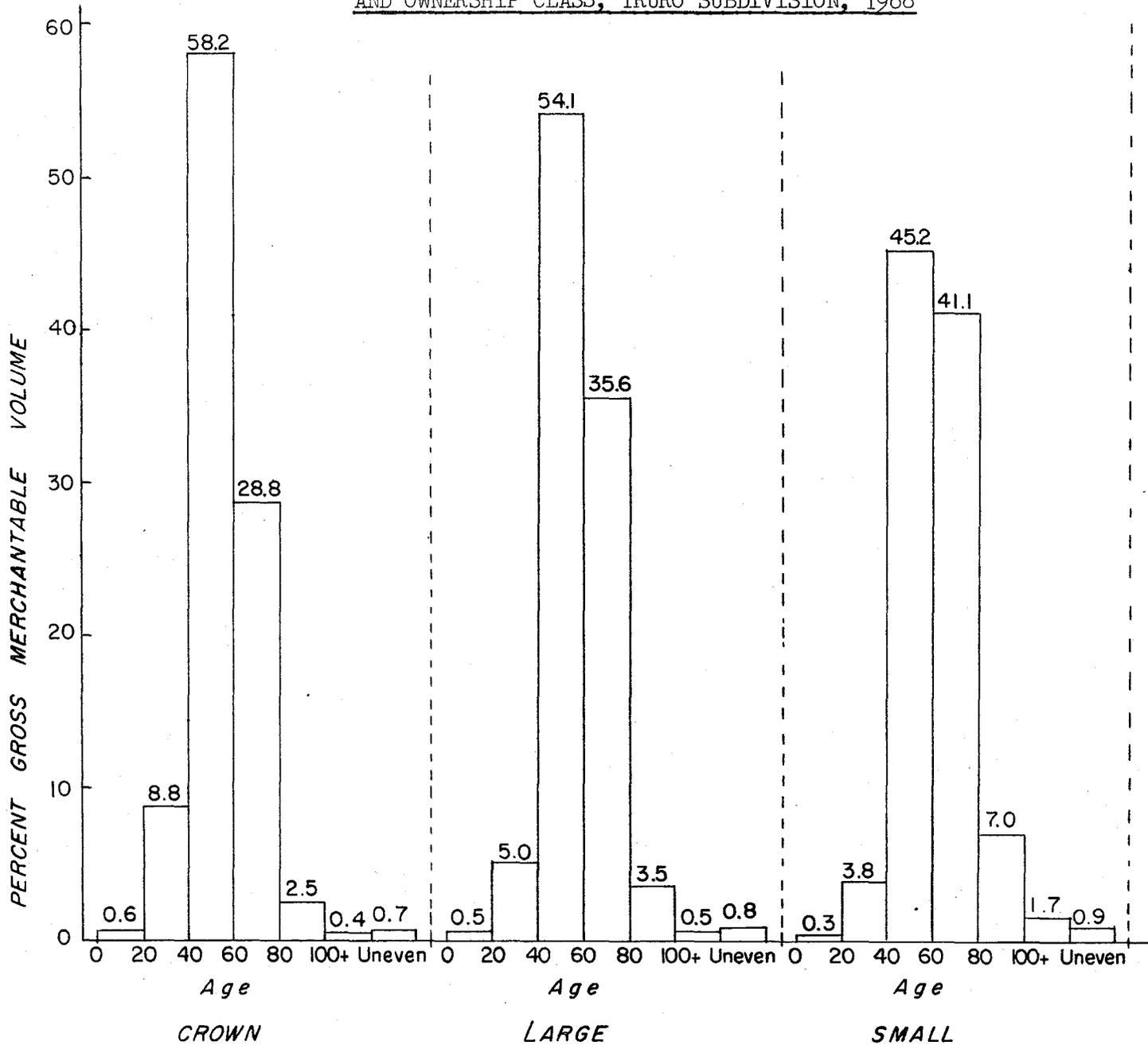


CHART VI: PER CENT OF GROSS MERCHANTABLE VOLUME BY AGE CLASS AND OWNERSHIP CLASS, TRURO SUBDIVISION, 1968



Gross Merch. Vol.
Cubic Feet: 120,311,000

557,747,000

708,071,000

TREE CONDITION

The inventory specifications call for information on four tree condition classes: "Normal", "Excessive Crook", "Excessive Rot, Seams and Scars", and "Excessive Limbiness". These classes are based strictly on visible defects, and are defined as follows:

1. Excessive Crook: Includes trees which are difficult to measure for merchantable length. These would be doubtful trees for use as pulpwood due to crook and difficulty in cutting.
2. Excessive Limbs: Includes trees, generally hardwoods and open-grown white spruce, which are difficult to measure for merchantable length, and which are suitable for pulpwood only.
3. Excessive Rot, Seams, and Scars: Includes trees having 10 per cent or more of merchantable length unusable because of rot, seams and scars.
4. Normal: Includes trees that do not fall in any of the first three classes. Where a tree classifies in more than one of the first three condition classes, the cruiser notes on the tally sheet the most evident condition.

The data are expressed as percentages of a total of 5,154 sample trees for the subdivision. Depending on the species group, the "Normal" tree condition class ranged from 64 to 93 per cent of the sample trees. The other three classes made up a relatively small proportion of the total. In most species groups, any single class other than Normal did not exceed five per cent. Regarding Class 3, (Excessive rot, seams and scars), the exceptions occurred in hemlock (11 per cent) pines (16

per cent), fir (22 per cent), and spruce (11 per cent). Another exception occurs in Class 1 (Excessive crook) with respect to pine (18 per cent). Hardwood also showed a high incidence of rot, seams and scars (24 per cent).

Concerning the hardwoods, it should be noted that the basis of comparison for tree condition in this inventory was not central Canada hardwoods, but Nova Scotia hardwoods. Because of the prevalence of limbiness, top damage and over-maturity in those hardwoods, their use as standards tends to give a higher assessment of quality than if central Canada standards were used.

CROWN CLASSES

Crown classes of sample trees were tallied as dominant, co-dominant, intermediate or suppressed, as follows:

1. Dominant: Trees with crowns extending above the general canopy level; receiving full light from above and partial light from the sides; larger than the average trees for the stand, with crowns well developed but possibly somewhat crowded on the sides.
2. Co-dominant: Trees with crowns forming the general canopy level; receiving full light from above but comparatively little from the sides; with the crowns usually medium-sized and more or less crowded on the sides.
3. Intermediate: Trees shorter than those in the preceding classes, but forming part of the same canopy level; receiving little direct light from above and none from the sides; with the crown usually small and considered crowded on the sides.

4. Suppressed: Trees with crowns entirely below the general canopy level, and receiving no direct light either from above or from the sides.

The results of this tally are shown in Table A below.

TABLE A: PER CENT OF SAMPLE TREES BY CROWN CLASS AND SPECIES GROUP, TRURO SUBDIVISION, 1968

SPECIES GROUP	C R O W N C L A S S E S			
	Dominant	Codominant	Intermediate	Suppressed
White Spruce	21	48	30	1
Red, Black Spruce	24	44	27	5
Fir	15	37	38	10
Hemlock, Cedar	10	48	32	10
White, Red Pine	35	43	16	6
Hardwood (Other than Aspen)	18	53	26	3
Aspen	38	59	3	-

VOLUME

Present volume estimates at the gross merchantable level for the subdivision are shown in Table B opposite. They are expressed four ways: as cubic feet, as cords of eight-foot rough (unbarked) pulpwood, as cords of four-

foot rough pulpwood, and as board feet. The estimates are therefore independent interpretations of the same basic volume. Each column represents a complete and separate picture of the growing stock in the subdivision, expressed in a single unit of measure. The reader is asked to note that the gross merchantable volumes here given make no cull deduction whatsoever, and are based on the assumption that all areas are operable and accessible. Conversion factors are given below the table.

TABLE B: ESTIMATE OF GROSS MERCHANTABLE VOLUME AS EQUIVALENT CUBIC FEET, OR ROUGH CORDS, OR BOARD FEET: TRURO SUBDIVISION, 1968
(All values in thousands)

	GROSS MERCH. CUBIC FEET	EIGHT-FOOT ROUGH CORDS ⁽¹⁾	FOUR-FOOT ROUGH CORDS ⁽²⁾	BOARD FEET ⁽³⁾
SOFTWOODS	995,300	12,800	11,700	4,127,000
HARDWOODS	390,800	5,000	4,600	1,643,000
TOTALS	1,386,100	17,800	16,300	5,770,000

(1) Conversion factor 78 cu. ft. = one cord

(2) Conversion factor 85 cu. ft. = one cord

(3) Conversion factor 176 cu.ft. = 1,000 fbm of sawn product, using trees 6.6 inches DBH and larger to 4-inch minimum top diameter.

The above volumes are based on certain specifications. Merchantable length or height is defined as that part of a tree which would normally be usable at a pulpwood level of utilization. Softwoods will generally be merchantable to the four-inch top diameter (outside bark)

class, with the limiting factor generally being broken tops. Hardwoods on the other hand often display poor form due to excessive limbs and crooks. Hardwoods are normally taken to the four-inch top diameter (outside bark) class, or to the point where most of the larger limbs begin. It is acceptable to have one limb below either of these points, provided the limb is under five inches in diameter where it emerges from the trunk.

Trees which are so crooked as to make piling and scaling as four-foot bolts difficult are not considered merchantable. The minimum merchantable length is four feet above stump height. Trees which branch into distinct boles within four feet of stump height are measured as separate trees and classified as such.

The standard for classifying hardwoods in this inventory is based on the type of trees growing in Nova Scotia. This fact should be borne in mind when attempting to relate the hardwood data contained herein to similar data from elsewhere.

COMPARISONS: 1966 AND 1956

A fundamental purpose in obtaining new forest inventory data is to compare it with previous data in order to investigate trends and to formulate policy. Comparisons can best be made when data are available from a long series of measurements made at regular intervals and under standard specifications. Unfortunately, forest data in Nova Scotia have not been so collected in the past. The present inventory system will gradually improve this situation. Comparisons will thus become more significant with time. Some area and volume comparisons between the two inventories follow.

AREA

TABLE C: LAND CLASSES AS A PER CENT OF TOTAL SUBDIVISION AREA, 1968 AND 1955, TRURO SUBDIVISION

<u>Land Class</u>	<u>1968</u>	<u>1955</u>	<u>Difference</u>
Forested			
Softwood	39.6	31.4	+8.3
Mixed Wood	24.6	37.9	-13.3
Hardwood	17.4	8.2	+ 9.2
Other Forested		1.3	- 1.3
Subtotal	81.6	78.8	+ 2.9
Non-Forested			
Agriculture & Urban	10.7	16.0	- 5.3
Other non-forested	7.7	5.2	+ 2.4
Subtotal	18.4	21.2	- 2.9
Total	100.0	100.0	00.0

NOTE: "Other Forested" in the 1955 inventory includes depleted forests (recent burns and clear-cuts); in the 1968 inventory it includes plantations, recent burns, and clear-cuts. "Other Non-Forested" in 1955 and 1968 include all non-forest areas (except agriculture and urban): swamps, water, bogs, etc. Cleared rights-of-way were not classified in 1955.

In Table C a change in the distribution of land classes is evident. Several things can account for this. One is variations in sampling, which are largely unavoidable. Another is the finer degree of typing called for in the 1966 specifications. To achieve this, field observations became the primary means for classification, instead of photo-interpretation alone, as in 1956. Because field typing in conjunction with photo-typing allows greater precision than photo-typing alone, some of the land previously classed as "Non-Forested" is now being classed as "Forested". This results in more accurate estimation of cover types.

A case in point is the apparent decrease of farmland and waste lands shown by the current data. This decrease is partly explained by the fact that wherever the 1966 field observations showed signs of such lands growing in, they were classified as "Forested". Close typing of this kind was not possible in the 1956 survey, because at that time much of the regeneration did not show on the photographs.

There is also some real decrease in agricultural land in the Subdivision due to the invasion of abandoned fields by regeneration. It might be noted that this regeneration is mostly softwood.

Each of the forest cover types above were further grouped into forest types, using cover, height, age, density and site. These forest types are of two kinds: photo types and ground types. Basically, the ground types are more detailed than the photo types. The differences are detailed in Section III.

Three of the most commonly occurring photo-types, representing 47% of the forest area of the subdivision, are:

- (a) Softwood cover of 41% to 60% density, 31 to 50 feet tall, average age 57, Site Quality IV.
- (b) Mixed Wood cover of 41% to 60% density, 31 to 50 feet tall, average age 58, Site Quality IV.
- (c) Hardwood cover of 41% to 60% density, 31 to 50 feet tall, average age 55, Site Quality IV.

In all there were 74 forest photo-types sampled in the subdivision. Of the total sampled area, 32 types comprised 85 percent, and six types made up 66 percent.

Unfortunately, these forest categories cannot be effectively compared with those of the 1955 inventory, because the limits of the components which define them are different--in fact, they overlap.

VOLUME

When comparing volume estimates of the two inventories, only gross volume (cubic feet) can be used. This is because of differences in specifications, in the tables used, and in method. Actually, there are fewer pitfalls in comparing at this level than at any other.

The gross volume in 1956 was defined as the solid cubic foot content of all trees of 3.6 inches DBH and larger, and included the volume in the stems only from an average stump height of one foot to the tips of the trees, including bark.

The gross volume in 1968 includes the cubic foot volume of solid wood contained in all trees of 3.6 inches DBH and larger in the stems only from ground level to the tips of the trees, excluding bark.

If the two inventories are directly compared, we see that there is a 4.8% decrease from the 1955 gross volume. Differences in method, especially regarding volume tables and their application, are at least partly responsible for this.

In order to make such comparisons, then, allowances must be made for differences in specifications and method. The assumption is therefore made that bark volume equals stump volume. Concerning method, tests were conducted to determine what effects different approaches might have had on the resultant volume estimates in both inventories.

Four aspects were investigated: use of different volume tables, different methods of entering volume tables, different methods of applying volume tables, and differences in sample tree specifications.

The investigation showed that the 1955 gross cubic foot volumes should be reduced by 10% for softwoods and 20% for hardwoods in order to make valid comparisons with 1968 data possible.

The causes of these differences were also established. Half the discrepancy in hardwood volumes was traced to the use of softwood volume tables in 1956--there being no suitable local hardwood tables then. The other half was due to differences in sample tree specifications, and in the use of the Tables. The latter factors applied equally to softwoods and hardwoods.

Using these adjustments, and assuming bark and stump volume to be equal, the following volume comparisons between 1968 and 1955 are made for the subdivision.

TABLE D: PERCENT DIFFERENCE IN GROSS CUBIC FOOT VOLUMES BETWEEN 1968 AND 1955* INVENTORIES BY COUNTY, TRURO SUBDIVISION (BASE: 1955)

	Cumberland	Colchester	Subdivision
Softwood	+18.30	+1.49	+ 8.64
Hardwood	- 0.74	+1.18	+ 1.36
Total	+17.55	+2.68	+10.00

* Adjusted (a) minus 10% for softwoods,
(b) minus 20% for hardwoods.

TABLE E: PER CENT DIFFERENCE IN GROSS CUBIC FOOT VOLUME BY SPECIES BETWEEN 1968 AND 1955 INVENTORIES, USING 1955* ADJUSTED GROSS VOLUME AS THE BASIS OF COMPARISON: TRURO SUBDIVISION.

SPECIES	PERCENT DIFFERENCE
White Spruce	+ 5.9
Red, Black Spruce	+28.8
Fir	+ 1.3
Other Softwoods	+10.1
TOTAL SOFTWOODS	+14.5
Sugar Maple	-24.0
Red Maple	+69.5
Yellow Birch	-16.9
White Birch	- 1.7
Other Hardwoods	-12.2
TOTAL HARDWOODS	+ 0.7
TOTAL	+10.0

*Adjusted minus 10% for softwoods and minus 20% for hardwoods.

TABLE F: COMPARISON OF SPECIES DISTRIBUTION BY GROSS CUBIC FOOT VOLUME PERCENTAGES IN THE 1968 AND 1955* INVENTORIES, TRURO SUBDIVISION

SPECIES	1968	1955
White Spruce	5.0	5.2
Red, Black Spruce	34.9	29.8
Fir	25.2	27.4
Hemlock	0.8	1.1
White Pine	2.5	3.1
Other Softwoods	1.9	0.9
TOTAL SOFTWOODS	70.3	67.5
Sugar Maple	6.7	9.7
Red Maple	10.3	6.7
Yellow Birch	5.3	7.1
White Birch	1.9	2.1
Other Hardwoods	5.5	6.9
TOTAL HARDWOODS	29.7	32.5
TOTAL	100.0	100.0

*Adjusted minus 10% for softwoods, minus 20% for hardwoods.

TABLE G: PER CENT OF GROSS CUBIC FOOT VOLUME
BY DIAMETER GROUPS IN 1958 AND 1955*
INVENTORIES, TRURO SUBDIVISION

DIAMETER GROUP (DBH)	1958	1955
SOFTWOOD		
4 to 9 inches	46.8	47.1
10 inches and over	23.5	20.4
TOTAL SOFTWOOD	70.3	67.5
HARDWOOD		
4 to 9 inches	18.5	17.6
10 inches and over	11.2	14.9
TOTAL HARDWOOD	29.7	32.5
TOTAL	100.0	100.0

*Adjusted minus 10% for softwoods, minus 20% for hardwoods.



V Local Volume Tables

METHOD OF CONSTRUCTION

Local volume tables were produced from the sample tree data collected at five points along each cruise line. From these data three height-diameter curves for each species group were plotted, smoothed and balanced.

The curves provided values for total height, merchantable height, and stump height. These values were then inserted into Honer's formulae to obtain gross and gross merchantable volumes.

Honer's formula for gross volume (cubic feet):

$$\text{Gross Volume} = \frac{D^2}{a + \frac{b}{H}}$$

where D = DBHob

H = total height

a and b = constants for each species group.

Honer's formula for gross merchantable volume (cubic feet):

Gross merchantable volume =

$$\text{Gross Volume} \left[A (X_1 - X_{12}) + C (X_1^2 - X_{12}^2) \right]$$

where $X_1 = \frac{\text{merchantable height}}{\text{total height}}$

$$X_{12} = \frac{\text{Stump height}}{\text{Total height}}$$

A and C = constants for each species group.

"Gross Volume" in every table is defined as solid cubic contents from ground level to tip of tree, excluding bark. "Merchantable Volume" is always gross merchantable, and means solid cubic contents, excluding bark, from stump height to a minimum top diameter of 3.6 inches outside bark (or larger if deformity or damage reduces the merchantable length).

Using Honer's formulae with the curved values from sample plot data, Individual Tree Volume Tables for each species group were produced. These tables follow.

Where data beyond a certain DBH were not available, volumes were extrapolated. The point where extrapolation begins is shown in the tables by a dashed line.

INDIVIDUAL TREE LOCAL VOLUME TABLES BY SPECIES GROUPS: SUBDIVISION II

SPECIES GROUP 1: WHITE SPRUCE

DBHob Inches	Gross Volume Cubic Feet	Merchantable Volume Cubic Feet
4	1.0	0.5
5	1.8	1.2
6	2.8	2.2
7	4.1	3.5
8	5.8	5.0
9	7.9	7.0
10	10.4	9.3
11	13.1	11.9
12	16.5	15.0
13	20.0	18.2
14	24.0	22.0
15	28.0	25.7
16	32.9	30.0
17	37.7	34.4

18	42.9	39.1
19	48.5	44.1
20	54.5	49.6
21	60.9	55.1
22	67.8	60.8
23	74.1	66.9
24	80.6	72.5

NOTE: Values below the dashed line are extrapolated.

March 1969.

SPECIES GROUP 2: SPRUCE (Red, Black); Larch, Jack Pine

DBHob Inches	Gross Volume Cubic Feet	Merchantable Volume Cubic Feet
4	1.1	0.6
5	2.0	1.5
6	3.2	2.6
7	4.9	4.1
8	6.9	5.8
9	9.4	8.3
10	12.4	10.9
11	15.8	14.1
12	19.4	17.6
13	23.9	21.9
14	28.5	26.1
15	33.7	31.2
16	39.4	36.6
17	45.7	42.4
18	52.6	48.9
19	59.3	55.4
20	67.3	63.0
21	75.1	69.9
22	84.4	78.9
23	93.2	86.9
24	103.7	96.6

March 1969.

INDIVIDUAL TREE LOCAL VOLUME TABLES BY SPECIES GROUPS: SUBDIVISION II

SPECIES GROUP 3: BALSAM FIR

SPECIES GROUP 4: HEMLOCK, CEDAR

DBHob Inches	Gross Volume Cubic Feet	Merchantable Volume Cubic Feet
4	1.1	0.6
5	1.9	1.3
6	2.9	2.2
7	4.2	3.5
8	5.9	5.0
9	7.9	6.8
10	10.1	9.0
11	13.0	11.5
12	16.0	14.4
13	19.1	17.4
14	22.9	21.0
15	27.1	25.0
16	31.3	29.0
17	36.4	33.7
18	41.4	38.4
19	46.7	43.5
20	52.5	48.9
21	58.6	54.6
22	65.1	60.8
23	72.1	67.4
24	73.2	73.2

NOTE: Values below the dashed line are extrapolated.

March 1969.

DBHob Inches	Gross Volume Cubic Feet	Merchantable Volume Cubic Feet
4	0.9	0.3
5	1.6	1.0
6	2.7	2.0
7	4.2	3.3
8	5.9	4.9
9	8.0	6.8
10	10.6	9.2
11	13.6	12.0
12	16.8	14.9
13	20.5	18.3
14	24.2	21.8
15	28.7	25.8
16	33.2	29.9
17	38.0	34.4
18	43.3	39.2
19	49.0	44.4
20	54.3	49.2
21	60.8	54.8
22	66.7	60.2
23	72.9	66.2
24	80.6	72.7

NOTE: Values below the dashed line are extrapolated.

March 1969.

INDIVIDUAL TREE LOCAL VOLUME TABLES BY SPECIES GROUPS: SUBDIVISION II

SPECIES GROUP 5: PINE (White, Red, Scotch)

DBHob Inches	Gross Volume Cubic Feet	Merchantable Volume Cubic Feet
4	0.8	0.5
5	1.6	1.1
6	2.7	2.1
7	4.2	3.4
8	5.9	5.1
9	8.3	7.1
10	10.9	9.6
11	14.1	12.3
12	17.4	15.3
13	21.2	18.7
14	25.5	22.6
15	30.3	26.7
<hr style="border-top: 1px dashed black;"/>		
16	35.0	30.9
17	40.2	35.1
18	46.5	40.6
19	52.7	45.4
20	58.3	50.7
21	65.3	56.0
22	72.8	62.1
23	80.7	68.9
24	87.9	74.8

NOTE: Values below the dashed line are extrapolated.

March 1969.

SPECIES GROUP 6: HARDWOODS (Other than Aspen,
Balsam Poplar)

DBHob Inches	Gross Volume Cubic Feet	Merchantable Volume Cubic Feet
4	1.1	0.5
5	1.9	1.2
6	3.0	2.1
7	4.3	3.2
8	6.0	4.8
9	7.9	6.4
10	10.2	8.5
11	12.9	10.9
12	15.9	13.6
13	19.4	16.6
14	22.9	19.7
15	26.7	23.0
16	31.4	27.0
17	35.4	30.7
18	40.4	34.9
19	45.7	39.2
20	50.6	43.4
21	56.7	48.7
22	62.2	53.2
23	68.0	58.1
24	75.1	63.7

March 1969.

INDIVIDUAL TREE LOCAL VOLUME TABLES
BY SPECIES GROUPS: SUBDIVISION II

SPECIES GROUP 7: ASPEN, Balsam Poplar

DBHob Inches	Gross Volume Cubic Feet	Merchantable Volume Cubic Feet
4	1.1	0.6
5	2.0	1.4
6	3.4	2.7
7	5.1	4.3
8	7.3	6.4
9	9.8	8.8
10	12.9	11.8
11	16.5	15.1
12	20.7	19.1
13	25.1	23.3
14	30.1	28.1

15	35.1	32.7
16	41.2	38.5
17	47.3	44.3
18	53.9	50.2
19	60.9	57.0
20	68.5	64.1
21	76.6	71.4
22	85.4	79.3
23	93.3	87.1
24	101.6	94.3

NOTE: Values below the dashed line are extrapolated.

March 1969.

VI Conversion Factors

Except where broad comparisons are made, as in Section IV, this report presents all volume data in cubic feet. It is left to the user of these data to convert them to the units he requires, using his own conversion factors. However, the guidelines provided in this section may prove useful.

CONVERTING CUBIC FOOT VOLUMES TO CORDS

The number of cubic feet of solid wood in a cord varies with species, average diameter and length of bolts, taper, method of piling, average bark thickness, closeness of limbing, amount of foreign material on the bolts, and the amount of crook, sweep, and abnormal growth projections. With so many variables affecting the result, no conversion factor employing exterior dimensions can be precise. Nonetheless, a number of such factors have been developed.

FOUR-FOOT BOLTS

Two factors commonly used for converting from cords of four-foot pulpwood to solid cubic contents are*:

85 cu. ft. solid wood = one cord rough softwood
 95 cu. ft. solid wood = one cord peeled softwood

EIGHT-FOOT BOLTS

In theory, it should be possible to convert from cubic

*Flann, I. B., Some Conversion Factors and Related Information For Use in Primary Forest Industry of Eastern Canada; Note #26, 1962.

feet to cords of eight-foot wood with the same factors used for four-foot wood. Were the bolts perfectly straight in both cases and all other things equal, this could be done.

In practice, the extra length increases the proportion of voids due to crook, sweep, taper and abnormalities. According to Flann, this increase results in the cubic foot content of solid wood per cord being "usually five per cent less for eight-foot wood than for four-foot wood", other things being equal. By this estimate a cord of rough eight-foot softwood would be expected to contain about 81 cubic feet of solid wood, on the average. However, measurements by local pulp companies have shown an average solid wood content of approximately 78 cubic feet per rough cord of softwood.

Regarding eight-foot hardwood pulpwood, it is generally believed that one rough cord contains 70 to 78 cubic feet of solid wood, on the average. Although this estimate has not been proved, it appears a reasonable one when the greater crookedness of hardwoods is considered.

CONVERTING CUBIC FOOT VOLUME TO BOARD MEASURE

The actual solid wood content in cubic feet of log volume required to produce one thousand board feet of lumber varies by species, log size, mill equipment and methods, dimensions being sawn, and the quality specifications of the market. These variables can cause the conversion factor for roundwood at roadside or mill to vary from about 140 cubic feet per thousand to over 200 cubic feet per thousand.

No attempt is made here to provide a single factor for

converting cubic feet to board feet. Instead, an analysis is presented showing the factors which enter such a conversion at each level of utilization. This permits the individual to use or alter the factors as he sees fit.

The basic factor used is 176 cubic feet per thousand feet board measure, a figure developed by G. E. Bell. These studies, which were published in the Flann paper cited, included "a wide variety of mill types" in Eastern Canada, "sawing logs with an average diameter of 8.4 inches". Elsewhere in his paper Flann presents other values for different types of head saws and different mill sizes.

Explanations follow the seven steps given below.

AN ANALYSIS

1. Gross merchantable (cu. ft.) solid wood from tables in section VIII, minus top, stump and bark, for trees 3.6 inches DBH and larger to 4-inch top.....(VALUE)
2. Gross merchantable volume (cu. ft.) of solid wood in trees between 3.6 inches DBH and 6.5 inches DBH to a 4-inch top; also available from tables, section VIII(VALUE)
3. Gross merchantable (cu. ft.) sawlog volume in roundwood form to 4-inch top (ie; 3 = 1 - 2).....(VALUE)
4. Sawlog residue (cu. ft.) equals gross merchantable roundwood volume in step 3 multiplied by 52.8%(VALUE)

This residue factor is derived as follows:

176 cu. ft. solid wood in round log = 1,000 fbm
 83 cu. ft. solid wood in lumber = 1,000 fbm

 93 cu. ft. solid wood in residue =
 $\frac{93}{176} \times 100 = 52.8\%$

The residue consists of

28 cu. ft./M fbm in sawdust (15.9% of 176)
 65 cu. ft./M fbm in slabs, edgings, trim
 (36.9% of 176)

5. Sawn product in gross merchantable cu. ft.
 (ie; 5 = 3 - 4).....(VALUE)
6. Gross merchantable sawn product in fbm, at 83 cu.
 ft. of sawn product = 1,000 fbm
 (ie; 6 = $\frac{5}{83} \times 1,000$(VALUE)
7. Pulpwood chip potential (7 = 3 x 36.9%)....(VALUE)

EXPLANATION

The values in Steps 1 and 2 come directly from the tables. The volume in Step 2 would be the portion from which pulpwood would be cut in an integrated operation. Step 3 gives the difference between the volumes derived from Steps 1 and 2, which is the volume for trees 6.6" DBH and larger to a 4" top. (All the board foot volumes computed from these data are calculated to a 4" top, because the factors needed to find the volume for the portion between a larger top and a 4" top are not available. Those factors would have to take account of such variables as cutting practices and market requirements, which may cause top diameter to

range from nine inches to four.) The trend on integrated operations is to utilize to a four-inch top.

Steps 4, 5 and 6 arrive at the sawn production in feet board measure from the given cubic foot volume of sawlog roundwood. This is done by deducting for sawdust, slabs, edgings and trim and then converting the remainder to board measure.

It should be noted here that the factors commonly used in converting cubic foot standing volumes to roadside or mill volumes in other units tend to over-estimate. This is because they are not designed to allow for logging losses arising from cull, breakage and other causes between the standing timber and the roundwood level.

The net effect of these losses is to call for a larger factor when attempting to relate standing volumes to roadside volumes. The size of this factor is further increased when the lower average yield of hardwoods--which are generally estimated with a softwood factor--is considered. The factor would also fluctuate with changing degrees of utilization.

What the correct values are has not been established. Indeed, it would be difficult to do so. It is because of these uncertainties that this report presents all values in cubic feet, leaving it to the reader to select the factors he prefers.

In the two instances where conversion from cubic feet to board feet was made, the value 176 was used for the sake of consistency with former Department publications.

CONVERSION FACTOR REFERENCES

- Bell, G.E.; Factors Influencing the Manufacture of Sawlogs into Lumber in Eastern Canada. Bulletin 99, Ottawa, 1951.
- Department of Mines and Resources; Form Class Volume Tables (2nd Edition), Ottawa, 1948
- Flann, I.B.; Some Conversion Factors and Related Information for Use in the Primary Forest Industries of Eastern Canada, Technical Note No. 26, Forest Products Research Laboratory, Ottawa, 1962.
- Hawboldt, L.S.; "What is a Cord?" Department of Lands and Forests, Truro, 1965.
- Society of American Foresters; Forestry Hand Book, New York, 1955.

VII List of Species

On the right is a list of the commercial Nova Scotia trees by their common and botanical names. It is according to the 1966 edition of Native Trees of Canada (Bulletin 61, Department of Forestry, Ottawa).

SOFTWOODS

Balsam Fir	<i>Abies balsamea</i> (L.) Mill
Red Spruce	<i>Picea rubens</i> Sarg.
White Spruce	<i>Picea glauca</i> (Moench)Voss
Black Spruce	<i>Picea mariana</i> (Mill.)B.S.P.
Eastern Hemlock	<i>Tsuga canadensis</i> (L.)Carr.
Eastern White Pine	<i>Pinus strobus</i> L.
Red Pine	<i>Pinus resinosa</i> Ait.
Jack Pine	<i>Pinus banksiana</i> Lamb.
Tamarack (Larch,Hackmatack)	<i>Larix laricina</i> (Du Roi)K.Koch
Eastern White Cedar	<i>Thuja occidentalis</i> L.

HARDWOODS

Yellow Birch	<i>Betula alleghaniensis</i> Britt.
White Birch	<i>Betula papyrifera</i> Marsh.
Grey (Wire) Birch	<i>Betula populifolia</i> Marsh.
Hard (Sugar) Maple	<i>Acer saccharum</i> Marsh.
Soft (Red) Maple	<i>Acer rubrum</i> L.
Beech	<i>Fagus grandifolia</i> Ehrh.
Red Oak	<i>Quercus rubra</i> L.
Largetooth Aspen	<i>Populus grandidentata</i> Michx.
Trembling Aspen	<i>Populus tremuloides</i> Michx.
Balsam Poplar	<i>Populus balsamifera</i> L.
American (White) Elm	<i>Ulmus americana</i> L.
Ironwood	<i>Ostrya virginiana</i> (Mill.)K.Koch
White Ash	<i>Fraxinus americana</i> L.
Black Ash	<i>Fraxinus nigra</i> Marsh.

VIII Tables

The tables are numbered consecutively for easy reference. The first four give acreage estimates by ownership class, municipality and subdivision. The remainder give volume estimates in cubic feet for each of the municipalities, and for the municipalities combined.

These volume estimates are given at the gross and gross merchantable levels, (as defined in section IV), and presented in four ways for each level: by density, by age, by site and by species. Except in the "Species" tables, all data are further classified by cover type, DBH group and ownership class. In the "Species" tables they are classified by DBH group and ownership class only.

INDEX: AREA CLASSIFICATION ESTIMATES

(By ownership class, municipality and subdivision)

1. Major Forest and Non-forest Classes
2. Density Classes
3. Age Classes
4. Site Classes

INDEX: VOLUME ESTIMATES IN CUBIC FEET

By cover type (except in "Species" tables), DBH group, and ownership class.

COLCHESTER MUNICIPALITY

Gross Volume by:

5. Density Classes
6. Age Classes
7. Site Classes
8. Species

Gross Merchantable Volume by:

9. Density Classes
10. Age Classes
11. Site Classes
12. Species

CUMBERLAND MUNICIPALITY

Gross Volume by:

13. Density Classes
14. Age Classes
15. Site Classes
16. Species

Gross Merchantable Volume by:

17. Density
18. Age Classes
19. Site Classes
20. Species

ALL MUNICIPALITIES

Gross Volume by:

- 21. Density Classes
- 22. Age Classes
- 23. Site Classes
- 24. Species

Gross Merchantable Volume by:

- 25. Density Classes
- 26. Age Classes
- 27. Site Classes
- 28. Species



The Tables:



MAJOR FOREST AND NON-FOREST LAND CLASSIFICATION

SUBDIVISION 2

AREA IN ACRES BY MUNICIPALITY AND OWNERSHIP CLASS

M U N I C I P A L I T Y

1

FOREST LAND AND NON-FOREST LAND CLASSIFICATION	C U M B E R L A N D					C O L C H E S T E R					A L L M U N I C I P A L I T I E S				
	CROWN LAND	LARGE OWNER	SMALL OWNER	M R + P *	TOTAL	CROWN LAND	LARGE OWNER	SMALL OWNER	M R + P *	TOTAL	CROWN LAND	LARGE OWNER	SMALL OWNER	M R + P *	TOTAL
FOREST LAND															
SOFTWOOD LAND	7000	13410	19164	27	39603	1996	14710	22100		38806	8996	28120	41265	27	78410
MIXEDWOOD LAND	2539	7843	15761		26143	1544	7838	13077		22460	4083	15681	28838		48604
HARDWOOD LAND	2774	6858	9658		19291	1562	6836	6800		15200	4336	13695	16459		34491
CLEAR CUT RECENT BURN PLANTATION															
TOTAL FORESTED LAND	12313	28112	44585	27	85039	5103	29385	41978		76467	17417	57497	86563	27	161506
NON-FOREST LAND															
BOGO OPEN + TREED	559	257	610		1427		369	361	2	730	559	627	971		2158
ALDERS + BRUSH	349	409	3197		3955	94	101	981		1176	443	510	4178		5132
ROCK BARREN							86	62		149		86	62		149
AGRICULTURE + MARSH	13	465	11742		12222	133	284	7115		7534	146	750	18858		19756
URBAN		240	593		834			520		520		240	1113		1354
ROAD AND R.R.	189	155	599		944	606	196	746		1549	795	352	1345		2493
TRANSMISSION LINE	28	9	25		64		21	91		113	28	31	117		178
TIDAL FLATS + MARSH	10		134		145						10		134		145
TOT NON-FOREST LAND	1151	1539	16903		19594	833	1060	9881		11775	1985	2599	26785		31370
WATER															
FLOWAGE	201	168	1662		2032	252	289	1368		1909	454	457	3031		3942
	18	90	695		803	40	28	136		206	59	119	831		1010
TOTAL	220	258	2357		2836	293	317	1504		2116	513	576	3862		4952
OFFSHORE SMALL ISLANDS															
GRAND TOTAL	13685	29909	63847	27	107470	6230	30764	53364		90359	19916	60673	117212	27	197829

* M R + P = MILITARY RESERVES AND PARKS

ALL FIGURES ARE IN TENS OF ACRES

SUBDIVISION 2 AREA IN ACRES BY MUNICIPALITY AND OWNERSHIP CLASS OWNERSHIP CLASS

FOREST LAND BY DENSITY CLASSES	CUMBERLAND					COLCHESTER					ALL MUNICIPALITIES				
	CROWN LAND	LARGE OWNER	SMALL OWNER	M R + P *	TOTAL	CROWN LAND	LARGE OWNER	SMALL OWNER	M R + P *	TOTAL	CROWN LAND	LARGE OWNER	SMALL OWNER	M R + P *	TOTAL
SOFTWOOD LAND															
UP TO 40%	2647	2705	5482	27	10862	694	3483	5727		9904	3342	6188	11209	27	20767
41% - 60%	1588	4762	5383		11733	506	3491	5871		9869	2094	8253	11254		21602
61% - 80%	2527	5406	7294		15228	775	6182	8200		15158	3302	11588	15494		30386
81% - 100%	237	578	952		1768	95	1417	2183		3697	333	1956	3136		5466
OVERSTOCKED			52		52	16	135	118		269	16	135	170		322
TOTAL	7000	13452	19164	27	39645	2088	14710	22100		38899	9089	28162	41265	27	78545
MIXEDWOOD LAND															
UP TO 40%	1081	2853	5364		9299	591	3537	4721		8850	1672	6390	10085		18149
41% - 60%	909	2829	6828		10567	343	2825	4675		7844	1252	5654	11504		18412
61% - 80%	548	2001	3307		5858	482	1414	3513		5410	1031	3416	6821		11269
81% - 100%		93	162		255	34	61	166		261	34	154	328		517
OVERSTOCKED		22	98		120							22	98		120
TOTAL	2539	7800	15761		26101	1451	7838	13077		22367	3991	15639	28838		48469
HARDWOOD LAND															
UP TO 40%	379	988	2623		3990	240	1555	1839		3635	619	2543	4462		7626
41% - 60%	924	2318	2935		6178	288	2115	1826		4231	1212	4435	4761		10409
61% - 80%	1328	3463	3965		8757	1033	3089	3072		7195	2362	6553	7038		15953
81% - 100%	142	88	134		365		53			53	142	142	134		418
OVERSTOCKED							20	62		83		20	62		83
TOTAL	2774	6858	9658		19291	1562	6836	6800		15200	4336	13695	16459		34491
ALL FOREST LAND															
UP TO 40%	4108	6546	13470	27	24152	1526	8576	12287		22390	5634	15123	25757	27	46543
41% - 60%	3421	9910	15147		28479	1138	8433	12373		21945	4560	18344	27520		50425
61% - 80%	4404	10871	14568		29843	2292	10686	14786		27764	6696	21557	29354		57608
81% - 100%	379	761	1249		2389	129	1532	2349		4012	509	2293	3598		6402
OVERSTOCKED		22	150		173	16	156	181		353	16	178	331		526
TOTAL	12313	28112	44585	27	85039	5103	29385	41978		76467	17417	57497	86563	27	161506

* M R + P = MILITARY RESERVES AND PARKS

ALL FIGURES ARE IN TENS OF ACRES

SUBDIVISION 2 AREA IN ACRES BY MUNICIPALITY AND OWNERSHIP CLASS OWNERSHIP CLASS

FOREST LAND BY AGE CLASSES	CUMBERLAND					COLCHESTER					ALL MUNICIPALITIES				
	CROWN LAND	LARGE OWNER	SMALL OWNER	M R + P *	TOTAL	CROWN LAND	LARGE OWNER	SMALL OWNER	M R + P *	TOTAL	CROWN LAND	LARGE OWNER	SMALL OWNER	M R + P *	TOTAL
SOFTWOOD LAND															
UP TO 20YRS	107	42	1248	27	1425	128	1461	1891		3482	236	1503	3140	27	4907
21YRS - 40YRS	1542	585	2328		4455	396	1577	3009		4982	1939	2162	5337		9439
41YRS - 60YRS	4445	5597	11072		21114	800	6281	11089		18172	5245	11879	22161		39287
61YRS - 80YRS	834	5415	3728		9977	730	4891	5059		10681	1565	10306	8787		20659
81YRS - 100YRS	23	1286	466		1777		451	819		1271	23	1738	1286		3048
101YRS OR MORE	46	482	153		683			36		36	46	482	189		719
UNEVENAGED STANDS		42	167		209	31	46	194		272	31	89	361		482
TOTAL	7000	13452	19164	27	39645	2088	14710	22100		38899	9089	28162	41265	27	78545
MIXEDWOOD LAND															
UP TO 20YRS	55	79	855		991	235	382	554		1172	291	462	1410		2164
21YRS - 40YRS	439	438	2166		3044	34	457	968		1460	473	896	3134		4504
41YRS - 60YRS	1672	3118	8931		13722	438	2187	5020		7645	2111	5305	13951		21368
61YRS - 80YRS	370	3739	3358		7469	743	4530	5949		11223	1114	8270	9308		18693
81YRS - 100YRS		284	390		675		227	251		479		512	642		1154
101YRS OR MORE		27			27		19			19		46			46
UNEVENAGED STANDS		111	58		170		34	332		366		146	390		536
TOTAL	2539	7800	15761		26101	1451	7838	13077		22367	3991	15639	28838		48469
HARDWOOD LAND															
UP TO 20YRS	84	25	723		833		45	298		343	84	71	1021		1177
21YRS - 40YRS	559	2667	2699		5925	46	1049	1279		2375	605	3716	3979		8301
41YRS - 60YRS	1970	3563	5111		10645	307	2845	2156		5309	2277	6409	7268		15955
61YRS - 80YRS	160	557	1103		1821	1166	2455	2594		6215	1326	3012	3697		8037
81YRS - 100YRS			5		5	41	242	472		756	41	242	477		762
101YRS OR MORE			15		15		81			81		81	15		97
UNEVENAGED STANDS		44			44		116			116		160			160
TOTAL	2774	6858	9658		19291	1562	6836	6800		15200	4336	13695	16459		34491
ALL FOREST LAND															
UP TO 20YRS	247	148	2827	27	3251	364	1889	2744		4998	612	2037	5572	27	8249
21YRS - 40YRS	2541	3691	7194		13426	477	3084	5257		8819	3018	6775	12451		22246
41YRS - 60YRS	8088	12279	25115		45483	1546	11315	18266		31128	9635	23554	43381		76611
61YRS - 80YRS	1365	9712	8190		19268	2640	11877	13603		28121	4006	21589	21793		47390
81YRS - 100YRS	23	1571	862		2458	41	921	1544		2507	65	2492	2406		4965
101YRS OR MORE	46	509	169		725		101	36		137	46	610	205		863
UNEVENAGED STANDS		199	225		425	31	196	526		755	31	396	752		1180
TOTAL	12313	28112	44585	27	85039	5103	29385	41978		76467	17417	57497	86563	27	161506

* M R + P = MILITARY RESERVES AND PARKS

ALL FIGURES ARE IN TENS OF ACRES

SUBDIVISION 2 AREA IN ACRES BY MUNICIPALITY AND OWNERSHIP CLASS OWNERSHIP CLASS

FOREST LAND BY SITE CLASSES	CUMBERLAND					COLCHESTER					ALL MUNICIPALITIES				
	CROWN LAND	LARGE OWNER	SMALL OWNER	M R + P *	TOTAL	CROWN LAND	LARGE OWNER	SMALL OWNER	M R + P *	TOTAL	CROWN LAND	LARGE OWNER	SMALL OWNER	M R + P *	TOTAL
SOFTWOOD LAND															
1									21	21					21
2	47		44		92		206	268		475					568
3	501	119	2723		3344	172	710	4211		5094					8439
4	5718	12118	15510	27	33375	1700	12685	16451		30837				27	64213
5	732	1214	885		2832	215	1107	1146		2469					5302
6															
TOTAL	7000	13452	19164	27	39645	2088	14710	22100		38899	9089	28162	41265	27	78545
MIXEDWOOD LAND															
1									45	45					45
2															
3	149	126	628		903		274	537		812				45	1716
4	2338	7602	14661		24602	1433	7481	12360		21275				1166	45878
5	51	71	471		594	18	82	133		234				27022	829
6														604	
TOTAL	2539	7800	15761		26101	1451	7838	13077		22367	3991	15639	28838		48469
HARDWOOD LAND															
1									132	132					132
2															
3	291	623	512		1427		142	452		595				132	2022
4	2428	6234	8947		17610	1562	6694	5127		14383				964	31994
5	54		199		253			88		88				15074	341
6														287	
TOTAL	2774	6858	9658		19291	1562	6836	6800		15200	4336	13695	16459		34491
ALL FOREST LAND															
1									21	21					21
2	47		44		92		206	446		653					746
3	941	869	3864		5676	172	1127	5202		6502					12178
4	10485	25956	39119	27	75589	4696	26860	34939		66496				27	142086
5	838	1285	1556		3680	233	1190	1368		2792				74058	6473
6														2924	
TOTAL	12313	28112	44585	27	85039	5103	29385	41978		76467	17417	57497	86563	27	161506

* M R + P = MILITARY RESERVES AND PARKS

ALL FIGURES ARE IN TENS OF ACRES

E S T I M A T E - GROSSCUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, DENSITY CLASSES, DBH GROUP AND OWNERSHIP CLASS

MUNICIPALITY - COLCHESTER

COVER TYPE AND DENSITY CLASS	O W N E R S H I P C L A S S												T O T A L				5 TOTAL			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S							
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL				
SOFTWOOD LAND																				
UP TO 400	1099	742	632	2475	7328	8702	8258	24289	8257	9271	7216	24745					16685	18717	16107	51510
410 - 600	1954	1640	724	4318	10953	14042	13402	38398	20964	25217	19421	65603					33872	40899	33548	108320
610 - 800	4683	3732	2627	11043	28728	31126	30571	90426	44832	47539	38142	130514					78244	82398	71341	231984
810 - 1000	420	760	402	1583	8111	5166	4921	18199	12079	10511	5943	28535					20610	16438	11268	48317
OVERSTOCKED	63	16	33	112	745	356	138	1240	273	95	142	511					1082	468	313	1864
TOTAL	8220	6892	4420	19533	55867	59395	57291	172554	86407	92635	70867	249910					150495	158923	132579	441999
MIXEDWOOD LAND																				
UP TO 400	1320	1837	1375	4533	5157	7512	10571	23240	9559	11599	10705	31863					16037	20549	22651	59638
410 - 600	928	1587	1626	4142	7394	10494	18294	36183	18234	19701	20549	58485					26557	31783	40470	98811
610 - 800	1226	2090	2366	5683	4732	6115	6562	17410	17170	16418	16548	50137					23129	24625	25477	73231
810 - 1000	30	9	112	152	120	94	69	284	573	336	509	1419					723	439	692	1855
OVERSTOCKED																				
TOTAL	3505	5524	5480	14511	17404	24216	35498	77119	45537	48056	48312	141906					66448	77797	89291	233536
HARDWOOD LAND																				
UP TO 400	520	848	971	2340	2283	3388	5562	11235	3133	3332	5408	11875					5927	7569	11943	25451
410 - 600	659	849	1568	3076	5234	6583	12545	24363	5573	4955	9851	20381					11467	12388	23965	47821
610 - 800	3387	2837	3757	9981	8067	7452	14116	29536	10702	9110	11015	30828					22156	16400	28989	70447
810 - 1000					46	51	54	151									46	51	54	151
OVERSTOCKED					12		54	67	72	108	137	319					85	108	192	386
TOTAL	4567	4535	6297	15399	15644	17476	32334	65455	19482	17507	26413	63403					39694	39519	65045	144259
ALL FOREST LAND																				
UP TO 400	2941	3428	2979	9349	14769	19603	24392	58766	20949	24204	23330	68484					38660	47236	50702	136599
410 - 600	3542	4077	3918	11538	23583	31119	44242	98945	44772	49874	49823	144470					71898	85071	97984	254954
610 - 800	9296	8661	8750	26708	41528	44694	51250	137474	72705	73068	65706	211480					123530	126425	125708	375663
810 - 1000	450	769	515	1735	8277	5312	5046	18635	12652	10847	6453	29954					21280	16929	12015	50325
OVERSTOCKED	63	16	33	112	758	357	192	1308	346	204	280	830					1167	577	505	2251
TOTAL	16293	16952	16198	49444	88917	101088	125124	315130	151427	158199	145593	455220					256638	276240	286916	819795

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - GROSSCUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, AGE CLASSES, DBH GROUP AND OWNERSHIP CLASSES

MUNICIPALITY - COLCHESTER

COVER TYPE AND AGE CLASS	O W N E R S H I P C L A S S												T O T A L								
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				T O T A L				
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	
SOFTWOOD LAND																					
UP TO 20YRS	34	30		64	985	993	468	2447	636	425	90	1153					1656	1449	559	3665	
21YRS - 40YRS	1353	695	346	2396	7014	3560	2360	12936	8713	5693	3301	17707					17081	9950	6008	33040	
41YRS - 60YRS	4148	3344	2281	9774	29037	30380	27928	87346	52156	54650	37826	144633					85342	88375	68036	241754	
61YRS - 80YRS	2457	2623	1654	6735	17510	22693	25051	65255	20670	29358	23406	70435					40638	51675	50113	142476	
81YRS - 100YRS					1160	1571	1270	4702	3294	4393	4621	12399					4455	5964	5852	16312	
101YRS OR MORE									157	188	557	902					157	188	557	902	
UNEVENAGED STANDS	226	199	137	562	158	195	211	565	778	925	1063	2767					1164	1320	1411	3896	
TOTAL	8220	6892	4420	19533	55867	59395	57291	172554	86407	92635	70867	249910					150495	158923	132579	441999	
MIXEDWOOD LAND																					
UP TO 20YRS	138	329	561	1029	261	278	114	654	201	267	193	662					601	875	869	2345	
21YRS - 40YRS	30	9	112	152	720	495	576	1791	2414	1368	1228	5011					3165	1873	1917	6955	
41YRS - 60YRS	1322	1998	1845	5167	6716	8736	17523	25776	20188	19140	17158	56487					28227	29875	29528	87630	
61YRS - 80YRS	2014	3187	2960	8162	9018	13718	21289	44726	21056	24788	25450	71294					32089	41654	49700	123484	
81YRS - 100YRS					584	860	2576	4721	656	1083	1910	3650					1240	1543	4487	7672	
101YRS OR MORE						37	181	219											37	181	219
UNEVENAGED STANDS					102	89	235	427	1020	1407	2371	4799					1123	1497	2607	5227	
TOTAL	3505	5524	5480	14511	17404	24216	35498	77119	45537	48056	48312	141906					66448	77797	89291	233536	
HARDWOOD LAND																					
UP TO 20YRS					34	12	87	134	74	64	29	169					108	77	117	303	
21YRS - 40YRS	46	68	52	167	1875	1185	1977	5038	2375	1402	2102	5880					4297	2655	4132	11085	
41YRS - 60YRS	1309	748	363	2421	7760	7168	13957	28386	8180	6542	10171	24893					17250	14456	24492	56202	
61YRS - 80YRS	3073	3457	5580	12111	5270	7988	14143	27402	8016	8372	11261	27649					16360	19818	30985	67163	
81YRS - 100YRS	138	260	300	698	427	774	978	2179	835	1126	2849	4810					1400	2161	4127	7689	
101YRS OR MORE					93	89	805	988										93	89	805	988
UNEVENAGED STANDS					183	257	384	825										183	257	384	825
TOTAL	4567	4535	6297	15399	15644	17476	32334	65455	19482	17507	26413	63403					39694	39519	65045	144259	
ALL FOREST LAND																					
UP TO 20YRS	172	359	561	1093	1281	1284	671	3236	912	758	313	1984					2366	2401	1546	6315	
21YRS - 40YRS	1430	772	512	2715	9610	5241	4914	19766	13503	8464	6631	28599					24544	14479	12058	51082	
41YRS - 60YRS	6780	6091	4491	17363	43513	46286	52409	142209	80525	80333	65155	226014					130819	132711	122056	385587	
61YRS - 80YRS	7545	9269	10195	27010	31800	44399	60484	136684	49742	59518	60118	169379					89088	112187	130798	333074	
81YRS - 100YRS	138	260	300	698	2172	3206	4825	10203	4786	6602	9382	20771					7096	10069	14507	31674	
101YRS OR MORE					93	127	987	1208	157	188	557	902					250	315	1544	2111	
UNEVENAGED STANDS	226	199	137	562	444	542	831	1819	1799	2333	3434	7567					2471	3075	4403	9949	
TOTAL	16293	16952	16198	49444	88917	101088	125124	315130	151427	158199	145593	455220					256638	276240	286916	819795	

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - GROSSCUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, SITE CLASSES, DBH GROUP AND OWNERSHIP CLASSES

MUNICIPALITY - COLCHESTER

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COVER TYPE AND SITE CLASS	O W N E R S H I P C L A S S																T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				4 - 6	7 - 9	10 + UP	TOTAL
	4 - 6	7 - 9	10 + UP	TOTAL	4 - 6	7 - 9	10 + UP	TOTAL	4 - 6	7 - 9	10 + UP	TOTAL	4 - 6	7 - 9	10 + UP	TOTAL	DBH	DBH	DBH	DBH
SOFTWOOD LAND																				
1									66	69	25	162					66	69	25	162
2					622	1319	2879	4821	1126	2203	2510	5839					1748	3522	5389	10661
3	381	732	319	1432	2503	3259	3306	9069	13466	14852	8891	37210					16351	18843	12518	47713
4	7407	5777	3801	16987	50248	52682	50147	153078	68288	72915	58445	199649					125945	131375	112394	369714
5	431	382	298	1113	2492	2134	957	5584	3459	2594	993	7048					6383	5112	2250	13747
6																				
TOTAL	8220	6892	4420	19533	55867	59395	57291	172554	86407	92635	70867	249910					150495	158523	132579	441999
MIXEDWOOD LAND																				
1									248	146	355	750					248	146	355	750
2									1208	1424	1916	4548					1741	2483	2875	7099
3					532	1058	959	2551	43739	46071	45853	135663					63863	74516	85589	223969
4	3490	5456	5480	14428	16633	22988	34255	73876	43739	46071	45853	135663					63863	74516	85589	223969
5	14	68		82	238	169	283	691	341	414	187	943					555	651	470	1717
6																				
TOTAL	3505	5524	5480	14511	17404	24216	35498	77119	45537	48056	48312	141906					66448	77757	89291	233536
HARDWOOD LAND																				
1									527	871	693	2091					527	871	693	2091
2									818	205	29	1053					1152	575	1330	3058
3					334	369	1300	2004	17934	16279	25602	59816					37812	37921	62933	138667
4	4567	4535	6297	15399	15310	17106	31034	63451	17934	16279	25602	59816					37812	37921	62933	138667
5									201	151	87	441					201	151	87	441
6																				
TOTAL	4567	4535	6297	15399	15644	17476	32334	65455	19482	17507	26413	63403					39654	39519	65045	144259
ALL FOREST LAND																				
1									66	69	25	162					66	69	25	162
2					622	1319	2379	4821	1901	3220	3559	8681					2523	4540	6439	13503
3	381	732	319	1432	3371	4687	5566	13625	15493	16482	10837	42813					19245	21902	16723	57872
4	15466	15769	15579	46815	82192	92777	115436	290406	129962	135266	129901	395130					227621	243813	260917	732351
5	446	451	298	1196	2730	2303	1241	6276	4003	3160	1269	8432					7180	5915	2809	15905
6																				
TOTAL	16293	16952	16198	49444	88917	101088	125124	315130	151427	153199	145593	455220					256638	276240	286916	819795

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - GROSSCUBIC FT. VOLUMES ON FORESTED LAND BY SPECIES, DBH GROUP AND OWNERSHIP CLASS

MUNICIPALITY - COLCHESTER

S P E C I E S	O W N E R S H I P C L A S S																T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				4 - 6	7 - 9	10 + UP	TOTAL
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL
WHITE SPRUCE	375	330	327	1032	1899	2457	4367	8724	10509	14402	15387	40298					12783	17190	20082	50056
SPRUCE-RED + BLACK	3642	3685	3669	10997	18671	27917	45422	92005	28174	39298	36047	103520					50487	70895	85139	206522
FIR	6300	6222	3024	15548	43672	39597	19873	103142	69039	52827	20854	142720					119012	58647	43752	261411
HEMLOCK	32	134	170	336	498	1489	2628	4616	2748	7177	13565	23492					3279	8801	16364	28445
WHITE PINE			279	279	26	47	612	685	149	482	2494	3126					175	529	3386	4091
RED PINE					14	124	521	659	5	12		18					19	136	521	677
LARCH	86	158	106	351	601	537	92	1231	1563	2592	1392	5547					2251	3288	1591	7130
JACK PINE	3	24	40	73													8	24	40	73
SCOTCH PINE																				
CEDAR																				
TOTAL SOFTWOODS	10445	10555	7619	28620	65384	72164	73517	211066	112188	116793	89741	318724					188018	195513	170878	558410
SUGAR MAPLE	2843	1967	3295	8105	8715	8158	18362	35236	8445	7864	13013	29324					20004	17990	34671	72666
RED MAPLE	1094	2072	2237	5404	6197	9179	12180	27557	15918	18783	21549	56250					23209	30035	35967	89212
YELLOW BIRCH	618	1514	2543	4676	4550	7704	17364	29618	4005	5469	10922	20397					9173	14688	30829	54692
WHITE BIRCH	257	155	42	455	700	996	605	2301	1769	1877	1315	4961					2727	3028	1963	7718
OAK					6			6		12	47	60					6	12	47	66
ASPEN	127	265	265	659	383	440	412	1237	4216	4709	6179	15106					4727	5415	6858	17002
GREY BIRCH	19			19	169	21		191	1984	184		2168					2173	205		2379
WHITE ASH	6			6	79	119	299	498	464	539	526	1530					550	658	826	2035
BLACK ASH					29	43	48	121	18			18					47	43	48	139
CHERRY					15	9		24	42			42					58	9		67
ELM									49	12	74	136					49	12	74	136
BEECH	877	422	193	1493	2642	2242	2332	7217	2220	1940	2222	6384					5741	4604	4749	15095
BALSAM POPLAR																				
TOTAL HARDWOODS	5844	6397	8578	20820	23489	28914	51607	104011	39136	41393	55852	136382					68471	76704	116038	261214
MISCELLANEOUS	3			3	42	9		51	101	12		114					148	21		170
TOTAL FOREST LAND	16293	16952	16198	49444	88917	101088	125124	315130	151427	158199	145593	455220					256638	276240	286916	819795

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - MERCH CUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, DENSITY CLASSES, DBH GROUP AND OWNERSHIP CLASS

MUNICIPALITY - COLCHESTER

COVER TYPE AND DENSITY CLASS	O W N E R S H I P C L A S S												T O T A L				9 TOTAL			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S							
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL				
SOFTWOOD LAND																				
UP TO 40(	766	629	559	1955	5022	7337	7386	19746	5702	7859	6464	20026					11492	15826	14410	41729
41(- 60(	1340	1375	641	3357	7603	11841	11948	31393	14452	21298	17318	53069					23397	34515	29908	87821
61(- 80(	3238	3146	2342	8727	19761	26320	27384	73466	30841	40190	34085	105117					53841	69657	63813	187311
81(-100(	287	644	359	1290	5438	4331	4404	14174	8199	8891	5283	22374					13924	13867	10046	37838
OVERSTOCKED	41	14	29	85	504	299	123	927	177	76	126	381					723	391	279	1394
TOTAL	5673	5810	3933	15417	38331	50130	51247	139709	59374	78316	63278	200969					103379	134257	118458	356095
MIXEDWOOD LAND																				
UP TO 40(	875	1512	1198	3585	3471	6182	9244	18897	6341	9551	9354	25247					10687	17245	19797	47730
41(- 60(	624	1306	1406	3337	4887	8654	16141	29683	12136	16353	18060	46550					17648	26314	35608	79571
61(- 80(	810	1714	2069	4595	3148	5064	5796	14008	11366	13573	14670	39610					15325	20352	22536	58213
81(-100(	19	6	99	125	74	77	58	211	366	279	449	1094					460	363	607	1432
OVERSTOCKED																				
TOTAL	2329	4540	4774	11644	11581	19978	31240	62800	30210	39757	42535	112503					44121	64276	78550	186948
HARDWOOD LAND																				
UP TO 40(	345	694	843	1883	1469	2729	4790	8989	2003	2666	4663	9333					3819	6090	10297	20207
41(- 60(	420	680	1359	2460	3263	5240	10768	19273	3519	3957	8497	15973					7203	9878	20625	37706
61(- 80(	2091	2257	3233	7582	4955	5908	12153	23017	6677	7262	9486	23425					13724	15428	24873	54026
81(-100(					27	40	47	114									27	40	47	114
OVERSTOCKED					9		46	55	49	87	119	256					58	87	165	311
TOTAL	2857	3633	5436	11927	9725	13918	27806	51450	12248	13972	22767	48988					24831	31525	56009	112366
ALL FOREST LAND																				
UP TO 40(	1987	2836	2601	7424	9963	16249	21420	47634	14048	20077	20482	54608					25999	39162	44505	109667
41(- 60(	2385	3362	3408	9155	15755	25736	38358	80350	30108	41608	43876	115593					48248	70708	86142	205099
61(- 80(	6140	7119	7645	20905	27865	37292	45334	110492	48884	61025	58243	168153					82890	105438	111223	299552
81(-100(	306	650	459	1416	5540	4449	4510	14499	8565	9171	5732	23469					14411	14271	10702	39385
OVERSTOCKED	41	14	29	85	513	299	169	983	226	164	246	637					782	478	445	1706
TOTAL	10860	13983	14143	38988	59638	84028	110293	253960	101833	132046	128581	362461					172332	230059	253018	655410

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - MERCH CUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, AGE CLASSES, DBH GROUP AND OWNERSHIP CLASSES

MUNICIPALITY - COLCHESTER

COVER TYPE AND AGE CLASS	O W N E R S H I P C L A S S												T O T A L				
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				
	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	
SOFTWOOD LAND																	
UP TO 20YRS	25	24		49	672	822	399	1895	395	357	79	832		1093	1204	479	2777
21YRS - 40YRS	913	584	306	1804	4666	2989	2072	9728	5781	4811	2918	13511		11361	8385	5297	25044
41YRS - 60YRS	2833	2813	2041	7689	19890	25670	24952	70513	35894	46288	33822	116005		58618	74772	60816	194208
61YRS - 80YRS	1733	2220	1464	5418	12168	19160	22487	53816	14331	22208	20862	57402		28233	43589	44814	116637
81YRS - 100YRS					827	1322	1139	3290	2318	3703	4131	10153		3145	5026	5271	13443
101YRS OR MORE									113	161	498	773		113	161	498	773
UNEVENAGED STANDS	167	167	120	455	107	164	193	465		539	785	2290		813	1117	1280	3211
TOTAL	5673	5810	3933	15417	38331	50130	51247	139709	59374	78316	63278	200969		103379	134257	118458	356095
MIXEDWOOD LAND																	
UP TO 20YRS	88	270	488	847	180	235	100	517	132	223	171	528		402	729	761	1892
21YRS - 40YRS	19	6	99	125	460	413	503	1377	1553	1132	1085	3771		2033	1552	1688	5274
41YRS - 60YRS	866	1635	1605	4108	4423	7194	9255	20873	13359	15878	15124	44362		18649	24709	25985	69344
61YRS - 80YRS	1354	2627	2580	6562	6055	11308	18740	36104	14044	20460	22413	56918		21454	34396	43734	99586
81YRS - 100YRS					397	718	2267	3384	438	893	1667	3000		836	1612	3935	6385
101YRS OR MORE						31	160	191							31	160	191
UNEVENAGED STANDS					64	76	211	352	681	1168	2071	3921		745	1244	2283	4273
TOTAL	2329	4540	4774	11644	11581	19978	31240	62800	30210	39757	42535	112503		44121	64276	78550	186948
HARDWOOD LAND																	
UP TO 20YRS					21	10	74	106	47	50	25	124		69	60	100	231
21YRS - 40YRS		58	45	133	1120	954	1705	3781	1478	1159	1830	4469		2629	2172	3582	8384
41YRS - 60YRS	801	589	307	1699	4788	5681	12031	22500	5111	5194	8762	19069		10701	11465	21101	43269
61YRS - 80YRS	1932	2775	4820	9528	3342	6362	12128	21833	5070	6671	9706	21448		10345	15809	26655	52810
81YRS - 100YRS	93	210	262	566	283	633	832	1749	539	896	2441	3876		916	1740	3536	6193
101YRS OR MORE					59	70	703	833						59	70	703	833
UNEVENAGED STANDS					108	206	329	644						108	206	329	644
TOTAL	2857	3633	5436	11927	9725	13918	27806	51450	12248	13972	22767	48988		24831	31525	56009	112366
ALL FOREST LAND																	
UP TO 20YRS	113	294	488	897	874	1068	575	2519	576	631	277	1485		1564	1994	1341	4901
21YRS - 40YRS	962	649	451	2063	6247	4357	4281	14887	8813	7103	5835	21752		16023	12110	10568	38703
41YRS - 60YRS	4502	5038	3955	13496	29101	38545	46239	113887	54366	67361	57709	179437		87970	110946	107904	306821
61YRS - 80YRS	5021	7622	8864	21508	21565	36832	53357	111755	33446	49340	52982	135769		60033	93795	115204	269033
81YRS - 100YRS	93	210	262	566	1508	2675	4239	8424	3296	5493	8240	17030		4899	8379	12742	26021
101YRS OR MORE					59	101	864	1024	113	161	498	773		172	262	1362	1798
UNEVENAGED STANDS	167	167	120	455	280	447	735	1462	1220	1954	3037	6212		1668	2569	3893	8130
TOTAL	10860	13983	14143	38988	59638	84028	110293	253960	101833	132046	128581	362461		172332	230059	253018	655410

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - MERCH CUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, SITE CLASSES, DBH GROUP AND OWNERSHIP CLASSES

MUNICIPALITY - COLCHESTER

COVER TYPE AND SITE CLASS	O W N E R S H I P C L A S S																T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				4 - 6	7 - 9	10 + UP	TOTAL
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL
SOFTWOOD LAND																				
1									46	59	22	128					46	59	22	128
2					427	1142	2611	4181	778	1895	2266	4940					1205	3037	4878	9121
3	263	622	286	1172	1715	2771	2962	7449	9282	12663	7966	29912					11261	16056	11216	38534
4	5097	4865	3388	13351	34435	44424	44803	123663	46824	61505	52142	160472					86357	110795	100334	297487
5	311	323	257	892	1753	1792	869	4415	2442	2193	879	5515					4507	4308	2006	10823
6																				
TOTAL	5673	5810	3933	15417	38331	50130	51247	139709	59374	78316	63278	200969					103379	134257	118458	356095
MIXEDWOOD LAND																				
1									152	117	326	596					152	117	326	596
2									794	1196	1703	3694					1158	2068	2530	5757
3					363	872	826	2062	29034	38095	40338	107468					42407	61545	75278	179231
4	2318	4483	4774	11576	11054	18966	30166	60186	228	347	167	744					403	544	415	1362
5	11	56		67	163	140	247	550												
6																				
TOTAL	2329	4540	4774	11644	11581	19978	31240	62800	30210	39757	42535	112503					44121	64276	78550	186948
HARDWOOD LAND																				
1									336	683	587	1607					336	683	587	1607
2									520	174	25	720					722	467	1131	2331
3					211	292	1105	1610	11256	12995	22076	46328					23627	30254	54212	108095
4	2857	3633	5436	11927	9513	13626	26700	49840	135	119	77	332					135	119	77	332
5																				
6																				
TOTAL	2857	3633	5436	11927	9725	13918	27806	51450	12248	13972	22767	48988					24831	31525	56009	112366
ALL FOREST LAND																				
1									46	59	22	128					46	59	22	128
2					427	1142	2611	4181	1267	2696	3181	7144					1694	3838	5792	11326
3	263	622	286	1172	2291	3936	4895	11123	10597	14034	9695	34326					13152	18592	14877	46623
4	10273	12982	13599	36855	55003	77016	101669	233690	87115	112597	114556	314269					152392	202595	229825	584814
5	323	379	257	960	1916	1933	1116	4965	2806	2660	1125	6592					5046	4972	2499	12518
6																				
TOTAL	10860	13983	14143	38988	59638	84028	110293	253960	101833	132046	128581	362461					172322	230059	253018	655410

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - MERCH CUBIC FT. VOLUMES ON FORESTED LAND BY SPECIES, DBH GROUP AND OWNERSHIP CLASS

MUNICIPALITY - COLCHESTER

S P E C I E S	O W N E R S H I P C L A S S																T O T A L	12		
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S							
	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL				
WHITE SPRUCE	260	285	297	844	1284	2128	3961	7374	7128	12490	13937	33556					8673	14905	18196	41774
SPRUCE-RED + BLACK	2638	3131	3306	9076	13624	23823	41145	78593	20635	33512	32504	86652					36897	60467	76956	174321
FIR	4246	5266	2707	12220	29494	33484	17774	80752	46598	44630	18669	109897					80338	83381	39150	202870
HEMLOCK	21	110	151	283	315	1232	2339	3888	1754	5922	12045	19721					2091	7265	14535	23893
WHITE PINE			240	240	18	39	537	596	103	410	2187	2700					121	449	2966	3537
RED PINE					9	105	457	572	4	10		15					14	115	457	587
LARCH	65	137	95	298	441	454	81	978	1150	2207	1242	4600					1658	2799	1420	5877
JACK PINE	6	20	36	63													6	20	36	63
SCOTCH PINE																				
CEDAR																				
TOTAL SCFTWOODS	7238	8952	6836	23027	45188	61269	66297	172755	77374	99184	80586	257144					129802	169405	153719	452927
SUGAR MAPLE	1740	1538	2806	6085	5286	6399	15663	27349	5180	6158	11101	22439					12206	14056	29570	55874
RED MAPLE	683	1629	1895	4208	3824	7220	10351	21397	9835	14719	18312	42868					14344	23569	30560	68474
YELLOW BIRCH	392	1186	2162	3740	2859	6064	14812	23735	2506	4294	9316	16116					5757	11545	26290	43593
WHITE BIRCH	158	120	35	315	426	784	509	1721	1087	1464	1114	3667					1673	2370	1660	5703
OAK					4			4		10	41	51					4	10	41	55
ASPEN	92	230	244	568	242	386	380	1008	2942	4116	5698	12757					3276	4734	6322	14333
GREY BIRCH	11			11	97	16		114	1133	140		1274					1242	157		1399
WHITE ASH	3			3	50	93	253	398	288	422	450	1160					342	516	704	1562
BLACK ASH					18	33	40	92	11			11					29	33	40	104
CHERRY					7	6		14	23			23					30	6		37
ELM									33	10	64	107					33	10	64	107
BEECH	537	325	163	1026	1608	1746	1984	5338	1355	1515	1896	4766					3500	3586	4044	11132
BALSAM POPLAR																				
TOTAL HARDWOODS	3619	5031	7307	15958	14425	22752	43996	81175	24396	32852	47995	105244					42442	60636	99299	202378
MISCELLANEOUS	2			2	23	6		30	62	10		72					88	16		105
TOTAL FOREST LAND	10860	13983	14143	38988	59638	84028	110293	253960	101833	132046	128581	362461					172332	230059	253018	655410

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - GROSSCUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, DENSITY CLASSES, DBH GROUP AND OWNERSHIP CLASS

MUNICIPALITY - CUMBERLAND

COVER TYPE AND DENSITY CLASS	O W N E R S H I P C L A S S												T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S			
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL
SOFTWOOD LAND																
UP TO 400	2527	2337	1354	6218	5631	6990	10960	23582	9419	9313	6249	24982				
410 - 600	5034	4958	3295	13289	16425	23637	41713	81776	21117	20916	20644	62679	17578	18641	18564	54784
610 - 800	14637	14646	7221	36505	26982	31188	47779	105950	43950	45335	35282	124567	42577	49512	65654	157744
810 -1000	1556	790	219	2566	4009	5218	4409	13637	7570	6151	2885	16607	85569	91170	90283	267023
OVERSTOCKED									325	116	34	476	13135	12160	7515	32812
TOTAL	23755	22732	12091	58579	53048	67035	104864	224948	82383	81833	65096	229313	325	116	34	476
MIXEDWOOD LAND																
UP TO 400	2144	1953	1235	5333	5443	8008	11822	25274	10002	10592	9484	30079				
410 - 600	3577	3585	2718	9881	8694	11165	15680	35540	24704	25661	20085	70451	17590	20553	22543	60687
610 - 800	2729	2996	1965	7691	9278	10674	11502	31455	15037	14169	11076	40283	36576	40412	38484	115873
810 -1000					836	416	504	1757	571	394	195	1161	27046	27840	24543	79430
OVERSTOCKED					84	49	32	166	72	27	21	120	1407	811	699	2919
TOTAL	8451	8535	5919	22906	24338	30314	39542	94195	50387	50846	40862	142096	156	76	53	287
HARDWOOD LAND																
UP TO 400	476	621	670	1768	2286	1894	2245	6426	3892	3104	3641	10638				
410 - 600	3183	2663	1704	7551	6040	4205	9027	19273	8835	6210	7711	22757	6655	5619	6557	18832
610 - 800	6360	4467	2379	13207	8786	6591	9688	25066	13502	10295	7680	31478	18058	13078	18444	49581
810 -1000	80	29		110	34	72	201	307	255	119	210	585	28649	21353	19748	69752
OVERSTOCKED													371	221	411	1004
TOTAL	10100	7781	4754	22637	17148	12763	21162	51073	26486	19729	19243	65459	371	221	411	1004
ALL FOREST LAND																
UP TO 400	5148	4911	3259	13319	13361	16893	25028	55284	23314	23009	19375	65700				
410 - 600	11795	11206	7719	30721	31160	39008	66421	136590	54657	52788	48441	155887	41824	44815	47664	134304
610 - 800	23727	22110	11566	57404	45047	48454	68971	162473	72490	69800	54038	196329	97612	103004	122583	323200
810 -1000	1637	820	219	2677	4880	5707	5115	15703	8397	6665	3291	18354	141265	140365	134576	416207
OVERSTOCKED					84	49	32	166	397	144	55	597	14915	13193	8626	36735
TOTAL	42307	39049	22766	104123	94535	110113	165569	370217	159257	152409	125202	436869	482	193	87	763

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - GROSSCUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, AGE CLASSES, DBH GROUP AND OWNERSHIP CLASSES

MUNICIPALITY - CUMBERLAND

COVER TYPE AND AGE CLASS	O W N E R S H I P C L A S S																T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				4 - 6	7 - 9	10 + UP	TOTAL
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL
SOFTWOOD LAND																				
UP TO 20YRS	24	73		97					210	115	124	450					234	188	124	548
21YRS - 40YRS	2033	548	171	2753	2108	903	573	3584	7387	3847	1387	12622					11529	5299	2132	18961
41YRS - 60YRS	19113	18262	8362	45739	26634	29388	33385	89408	55669	53602	37557	146828					101417	101253	79305	281976
61YRS - 80YRS	2403	3542	3371	9317	19570	28679	45682	93932	17013	21643	21025	59682					38987	53865	70079	162932
81YRS - 100YRS	57	146	145	349	3118	6174	18700	27994	1402	1807	3062	6272					4578	8128	21908	34615
101YRS OR MORE	123	158	40	322	1400	1678	6355	9434	343	410	1562	2316					1867	2247	7958	12073
UNEVENAGED STANDS					215	211	166	593	355	406	376	1139					571	618	543	1732
TOTAL	23755	22732	12091	58579	53048	67035	104864	224948	82383	81833	65096	229313					159187	171601	182052	512841
MIXEDWOOD LAND																				
UP TO 20YRS					70	47		117	277	150	91	519					347	197	91	637
21YRS - 40YRS	816	318	79	1213	794	725	539	2060	3837	2569	1478	7885					5448	3612	2097	11159
41YRS - 60YRS	6204	6557	4589	17350	11704	13206	11927	36839	32571	30075	23835	86482					50480	49839	40353	140672
61YRS - 80YRS	1430	1659	1251	4341	10718	15192	24453	50365	12139	16129	12453	40721					24289	32982	38157	95428
81YRS - 100YRS					582	658	1602	2843	1270	1653	2916	5840					1852	2311	4519	8683
101YRS OR MORE					71	100	469	642									71	100	469	642
UNEVENAGED STANDS					395	382	548	1327	291	268	86	646					687	651	635	1973
TOTAL	8451	8535	5919	22906	24338	30314	39542	94195	50387	50846	40862	142096					83177	89655	86324	259198
HARDWOOD LAND																				
UP TO 20YRS					33	8		42	296	185	181	663					329	154	181	705
21YRS - 40YRS	730	374	180	1286	4552	3084	4494	12131	3561	1857	2082	7501					8844	5316	6758	20919
41YRS - 60YRS	8884	6893	3943	19721	11349	7733	12874	31956	18927	13974	13111	46014					39161	28601	29929	97692
61YRS - 80YRS	486	513	630	1630	1130	1886	3793	6810	3639	3636	3591	10867					5255	6037	8016	19308
81YRS - 100YRS									10	37	206	253					10	37	206	253
101YRS OR MORE									51	37	68	157					51	37	68	157
UNEVENAGED STANDS					82	50		133									82	50		133
TOTAL	10100	7781	4754	22637	17148	12763	21162	51073	26486	19729	19243	65459					53735	40274	45160	139171
ALL FOREST LAND																				
UP TO 20YRS	24	73		97	103	55		159	784	451	397	1633					912	580	397	1890
21YRS - 40YRS	3580	1241	431	5253	7455	4713	5608	17776	14786	8274	4949	28010					25822	14229	10988	51040
41YRS - 60YRS	34201	31713	16896	82811	49688	50328	58187	158204	107168	97652	74504	279325					191058	179654	149588	520341
61YRS - 80YRS	4320	5716	5253	15290	31419	45758	73929	151108	32792	41409	37070	111272					68532	92865	116252	277670
81YRS - 100YRS	57	146	145	349	3701	6832	20303	30837	2683	3497	6185	12366					6441	10477	26635	43554
101YRS OR MORE	123	158	40	322	1472	1779	6825	10076	395	448	1631	2474					1991	2385	8496	12873
UNEVENAGED STANDS					694	644	715	2054	647	674	463	1785					1341	1319	1178	3839
TOTAL	42307	39049	22766	104123	94535	110113	165569	370217	159257	152409	125202	436869					296101	301572	313537	911211

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - GROSSCUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, SITE CLASSES, DBH GROUP AND OWNERSHIP CLASSES

MUNICIPALITY - CUMBERLAND

COVER TYPE AND SITE CLASS	O W N E R S H I P C L A S S																T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				4 - 6	7 - 9	10 + UP	TOTAL
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL
SOFTWOOD LAND																				
1																				
2	252	74		326					106	272	267	646					358	347	267	973
3	2802	1555	380	4738	614	887	1127	2629	7582	7693	7867	23143					11000	10135	9375	30511
4	20046	20503	11605	52155	49163	62223	97581	208968	72351	72596	56368	201316					141561	155323	165555	462441
5	654	599	105	1359	3269	3925	6155	13350	2342	1270	592	4206					6766	5795	6853	18915
6																				
TOTAL	23755	22732	12091	58579	53048	67035	104864	224948	82383	81833	65096	229313					159187	171601	182052	512841
MIXEDWOOD LAND																				
1																				
2																				
3	334	113	20	468	626	718	248	1593	731	832	625	2189					1692	1664	894	4252
4	8049	8300	5864	22214	23535	29478	39261	92275	48133	48355	39327	135816					79717	86134	84454	250306
5	67	121	34	222	176	117	32	326	1523	1657	908	4089					1767	1896	975	4639
6																				
TOTAL	8451	8535	5919	22906	24338	30314	39542	94195	50387	50846	40862	142096					83177	89655	86324	259198
HARDWOOD LAND																				
1																				
2																				
3	1594	1214	746	3555	1863	1118	1257	4239	1610	782	392	2785					5068	3115	2397	10581
4	8475	6537	4008	19020	15285	11644	19904	46834	24743	18901	18829	62474					48503	37083	42742	128329
5	30	30		61					132	44	21	199					163	75	21	260
6																				
TOTAL	10100	7781	4754	22637	17148	12763	21162	51073	26436	19729	19243	65459					53735	40274	45160	139171
ALL FOREST LAND																				
1																				
2	252	74		326					106	272	267	646					358	347	267	973
3	4732	2862	1148	8763	3104	2724	2933	8462	9924	9308	8886	28118					17760	14916	12667	45345
4	36570	35341	21478	93390	87984	103346	155747	348073	145228	139854	114525	399608					265783	278541	292752	841077
5	752	751	139	1643	3446	4042	6187	13576	3998	2973	1523	8495					8197	7766	7850	23815
6																				
TOTAL	42307	39049	22786	104123	94525	110113	165569	370217	159257	152409	125202	436869					296101	301572	313537	911211

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - GROSSCUBIC FT. VOLUMES ON FORESTED LAND BY SPECIES, DBH GROUP AND OWNERSHIP CLASS

06/02/69

MUNICIPALITY - CUMBERLAND

S P E C I E S	O W N E R S H I P C L A S S																T O T A L				
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL					
WHITE SPRUCE	754	648	688	2092	972	1530	2110	4613	8103	10003	11439	29546					9830	12182	14238	36251	
SPRUCE-RED + BLACK	16739	19197	10384	46321	32037	51311	106265	189615	46788	58002	56616	161408					95565	128511	173266	397344	
FIR	5904	4277	1859	12041	28025	26183	14261	68470	47369	35722	12147	95239					81299	66183	28269	175752	
HEMLOCK	21	82	56	159	594	1584	2506	4685	1626	3580	5098	10306					2242	5247	7662	15152	
WHITE PINE	249	492	2041	2783	158	433	1024	1616	482	1007	3535	5025					891	1933	6601	9426	
RED PINE	84	115	332	532	52	79	286	417	133	230	412	777					270	425	1031	1727	
LARCH	641	481	361	1483	160	143	322	626	2107	2945	1515	6568					2909	3570	2199	8678	
JACK PINE	3184	3110	1095	7389	1913	1862	730	4507	912	701	320	1934					6010	5674	2146	13831	
SCOTCH PINE					5		22	28									5			22	28
CEGAR																					
TOTAL SOFTWOODS	27580	28405	16819	72805	63921	83129	127530	274581	107525	112194	91087	310807					199026	223729	235437	658192	
SUGAR MAPLE	744	740	527	2012	8028	4461	11599	24089	5749	4762	6304	16816					14523	9963	18431	42918	
RED MAPLE	5924	5260	3099	14284	8816	9657	9894	28368	18197	16243	11670	46111					32938	31162	24664	88764	
YELLOW BIRCH	371	252	933	1557	4820	6254	12542	23617	3657	3883	5367	12909					8850	10391	18843	38085	
WHITE BIRCH	4975	2707	794	8479	3274	1858	932	6766	6229	2953	1366	10549					14480	7519	3094	25094	
OAK					2			2	31	28		60					33	28		62	
ASPEN	1496	1497	492	3486	1792	2503	1381	5677	7803	8154	5731	21689					11091	12155	7605	30853	
GREY BIRCH	1084	47	32	1165	1367	115		1483	6013	435	157	6607					8465	599	190	9255	
WHITE ASH	97	128	65	292	132	131	203	467	453	537	439	1430					684	797	708	2190	
BLACK ASH					21	103	21	146	81	34	66	181					102	137	87	328	
CHERRY	6			6	73	21	21	116	134			134					215	21	21	257	
FLM					48	340	389			24	305	329						73	645	719	
BEECH	20	8		29	2189	1774	1055	5019	3160	3037	2607	8805					5370	4820	3662	13854	
BALSAM POPLAR																					
TOTAL HARDWOODS	14723	10644	5946	31314	30520	26932	37991	95444	51512	40095	34017	125625					56757	77672	77955	252384	
MISCELLANEOUS	3			3	93	51	47	192	219	119	97	436					317	170	144	633	
TOTAL FOREST LAND	42307	39049	22766	104123	94535	110113	165569	370218	159257	152409	125202	436869					296101	301572	313537	911211	

ALL FIGURES ARE IN THOUSANDS CU. FT.

E S T I M A T E - MERCH CUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, DENSITY CLASSES, DBH GROUP AND OWNERSHIP CLASS

MUNICIPALITY - CUMBERLAND

COVER TYPE AND DENSITY CLASS	O W N E R S H I P C L A S S																T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				4 - 6	7 - 9	10 + UP	TOTAL
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	CBH	DBH	DBH	TOTAL
SOFTWOOD LAND																				
UP TO 40(	1758	1982	1202	4943	3918	5931	9886	19735	6485	7893	5589	19967					12162	15806	16678	44647
41(- 60(	3544	4184	2940	10668	11434	20022	37569	69026	14584	17675	18507	50767					29562	41882	59017	130462
61(- 80(	10331	12388	6421	29141	18820	26379	43122	88322	30481	38399	31637	100517					59634	77167	81180	217982
81(-100(	1070	666	193	1930	2849	4417	3967	11234	5209	5199	2574	12983					9129	10283	6735	26148
OVERSTOCKED									225	96	31	352					225	96	31	352
TOTAL	16705	19221	10757	46684	37023	56751	94546	188320	56985	69263	58339	184588					110714	145235	163643	419593
MIXEDWOOD LAND																				
UP TO 40(	1459	1632	1087	4179	3684	6609	10432	20726	6568	8792	8390	23751					11712	17034	19909	48657
41(- 60(	2337	2985	2402	7724	5821	9238	13918	28978	16416	21339	17781	55538					24575	33562	34103	92241
61(- 80(	1828	2492	1745	6067	6196	8807	10209	25213	9914	11807	9835	31557					17938	23108	21791	62837
81(-100(					545	347	444	1337	373	328	171	872					919	675	615	2210
OVERSTOCKED					62	41	29	133	48	22	17	88					110	64	46	221
TOTAL	5625	7110	5235	17971	16310	25044	35034	76389	33320	42291	36196	111808					55256	74445	76466	206169
HARDWOOD LAND																				
UP TO 40(	304	495	571	1371	1414	1517	1940	4871	2499	2530	3174	8204					4218	4543	5686	14447
41(- 60(	2025	2154	1470	5670	3702	3405	7836	14944	5507	5001	6692	17201					11235	10561	16019	37816
61(- 80(	3953	3548	2052	9553	5319	5275	8399	18994	8342	8326	6708	23377					17615	17150	17159	51925
81(-100(	47	23		71	21	61	183	266	154	95	179	429					222	180	362	766
OVERSTOCKED																				
TOTAL	6330	6222	4114	16667	10457	10259	18360	39776	16503	15954	16754	49212					33291	32436	39228	104956
ALL FOREST LAND																				
UP TO 40(	3522	4110	2861	10494	9017	14058	22258	45334	15552	19216	17154	51923					28092	37384	42274	107752
41(- 60(	7907	9323	6832	24063	20958	32665	59325	112749	36508	44016	42982	123506					65373	86005	109140	260520
61(- 80(	16113	18429	10219	44762	30336	40463	61731	132530	48738	58533	48181	155452					95188	117426	120132	332746
81(-100(	1113	690	193	2001	3416	4826	4595	12838	5736	5623	2924	14285					10271	11140	7714	29125
OVERSTOCKED					62	41	29	133	273	119	48	441					335	160	77	574
TOTAL	28661	32553	20107	81322	63790	92055	147940	303787	106810	127508	111290	345609					199262	252118	279339	730719

ALL FIGURES ARE IN THOUSANDS CU.FT.

F S T I M A T E - MERCH CUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, AGE CLASSES, DBH GROUP AND OWNERSHIP CLASSES

MUNICIPALITY - CUMBERLAND

COVER TYPE AND AGE CLASS	O W N E R S H I P C L A S S													T O T A L						
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				4 - 6	7 - 9	10 + UP	TOTAL
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 CBH	7 - 9 CBH	10 + UP DBH	TOTAL
SOFTWOOD LAND																				
UP TO 20YRS	16	61		78					139	97	113	350				156	159	113	428	
21YRS - 40YRS	1386	456	149	1992	1406	757	512	2676	4876	3269	1235	9381				7669	4483	1898	14051	
41YRS - 60YRS	13484	15456	7438	36379	18584	24827	29989	73400	38497	45378	33580	117456				70565	85663	71008	227236	
61YRS - 80YRS	1691	2987	3004	7682	13691	24346	41181	79219	11984	18302	18903	49190				27367	45636	63088	136093	
81YRS - 100YRS	39	123	128	291	2190	5212	16950	24353	997	1526	2759	5283				3227	6862	19939	29929	
101YRS OR MORE	87	134	36	258	1000	1428	5762	8191	243	347	1412	2004				1331	1910	7211	10453	
UNEVENAGED STANDS					149	179	149	478	247	339	334	921				356	519	483	1399	
TOTAL	16705	19221	10757	46684	37023	56751	94546	188320	56985	69263	58339	184588				110714	145235	163643	419593	
MIXEDWOOD LAND																				
UP TO 20YRS					51	39		90	180	124	78	383				231	164	78	474	
21YRS - 40YRS	552	268	70	891	521	610	484	1616	2493	2166	1314	5974				3567	3046	1869	8482	
41YRS - 60YRS	4116	5457	4045	13619	7840	10883	10517	29241	21493	25109	21165	67767				33450	41449	35727	110627	
61YRS - 80YRS	956	1384	1119	3460	7178	12572	21707	41457	8092	13318	10967	32378				16227	27274	33794	77296	
81YRS - 100YRS					406	538	1414	2359	858	1353	2594	4806				1264	1892	4008	7166	
101YRS OR MORE					50	84	419	554								50	84	419	554	
UNEVENAGED STANDS					261	315	492	1069	202	218	76	497				462	534	568	1567	
TOTAL	5625	7110	5235	17971	16310	25044	35034	76389	33320	42291	36196	111808				55256	74445	76466	206169	
HARDWOOD LAND																				
UP TO 20YRS					21	6		27	197	158	164	519				218	164	164	547	
21YRS - 40YRS	453	316	162	932	2723	2527	3964	9215	2166	1525	1809	5501				5344	4368	5936	15649	
41YRS - 60YRS	5563	5494	3411	14469	6946	6169	11127	24243	11760	11284	11439	34484				24269	22948	25978	73196	
61YRS - 80YRS	313	411	539	1264	719	1513	3268	5501	2340	2926	3105	8373				3373	4852	6913	15139	
81YRS - 100YRS									6	29	176	212				6	29	176	212	
101YRS OR MORE									32	29	58	120				32	29	58	120	
UNEVENAGED STANDS					46	42		89								46	42		89	
TOTAL	6330	6222	4114	16667	10457	10259	18360	39076	16503	15954	16754	49212				33291	32436	39228	104956	
ALL FOREST LAND																				
UP TO 20YRS	16	61		78	72	46		118	516	380	356	1253				605	488	356	1450	
21YRS - 40YRS	2392	1042	382	3817	4651	3895	4961	13508	9536	6961	4359	20857				16580	11898	9704	38183	
41YRS - 60YRS	23164	26408	14895	64468	33371	41880	51633	126884	71750	81772	66185	219708				128285	150061	132714	411061	
61YRS - 80YRS	2961	4782	4663	12408	21589	38432	66157	126178	22418	34547	32976	89942				46969	77762	103797	228529	
81YRS - 100YRS	39	123	128	291	2597	5750	18365	26713	1862	2910	5530	10303				4498	8784	24025	37308	
101YRS OR MORE	87	134	36	258	1051	1513	6181	8745	276	377	1471	2124				1414	2024	7689	11128	
UNEVENAGED STANDS					457	538	641	1636	449	558	410	1419				906	1096	1052	3055	
TOTAL	28661	32553	20107	81322	63790	92055	147940	303787	106810	127508	111290	345609				199262	252118	279339	730719	

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - MERCH CUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, SITE CLASSES, DBH GROUP AND OWNERSHIP CLASSES

MUNICIPALITY - CUMBERLAND

COVER TYPE AND SITE CLASS	O W N E R S H I P C L A S S																T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				4 - 6	7 - 9	10 + UP	TOTAL
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL
SOFTWOOD LAND																				
1																				
2	184	62		247					76	233	240	550					261	296	240	798
3	1970	1315	338	3624	434	744	1020	2199	5204	6557	7080	18842					7608	8618	8439	24666
4	14102	17334	10324	41761	34301	52674	87971	174948	50067	61406	50486	161960					98471	131415	148783	378670
5	447	508	95	1051	2287	3331	5552	11172	1637	1065	532	3235					4371	4905	6180	15458
6																				
TOTAL	16705	19221	10757	46684	37023	56751	94546	188320	56985	69263	58339	184588					110714	145235	163643	419593
MIXEDWOOD LAND																				
1																				
2																				
3	219	95	18	333	412	607	221	1242	476	706	560	1743					1108	1409	801	3319
4	5356	6909	5185	17452	15771	24341	34783	74897	31836	40227	34856	106920					52964	71479	74825	199269
5	48	105	31	185	126	94	29	250	1007	1357	779	3144					1182	1557	839	3579
6																				
TOTAL	5625	7110	5235	17971	16310	25044	35034	76389	33320	42291	36196	111808					55256	74445	76466	206169
HARDWOOD LAND																				
1																				
2																				
3	1000	970	638	2609	1150	902	1091	3143	972	635	351	1959					3122	2509	2080	7712
4	5312	5228	3476	14016	9306	9357	17268	35933	15442	15280	16384	47107					30061	29866	37129	97057
5	18	23		41					88	37	19	145					106	60	19	186
6																				
TOTAL	6330	6222	4114	16667	10457	10259	18360	39076	16503	15954	16754	49212					33291	32436	39228	104956
ALL FOREST LAND																				
1																				
2	184	62		247					76	233	240	550					261	296	240	798
3	3190	2381	994	6566	1996	2254	2333	6585	6653	7899	7992	22545					11840	12536	11321	35697
4	24771	29472	18986	73230	59380	86273	140024	285778	97346	116915	101726	315988					181498	232761	260738	674998
5	514	636	126	1277	2413	3426	5582	11422	2732	2460	1330	6524					5661	6524	7039	19224
6																				
TOTAL	28661	32553	20107	81322	63790	92055	147940	303787	106810	127508	111290	345609					199262	252118	279339	730719

ALL FIGURES ARE IN THOUSANDS CU.FT.

F S T I M A T E - MERCH CUBIC FT. VOLUMES ON FORESTED LAND BY SPECIES, DBH GROUP AND OWNERSHIP CLASS

06/02/69

MUNICIPALITY - CUMBERLAND

S P E C I E S	O W N E R S H I P C L A S S																T O T A L	20		
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S							
	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL				
WHITE SPRUCE	511	561	625	1698	661	1330	1917	3909	5430	8671	10375	24477					6603	10562	12919	30085
SPRUCE-RED + BLACK	12099	16290	9305	37695	23507	43825	96396	163729	34068	49397	51052	134518					69675	109513	156755	335944
FIR	3972	3616	1663	9252	18950	22145	12798	53895	31897	30158	10859	72916					54820	55920	25322	136063
HEMLOCK	14	69	49	133	385	1303	2219	3908	1041	2955	4529	8526					1441	4328	6798	12568
WHITE PINE	179	417	1787	2384	115	366	889	1372	344	851	3078	4274					638	1635	5756	8031
RED PINE	63	97	291	452	38	67	250	357	95	194	363	653					157	359	906	1462
LARCH	456	406	323	1187	112	122	288	523	1550	2507	1365	5422					2119	3036	1977	7133
JACK PINE	2277	2653	980	5911	1369	1579	648	3597	679	599	286	1566					4227	4832	1915	11076
SCOTCH PINE					4		19	24									4		19	24
CEDAR																				
TOTAL SOFTWOODS	19575	24112	15028	58716	45146	70741	115429	231317	75108	95336	81911	252356					139830	190189	212370	542390
SUGAR MAPLE	457	581	446	1485	4717	3487	9910	18115	3437	3728	5377	12543					8613	7796	15735	32144
RED MAPLE	3644	4114	2624	10383	5453	7558	8407	21419	11020	12703	9895	33619					20119	24376	20926	65422
YELLOW BIRCH	226	198	800	1225	2972	4887	10701	18561	2283	3044	4565	9893					5483	8129	16067	29680
WHITE BIRCH	3020	2106	670	5797	1928	1439	790	4158	3702	2295	1159	7157					8651	5841	2620	17113
OAK					1			1	18	23		41					19	23		42
ASPEN	1061	1295	452	2809	1266	2184	1272	4723	5409	7115	5269	17794					7737	10596	6993	25327
GREY BIRCH	593	36	28	658	759	85		845	3345	333	133	3812					4698	455	162	5316
WHITE ASH	63	102	56	222	81	102	171	355	278	419	372	1069					423	624	599	1647
BLACK ASH					13	82	17	113	51	26	56	134					65	108	74	248
CHERRY	3			3	43	16	17	77	72			72					118	16	17	152
ELM						39	291	330		19	260	280						59	551	610
BEECH	11	6		18	1347	1390	890	3628	1954	2370	2205	6530					3312	3767	3095	10176
BALSAM POPLAR																				
TOTAL HARDWOODS	9083	8441	5078	22604	18585	21274	32470	72329	31574	32080	29295	92950					59243	61796	66844	187884
MISCELLANEOUS	2			2	59	39	40	139	126	92	83	302					188	132	124	444
TOTAL FOREST LAND	28661	32553	20107	81322	63790	92055	147940	303787	106810	127508	111290	345609					199262	252118	279339	730719

ALL FIGURES ARE IN THOUSANDS CU. FT.

E S T I M A T E - GROSSCUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, DENSITY CLASSES, DBH GROUP AND OWNERSHIP CLASS

TOTALS ALL MUNICIPALITIES

COVER TYPE ANC DENSITY CLASS	O W N E R S H I P C L A S S												T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S			
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL
SOFTWOOD LAND																
UP TO 40'	3627	3079	1986	8693	12960	15693	19218	47872	17676	18585	13466	49728				
41' - 60'	6988	6598	4020	17607	27378	37679	55116	120174	42082	46133	40066	128282	34264	37358	34671	106294
61' - 80'	19320	18378	9849	47548	55711	62315	78351	196377	88782	92875	73424	255082	76450	90412	99203	266065
81' -100'	1976	1551	622	4150	12120	10385	9331	31837	19650	16662	8829	45142	163814	173568	161625	499008
OVERSTOCKED	63	16	33	112	745	356	138	1240	599	211	176	987	33746	28599	18783	81130
TOTAL	31975	29625	16512	78113	108916	126431	162155	397503	168791	174468	135963	479224	309683	330525	314631	954840
MIXEDWOOD LAND																
UP TO 40'	3464	3790	2610	9866	10601	15520	22394	48515	19561	22192	20189	61943				
41' - 60'	4505	5172	4345	14023	16089	21659	33974	71724	42938	45363	40634	128936	33627	41503	45194	120325
61' - 80'	3955	5087	4331	13374	14011	16789	18064	48865	32208	30588	27624	90421	63534	72195	78954	214684
81' -100'	30	9	112	152	956	511	573	2042	1144	730	705	2580	50175	52466	50021	152662
OVERSTOCKED					84	49	32	166	72	27	21	120	2131	1251	1392	4774
TOTAL	11957	14060	11400	37417	41743	54530	75040	171314	95924	98902	89175	284002	149625	167493	175616	492735
HARDWOOD LAND																
UP TO 40'	997	1469	1642	4109	4570	5283	7808	17661	7025	6437	9050	22513				
41' - 60'	3842	3512	3272	10628	11275	10788	21573	43636	14409	11165	17563	43138	12592	13189	18500	44283
61' - 80'	9747	7304	6136	23189	16853	14044	23805	54703	24205	19405	18695	62306	29526	25467	42409	97403
81' -100'	80	29		110	80	123	255	459	255	119	210	585	50806	40754	48637	140199
OVERSTOCKED					12		54	67	72	108	137	319	417	272	465	1156
TOTAL	14668	12317	11051	38037	32793	30239	53497	116529	45968	37237	45656	128862	53430	79793	110206	283430
ALL FOREST LAND																
UP TO 40'	8089	8340	6239	22669	28131	36497	49421	114050	44264	47214	42706	134184				
41' - 60'	15337	15284	11638	42260	54743	70128	110664	235536	99430	102663	98264	300358	80485	92051	98367	270904
61' - 80'	33023	30771	20317	84112	86576	93149	120221	299947	145195	142869	119744	407810	169511	188075	220567	578154
81' -100'	2087	1590	735	4413	13157	11020	10161	34339	21050	17513	9744	48308	264796	266790	260284	791870
OVERSTOCKED	63	16	33	112	842	406	225	1474	744	348	335	1427	36296	30123	20641	87061
TOTAL	58601	56002	38964	153568	183452	211201	290694	685347	310685	310608	270795	892089	552739	577812	600454	1731006

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - GROSSCUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, AGE CLASSES, DBH GROUP AND OWNERSHIP CLASSES

TOTALS ALL MUNICIPALITIES

COVER TYPE AND AGE CLASS	O W N E R S H I P C L A S S												T O T A L				
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				
	4 - 6 DBH	7 - 9 DBH	10 + DBH	UP TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	UP TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	UP TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	UP TOTAL	
22																	
SOFTWOOD LAND																	
UP TO 20YRS	58	103		161	985	993	468	2447	847	541	215	1604		1891	1638	684	4213
21YRS - 40YRS	3387	1244	518	5149	9122	4464	2934	16521	16100	9541	4688	30330		28611	15249	8140	52001
41YRS - 60YRS	23261	21606	10644	55513	55672	59769	61313	176755	107826	108252	75383	291462		186759	189629	147341	523731
61YRS - 80YRS	4860	6166	5026	16053	37081	51372	70734	159188	37684	48002	44431	130117		79626	105541	120192	305359
81YRS - 100YRS	57	146	145	349	4279	7745	19971	31996	4697	6200	7684	18582		9034	14092	27801	50928
101YRS OR MORE	123	158	40	322	1400	1678	6355	9434	500	598	2119	3219		2025	2435	8515	12976
UNEVENAGED STANDS	226	199	137	562	374	407	378	1159	1134	1332	1439	3906		1735	1938	1955	5629
TOTAL	31975	29625	16512	78113	108916	126431	162155	397503	168791	174468	135963	479224		309683	330525	314631	954840
MIXEDWOOD LAND																	
UP TO 20YRS	138	329	561	1029	332	325	114	771	478	418	284	1181		949	1073	960	2982
21YRS - 40YRS	846	327	191	1365	1515	1220	1116	3852	6251	3938	2707	12897		8613	5486	4015	18115
41YRS - 60YRS	7526	8555	6435	22518	18421	21943	22451	62815	52759	49216	40994	142969		78707	79715	69881	228303
61YRS - 80YRS	3445	4847	4211	12504	19737	28911	45742	94391	33195	40917	37903	112016		56378	74676	87857	218912
81YRS - 100YRS					1166	1518	4179	6865	1926	2736	4827	9490		3093	4255	9006	16356
101YRS OR MORE					71	138	651	861						71	138	651	861
UNEVENAGED STANDS					498	472	784	1755	1312	1675	2458	5446		1810	2148	3242	7201
TOTAL	11957	14060	11400	37417	41743	54530	75740	171314	95924	98902	89175	284002		149625	167493	175616	492735
HARDWOOD LAND																	
UP TO 20YRS					67	21	87	176	370	250	211	832		438	271	299	1009
21YRS - 40YRS	776	443	233	1453	6428	4269	6471	17169	5936	3259	4185	13381		13142	7972	10890	32005
41YRS - 60YRS	10193	7641	4307	22142	19109	14902	26331	60342	27108	20517	23282	70908		56411	43060	54422	153894
61YRS - 80YRS	3559	3971	6210	13742	6400	9874	17937	34212	11655	12008	14853	38517		21616	25855	39001	86472
81YRS - 100YRS	138	260	300	698	427	774	978	2179	845	1163	3055	5064		1410	2158	4334	7943
101YRS OR MORE					93	89	805	988	51	37	68	157		145	126	874	1146
UNEVENAGED STANDS					266	307	384	958						266	307	384	958
TOTAL	14668	12317	11051	38037	32793	30239	53497	116529	45968	37237	45656	128862		93430	79793	110206	283430
ALL FOREST LAND																	
UP TO 20YRS	196	433	561	1190	1385	1340	671	3396	1697	1209	711	3618		3278	2982	1943	8205
21YRS - 40YRS	5010	2014	943	7968	17066	9954	10522	37543	28289	16739	11580	56610		50367	28708	23046	102122
41YRS - 60YRS	40982	37804	21387	100174	93202	96615	110596	300414	187693	177986	139660	505340		321878	312405	271645	905929
61YRS - 80YRS	11865	14986	15448	42300	63219	90158	134414	287792	82535	100928	97188	280651		157620	206072	247051	610745
81YRS - 100YRS	195	407	445	1048	5873	10039	25129	41041	7469	10100	15567	33138		13538	20546	41142	75228
101YRS OR MORE	123	158	40	322	1565	1906	7312	11285	552	636	2188	3377		2242	2700	10041	14984
UNEVENAGED STANDS	226	199	137	562	1139	1187	1547	3873	2446	3008	3898	9352		3812	4354	5582	13789
TOTAL	58601	56002	38964	153568	183452	211201	290694	685347	310685	310608	270795	892089		552739	577812	600454	1731006

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - GROSSCUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, SITE CLASSES, DBH GROUP AND OWNERSHIP CLASSES

TOTALS ALL MUNICIPALITIES

COVER TYPE AND SITE CLASS	O W N E R S H I P C L A S S												T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S			
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL
SOFTWOOD LAND																
1									66	69	25	162	66	69	25	162
2	252	74		326	622	1319	2879	4821	1232	2476	2777	6486	2107	3869	5657	11634
3	3183	2287	700	6171	3118	4146	4434	11693	21049	22545	16759	60354	27351	28579	21893	78225
4	27454	26280	15407	69142	99412	114905	147729	362047	140639	145512	114813	400966	267506	286658	277950	832156
5	1085	982	404	2472	5762	6060	7112	18935	5802	3865	1586	11254	12650	10907	9104	32662
6																
TOTAL	31975	29625	16512	78113	108916	126431	162155	397503	168791	174468	135963	479224	309682	330525	314631	954840
MIXEDWOOD LAND																
1									248	146	355	750	248	146	355	750
2									1939	2257	2541	6738	3433	4148	3770	11352
3	334	113	20	468	1159	1777	1207	4145	91872	94426	85181	271480	143581	160650	170043	474275
4	11540	13757	11345	36642	40168	52466	73516	166151	91872	94426	85181	271480	143581	160650	170043	474275
5	82	189	34	305	414	286	316	1917	1865	2071	1096	5033	2362	2547	1446	6356
6																
TOTAL	11957	14060	11400	37417	41743	54530	75040	171314	95924	98902	89175	284002	149625	167493	175616	492735
HARDWOOD LAND																
1									527	871	693	2091	527	871	693	2091
2									2428	988	422	3839	6221	2690	3727	13639
3	1594	1214	746	3555	2197	1487	2558	6244	42678	35181	44431	122291	86316	75005	105675	266997
4	13042	11072	10305	34420	30595	28751	50938	110285	42678	35181	44431	122291	86316	75005	105675	266997
5	30	30		61					334	196	109	640	365	226	109	701
6																
TOTAL	14668	12317	11051	38037	32793	30239	53497	116529	45968	37237	45656	128862	93430	79793	110206	283430
ALL FOREST LAND																
1									66	69	25	162	66	69	25	162
2	252	74		326	622	1319	2879	4821	2008	3493	3827	9328	2882	4887	6706	14477
3	5113	3615	1467	10196	6475	7411	8200	22088	25417	25791	19723	70932	37006	36818	29391	103217
4	52036	51110	37057	140205	170177	196123	272184	638485	275190	275120	244426	794738	497404	522354	553669	1573429
5	1198	1202	438	2839	6177	6346	7429	19952	8001	6133	2792	16928	15378	13682	10660	39720
6																
TOTAL	58601	56002	38964	153568	183452	211201	290694	685347	310685	310608	270795	892089	552739	577812	600454	1731006

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - GROSSCUBIC FT. VOLUMES ON FORESTED LAND BY SPECIES, DBH GROUP AND OWNERSHIP CLASS

TOTALS ALL MUNICIPALITIES

S P E C I E S	O W N E R S H I P C L A S S												T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S			
	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL
WHITE SPRUCE	1129	978	1016	3125	2871	3987	6478	13337	18612	24406	26826	69845	22613	29373	34321	86308
SPRUCE-RED + BLACK	20382	22883	14053	57318	50708	79222	151688	281620	74962	97301	92664	264928	146053	199407	258406	603867
FIR	12205	10500	4884	27589	71698	65780	34135	171613	116408	88550	33002	237960	200311	164830	72021	437164
HEMLOCK	53	216	226	496	1093	3073	5135	9302	4375	10758	18664	33798	5522	14048	24026	43597
WHITE PINE	249	492	2321	3063	185	481	1636	2302	632	1489	6030	8151	1067	2463	9987	13518
RED PINE	84	115	332	532	66	204	807	1077	139	242	412	795	290	562	1553	2405
LARCH	727	639	468	1835	762	681	414	1858	3671	5537	2907	12116	5161	6658	3790	15809
JACK PINE	3192	3134	1135	7463	1913	1862	730	4507	912	701	320	1934	6019	5699	2187	13905
SCOTCH PINE					5			22					5		22	28
CECAR																
TOTAL SOFTWOODS	38025	38961	24438	101425	129305	155293	201048	485647	219714	228988	180829	629531	387044	423242	406316	1216604
SUGAR MAPLE	3588	2707	3823	10118	16744	12619	29961	59325	14195	12627	19317	46140	34528	27553	53102	115584
RED MAPLE	7018	7333	5337	19689	15013	18837	22075	55926	34115	35027	33219	102362	56148	61157	60632	177977
YELLOW BIRCH	989	1767	3476	6234	9370	13959	29906	53236	7663	9353	16290	33307	18024	25079	49673	92777
WHITE BIRCH	5234	2862	837	8934	3975	2855	1537	8368	7998	4830	2682	15510	17207	10548	5057	32813
OAK					8			8	31	41	47	120	40	41	47	129
ASPEN	1624	1762	758	4145	2175	2944	1794	6914	12019	12864	11911	36795	15819	17571	14464	47856
GREY BIRCH	1104	47	32	1184	1537	136		1674	7998	620	157	8775	10639	805	190	11635
WHITE ASH	103	128	65	298	212	251	502	966	918	1076	966	2960	1234	1456	1535	4225
BLACK ASH					50	147	69	267	99	34	66	200	150	181	136	468
CHERRY	6			6	89	30	21	140	177			177	273	30	21	324
ELM					48	340	389	49	37	379	466		49	86	719	855
BEFCH	898	431	193	1523	4831	4017	3388	12236	5381	4977	4829	15189	11111	5425	8412	28949
BALSAM POPLAR																
TOTAL HARDWOODS	20568	17041	14525	52135	54010	55847	89598	199455	90649	81488	89869	262007	165228	154377	193993	513598
MISCELLANEOUS	7			7	136	60	47	244	321	132	97	551	466	192	144	803
TOTAL FOREST LAND	58601	56002	38964	153568	183452	211201	290694	685348	310685	310608	270796	892089	552739	577812	600454	1731006

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - MERCH CUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, DENSITY CLASSES, DBH GROUP AND OWNERSHIP CLASS

TOTALS ALL MUNICIPALITIES

COVER TYPE AND DENSITY CLASS	O W N E R S H I P C L A S S																T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL				
SOFTWOOD LAND																				
UP TO 40(	2525	2611	1762	6899	8941	13269	17272	39482	12188	15752	12053	39994					23654	31633	31088	86376
41(- 60(	4884	5559	3581	14026	19037	31864	49518	109420	29036	38973	35825	103836					52959	76357	88926	218283
61(- 80(	13570	15534	8764	37869	38582	52700	70506	161789	61322	78589	65723	205635					113475	146824	144954	405294
81(-100(	1357	1310	552	3220	8287	8749	8372	25408	13408	14091	7857	35357					23053	24151	16782	63987
OVERSTOCKED	41	14	29	85	504	299	123	927	403	172	157	733					949	487	310	1747
TOTAL	22378	25031	14690	62101	75354	106882	145793	328030	116359	147579	121618	385557					214093	279493	282102	775689
MIXEDWOOD LAND																				
UP TO 40(	2335	3144	2285	7764	7155	12791	19676	39623	12909	18343	17745	48998					22400	34280	39707	96387
41(- 60(	2961	4291	3808	11062	10708	17892	30060	58661	28553	37692	35842	102088					42223	56877	69711	171812
61(- 80(	2638	4207	3815	10662	9344	13871	16005	39221	21280	25381	24505	71167					33263	43460	44327	121051
81(-100(	19	6	99	125	620	425	502	1548	739	607	620	1967					1379	1039	1223	3642
OVERSTOCKED					62	41	29	133	48	22	17	88					110	64	46	221
TOTAL	7955	11650	10010	29615	27891	45023	66274	139190	63530	82048	78732	224311					99377	138722	155017	393117
HARDWOOD LAND																				
UP TO 40(	650	1190	1414	3255	2883	4246	6730	13361	4503	5196	7837	17538					8037	10634	15983	34655
41(- 60(	2445	2835	2849	8130	6966	8645	18605	34217	9026	8958	15189	33174					18438	20439	36644	75522
61(- 80(	6044	5806	5285	17136	10274	11184	20552	42011	15019	15588	16195	46803					31239	32579	42033	105952
81(-100(	47	23		71	48	101	231	380	154	95	179	429					249	221	410	881
OVERSTOCKED					9		46	55	49	87	119	256					58	87	165	311
TOTAL	9188	9855	9550	28594	20182	24178	46166	90527	28752	29927	39521	98201					58123	63661	95238	217323
ALL FOREST LAND																				
UP TO 40(	5510	6946	5463	17919	18980	30307	43679	92968	29601	39293	37637	106531					54092	76547	86779	217419
41(- 60(	10292	12686	10240	33219	36713	58402	98184	193300	66616	85625	86858	239099					113622	156714	195283	465619
61(- 80(	22254	25548	17865	65668	58202	77756	107065	243023	97622	119559	106424	323606					178078	222864	231355	632298
81(-100(	1424	1341	652	3418	8956	9275	9106	27338	14302	14794	8657	37754					24683	25411	18416	68511
OVERSTOCKED	41	14	29	85	576	341	198	1116	500	283	295	1078					1118	639	523	2280
TOTAL	39522	46537	34251	120311	123429	176084	258234	557747	208643	259555	239872	708071					371594	482177	532358	1386130

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - MERCH CUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, AGE CLASSES, DBH GROUP AND OWNERSHIP CLASSES

TOTALS ALL MUNICIPALITIES

COVER TYPE AND AGE CLASS	O W N E R S H I P C L A S S																T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				4 - 6	7 - 9	10 + UP	TOTAL
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL
SOFTWOOD LAND																				
UP TO 20YRS	42	86		128	672	822	399	1895	534	454	192	1182					1249	1363	592	3206
21YRS - 40YRS	2299	1041	455	3797	6072	3747	2585	12405	10658	3080	4154	22893					19030	12869	7195	39095
41YRS - 60YRS	16318	18270	9480	44068	38474	50497	54942	143914	74391	91667	67402	233462					129184	160435	131825	421444
61YRS - 80YRS	3425	5207	4468	13100	25859	43506	63669	133036	26316	40511	39765	106593					55601	89225	107903	252730
81YRS - 100YRS	39	123	128	291	3018	6535	18090	27643	3315	5230	6891	15436					6373	11889	25110	43372
101YRS OR MORE	87	134	36	258	1000	1428	5762	8191	357	509	1911	2777					1444	2072	7710	11227
UNEVENAGED STANDS	167	167	120	455	256	344	343	943	786	1125	1299	3211					1209	1637	1763	4611
TOTAL	22378	25031	14690	62101	75354	106882	145793	328030	116359	147579	121618	365557					214093	279493	282102	775689
MIXEDWOOD LAND																				
UP TO 20YRS	88	270	438	847	231	274	107	607	313	348	250	911					633	893	840	2367
21YRS - 40YRS	571	275	170	1017	982	1074	987	2994	4046	3298	2399	9745					5600	4598	3557	13757
41YRS - 60YRS	4983	7092	5651	17727	12263	18077	19772	50114	34852	40987	36289	112130					52099	66158	61713	179972
61YRS - 80YRS	2311	4011	3700	10022	13233	23881	40447	77562	22137	33778	33381	89297					37682	61671	77529	176882
81YRS - 100YRS					804	1257	3682	5743	1297	2247	4262	7807					2101	3504	7944	13551
101YRS OR MORE					50	115	579	745									50	115	579	745
UNEVENAGED STANDS					325	392	703	1421	883	1387	2148	4419					1209	1779	2851	5840
TOTAL	7955	11650	10010	29615	27891	45023	66274	139190	63530	82048	78732	224311					99377	138722	155017	393117
HARDWOOD LAND																				
UP TO 20YRS					42	16	74	134	245	209	190	644					287	225	265	778
21YRS - 40YRS	483	374	208	1066	3844	3481	5570	12996	3645	2685	3640	9971					7973	6541	9519	24034
41YRS - 60YRS	6364	6084	3719	16168	11734	11850	23158	46743	16871	16479	20202	53553					34571	34414	47080	116465
61YRS - 80YRS	2246	3186	5360	10793	4061	7876	15396	27334	7411	9598	12812	29821					13719	20661	33568	67950
81YRS - 100YRS	93	210	262	566	283	633	832	1749	546	925	2617	4089					923	1769	3712	6405
101YRS OR MORE					59	70	703	833	32	29	58	120					91	100	762	953
UNEVENAGED STANDS					155	248	329	734									155	248	329	734
TOTAL	9188	9855	9550	28594	20182	24178	46166	90527	28752	29927	39521	98201					58123	63561	95238	217323
ALL FOREST LAND																				
UP TO 20YRS	130	356	488	975	947	1114	575	2637	1092	1012	633	2738					2170	2483	1697	6351
21YRS - 40YRS	3354	1691	834	5880	10899	8253	9243	28396	18350	14064	10195	42610					32604	24009	20272	76887
41YRS - 60YRS	27666	31447	19850	77965	62472	80425	97873	240772	126116	149134	123894	399145					216255	261008	240619	717883
61YRS - 80YRS	7982	12405	13528	33917	43155	75264	119514	237933	55865	83888	85959	225712					107003	171558	219002	497563
81YRS - 100YRS	132	334	391	858	4106	8426	22604	35137	5158	8403	13771	27334					9398	17164	36767	63330
101YRS OR MORE	87	134	36	258	1110	1614	7045	9770	389	538	1969	2898					1587	2287	9051	12927
UNEVENAGED STANDS	167	167	120	455	737	985	1376	3099	1670	2513	3447	7631					2575	3666	4945	11186
TOTAL	39522	46537	34251	120311	123429	176084	258234	557747	208643	259555	239872	708071					371594	482177	532358	1386130

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - MERCH CUBIC FT. VOLUMES ON FORESTED LAND BY COVER TYPE, SITE CLASSES, DBH GROUP AND OWNERSHIP CLASSES

TOTALS ALL MUNICIPALITIES

COVER TYPE AND SITE CLASS	O W N E R S H I P C L A S S																T O T A L			
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S				4 - 6	7 - 9	10 + UP	TOTAL
	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + UP DBH	TOTAL
SOFTWOOD LAND																				
1									46	59	22	128					46	59	22	128
2	184	62		247	427	1142	2611	4181	855	2128	2507	5491					1467	3333	5119	9920
3	2234	1937	624	4796	2149	3516	3983	9649	14486	19220	15046	48754					18870	24674	19655	63201
4	19200	22199	13713	55113	68737	97099	132775	298611	96891	122912	102628	322432					184829	242210	249117	676158
5	759	831	352	1943	4040	5124	6422	15587	4079	3258	1412	8750					8879	9214	8187	26281
6																				
TOTAL	22378	25031	14690	62101	75354	106882	145793	328030	116359	147579	121618	385557					214092	279493	282102	775689
MIXEDWOOD LAND																				
1									152	117	326	596					152	117	326	596
2																				
3	219	95	18	333	776	1479	1048	3304	1271	1902	2264	5438					2267	3477	3331	9076
4	7675	11393	9960	29028	26825	43308	64950	135083	60871	78323	75194	214388					95371	133025	150104	378501
5	60	161	31	252	289	235	276	801	1236	1705	947	3888					1586	2101	1254	4942
6																				
TOTAL	7955	11650	10010	29615	27891	45023	66274	139190	63530	82048	78732	224311					99377	138722	155017	393117
HARDWOOD LAND																				
1									336	683	587	1607					336	683	587	1607
2																				
3	1000	970	638	2609	1362	1195	2196	4754	1492	810	376	2679					3854	2576	3211	10043
4	8169	8861	8912	25943	18820	22983	43969	85773	26699	28276	38460	93435					53689	60121	91341	205153
5	18	23		41					223	156	96	477					242	180	96	519
6																				
TOTAL	9188	9855	9550	28594	20182	24178	46166	90527	28752	29927	39521	98201					58123	63561	95238	217323
ALL FOREST LAND																				
1									46	59	22	128					46	59	22	128
2	184	62		247	427	1142	2611	4181	1344	2929	3421	7695					1956	4134	6033	12124
3	3454	3003	1281	7739	4288	6191	7229	17708	17250	21933	17688	56872					24593	31129	26198	82321
4	35045	42454	32585	110085	114383	163390	241694	519469	184462	229512	216283	630257					333891	435357	490563	1259812
5	838	1016	384	2238	4330	5359	6698	16388	5539	5120	2456	13116					10707	11496	9538	31743
6																				
TOTAL	39522	46537	34251	120311	123429	176084	258234	557747	208643	259555	239872	708071					371594	482177	532358	1386130

ALL FIGURES ARE IN THOUSANDS CU.FT.

E S T I M A T E - MERCH CUBIC FT. VOLUMES ON FORESTED LAND BY SPECIES, DBH GROUP AND OWNERSHIP CLASS

TOTALS ALL MUNICIPALITIES

S P E C I E S	O W N E R S H I P C L A S S												T O T A L				T O T A L				
	C R O W N L A N D				L A R G E O W N E R S				S M A L L O W N E R S				M I L I T A R Y R E S E R V E S A N D P A R K S								
	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL	4 - 6 DBH	7 - 9 DBH	10 + DBH	TOTAL					
WHITE SPRUCE	772	847	923	2542	1945	3458	5879	11283	12558	21161	24313	58033					15276	25467	31115	71860	
SPRUCE-RED + BLACK	14737	19421	12612	46772	37132	67649	137541	242322	54704	82909	83557	221171					106573	169980	233711	510266	
FIR	8219	8882	4370	21472	48445	55629	30572	134647	78495	74789	29528	182814					135159	139302	64472	338934	
HEMLOCK	36	179	200	416	701	2536	4558	7796	2796	8877	16574	28248					3533	11554	21333	36461	
WHITE PINE	179	417	2028	2625	133	406	1427	1968	447	1261	5266	6974					760	2085	8722	11568	
RED PINE	63	97	291	452	48	172	708	929	99	205	363	668					211	475	1363	2050	
LARCH	522	543	419	1485	554	577	370	1501	2701	4715	2607	10023					3777	5835	3397	13011	
JACK PINE	2284	2673	1017	5975	1369	1579	648	3597	679	599	286	1566					4333	4853	1952	11139	
SCOTCH PINE																	4			19	24
CEDAR					4		19	24													
TOTAL SOFTWOODS	26813	33064	21865	81743	90335	132010	181727	404072	152483	194520	162497	509501					269632	359555	366090	995317	
SUGAR MAPLE	2197	2119	3253	7570	10004	9886	25573	45464	8618	9886	16479	34983					20820	21892	45305	88018	
RED MAPLE	4328	5743	4519	14591	9278	14779	18759	42316	20856	27423	28208	76488					34463	47946	51486	133896	
YELLOW BIRCH	619	1384	2962	4966	5831	10951	25513	42296	4789	7338	13881	26010					11240	19675	42357	73273	
WHITE BIRCH	3179	2227	705	6112	2355	2224	1300	5880	4790	3759	2274	10824					10324	8211	4280	22817	
OAK					5			5	18	33	41	93					24	33	41	98	
ASPEN	1153	1526	697	3377	1508	2571	1652	5731	8351	11232	10967	30551					11014	15330	13316	39661	
GREY BIRCH	605	36	28	669	857	102		959	4478	474	133	5087					5941	613	162	6716	
WHITE ASH	67	102	56	225	132	196	425	753	566	841	822	2230					765	1140	1303	3209	
BLACK ASH					31	116	58	206	63	26	56	146					95	142	114	352	
CHERRY	3			3	50	23	17	91	95			95					149	23	17	190	
FLM						39	291	330	33	29	324	387					33	69	615	718	
BEECH	549	331	163	1044	2955	3136	2875	8967	3309	3886	4101	11296					6813	7354	7140	21308	
BALSAM POPLAR																					
TOTAL HARDWOODS	12703	13473	12386	38562	33010	44027	76466	153504	55971	64932	77290	198194					101685	122433	166143	390262	
MISCELLANEOUS	4			4	83	46	40	170	188	102	83	375					277	148	124	550	
TOTAL FOREST LAND	39522	46537	34251	120311	123429	176084	258234	557747	208643	259555	239872	708071					371594	482177	532358	1386130	

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