



United States
Department of
Agriculture

Forest Service

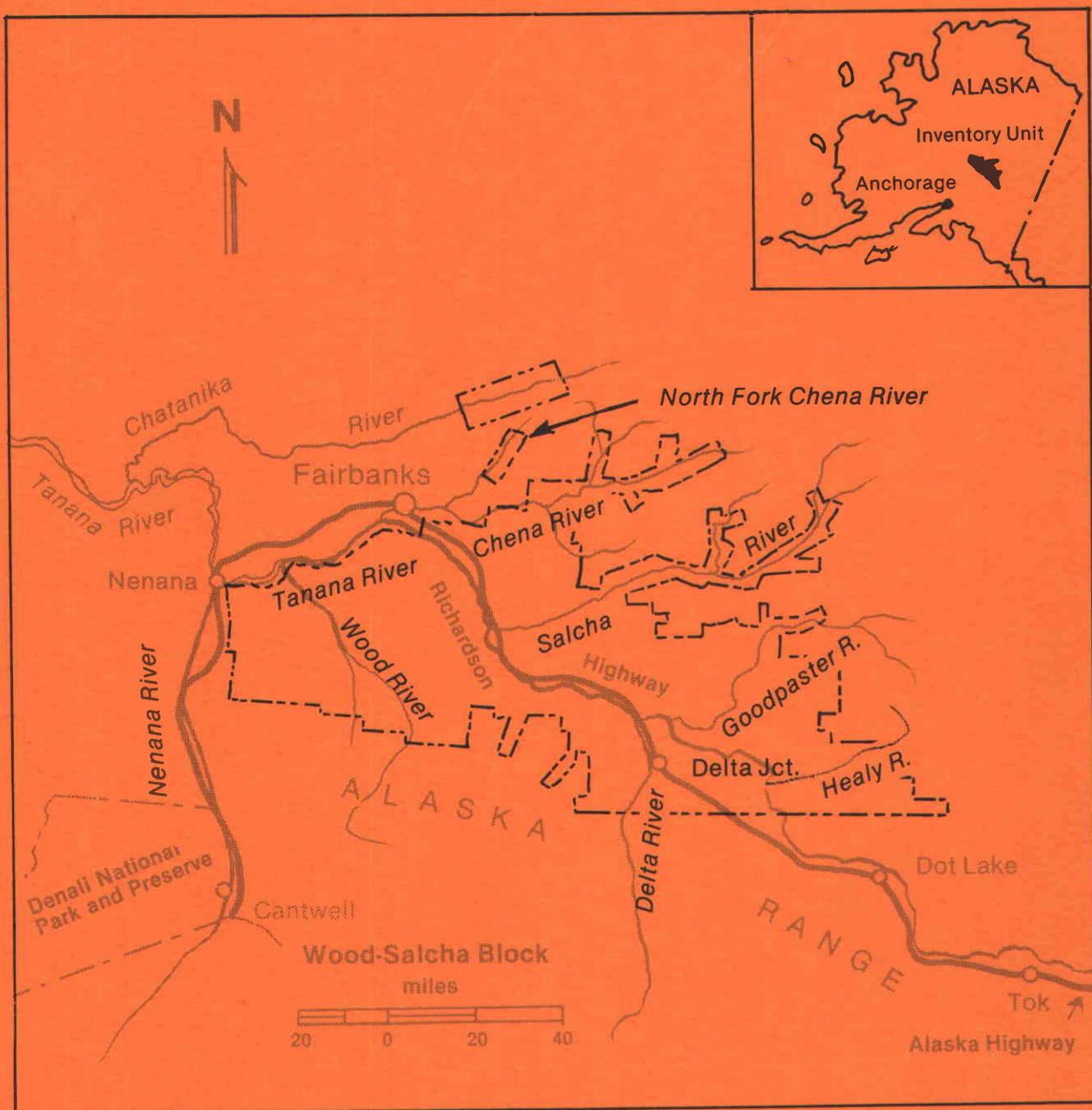
Pacific Northwest
Forest and Range
Experiment Station

Resource Bulletin
PNW-107
October 1983



Timber Resource Statistics for the Wood-Salcha Block, Tanana Inventory Unit, Alaska, 1975

Kenneth C. Winterberger



Author

KENNETH C. WINTERBERGER is a forester, Forestry Sciences Laboratory, Pacific Northwest Forest and Range Experiment Station, 2221 E. Northern Lights Blvd., Suite 106, Anchorage, AK 99508.

Abstract

Winterberger, Kenneth C. Timber resource statistics for the Wood-Salcha block, Tanana inventory unit, Alaska, 1975. Resour. Bull. PNW-107. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1983. 34 p.

This statistical report on timber resources of the 4.1-million-acre Wood-Salcha block is the last of four reports on the 14-million-acre Tanana Valley inventory unit. Tables are provided for commercial and operable noncommercial forest land, total gross and net volumes, and annual net growth and mortality. Estimates for commercial forest land total 626,300 acres with 799,374,800 net cubic feet of growing stock volume. Estimates for the special operable noncommercial class total 94,400 acres with 117,812,500 net cubic feet of growing stock volume.

Keywords: Forest surveys, timber inventory, timber resources, resources (forest), statistics (forest), Alaska (Tanana Valley).

Summary

This report on the timber resources of the 4.1-million-acre Wood-Salcha block is the last of four on the 14-million-acre Tanana Valley inventory unit. The block is located to the south and east of Fairbanks, Alaska; its southern boundary lies just north of the Alaska Range. Statistics for the Fairbanks block are reported in Resource Bulletin PNW-59, for the Kantishna block in Resource Bulletin PNW-95, and for the Upper Tanana block in Resource Bulletin PNW-100.

Inventory fieldwork in the Wood-Salcha block was completed in 1975 through the cooperative efforts of the U.S. Department of the Interior, Bureau of Land Management; the U.S. Army; and the State of Alaska, Department of Natural Resources, Division of Lands. Estimates for forest area total 3,408,900 acres with 626,300 acres of commercial forest land and 94,400 acres in a special noncommercial class having a gross volume of 800 cubic feet or more per acre. Estimated net growing stock volume in these two forest land classes is 799,374,800 and 117,812,500 cubic feet, respectively. Although nearly 65 percent of the commercial forest land area is classed as hardwood types, the volume of softwood species makes up more than 50 percent of the total cubic-foot volume and nearly 90 percent of the board foot volume.

The inventory of the Wood-Salcha block was completed in 1975. Since then, land has been cleared for the Delta Agricultural Project, and several large fires have burned within the area. Statistics in this report do not account for either the acreage lost from the forest land base to agricultural conversion or the timber volume lost to fire or conversion.

Statistics for land ownership are not included in this report because of continuing uncertainty about land status changes associated with Alaska native and State of Alaska land selections and wilderness area withdrawals. These land status changes are the result of Federal legislation: the Alaska Statehood Act of 1958, public Law 85-508; the Alaska Native Claims Settlement Act of 1971, Public Law 92-203; and the Alaska National Interest Lands Conservation Act, Public Law 96-487. A resource analysis, with statistics on ownership, will be published in the future when the status of land shifts is more clear.

Contents

- 1 Introduction
- 2 Inventory Procedures
- 4 Reliability of Inventory Data
- 5 Terminology
- 10 Names of Trees
- 11 Tables
- 32 Acknowledgments
- 32 Metric Equivalents
- 33 Literature Cited

Tables

Table 1--Area by land class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 2--Area of commercial and operable noncommercial forest land by stand size class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 3--Area of commercial and operable noncommercial forest land by stand volume class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 4--Area of commercial and operable noncommercial forest land by stand volume and stand size class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 5--Area of commercial forest land by area condition class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 6--Area of commercial forest land by site class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 7--Area of commercial and noncommercial forest land by forest type, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 8--Area of commercial forest land by stand age and stand size class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 9--Area of operable noncommercial forest land by stand age and stand size class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 10--Number of growing stock trees on commercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 11--Number of growing stock trees 5.0-inch d.b.h. and larger on commercial and operable noncommercial forest land by 5-foot height class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 12--Net volume of timber on commercial and operable noncommercial forest land by class of timber and by softwoods and hardwoods, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 13--Net volume of growing stock on commercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 14--Net volume of growing stock on commercial and operable noncommercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 15--Net volume of sawtimber on commercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 16--Net volume of sawtimber on commercial and operable noncommercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 17--Gross volume of sawtimber on commercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 18--Gross volume of sawtimber on commercial and operable noncommercial forest land by diameter class and species, Wood-Salcha block Tanana inventory unit, Alaska, 1975

Table 19--Net volume of growing stock on commercial forest land, in cubic feet and volume per acre, by forest type and stand size class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 20--Net volume of growing stock on operable noncommercial forest land, in cubic feet and volume per acre, by forest type and stand size class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 21--Net volume of sawtimber on commercial forest land, in board feet International 1/4-inch rule and volume per acre, by forest type and stand size class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 22--Net volume of sawtimber on operable noncommercial forest land, in board feet International 1/4-inch rule and volume per acre, by forest type and stand size class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 23--Net volume of sawtimber on commercial forest land by species and log grade, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 24--Net volume of sawtimber on operable noncommercial forest land by species and log grade, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 25--Net annual growth of growing stock by species and forest land class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 26--Net annual growth of sawtimber by species and forest land class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 27--Annual mortality of growing stock by species and forest land class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 28--Annual mortality of sawtimber by species and forest land class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975.

Table 29--Annual mortality of growing stock by cause, forest land class, and by softwoods and hardwoods, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Table 30--Annual mortality of sawtimber by cause, forest land class, and by softwoods and hardwoods, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

Highlights

	<i>Thousand acres</i>	<i>Thousand hectares</i>
Total Wood-Salcha block area:	4,090.9	1 655.6
With forests	3,408.9	1 379.6
With nonforest	554.9	224.6
With non-Census water	49.7	20.1
With Census water	77.4	31.3
Forested area:		
Commercial forest land	626.3	253.5
Noncommercial forest land--		
800 cubic feet or more per acre	94.4	38.2
less than 800 cubic feet per acre	2,688.2	1 087.9
Commercial forest composition:		
Sawtimber	169.4	68.6
Poletimber	283.7	114.8
Seedlings and saplings	173.2	70.1
Nonstocked	--	--
Commercial forest land type:		
Black spruce	10.4	4.2
White spruce	212.7	86.1
Balsam poplar	19.4	7.9
Quaking aspen	125.2	50.6
Paper birch	258.6	104.7
Nonstocked	--	--

	<u>All Growing Stock</u>		<u>Sawtimber Growing Stock</u>	
	<i>Thousand cubic feet^{1/}</i>	<i>Thousand cubic meters^{1/}</i>	<i>Thousand board feet^{2/}</i>	<i>Thousand cubic meters^{3/}</i>
Volumes on commercial forest land:				
Total gross volume	846,145.4	23 945.9	2,099,136.5	10 943.7
Total net volume	799,374.8	22 622.3	2,005,400.2	10 485.8
Annual net growth	19,985.2	565.6	64,069.2	118.8
Annual net mortality	1,685.1	47.7	4,254.9	27.7

-- = no data.

^{1/}Volume of roundwood in live trees 5.0-inch d.b.h. and larger.

^{2/}Net volume, Internation 1/4-inch rule.

^{3/}Volume of roundwood for softwood trees 9.0-inch d.b.h. and larger and hardwood trees 11.0-inch d.b.h. and larger.

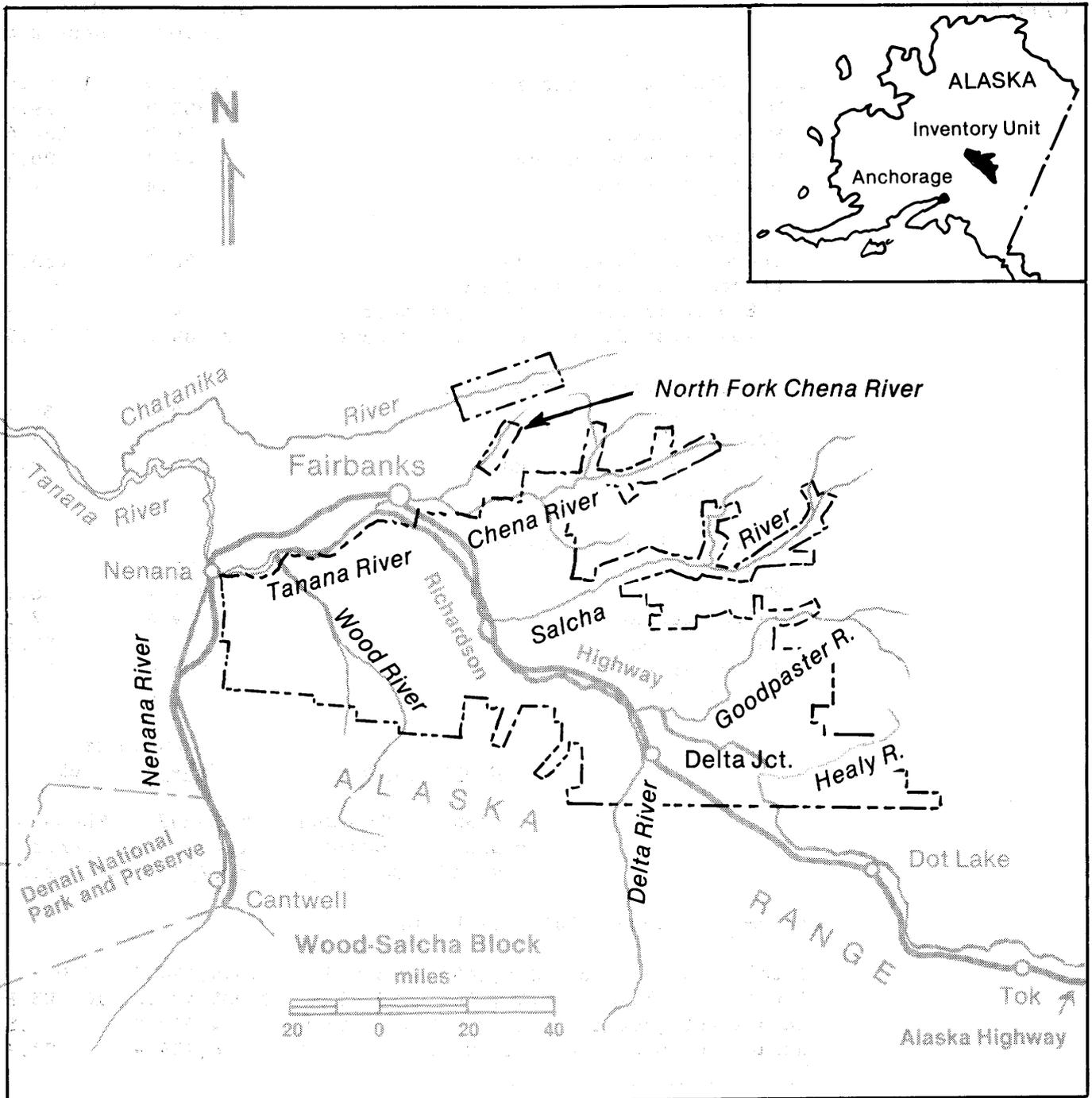


Figure 1.--The Wood-Salcha inventory block.

Introduction

Preparations for the Tanana forest inventory began in 1968 when a cooperatively funded contract was let for aerial photography of 11.3 million acres of the Tanana River valley, which, with 2.3 million acres previously photographed in the Fairbanks area, make up the 13.6-million-acre Tanana inventory unit. Cooperators were the Economic Development Administration (EDA), U.S. Department of Commerce; the Bureau of Indian Affairs (BIA) and Bureau of Land Management (BLM), U.S. Department of the Interior; and the Alaska Department of Natural Resources Division of Lands (DNR), State of Alaska. The intent was to inventory the valley as a unit, but poor flying weather and smoke haze slowed the photo project, so "blocks" within the Tanana unit were inventoried as photos became available.

This report, the last of four, is on the Wood-Salcha block, inventoried in 1975. Reports for the other three blocks of the Tanana inventory unit have been published: Fairbanks (Hegg 1975b), Kantishna (Hegg 1982), and Upper Tanana (Hegg 1983).

The statistics in this report on area, volume, growth, and mortality relate to the supply of wood available for local, regional, and national needs. These data are presented for the use of State planners, legislators, land and forest managers, forest industry, and other users of forest inventory data.

The Wood-Salcha block, located near Fairbanks, Alaska, is bounded on the south by the foothills of the Alaska Range, on the west by the Nenana River, and on the northwest by the Tanana River (fig. 1). The northeast boundary encompasses the timbered portions of the Chatanika and Chena River drainages not contained in the Fairbanks block. The eastern boundary encompasses the timbered portions of the drainages of Shaw Creek and the Salcha, Goodpaster, and Healy Rivers. Its southeast boundary lies adjacent to the Upper Tanana block near Dot Lake on the Alaska Highway.

Work on the Wood-Salcha block began in 1974 with photo interpretation of 15,403 one-acre photo points. Photo interpretation, ownership determination, and fieldwork preparation and completion were a cooperative effort of DNR, BLM, BIA, U.S. Army, and the Forestry Sciences Laboratory (Anchorage) of the Pacific Northwest Forest and Range Experiment Station. Supervision and editing of plot records were done by the Forestry Sciences Laboratory. Data processing was handled by the Pacific Northwest Forest and Range Experiment Station in Portland.

Forest Inventory and Analysis (FIA),^{4/} authorized by the McSweeney-McNary Act in 1928 and extended to Alaska in 1954, is a nationwide effort conducted at various locations to obtain information on forest lands--their extent, condition, volume, growth, and depletion. The first inventories of interior Alaska were begun in 1956 and completed in 1962 (Hutchison 1967). These were extensive inventories, and subsequently, areas with concentrations of commercial forest land have been defined for more intensive measurements. Areas where intensive inventories have been conducted and for which reports are available are: Susitna Valley (Hegg 1970); Norton Bay Indian Reservation;^{5/} Koyukuk River (Hegg 1974); Copper River (Hegg 1975a); Tuxedni Bay (Hegg 1979); Kuskokwim River (Hegg and Sieverding 1980); and the Fairbanks (Hegg 1975b), Kantishna (Hegg 1982), and Upper Tanana (Hegg 1983) blocks of the Tanana unit.

Inventory Procedures

The estimates of area and timber volumes are based on a double sampling procedure (Bickford 1952). Enough points to satisfy specific levels of statistical precision were systematically distributed over 1:15,840-scale aerial photographs of the Wood-Salcha block. A 1-acre photo plot surrounding each of these points was interpreted and classified by land type, forest type, and volume strata. A subsample was then drawn from all land types and reexamined on the photos. All points in the subsample that were originally classified as commercial forest land^{6/} as well as any other points questionably classified were visited on the ground.

For the Wood-Salcha block, we interpreted 15,403 photo points and reexamined 1,002 noncommercial and nonforest points. This reexamination was equivalent to a ground check and yielded 16 questionable points which, along with the 172 commercial forest and operable noncommercial points, totaled 188 locations actually checked on the ground. The ground plot was located at the exact point established on the photo. At each

^{4/}Forest Inventory and Analysis was originally named Forest Survey. The name was officially changed in 1975 to Renewable Resources Evaluation; it was last changed in 1982.

^{5/}Office report on file at the Bureau of Indian Affairs, Juneau, Alaska; 1973.

^{6/}For definition of this term and others, see the section "Terminology."

ground location a 10-point cluster of variable radius plots was measured.^{1/} A 40 basal-area factor gage was used to select sample trees at each point for detailed measurements of size and vigor.

Corrected area classifications and tree measurements made on these ground plots served as the basis for estimating the area and volumes presented in this report. The tables showing the estimates, however, depart from the standard FIA tables with the addition of a noncommercial forest category called "operable." During the initial inventory of interior Alaska, we found that much noncommercial forest land had a relatively high per-acre volume. When more intensive inventories were begun in the mid-1960's, we and our cooperators agreed that some of this noncommercial strata had potential value as a local commercial wood supply. By extrapolation, from cutting minimums of 3 cords per acre used in the Lake States and Canada, we established 9 cords or 800 cubic feet per acre as a prudent level for Alaska. This threefold increase in the minimum economic operating level should compensate for the higher production and shipping costs in Alaska.

The operable noncommercial areas presently have more than 800 gross cubic feet per acre in poletimber and sawtimber trees. The area and volume in this classification, although considered adequate for some cutting operations, should not be included in allowable cut computations. Future studies may show, through logging or other silvicultural practices, if these marginal sites can be managed as commercial forest land. None of the reported areas and volumes (whether classed as commercial or other) should be used in any calculation of an allowable cut without consideration of possible management and land use alternatives.

^{1/}Study plan and field manual are on file at the Forestry Sciences Laboratory, 2221 E. Northern Lights Blvd., Anchorage, AK 99504.

Reliability of Inventory Data

The reliability of the inventory data is expressed in terms of relative sampling errors at the 68-percent confidence level.

	Design sampling error	Sampling error achieved	Sampling error of total area or volume reported
----- -Percent- -----			
Area:			
Commercial forest land, per million acres	3.0	3.2	±4.0
Noncommercial forest land, per million acres	10.0	5.0	±3.0
Volume:			
Commercial forest land, per billion cubic feet	6.0	6.3	±7.0
Commercial forest land, gross growth per billion cubic feet	5.0	1.0	±9.0

For the Wood-Salcha block, we reported 799.4 million cubic feet of growing stock volume, ± 7.0 percent, yielding 68-percent confidence limits of 743.5 and 855.3 million cubic feet. A 68-percent confidence level means that if repeated samples are taken of this population, the total volume will lie between 743.5 and 855.3 million cubic feet 68 percent of the time. We slightly exceeded our design sampling error for both commercial forest land area (3.0 percent per million acres) and commercial forest land volume (6.0 percent per billion cubic feet). Sampling errors for most of the tabular data in this report are available on request.

Terminology^{8/}

Allowable cut--The volume of timber that could be cut on commercial forest land during a given period under specified management plans for sustained production such as those in effect on National Forests.

Area condition class--Area condition class provides a general stratification of commercial forest land by management opportunity class as indicated by the stocking or area controlled by tree and cover class.

Commercial species--Trees presently or prospectively suitable for industrial products.

Cull--Portions of a tree unusable for industrial products because of rot, form, or other defect.

Cull trees--Live trees of sawtimber or poletimber size unmerchantable for saw logs now or prospectively because of defect, rot, or species.

Rough trees--Live trees of 5.0-inch d.b.h. and larger that do not contain a saw log now or prospectively, primarily because of roughness, poor form, or because they are a non-commercial species.

Rotten trees--Live trees of 5.0-inch d.b.h. and larger that do not contain a saw log now or prospectively, primarily because of rot.

Forest land--Land at least 16.7 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for nonforest use.

Commercial forest land--Forest land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization. Areas qualifying as commercial forest land have the capability of producing in excess of 20 cubic feet per acre per year of industrial wood under management.

Noncommercial forest land--Unproductive forest land incapable of yielding crops of industrial wood because of adverse site conditions (producing less than 20 cubic feet per acre per year) and productive forest land withdrawn from commercial timber use through statute or administrative regulation.

^{8/} Terminology and definitions are from the USDA Forest Service Handbook, Title 4813.1, 1967, unless otherwise noted.

Noncommercial operable--noncommercial forest land with a gross volume of 800 cubic feet or more per acre.

Noncommercial inoperable--noncommercial forest land with a gross volume of less than 800 cubic feet per acre.

Forest type--A classification of forest land based on the species forming a plurality of the live tree stocking.

Black spruce--Forests in which a plurality of the stand is black spruce. Black spruce most often occurs in nearly pure stands but can be found mixed with tamarack, white spruce, paper birch, and aspen. Black spruce is fairly characteristic of poorer quality forest land.

White spruce--Forests in which a plurality of the stand is white spruce. Common associates include paper birch and balsam poplar, and occasionally black spruce or quaking aspen.

Tamarack--Forests in which a plurality of the stand is tamarack. Tamarack rarely occurs as a pure type; it is more often an associated species in the black spruce type.

Balsam poplar--Forests in which a plurality of the stand is balsam poplar. Balsam poplar is usually found in nearly pure stands; occasional associates are white spruce or paper birch. As the poplar ages it is usually replaced by white spruce. South of Alaska Range balsam poplar may be replaced by black cottonwood or hybrids between the two.

Black cottonwood--Forests in which a plurality of the stand is black cottonwood. Black cottonwood is found south of the Alaska Range in pure stands along the major rivers. It hybridizes extensively with balsam poplar where their ranges overlap; in this overlap area types are not distinguished by species but are usually reported as cottonwood/poplar. Black cottonwood stands are replaced by white spruce as they age, and the pure stands contain only an occasional white spruce or paper birch.

Paper birch--Forests in which a plurality of the stand is paper birch. Paper birch can occur in pure stands but is more often mixed with white spruce, quaking aspen, or black spruce.

Quaking aspen--Forests in which a plurality of the stand is aspen. Aspen is usually found as a pure type following fire and the willow stage of succession. As the aspen ages it is usually replaced by spruce, except on very dry sites where it may remain as a pure type. Common associates include black spruce, white spruce, and occasionally paper birch.

Growing stock trees--Sawtimber trees, poletimber trees, saplings, and seedlings; that is, all live trees except cull trees.

Desirable trees--Growing stock trees with no serious defects in quality limiting present or prospective use, relatively high vigor, and hosting no pathogens that could result in death or serious deterioration before rotation age. They include the type of trees forest managers aim to grow; that is, the trees left in silvicultural cutting or favored in cultural operations.

Acceptable trees--Trees meeting the specifications for growing stock but not qualifying as desirable.

Hardwoods--Dicotyledonous trees, usually broad leaved and deciduous. hardwood species in interior Alaska are paper birch, quaking aspen, black cottonwood, and balsam poplar.

Inhibiting vegetation--Cover sufficiently dense to prevent establishment of tree seedlings.

International 1/4-inch rule--A rule used to determine the tree volume in board feet (Bruce and Schumacher 1950).

Land area--The area of dry land and land temporarily or partly covered by water such as marshes, swamps, and river flood plains (omitting tidal flats below mean high tide); streams, sloughs, estuaries, and canals less than 120 feet wide; and lakes, reservoirs, and ponds less than 1 acre in area.

Log grades--a classification of logs based on external characteristics as indicators of quality or value.

Mean annual increment (MAI)--A measure of the volume of wood, in cubic feet, produced on 1 acre during 1 year. FIA minimum standard for commercial forest land is the ability to produce 20 cubic feet per acre per year.

Mortality--Number or sound-wood volume of live trees dying from natural causes during a 5-year period.

Net annual growth of growing stock--The annual change in volume of sound wood in live sawtimber and poletimber trees.

Net annual growth of sawtimber--The annual change in net board-foot volume of live sawtimber trees.

Net volume--The gross volume of a tree less deductions for rot, sweep, or other defect affecting product use.

Growing stock volume--The net volume of sound wood in the bole of growing stock trees 5.0-inch d.b.h. and larger, from stump to a minimum top diameter of 4.0 inches outside bark or to the point where the central stem breaks into limbs.

Noncommercial species--Tree species of typically small size, poor form, or inferior quality which normally do not develop into trees suitable for industrial products.

Nonforest land--Land that does not qualify as forest land. Includes land that has never supported forests and lands formerly forested where forest use is precluded by development for nonforest uses, such as crops, improved pasture, residential areas, and city parks. Also includes improved roads and certain areas of water classified by the Bureau of Census as land. Unimproved roads, streams, canals, and nonforest strips in forest areas must be more than 120 feet wide, and clearings in forest areas must be more than .1 acre in size to qualify as nonforest land.

Nonstockable land--Areas of forest land not capable of supporting forest growth because of rock, water, etc.

Rotten cull trees--Live trees of 5.0-inch and larger d.b.h. that do not contain a saw log now or prospectively, primarily because of rot.

Salvable dead trees--Standing dead trees that are considered currently or potentially merchantable by regional standards. A poletimber tree must be more than one-half sound; a sawtimber tree more than one-third sound (board measure).

Saw log--A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, and with a minimum small end diameter inside bark of 6 inches for softwoods (8 inches for hardwoods).

Saw-log portion--That part of the bole of sawtimber trees between the stump and the saw log top.

Saw-log top--The point on the bole of sawtimber trees above which a saw log cannot be produced. The minimum sawlog top is 7.0-inch d.o.b. (diameter outside bark) for softwoods and 9.0-inch d.o.b. for hardwoods.

Site class--A classification of forest land by its capacity to grow crops of industrial wood.

Softwoods--Needle leaved trees, usually evergreen. Interior Alaska species are white and black spruce and tamarack.

Stocking--The degree of occupancy of land by trees, measured by basal area and/or the number of trees in a stand by size or age and spacing, compared with the basal area or number of trees required to fully utilize the growth potential of the land; that is, the stocking standard.

Overstocked areas--Areas where growth of trees is significantly reduced by excessive numbers of trees.

Nonstocked areas--Commercial forest lands less than 16.7 percent stocked with growing stock trees.

Stand size class--A classification of forest land based on size of the growing stock present; that is, sawtimber, poletimber, or saplings and seedlings.

Sawtimber stands--Stands at least 16.7 percent stocked with growing stock trees, with half or more of total stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands--Stands at least 16.7 percent stocked with growing stock trees of which half or more of this stocking is in poletimber and sawtimber trees, and with poletimber stocking exceeding that of sawtimber.

Seedling-sapling stands--stands at least 16.7 percent stocked with growing stock trees of which more than half of the stocking is seedlings and saplings.

Tree-size class--A classification based on the diameter of the tree at breast height (4-1/2 feet above the ground on the uphill side of the tree).

Sawtimber-size tree--Softwood tree of 9.0-inch d.b.h. and larger. Hardwood tree of 11.0-inch d.b.h. and larger.

Poletimber-size tree--Softwood tree of 5.0- to 8.9-inch d.b.h. Hardwood tree of 5.0- to 10.9-inch d.b.h.

Sapling-size tree--A tree of 1.0- to 4.9-inch d.b.h.

Seedling-size tree--An established tree of less than 1.0-inch d.b.h.

Upper-stem portion--That part of the main stem or fork of saw-timber trees above the saw-log top to a minimum top diameter of 4.0-inch outside bark or to the point where the main stem or fork breaks into limbs.

Water--Bureau of the Census definition: Streams, sloughs, estuaries, and canals more than one-eighth of a statute mile in width; and lakes, reservoirs, and ponds more than 40 acres in area. FIA definition: The same as the Bureau of the Census definition, except minimum width of streams, etc., is 120 feet and minimum size of lakes, etc., is 1 acre.

Names of Trees

Pine family:

Black spruce	<i>Picea mariana</i> (Mill.) B.S.P.
White spruce	<i>Picea glauca</i> (Moench) Voss

Willow family:

Balsam poplar	<i>Populus balsamifera</i> L.
Quaking aspen	<i>Populus tremuloides</i> Michx.

Birch family:

Paper birch	<i>Betula papyrifera</i> Marsh.
-------------	---------------------------------

A number of other trees or plants with treelike stature were found in the Wood-Salcha inventory block: 10 members of the willow family, 2 members of the birch family (alders), and 1 member of the rose family (Green mountain ash). Because they are considered noncommercial species, these trees and plants were not inventoried.

One member of the pine family, tamarack (*Larix laricina* (DuRoi) K. Koch), although regarded as a "commercial tree species" in the 1975 inventory, was not tallied in the sample of 188 ground plots. It is, however, fairly common as an associated species in the black spruce type and occasionally occurs as a pure type in small stands in the Wood-Salcha block, especially in that area of the block south of the Tanana River.

^{9/}The source for scientific names and distribution is Viereck and Little (1975). The trees listed in this tabulation are commercial species.

Tables

Estimates in this report are developed from statistically based samples and therefore are subject to sampling error. Sampling errors are presented in the section "Reliability of Inventory Data."

Table 1--Area by land class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

LAND CLASS	THOUSAND ACRES
FOREST LAND:	
COMMERCIAL	626.3
NONCOMMERCIAL--	
OPERABLE	94.4
INOPERABLE	2,688.2
	<hr/>
TOTAL	3,408.9
NONFOREST LAND ^{1/}	604.6
	<hr/>
ALL LANDS	4,013.5
CENSUS WATER	77.4
	<hr/>
TOTAL AREA	4,090.9

Estimates are subject to sampling error.

^{1/}Includes swampland, industrial and urban areas, other nonforest land, and 49,732 acres classified as water by Forest Inventory and Analysis standards but defined by the Bureau of the Census as land.

Table 2--Area of commercial and operable noncommercial forest land by stand size class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

STAND SIZE CLASS	FOREST LAND		
	COMMERCIAL	OPERABLE NONCOMMERCIAL	TOTAL
	<i>THOUSAND ACRES</i>		
SAWTIMBER STANDS	169.4	23.1	192.5
POLETIMBER STANDS	283.7	71.3	355.0
SEEDLING AND SAPLING STANDS	173.2	--	173.2
NONSTOCKED AREAS	--	--	--
ALL CLASSES	626.3	94.4	720.7

Estimates are subject to sampling error.

-- = no data.

Table 3--Area of commercial and operable noncommercial forest land by stand volume class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

STAND VOLUME	FOREST LAND		
	COMMERCIAL	OPERABLE NONCOMMERCIAL	TOTAL
	<i>THOUSAND ACRES</i>		
<i>BOARD FEET PER ACRE ^{1/}</i>			
0-799	262.2	29.9	292.1
800-1,499	42.8	20.8	63.6
1,500-2,999	101.1	13.6	114.7
3,000-4,999	62.9	10.0	72.9
5,000-6,999	54.2	13.6	67.8
7,000 AND OVER	103.1	6.5	109.6
ALL CLASSES	626.3	94.4	720.7

Estimates are subject to sampling error.

^{1/}Net volume, International 1/4-inch rule.

Table 4--Area of commercial and operable noncommercial forest land by stand volume and stand size class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

STAND VOLUME CLASS	STAND SIZE CLASS				TOTAL
	NONSTOCKED	SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	
	<u>THOUSAND ACRES</u>				
0-299	--	114.4	3.6	--	118.0
300-799	--	42.6	68.5	13.7	124.8
800-1,499	--	16.2	162.9	35.5	214.6
1,500-2,199	--	--	86.6	65.8	152.4
2,200 AND OVER	--	--	33.4	77.5	110.9
ALL CLASSES	--	173.2	355.0	192.5	720.7

Estimates are subject to sampling error.

-- = no data.

Table 5--Area of commercial forest land by area condition class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

CODE	AREA CONDITION CLASS	THOUSAND ACRES
10	Areas 100 percent or more stocked with desirable trees and not overstocked.	6.5
20	Areas 100 percent or more stocked with desirable trees and overstocked.	55.9
30	Areas 60 to 100 percent stocked with desirable trees and with less than 30 percent of the area controlled by acceptable growing stock trees, cull trees, inhibiting vegetation, slash, or nonstockable conditions.	9.7
40	Areas 60 to 100 percent stocked with desirable trees and with 30 percent or more of the area controlled by other trees (or overstocked areas) or conditions that ordinarily prevent occupancy by desirable trees.	95.1
50	Areas less than 60 percent stocked with desirable trees but with 100 percent or more stocking with growing stock trees.	248.1
60	Areas less than 60 percent stocked with desirable trees but with 60-to 100-percent stocking with growing stock trees.	177.6
70	Areas less than 60 percent stocked with desirable trees and with less than 60-percent stocking with growing stock trees.	33.4
	ALL CLASSES	626.3

Estimates are subject to sampling error.

Table 6--Area of commercial forest land by site class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

SITE CLASS	THOUSAND ACRES
<i>CUBIC FEET</i>	
85 OR MORE ^{1/}	--
50-85	--
LESS THAN 50	626.3
ALL CLASSES	626.3

Estimates are subject to sampling error.

-- = no data.

^{1/}Potential yield, mean annual increment.

Table 7--Area of commercial and noncommercial forest land by forest type, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

FOREST TYPE	COMMERCIAL FOREST LAND	NONCOMMERCIAL FOREST LAND		
		OPERABLE	INOPERABLE	TOTAL
<i>THOUSAND ACRES</i>				
BALSAM POPLAR	19.4	--	31.9	51.3
BLACK SPRUCE	10.4	20.5	1877.5	1908.4
WHITE SPRUCE	212.7	50.5	329.7	592.9
PAPER BIRCH	258.6	13.0	357.0	628.6
QUAKING ASPEN	125.2	10.4	92.1	227.7
NONSTOCKED	--	--	--	--
ALL TYPES	626.3	94.4	2,688.2	3,408.9

Estimates are subject to sampling error.

-- = no data.

Table 8--Area of commercial forest land by stand age and stand size class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

STAND AGE	STAND SIZE CLASS				ALL CLASSES
	NONSTOCKED	SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	
<i>YEARS</i>					<i>THOUSAND ACRES</i>
1-10	--	19.4	--	--	19.4
10-20	--	16.5	--	--	16.5
20-30	--	29.0	--	3.2	32.2
30-40	--	69.1	13.3	--	82.4
40-50	--	19.7	22.8	--	42.5
50-60	--	6.5	29.1	--	35.6
60-70	--	--	49.9	7.2	57.1
70-80	--	6.5	40.2	19.7	66.4
80-90	--	--	16.2	10.1	26.3
90-100	--	--	36.0	25.8	61.8
100-120	--	--	49.7	32.1	81.8
120-140	--	--	16.5	39.6	56.1
140-160	--	--	6.8	9.2	16.0
160-180	--	--	--	3.2	3.2
180-200	--	--	--	6.5	6.5
200-300	--	--	--	12.8	12.8
300 AND OVER	--	--	--	--	--
MIXED AGES	--	6.5	3.2	--	9.7
ALL AGES	--	173.2	283.7	169.4	626.3

Estimates are subject to sampling error.

-- = no data.

Table 9--Area of operable noncommercial forest land by stand age and stand size class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

STAND AGE	STAND SIZE CLASS				TOTAL
	NONSTOCKED	SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	
<i>YEARS</i>	<i>THOUSAND ACRES</i>				
1-10	--	--	--	--	--
10-20	--	--	--	--	--
20-30	--	--	--	--	--
30-40	--	--	--	--	--
40-50	--	--	--	--	--
50-60	--	--	3.3	--	3.3
60-70	--	--	3.2	--	3.2
70-80	--	--	3.2	--	3.2
80-90	--	--	3.2	--	3.2
90-100	--	--	3.6	--	3.6
100-120	--	--	24.0	3.2	27.2
120-140	--	--	20.4	6.5	26.9
140-160	--	--	--	3.3	3.3
160-180	--	--	3.2	6.5	9.7
180-200	--	--	3.6	--	3.6
200-300	--	--	--	3.6	3.6
300 AND OVER	--	--	--	--	--
MIXED AGES	--	--	3.6	--	3.6
ALL AGES	--	--	71.3	23.1	94.4

Estimates are subject to sampling error.

-- = no data.

Table 10--Number of growing stock trees on commercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

DIAMETER CLASS	BALSAM POPLAR	BLACK SPRUCE	PAPER BIRCH	QUAKING ASPEN	WHITE SPRUCE	ALL SPECIES
<i>INCHES AT BREAST HEIGHT</i>						
<i>THOUSAND TREES</i>						
1.0-2.9	3,052.5	--	96,068.8	36,601.8	41,432.6	177,155.7
3.0-4.9	1,726.8	--	51,022.0	25,938.7	21,390.6	100,078.1
5.0-6.9	2,776.8	2,266.5	23,235.2	17,306.0	13,875.6	59,460.1
7.0-8.9	1,785.4	1,047.9	13,922.2	6,536.4	11,170.4	34,462.3
9.0-10.9	1,126.2	82.2	6,412.9	1,657.0	8,153.4	17,431.7
11.0-12.9	453.2	18.1	1,781.5	443.4	4,554.4	7,250.6
13.0-14.9	128.4	--	355.5	130.9	2,499.0	3,113.8
15.0-16.9	27.0	--	77.8	82.1	942.2	1,129.1
17.0-18.9	--	--	14.6	15.6	417.2	447.4
19.0-20.9	--	--	--	--	87.0	87.0
21.0-28.9	--	--	--	--	38.0	38.0
29 AND OVER	--	--	--	--	--	--
ALL CLASSES	11,076.3	3,414.7	192,890.5	88,711.9	104,560.4	400,653.8

Estimates are subject to sampling error.

-- = no data.

Table 11--Number of growing stock trees 5.0-inch d.b.h. and larger on commercial and operable noncommercial forest land by 5-foot height class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

5-FOOT HEIGHT CLASS	BALSAM POPLAR	BLACK SPRUCE	PAPER BIRCH	QUAKING ASPEN	WHITE SPRUCE	ALL SPECIES
<i>THOUSAND TREES</i>						
0-30	726.3	508.8	1,065.6	839.4	2,715.6	5,855.7
31-35	437.6	1,476.2	2,185.2	1,380.0	4,007.4	9,486.4
36-40	1,236.1	1,392.5	5,269.2	3,662.7	6,162.9	17,723.4
41-45	1,084.4	1,933.6	9,430.4	4,373.9	7,519.9	24,342.2
46-50	1,334.3	1,529.1	10,474.2	7,353.0	8,214.5	28,905.1
51-55	705.3	610.0	9,004.0	4,233.7	6,920.2	21,473.2
56-60	540.1	449.8	7,464.6	3,857.0	5,680.5	17,992.0
61-65	194.3	121.9	4,066.4	1,836.4	4,347.5	10,566.5
66-70	70.9	--	1,452.4	832.0	3,591.4	5,946.7
71-75	--	--	384.3	115.6	2,481.1	2,981.0
76-80	--	--	193.7	59.4	1,433.2	1,686.3
81-85	--	--	--	--	1,005.1	1,005.1
86-90	--	--	19.7	--	500.6	520.3
91-95	--	--	--	--	237.6	237.6
96-100	--	--	--	--	123.6	123.6
101 AND OVER	--	--	--	--	91.7	91.7
ALL CLASSES	6,329.3	8,021.9	51,009.7	28,543.1	55,032.8	148,936.8

Estimates are subject to sampling error.

-- = no data.

Table 12--Net volume of timber on commercial and operable noncommercial forest land by class of timber and by softwoods and hardwoods, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

CLASS OF TIMBER	COMMERCIAL FOREST LAND			OPERABLE NONCOMMERCIAL FOREST LAND		
	SOFTWOODS	HARDWOODS	TOTAL	SOFTWOODS	HARDWOODS	TOTAL
<i>MILLION CUBIC FEET</i>						
SAWTIMBER TREES:						
SAW-LOG PORTION	295.7	39.2	334.9	35.2	0.6	35.8
UPPER-STEM PORTION	24.0	11.6	35.6	3.8	.2	4.0
TOTAL	319.7	50.8	370.5	39.0	.8	39.8
POLETIMBER TREES	115.6	313.3	428.9	50.8	27.3	78.1
ALL GROWING STOCK TREES	435.3	364.1	799.4	89.8	28.1	117.9
ROUGH TREES	.4	1.3	1.7	.7	--	.7
ROTTEN TREES	1.2	4.0	5.2	--	.9	.9
SALVABLE TREES	10.5	1.6	12.1	.5	--	.5
ALL TIMBER	447.4	371.0	818.4	91.0	29.0	120.0

Estimates are subject to sampling error.

-- = no data.

Table 13--Net volume of growing stock on commercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

DIAMETER CLASS	SOFTWOODS			HARDWOODS				ALL SPECIES
	BLACK SPRUCE	WHITE SPRUCE	TOTAL	BALSAM POPLAR	PAPER BIRCH	QUAKING ASPEN	TOTAL	
<i>MILLION CUBIC FEET</i>								
INCHES AT BREAST HEIGHT								
5.0-6.9	5.1	35.4	40.5	4.6	55.3	44.2	104.1	144.6
7.0-8.9	5.7	69.4	75.1	7.3	81.0	36.4	124.7	199.8
9.0-10.9	.8	96.0	96.8	7.4	61.8	15.3	84.5	181.3
11.0-12.9	.2	85.9	86.1	4.8	23.4	7.3	35.5	121.6
13.0-14.9	--	69.8	69.8	1.8	5.9	2.5	10.2	80.0
15.0-16.9	--	36.1	36.1	.6	1.8	1.9	4.3	40.4
17.0-18.9	--	21.8	21.8	--	.3	.5	.8	22.6
19.0-20.9	--	5.6	5.6	--	--	--	--	5.6
21.0-28.9	--	3.5	3.5	--	--	--	--	3.5
29.0 AND OVER	--	--	--	--	--	--	--	--
ALL CLASSES	11.8	423.5	435.3	26.5	229.5	108.1	364.1	799.4

Estimates are subject to sampling error.

-- = no data.

Table 14--Net volume of growing stock on commercial and operable noncommercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

DIAMETER CLASS	SOFTWOODS			HARDWOODS			TOTAL	ALL SPECIES
	BLACK SPRUCE	WHITE SPRUCE	TOTAL	BALSAM POPLAR	PAPER BIRCH	QUAKING ASPEN		
<i>INCHES AT BREAST HEIGHT</i>								
<i>MILLION CUBIC FEET</i>								
5.0-6.9	12.8	49.8	62.6	4.6	60.3	48.3	113.2	175.8
7.0-8.9	13.1	90.7	103.8	7.3	90.1	39.4	136.9	240.7
9.0-10.9	1.3	115.0	116.3	7.5	66.0	17.0	90.5	206.8
11.0-12.9	.5	99.8	100.3	4.8	23.9	7.7	36.4	136.7
13.0-14.9	--	73.9	73.9	1.7	5.9	2.6	10.1	84.0
15.0-16.9	--	37.2	37.2	.6	1.8	1.9	4.3	41.5
17.0-18.9	--	21.8	21.8	--	.3	.5	.8	22.6
19.0-20.9	--	5.6	5.6	--	--	--	--	5.6
21.0-28.9	--	3.5	3.5	--	--	--	--	3.5
29.0 AND OVER	--	--	--	--	--	--	--	--
ALL CLASSES	27.7	497.3	525.0	26.5	248.3	117.4	392.2	917.2

Estimates are subject to sampling error.

-- = no data.

Table 15--Net volume of sawtimber on commercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

DIAMETER CLASS	SOFTWOODS			HARDWOODS			TOTAL	ALL SPECIES
	BLACK SPRUCE	WHITE SPRUCE	TOTAL	BALSAM POPLAR	PAPER BIRCH	QUAKING ASPEN		
<i>INCHES AT BREAST HEIGHT</i>								
<i>MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE</i>								
9.0-10.9	4.5	510.9	515.4	0	0	0	0	515.4
11.0-12.9	1.3	475.2	476.5	13.7	99.7	31.1	144.5	621.0
13.0-14.9	--	401.2	401.2	6.5	26.5	11.4	44.4	445.6
15.0-16.9	--	211.4	211.4	3.0	9.8	8.7	21.5	232.9
17.0-18.9	--	129.9	129.9	--	1.5	2.8	4.3	134.2
19.0-20.9	--	34.1	34.1	--	--	--	--	34.1
21.0-28.9	--	22.2	22.2	--	--	--	--	22.2
29.0 AND OVER	--	--	--	--	--	--	--	--
ALL CLASSES	5.8	1,784.9	1,790.7	23.2	137.5	54.0	214.7	2,005.4

Estimates are subject to sampling error.

-- = no data.

Table 16--Net volume of sawtimber on commercial and operable noncommercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

DIAMETER CLASS	SOFTWOODS			HARDWOODS			TOTAL	ALL SPECIES
	BLACK SPRUCE	WHITE SPRUCE	TOTAL	BALSAM POPLAR	PAPER BIRCH	QUAKING ASPEN		
<i>INCHES AT BREST HEIGHT</i>								
<i>MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE</i>								
9.0-10.9	7.4	618.8	626.2	0	0	0	0	626.2
11.0-12.9	3.0	553.0	556.0	13.7	102.0	32.5	148.2	704.2
13.0-14.9	--	424.3	424.3	6.5	26.4	11.4	44.3	468.6
15.0-16.9	--	217.4	217.4	3.0	9.8	8.7	21.5	238.9
17.0-18.9	--	129.9	129.9	--	1.5	2.8	4.3	134.2
19.0-20.9	--	34.1	34.1	--	--	--	--	34.1
21.0-28.9	--	22.2	22.2	--	--	--	--	22.2
29.0 AND OVER	--	--	--	--	--	--	--	--
ALL CLASSES	10.4	1,999.7	2,010.1	23.2	139.7	55.4	218.3	2,228.4

Estimates are subject to sampling error.

-- = no data.

Table 17--Gross volume of sawtimber on commercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

DIAMETER CLASS	SOFTWOODS			HARDWOODS			TOTAL	ALL SPECIES
	BLACK SPRUCE	WHITE SPRUCE	TOTAL	BALSAM POPLAR	PAPER BIRCH	QUAKING ASPEN		
<i>INCHES AT BREST HEIGHT</i>								
<i>MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE</i>								
9.0-10.9	4.5	517.2	521.7	0	0	0	0	521.7
11.0-12.9	1.3	483.7	485.0	16.0	125.8	33.6	175.4	660.4
13.0-14.9	--	411.0	411.0	8.0	37.9	14.0	59.9	470.9
15.0-16.9	--	217.7	217.7	3.5	12.7	11.6	27.8	245.5
17.0-18.9	--	136.4	136.4	--	2.7	3.4	6.1	142.5
19.0-20.9	--	35.9	35.9	--	--	--	--	35.9
21.0-28.9	--	22.2	22.2	--	--	--	--	22.2
29.0 AND OVER	--	--	--	--	--	--	--	--
ALL CLASSES	5.8	1,824.1	1,829.9	27.5	179.1	62.6	269.2	2,099.1

Estimates are subject to sampling error.

-- = no data.

Table 18--Gross volume of sawtimber on commercial and operable noncommercial forest land by diameter class and species, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

DIAMETER CLASS	SOFTWOODS			HARDWOODS			TOTAL	ALL SPECIES
	BLACK SPRUCE	WHITE SPRUCE	TOTAL	BALSAM POPLAR	PAPER BIRCH	QUAKING ASPEN		
INCHES AT BREAST HEIGHT								
MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE								
9.0-10.9	7.4	627.9	635.3	0.0	0.0	0.0	0.0	635.3
11.0-12.9	3.0	565.3	568.3	16.0	128.7	35.0	179.7	748.0
13.0-14.9	--	436.1	436.1	8.0	37.9	14.0	59.9	496.0
15.0-16.9	--	223.8	223.8	3.5	12.7	11.6	27.8	251.6
17.0-18.9	--	136.4	136.4	--	2.7	3.4	6.1	142.5
19.0-20.9	--	35.9	35.9	--	--	--	--	35.9
21.0-28.9	--	22.2	22.2	--	--	--	--	22.2
29.0 AND OVER	--	--	--	--	--	--	--	--
ALL CLASSES	10.4	2,047.6	2,058.0	27.5	182.0	64.0	273.5	2,331.5

Estimates are subject to sampling error.

-- = no data.

Table 19--Net volume of growing stock on commercial forest land, in cubic feet and volume per acre, by forest type and stand size class, Wood-Salcha block, Tanana inventory unit, 1975

FOREST TYPE AND UNIT	STAND SIZE CLASS				
	NONSTOCKED	SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	ALL CLASSES
BLACK SPRUCE:					
FT ³	--	--	13,143,685	--	13,143,685
ACRES	--	--	10,397	--	10,397
FT ³ /ACRE	--	--	1,264	--	1,264
WHITE SPRUCE:					
FT ³	--	9,530,162	90,934,738	301,518,475	401,983,375
ACRES	--	19,366	63,054	130,299	212,719
FT ³ /ACRE	--	492	1,442	2,314	1,890
BALSAM POPLAR:					
FT ³	--	1,922,974	13,523,050	--	15,446,024
ACRES	--	6,448	12,964	--	19,412
FT ³ /ACRE	--	298	1,043	--	796
QUAKING ASPEN:					
FT ³	--	13,893,986	82,096,489	12,588,832	108,579,307
ACRES	--	55,875	62,455	6,808	125,138
FT ³ /ACRE	--	249	1,314	1,850	868
PAPER BIRCH:					
FT ³	--	20,595,574	189,602,579	50,024,292	260,222,446
ACRES	--	91,465	134,837	32,303	258,605
FT ³ /ACRE	--	225	1,406	1,549	1,006
ALL TYPES:					
FT ³	--	45,942,696	389,300,541	364,131,599	799,374,836
ACRES	--	173,154	283,707	169,410	626,271
FT ³ /ACRE	--	265	1,372	2,149	1,276

Estimates are subject to sampling error.

-- = no data.

Table 20--Net volume of growing stock on operable noncommercial forest land, in cubic feet and volume per acre, by forest type and stand size class, Wood-Salcha block, Tanana inventory unit, 1975

FOREST TYPE AND UNIT	STAND SIZE CLASS				ALL CLASSES
	NONSTOCKED	SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	
BLACK SPRUCE:					
FT ³	--	--	21,138,965	--	21,138,965
ACRES	--	--	20,458	--	20,458
FT ³ /ACRE	--	--	1,033	--	1,033
WHITE SPRUCE:					
FT ³	--	--	37,136,342	37,545,156	74,681,498
ACRES	--	--	27,527	23,024	50,551
FT ³ /ACRE	--	--	1,349	1,631	1,477
BALSAM POPLAR:					
FT ³	--	--	--	--	--
ACRES	--	--	--	--	--
FT ³ /ACRE	--	--	--	--	--
QUAKING ASPEN:					
FT ³	--	--	10,979,111	--	10,979,111
ACRES	--	--	10,397	--	10,397
FT ³ /ACRE	--	--	1,056	--	1,056
PAPER BIRCH:					
FT ³	--	--	11,012,895	--	11,012,895
ACRES	--	--	12,964	--	12,964
FT ³ /ACRE	--	--	849	--	849
ALL TYPES:					
FT ³	--	--	80,267,313	37,545,156	117,812,469
ACRES	--	--	71,346	23,024	94,370
FT ³ /ACRE	--	--	1,125	1,631	1,248

Estimates are subject to sampling error.

-- = no data.

Table 21--Net volume of sawtimber on commercial forest land, in board feet International 1/4-inch rule and volume per acre, by forest type and stand size class, Wood-Salcha block, Tanana inventory unit, 1975

FOREST TYPE AND UNIT	STAND SIZE CLASS				
	NONSTOCKED	SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	ALL CLASSES
BLACK SPRUCE:					
FBM ^{1/}	--	--	27,283,619	--	27,283,619
ACRES	--	--	10,397	--	10,397
FBM/ACRE	--	--	2,624	--	2,624
WHITE SPRUCE:					
FBM	--	27,572,211	213,727,653	1,225,819,132	1,467,118,996
ACRES	--	19,366	63,054	130,299	212,719
FBM/ACRE	--	1,424	3,390	9,408	6,897
BALSAM POPLAR:					
FBM	--	489,069	17,224,959	--	17,714,028
ACRES	--	6,448	12,964	--	19,412
FBM/ACRE	--	76	1,329	--	913
QUAKING ASPEN:					
FBM	--	2,904,111	41,285,426	41,742,854	85,932,390
ACRES	--	55,875	62,455	6,808	125,138
FBM/ACRE	--	52	661	6,131	687
PAPER BIRCH:					
FBM	--	19,621,778	243,237,759	144,491,580	407,351,117
ACRES	--	91,465	134,837	32,303	258,605
FBM/ACRE	--	215	1,804	4,473	1,575
ALL TYPES:					
FBM	--	50,587,169	542,759,416	1,412,053,566	2,005,400,150
ACRES	--	173,154	283,707	169,410	626,271
FBM/ACRE	--	292	1,913	8,335	3,202

Estimates are subject to sampling error.

-- = no data.

^{1/}FBM = board-foot measure, International 1/4-inch rule.

Table 22--Net volume of sawtimber on operable noncommercial forest land, in board feet International 1/4-inch rule and volume per acre, by forest type and stand size class, Wood-Salcha block, Tanana inventory unit, 1975

FOREST TYPE AND UNIT	STAND SIZE CLASS				ALL CLASSES
	NONSTOCKED	SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	
BLACK SPRUCE:					
FBM ¹ / ACRES	--	--	9,446,735	--	9,446,735
FBM/ACRE	--	--	20,458	--	20,458
	--	--	462	--	462
WHITE SPRUCE:					
FBM	--	--	66,199,715	139,383,881	205,583,596
ACRES	--	--	27,527	23,024	50,551
FBM/ACRE	--	--	2,405	6,054	4,067
BALSAM POPLAR:					
FBM	--	--	--	--	--
ACRES	--	--	--	--	--
FBM/ACRE	--	--	--	--	--
QUAKING ASPEN:					
FBM	--	--	6,777,493	--	6,777,493
ACRES	--	--	10,397	--	10,397
FBM/ACRE	--	--	652	--	652
PAPER BIRCH:					
FBM	--	--	1,199,300	--	1,199,300
ACRES	--	--	12,964	--	12,964
FBM/ACRE	--	--	93	--	93
ALL TYPES:					
FBM	--	--	83,623,243	139,383,881	223,007,124
ACRES	--	--	71,346	23,024	94,370
FBM/ACRE	--	--	1,172	6,054	2,363

Estimates are subject to sampling error.

-- = no data.

¹/FBM = board-foot measure, International 1/4-inch rule.

Table 23--Net volume of sawtimber on commercial forest land by species and log grade, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

SPECIES	LOG GRADE ^{1/}				TOTAL
	1	2	3	4 ^{2/}	
<i>MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE</i>					
SOFTWOODS:					
BLACK SPRUCE	--	--	5.8	--	5.8
WHITE SPRUCE	0.8	48.2	1,500.4	235.5	1,784.9
TOTAL	.8	48.2	1,506.2	235.5	1,790.7
HARDWOODS:					
BALSAM POPLAR	--	5.2	15.1	2.9	23.2
PAPER BIRCH	--	11.7	95.7	30.2	137.6
QUAKING ASPEN	1.0	7.7	38.5	6.7	53.9
TOTAL	1.0	24.6	149.3	39.8	214.7
ALL SPECIES	1.8	72.8	1,655.5	275.3	2,005.4

Estimates are subject to sampling error.

-- = no data.

^{1/}Forest Products Laboratory (1959), and Northern Hemlock and Hardwood Manufacturers Association (1959).

^{2/}Logs for local use.

Table 24--Net volume of sawtimber on operable noncommercial forest land by species and log grade, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

SPECIES	LOG GRADE ^{1/}				TOTAL
	1	2	3	4 ^{2/}	
<i>MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE</i>					
SOFTWOODS:					
BLACK SPRUCE	--	--	4.0	0.5	4.5
WHITE SPRUCE	--	1.9	167.1	45.8	214.8
TOTAL	--	1.9	171.1	46.3	219.3
HARDWOODS:					
BALSAM POPLAR	--	--	--	--	--
PAPER BIRCH	--	.7	.9	.6	2.2
QUAKING ASPEN	--	--	.9	.6	1.5
TOTAL	--	.7	1.8	1.2	3.7
ALL SPECIES	--	2.6	172.9	47.5	223.0

Estimates are subject to sampling error.

-- = no data.

^{1/}Forest Products Laboratory (1959), and Northern Hemlock and Hardwood Manufacturers Association (1959).

^{2/}Logs for local use.

Table 25--Net annual growth of growing stock by species and forest land class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

SPECIES	FOREST LAND CLASS		
	COMMERCIAL	OPERABLE NONCOMMERCIAL	TOTAL
<i>THOUSAND CUBIC FEET</i>			
SOFTWOODS:			
BLACK SPRUCE	339.0	563.0	902.0
WHITE SPRUCE	7,141.6	1,255.3	8,396.9
TOTAL	7,480.6	1,818.3	9,298.9
HARDWOODS:			
BALSAM POPLAR	493.5	.8	494.3
PAPER BIRCH	6,447.5	378.8	6,826.3
QUAKING ASPEN	5,563.6	158.0	5,721.6
TOTAL	12,504.6	537.6	13,042.2
ALL SPECIES	19,985.2	2,355.9	22,341.1

Estimates are subject to sampling error.

Table 26--Net annual growth of sawtimber by species and forest land class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

SPECIES	FOREST LAND CLASS		
	COMMERCIAL	OPERABLE NONCOMMERCIAL	TOTAL
<i>THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE</i>			
SOFTWOODS:			
BLACK SPRUCE	671.9	52.4	724.3
WHITE SPRUCE	47,636.9	9,113.9	56,750.8
TOTAL	48,308.8	9,166.3	57,475.1
HARDWOODS:			
BALSAM POPLAR	1,473.1	--	1,473.1
PAPER BIRCH	11,570.9	23.3	11,594.2
QUAKING ASPEN	2,716.4	27.1	2,743.5
TOTAL	15,760.4	50.4	15,810.8
ALL SPECIES	64,069.2	9,216.7	73,285.9

Estimates are subject to sampling error.

-- = no data.

Table 27--Annual mortality of growing stock by species and forest land class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

SPECIES	FOREST LAND CLASS		
	COMMERCIAL	OPERABLE NONCOMMERCIAL	TOTAL
	THOUSAND CUBIC FEET		
SOFTWOODS:			
BLACK SPRUCE	149.7	--	149.7
WHITE SPRUCE	1,144.0	109.1	1,253.1
TOTAL	1,293.7	109.1	1,402.8
HARDWOODS:			
BALSAM POPLAR	150.7	--	150.7
PAPER BIRCH	217.1	--	217.1
QUAKING ASPEN	23.6	42.4	66.0
TOTAL	391.4	42.4	433.8
ALL SPECIES	1,685.1	151.5	1,836.6

Estimates are subject to sampling error.

-- = no data.

Table 28--Annual mortality of sawtimber by species and forest land class, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

SPECIES	FOREST LAND CLASS		
	COMMERCIAL	OPERABLE NONCOMMERCIAL	TOTAL
<i>THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE</i>			
SOFTWOODS:			
BLACK SPRUCE	740.3	--	740.3
WHITE SPRUCE	3,514.6	320.8	3,835.4
TOTAL	4,254.9	320.8	4,575.7
HARDWOODS:			
BALSAM POPLAR	--	--	--
PAPER BIRCH	--	--	--
QUAKING ASPEN	--	--	--
TOTAL	--	--	--
ALL SPECIES	4,254.9	320.8	4,575.7

Estimates are subject to sampling error.

-- = no data.

Table 29--Annual mortality of growing stock by cause, forest land class, and by softwoods and hardwoods, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

CAUSE	COMMERCIAL FOREST LAND			OPERABLE NONCOMMERCIAL FOREST LAND		
	SOFTWOODS	HARDWOODS	TOTAL	SOFTWOODS	HARDWOODS	TOTAL
<i>THOUSAND CUBIC FEET</i>						
FIRE	712.5	140.4	852.9	--	--	--
INSECTS	51.9	23.6	75.5	--	--	--
DISEASE	97.2	42.7	139.9	--	--	--
WINDTHROW	71.3	--	71.3	--	42.4	42.4
OTHER	147.1	34.0	181.1	56.7	--	56.7
UNKNOWN	213.7	150.7	364.4	52.4	--	52.4
TOTAL	1,293.7	391.4	1,685.1	109.1	42.4	151.5

Estimates are subject to sampling error.

-- = no data.

Table 30--Annual mortality of sawtimber by cause, forest land class, and by softwoods and hardwoods, Wood-Salcha block, Tanana inventory unit, Alaska, 1975

CAUSE	COMMERCIAL FOREST LAND			OPERABLE NONCOMMERCIAL FOREST LAND		
	SOFTWOODS	HARDWOODS	TOTAL	SOFTWOODS	HARDWOODS	TOTAL
<i>THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE</i>						
FIRE	2,306.5	--	2,306.5	--	--	--
INSECTS	278.5	--	278.5	--	--	--
DISEASE	554.9	--	554.9	--	--	--
WINDTHROW	377.7	--	377.7	--	--	--
OTHER	307.9	--	307.9	320.8	--	320.8
UNKNOWN	429.4	--	429.4	--	--	--
TOTAL	4,254.9	--	4,254.9	320.8	--	320.8

Estimates are subject to sampling error.

-- = no data.

Acknowledgments

This study was made possible by the diligence of the field crew and through the cooperation of the Bureau of Land Management, U.S. Department of the Interior; the State of Alaska, Department of Natural Resources, Division of Lands; and the U.S. Army.

Inventory prepared by: Alaska Forest Inventory and Analysis work unit, Anchorage, Alaska.

O. Keith Hutchison, Project Leader (now retired)
Karl M. Hegg, Interior Alaska Supervisor
Mel S. Mehl, Field Supervisor

Field measurements:

Forest Inventory and Analysis

Karl M. Hegg
Willie Jack
Steve Johnson
Neil McKay
Mel S. Mehl
Chris Roholt
Ken Winterberger

Alaska Department Natural Resources, Division of Lands

Enzio Becia
Perry Coclosure
John Karoly
Guy Wold

Office compilation: John M. Berger, Supervisor, Patti Bassett, and David Jacobs (Portland); Mel S. Mehl (Juneau).

Statistical report preparation: Karl M. Hegg and Ken Winterberger.

Metric Equivalents

1 acre = 0.4047 hectare
1 hectare = 2.47 acres
1 cubic foot = 0.0283 cubic meter
1 cubic meter = 35.3147 cubic feet
1 cubic foot per acre = 0.06997 cubic meter per hectare
1 cubic meter per hectare = 14.2913 cubic feet per acre
20 cubic feet per acre = 1.3994 cubic meter per hectare
1 square foot basal area per acre = 0.2296 square meter per hectare
1 square meter per hectare = 4.356 square feet per acre

Literature Cited

- Bickford, C. A. The sampling design used in the forest survey of the Northeast. *J. For.* 50(4):290-293; 1952.
- Bruce, Donald; Schumacher, Francis X. *Forest Mensuration*. 3d ed. New York: McGraw-Hill; 1950, 483 p.
- Forest Products Laboratory. *Hardwood log grades for standard lumber*. Rep. R1737. Madison, WI: U.S. Department of Agriculture, Forest Service, Forest Products Laboratory; 1959. 61 p.
- Hegg, Karl M. *Forest resources of the Susitna Valley, Alaska*. Resour. Bull. PNW-32. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1970. 42 p.
- Hegg, Karl M. *Forest statistics for the upper Koyukuk River, Alaska, 1971*. Resour. Bull. PNW-54. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1974. 26 p.
- Hegg, Karl M. *Timber resource Statistics for the Copper River inventory unit, Alaska, 1968*. Resour. Bull. PNW-62. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1975a. 55 p.
- Hegg, Karl M. *Timber resource statistics for the Fairbanks block, Tanana inventory unit, Alaska, 1970*. Resour. Bull. PNW-59. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1975b. 36 p.
- Hegg, Karl M. *Timber resource statistics for the Tuxedni Bay inventory unit, Alaska, 1971*. Resour. Bull. PNW-88. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1979. 43 p.
- Hegg, Karl M. *Timber resource statistics for the Kantishna block, Tanana inventory unit, Alaska, 1973*. Resour. Bull. PNW-95. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1982. 32 p.

Hegg, Karl M. Timber resource statistics for the Upper Tanana block, Tanana inventory unit, Alaska, 1974. Resour. Bull. PNW-100. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1983. 34 p.

Hegg, Karl M; Sieverding, Harold. Timber resources of the Kuskokwim flood plain and adjacent upland. Resour. Bull. PNW-87. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1980. 40 p.

Hutchison, O. Keith. Alaska's forest resource. Resour. Bull. PNW-19. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1967. 74 p.

Northern Hemlock and Hardwood Manufacturers Association. Official grading rules for northern hardwood and softwood logs and tie cuts. Green Bay, WI; 1959. 12 p.

Viereck, Leslie A.; Little, Elbert L., Jr. Atlas of United States trees. Volume 2: Alaska trees and common shrubs. Misc. Publ. 1293. Washington, DC: U.S. Department of Agriculture, Forest Service; 1975. 126 p.

Winterberger, Kenneth C. Timber resource statistics for the Wood-Salcha block, Tanana inventory unit, Alaska, 1975. Resour. Bull. PNW-107. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1983. 34 p.

This statistical report on timber resources of the 4.1-million-acre Wood-Salcha block in the last of four reports on the 14-million-acre Tanana Valley inventory unit. Tables are provided for commercial and operable noncommercial forest land, total gross and net volumes, and annual net growth and mortality. Estimates for commercial forest land total 626,300 acres with 799,374,800 net cubic feet of growing stock volume. Estimates for the special operable noncommercial class total 94,400 acres with 117,812,500 net cubic feet of growing stock volume.

Keywords: Forest surveys, timber inventory, timber resources, resources (forest), statistics (forest), Alaska (Tanana Valley).

The **Forest Service** of the U.S. Department of Agriculture is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the States and private forest owners, and management of the National Forests and National Grasslands, it strives — as directed by Congress — to provide increasingly greater service to a growing Nation.

The U.S. Department of Agriculture is an Equal Opportunity Employer. Applicants for all Department programs will be given equal consideration without regard to age, race, color, sex, religion, or national origin.

Pacific Northwest Forest and Range
Experiment Station
809 N.E. Sixth Avenue
P.O. Box 3890
Portland, Oregon 97208