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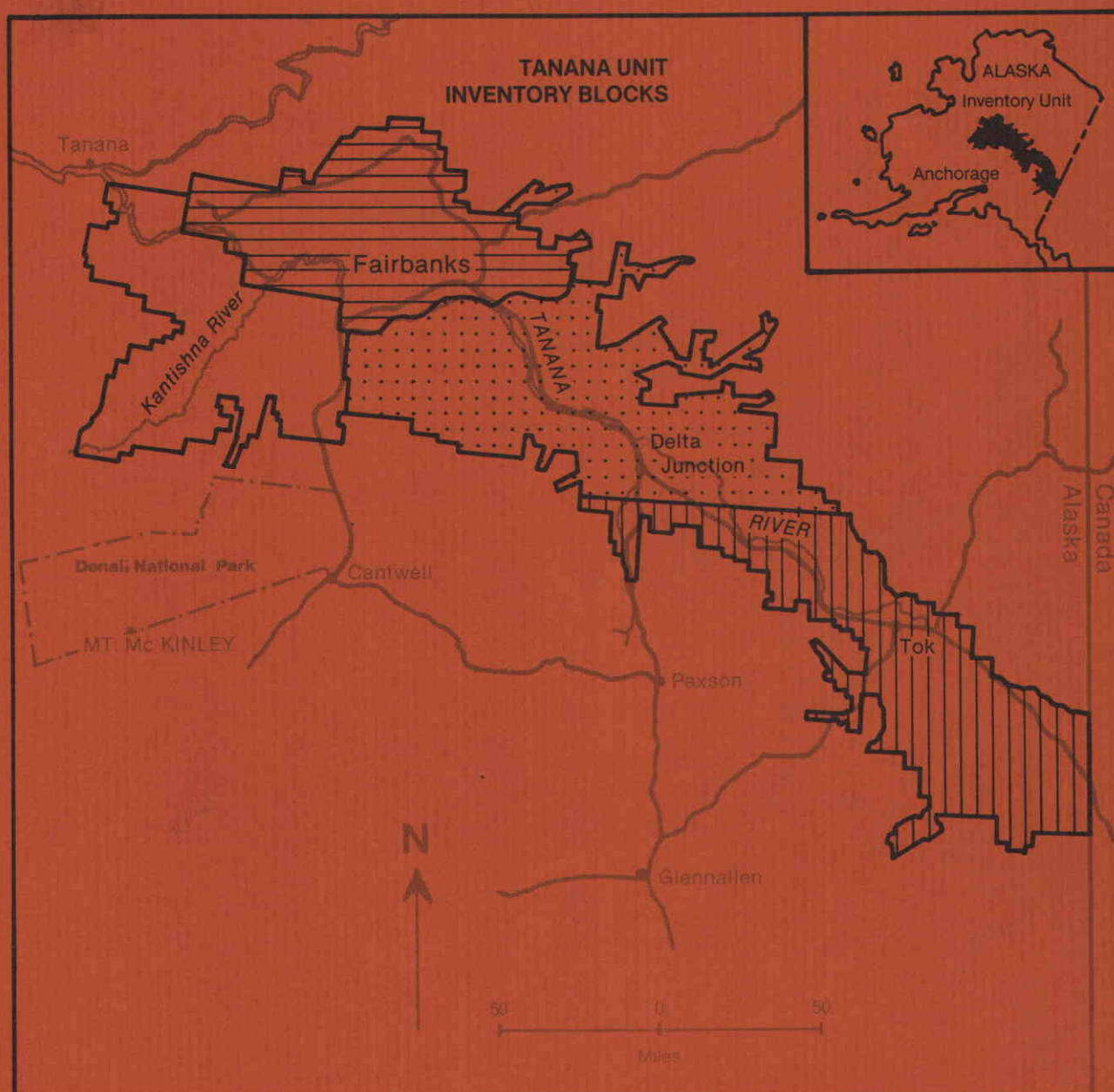
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Timber Resource Statistics for the Tanana Inventory Unit, Alaska, 1971-75

EDITOR'S
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Willem W. S. van Hees



Abstract

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Statistics on forest area, total gross and net timber volumes, and annual net growth and mortality are presented for the 1971-75 timber inventory of the Tanana unit, Alaska. This report summarizes statistics previously published for the four inventory blocks of the unit: Fairbanks, Kantishna, Upper Tanana, and Wood-Salcha. Timberland area is estimated at 2.19 million acres (888 164 ha), net growing stock volume at 2.27 billion cubic feet (64.36 million m³), and annual net growth and mortality at 61.34 and 6.14 million cubic feet (1.74 and 0.17 million m³), respectively.

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

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Summary

This report for the 14-million-acre (5 523 114-ha) Tanana forest inventory unit summarizes statistics of its four inventory blocks published from 1975-83. The unit begins near Tanana, Alaska, northwest of Fairbanks, and extends southeast of Delta Junction through the Tanana River Valley to the Canadian border.

This is the first general reinventory of forests in the Tanana unit since the first inventory in 1961-63. Statistics on forest area, total gross and net timber volumes, and annual net growth and mortality are presented from the 1971-75 timber resources inventory of the Tanana unit. Timberland area is estimated at 2.19 million acres (888 164 ha), net growing stock volume at 2.27 billion cubic feet (64.36 million m³), and net annual growth and mortality at 61.34 and 6.14 million cubic feet (1.74 and 0.17 million m³), respectively.

Preface

Forest Inventory and Analysis (FIA) is a nationwide project of the USDA Forest Service authorized by the Forest and Rangeland Renewable Resources Research Act of 1978. Work units of the project, located at Forest Service Experiment Stations, conduct forest resource inventories throughout the 50 States. The Pacific Northwest Forest and Range Experiment Station at Portland, Oregon, is responsible for forest inventories in Alaska, California, Hawaii, Oregon, and Washington.

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Highlights

	Thousand acres	Thousand hectares		
Tanana inventory				
unit area:	13,647.9	5 523.1		
With forest	11,324.7	4 582.9		
With nonforest	2,000.4	809.5		
With non-Census water	<u>1</u> /	<u>1</u> /		
With Census water	322.8	130.6		
Forested area:				
Timberland	2,194.7	888.2		
Other forest land	9,130.0	3 694.8		
Timberland composition:				
Sawtimber	516.2	208.9		
Poletimber	862.5	349.0		
Seedlings and saplings, and nonstocked	816.0	330.2		
Timberland forest type composition:				
Black spruce	43.3	17.5		
White spruce	752.7	304.6		
Balsam poplar	84.4	34.2		
Paper birch	888.9	359.7		
Quaking aspen	403.6	163.3		
Tamarack	<u>1</u> /	<u>1</u> /		
Nonstocked	21.8	8.8		
	All growing stock	Sawtimber growing stock		
	Million cubic feet <u>2</u> /	Million cubic feet <u>3</u> /	Million board feet <u>3</u> /	Million cubic meters <u>4</u> /
Volumes on timberland:				
Total gross volume	2,375.5	67.3	6,199.5	23.6
Total net volume	2,273.2	64.4	5,951.3	22.6
Annual net growth	61.3	1.7	182.9	0.2
Annual net mortality	6.1	.2	18.3	<u>5</u> /

1/No data were collected.

2/Volume of roundwood in live trees 5.0 inches (12.7 cm) in d.b.h. and larger.

3/Net volume, International 1/4-inch rule, for softwood trees 9.0 inches (22.9 cm) in d.b.h. and larger, and for hardwood trees 11.0 inches (28 cm) in d.b.h. and larger.

4/Volume of roundwood for softwood trees 9.0 inches (22.9 cm) in d.b.h. and larger, and for hardwood trees 11.0 inches (28 cm) in d.b.h. and larger.

5/Less than 30 000 cubic meters.

Introduction

This report for the Tanana timber inventory unit summarizes statistics previously published for the four inventory blocks of the unit: Fairbanks (Hegg 1975), Kantishna (Hegg 1975), Upper Tanana (Hegg 1983), and Wood-Salcha (Winterberger 1983). The Tanana unit lies in the Tanana River Valley between 141° and 152° west longitude, and between 62°15' and 65°30' north latitude (fig. 1).

Major physiographic features of the Tanana River Valley include the north drainage of the eastern and central portions of the Alaska Range, the northwestern section of the Wrangell Mountains, the Tanana lowlands, and the south drainage of the Yukon-Tanana upland.

The morphological features of the Tanana Valley are essentially simple. Included are glaciated mountains, glacial moraines and outwash plains, low terraces on the south side of the Valley, and unglaciated hills, mountains, and low terraces on the north side of the Valley. Also, sand dunes occur in several areas of the Valley.

Soils in the Tanana Valley have developed in different types of material in a cold, continental climate. The soils in the Alaska Range, the Wrangell Mountains, and adjoining foothills have developed in glacial deposits. The soils in the Tanana uplands have developed in silty loess over colluvial material of weathered rock. Soils in the Tanana lowland developed in thin, silty loess over glacial outwash of sandy or gravelly material and in deep, silty loess deposits. Soils on flood plains and low terraces developed in stratified silt and sand over gravel. Soils in depressions in the lowlands have developed in organic material of decaying plants. Soils on south-facing and convex slopes are usually better drained than soils on north-facing and concave slopes. Wet soils in such concavities are often caused by permafrost, and bogs and muskegs are also common in depressions.

Statistics on forest area, total gross and net timber volumes, and annual net growth and mortality are presented from the 1971-75 timber resources inventory of the Tanana unit. Timberland area is estimated at 2.19 million acres (888 164 ha), net growing stock volume at 2.27 billion cubic feet (64.36 million m³), and net annual growth and mortality at 61.34 and 6.14 million cubic feet (1.74 and 0.17 million m³), respectively.

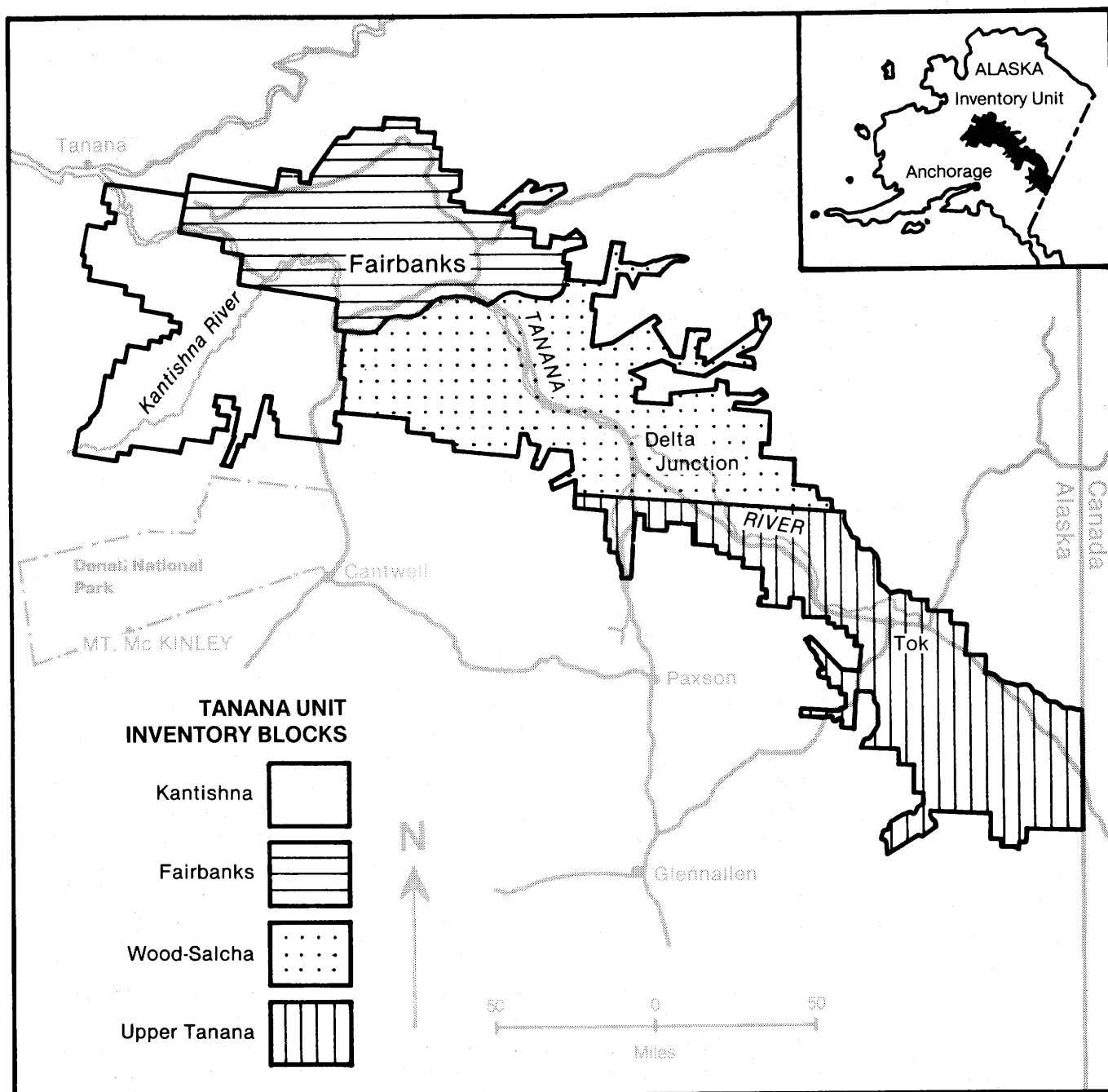


Figure 1.--Tanana inventory unit.

Inventory Procedures

The estimates of area and timber volumes from the 1971-75 timber reinventory are based on a double sampling (2-phase) technique (Bickford 1952). In the first phase of the sampling study, 46,602 photo points were systematically distributed over 1:15,840 scale aerial photographs, then interpreted. Each photo point was classified by land type. Of the 46,602 photo plots, 798 ground plots were selected. Tree measurements were made on these plots in the second phase of the sampling. Corrected area classifications and measurements of volume on these ground plots served as the basis for the area and volume estimates presented in this report.

Estimates of growth volumes presented are based on increment borings; the estimates of mortality were based on estimations of the number of years since the trees died.

Ownership Statistics

Statistics on land ownership are not presented in this report because of uncertainties of changes in land status associated with Alaska Native and State of Alaska land selections and wilderness area withdrawals. These changes in land status 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. Alaska Native land selections and decisions on wilderness withdrawals seemed nearly settled at the end of 1982, but Alaska State selections will remain uncertain for the next 5-10 years.

Statistics on ownership and reserved land status and a resource analysis will be published when the status of land shifts is more clear. It is already clear, however, that the Alaska Native and State of Alaska land selections are concentrating partly on timberlands, which will leave a reduced proportion of the better timberland in Federal ownership.

Reliability of Inventory Data

All area and volume statistics reported here are estimates based on sampling and are subject to sampling error. Sampling errors for all estimates presented in the tables are available on request. The reliability of the inventory is expressed in terms of relative sampling error at the 68-percent confidence level:

	<u>Design sampling error</u>	<u>Sampling error achieved</u>	<u>Sampling error of the total estimate</u>
	<i>----- Percent -----</i>		
Timberland area:			
Per million acres	3.0	4.2	
For the total 2.2 million acres			2.8
Other forest land area:			
Per million acres	10.0	2.4	
For the total 9.1 million acres			0.8
Net growing stock volume:			
On timberland, per billion ft ³	10.0	5.9	
For the total 2.3 billion ft ³			3.9
Net growth on growing stock:			
On timberland, per billion ft ³	10.0	1.4	
For the total 61.3 million ft ³			5.5

For the Tanana inventory unit, we estimate 2,273.2 billion cubic feet of net growing stock volume, ± 2.8 percent, yielding 68-percent confidence limits of 2,209.5 and 2,336.8 billion cubic feet. That confidence level means that upon repeated sampling, about 68 percent of the confidence intervals constructed for each sample would capture the true value of the parameter being estimated.

We were within the design sampling error for other forest land, net volume, and net growth.

Terminology ^{6/}

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

Allowable cut--The volume of timber that could be cut on timberland 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 timberland by management opportunity class as indicated by the stocking or area controlled by tree and cover class.

Census water--Streams, sloughs, estuaries, and canals more than one-eighth mile (200 m) wide; and lakes, reservoirs, and ponds more than 40 acres (16 ha) in area. (Also see non-census water).

Commercial species--Tree species suitable for industrial products.

Cull logs--Softwood sawtimber logs with two-thirds or more of the board-foot volume in cull material. Hardwood sawtimber logs with half or more of the volume in cull material.

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

Cull trees--Live trees of sawtimber or poletimber size that are not merchantable for saw logs now nor are they likely to become merchantable because of defect, rot, or species.

D.b.h.--Diameter at breast height, a point 4-1/2 feet (1.37 m) above the ground on the uphill side of a tree, where, on a normally formed tree, the diameter is measured.

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.

^{6/}Terminology is from the USDA Forest Service, Forest Service Handbook, Title 4813.1, 1967, and the manual of field instructions for the forest survey of the Tanana River Basin, Alaska, 1975.

Diameter class--A classification of trees based on diameter of the tree outside the bark measured at breast height, 4-1/2 feet (1.37 m) above the ground. D.b.h. is the common abbreviation for "diameter at breast height." Each 2-inch diameter class is assigned to the appropriate even inch at midpoint. For example, the 6-inch class includes trees 5.0 through 6.9 inches d.b.h.

Forest land--Land at least 16.7 percent stocked by live trees of any size, or land formerly having such tree cover, and not currently developed for nonforest use. Includes chaparral areas in the western United States and afforested areas. The minimum area for classification as forest land or subclasses of forest land is 1 acre (0.4 ha). Roadside, streamside, and shelterbelt strips of timber must be at least 120 feet (36 m) wide to be classified as forest land. Unimproved roads and trails, streams, and clearings in forest areas must be less than 120 feet wide to be classified as forest land. (Also see timberland, other forest land, reserved forest land, and nonforest land.)

Forest types--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 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 and is more often found as an associated species in the black spruce type.

Balsam poplar--Forests in which a plurality of the stand is balsam poplar. South of the Alaska Range balsam poplar may be replaced by black cottonwood or hybrids between the two. As the poplar ages it is usually replaced by white spruce; however, it is usually found as a nearly pure type with only an occasional associate of white spruce or paper birch.

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 and 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 a 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 and white spruce and occasionally paper birch.

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

Growing stock volume--The net cubic-foot volume of sound wood in the bole of growing stock trees 5.0 inches (12.5 cm) in d.b.h. and larger, from stump to a minimum 4.0-inch (10-cm) top outside the bark or to the point where the central stem breaks into limbs.

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

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

Inoperable forest land--Other forest land with a gross volume of less than 800 cubic feet per acre, or forest land on rough, rocky, steep, or otherwise broken terrain.

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

Land area--Area reported as land by the Bureau of the Census. Total land area includes dry land and land temporarily or partially 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 (36 m) wide; and lakes, reservoirs, and ponds less than 1 acre (0.4 ha) in area. (Also see non-Census water).

Land class--A classification of land by major use, such as timberland, other forest, and nonforest. The minimum size area for classification is 1 acre (0.4 ha).

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

Marginal timberland--Other forest land with a gross volume over 800 cubic feet per acre.

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

Merchantable tree--A merchantable tree must be producing or be capable of producing at least one merchantable saw log which is at least 50-percent sound for hardwoods or 33-percent sound for softwoods, board foot measure. All poletimber that is less than 50-percent sound, cubic-foot measure, and all saplings with any sign of rot are not considered merchantable trees, but rotten culls. All trees that are of such poor form that they will never produce a merchantable saw log are not classed as merchantable trees, but as sound culls or rough trees.

Mortality--Number of or the sound wood volume from live trees dying from natural causes during a specified period (5 years).

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.

Non-Census water--Streams, sloughs, estuaries, and canals between 120 feet (36 m) and one-eighth mile (200 m) wide; and lakes, reservoirs, and ponds between 1 and 40 acres (0.4 and 16 ha) in area. (Also see Census water).

Noncommercial species--Tree species of typically small size, poor form, or inferior quality that normally is not 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 (36 m) wide, and clearings in forest areas must be more than 1 acre (0.4 ha) in size to qualify as nonforest land.

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

Nonstocked areas--Timberland less than 16.7 percent stocked with growing stock trees.

Other forest land--(1) 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). This includes sterile or poorly drained forest land, subalpine forests, and steep rocky areas where topographic conditions are likely to prevent management for timber production indefinitely. In coastal Alaska, this includes forest lands that are not capable of producing 8,000 board feet per acre (net International 1/4-inch rule).

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

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

Poletimber trees--Growing stock trees 5.0 to 8.9 inches (12.5 to 22.6 cm) in d.b.h. for softwoods and 5.0 to 10.9 inches (12.5 to 27.5 cm) in d.b.h. for hardwoods.

Reserved forest land--Productive forest land withdrawn from commercial timber use through statute or administrative regulation.

Rotten cull trees--Live trees 5.0 inches (12.5 cm) in d.b.h. and larger that do not contain a saw log now and are not likely to, primarily because of rot.

Rough trees--Live trees 5.0 inches (12.5 cm) in d.b.h. and larger that do not contain a saw log now and are not likely to, primarily because of roughness, poor form, or because they are a noncommercial species.

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).

Sapling trees--Trees 1.0 to 4.9 inches (2.5 to 12.5 cm) in d.b.h.

Saw log--A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet (2.5 m) long, sound and straight, and with a minimum small-end diameter of 6 inches (15 cm) inside the bark for softwoods and 8 inches (20 cm) for hardwoods.

Saw-log portion--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 top diameter is 7.0 inches (18 cm) outside the bark for softwoods and 9.0 inches (23 cm) outside the bark for hardwoods.

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

Sawtimber trees--Growing stock trees at least 9.0 inches in d.b.h. for softwoods and 11.0 inches in d.b.h. for hardwoods.

Sawtimber volume--Net volume of sawtimber trees measured in board feet. Net volume equals gross volume less deduction for rot, sweep, crook, and other defects that affect use for lumber.

Seedling--An established tree less than 1.0 inch (2.5 cm) in d.b.h.

Seedling and sapling stands--Stands at least 16.7 percent stocked with growing stock trees and with seedlings and/or saplings comprising more than half this stocking.

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

Softwoods--Coniferous trees, usually evergreen with needles or scalelike leaves. Species in interior Alaska are white spruce, black spruce, and tamarack.

Stand age class--A classification of forest land based on the predominant age of trees in a given stand.

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

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.

Timberland--Forest land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization. Areas qualifying as timberland could produce more than 20 cubic feet per acre (1.4 m³/ha) per year of industrial wood under management.

Tree size class--A classification of growing stock trees based on the diameter of the tree at breast height.

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

Names of Trees 1/

Common name	Scientific name
<u>Softwoods:</u>	
Black spruce	<i>Picea mariana</i> (Mill.) B.S.P.
White spruce	<i>Picea glauca</i> (Moench) Voss
Tamarack	<i>Larix laricina</i> (Du Roi) K. Koch
<u>Hardwoods:</u>	
Balsam poplar	<i>Populus balsamifera</i> L.
Quaking aspen	<i>Populus tremuloides</i> Michx.
Paper birch	<i>Betula papyrifera</i> Marsh.

1/Scientific names are according to Viereck and Little (1972).

Tables

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

TABLE 1--AREA BY LAND CLASS, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

LAND CLASS	THOUSAND ACRES
FOREST LAND:	
TIMBERLAND	2,194.7
MARGINAL TIMBERLAND	283.9
INOPERABLE FOREST LAND	8,846.1
TOTAL	11,324.7
NONFOREST LAND <u>2/</u>	2,000.4
ALL LANDS	13,325.1
CENSUS WATER	322.8
ALL LANDS	13,647.9

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

2/Includes swampland, industrial and urban areas, other nonforest land, and 172,500 acres classified as water by Forest Inventory and Analysis standards but defined by the Bureau of the Census as land.

TABLE 2--AREA OF TIMBERLAND AND MARGINAL TIMBERLAND BY STAND SIZE CLASS, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

STAND SIZE CLASS	TIMBERLAND	MARGINAL TIMBERLAND	TOTAL
<i>THOUSAND ACRES</i>			
SAWTIMBER	516.2	69.7	585.9
POLETIMBER	862.5	209.5	1,072.1
SEEDLING AND SAPLING	794.1	4.7	798.8
NONSTOCKED	21.9	--	21.9
ALL CLASSES	2,194.7	283.9	2,478.6

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

TABLE 3--AREA OF TIMBERLAND AND MARGINAL TIMBERLAND BY STAND VOLUME CLASS, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

STAND VOLUME CLASS	TIMBERLAND	MARGINAL TIMBERLAND	TOTAL
<i>BOARD FEET PER ACRE</i>	<i>THOUSAND ACRES</i>		
0-1,499	1,265.8	127.8	1,393.6
1,500-2,999	265.5	60.7	326.2
3,000-4,999	202.6	48.9	251.5
5,000-6,999	121.6	25.6	147.2
7,000 AND OVER	339.2	20.9	360.1
ALL CLASSES	2,194.7	283.9	2,478.6

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

TABLE 4--AREA OF TIMBERLAND AND MARGINAL TIMBERLAND BY STAND VOLUME AND STAND SIZE CLASSES, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

STAND VOLUME CLASS	NONSTOCKED AREAS	STAND SIZE CLASS			TOTAL
		SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	
CUBIC FEET PER ACRE		THOUSAND ACRES			
0-299	21.9	511.3	23.8	--	557.0
300-799	--	245.3	289.2	28.5	563.0
800-1,499	--	37.1	494.2	156.2	687.5
1,500-2,199	--	5.0	208.2	170.6	383.8
2,200 AND OVER	--	--	56.7	230.6	287.3
ALL CLASSES	21.9	798.7	1,072.1	585.9	2,478.6

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

TABLE 5--AREA OF TIMBERLAND BY AREA CONDITION CLASS, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

CODE	AREA CONDITION CLASS	THOUSAND ACRES
10	Areas 100 percent or more stocked with desirable trees and not overstocked.	30.8
20	Areas 100 percent or more stocked with desirable trees and overstocked.	142.6
30	Areas 60 to 100 percent stocked with desirable trees and with less than 50 percent of the area controlled by acceptable growing stock trees, cull trees, inhibiting vegetation, slash, or nonstockable conditions.	75.9
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.	363.5
50	Areas less than 60 percent stocked with desirable trees but with 100-percent or more stocking with growing stock trees.	650.0
60	Areas less than 60 percent stocked with desirable trees but with 60- to 100-percent stocking with growing stock trees.	723.2
70	Areas less than 60 percent stocked with desirable trees and with less than 60-percent stocking with growing stock trees.	208.7
ALL CLASSES		2,194.7

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

TABLE 6--AREA OF TIMBERLAND BY SITE CLASS,
TANANA INVENTORY UNIT, INTERIOR ALASKA,
1971-75 1/

SITE CLASS <u>2</u> /	THOUSAND ACRES
<i>CUBIC FEET</i>	
85 AND MORE	--
50-85	5.0
LESS THAN 50	2,189.7
ALL CLASSES	2,194.7

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

2/Potential yield per acre, mean annual increment.

TABLE 7--AREA OF TIMBERLAND, MARGINAL TIMBERLAND, AND
INOPERABLE FOREST LAND BY FOREST TYPE, TANANA INVENTORY UNIT,
INTERIOR ALASKA, 1971-75 1/

FOREST TYPE	TIMBERLAND	MARGINAL TIMBERLAND	INOPERABLE FOREST LAND	TOTAL
<i>THOUSAND ACRES</i>				
BALSAM POPLAR	84.4	--	69.3	153.7
BLACK SPRUCE	43.3	61.0	6,612.4	6,716.7
WHITE SPRUCE	752.7	160.1	919.5	1,832.3
PAPER BIRCH	888.9	47.0	793.3	1,729.2
QUAKING ASPEN	403.6	15.8	435.9	855.3
TAMARACK	--	--	15.6	15.6
NONSTOCKED	21.8	--	--	21.8
ALL TYPES	2,194.7	283.9	8,846.0	11,324.6

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

TABLE 8--AREA OF TIMBERLAND BY STAND AGE AND STAND SIZE CLASS, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 ^{1/}

STAND AGE	NONSTOCKED AREAS	STAND SIZE CLASS			TOTAL
		SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	
YEARS		THOUSAND ACRES			
1-10	2.4	48.0	--	--	50.4
10-20	4.7	93.3	--	3.0	101.0
20-30	--	189.3	7.6	6.4	203.3
30-40	14.8	260.6	67.0	--	342.4
40-50	--	87.7	156.7	--	244.4
50-60	--	45.9	108.3	2.7	156.9
60-70	--	10.4	98.0	10.4	118.8
70-80	--	15.0	113.8	41.2	170.0
80-90	--	4.6	27.3	30.8	62.7
90-100	--	3.2	102.6	79.4	185.2
100-120	--	7.9	83.9	96.0	187.8
120-140	--	5.6	47.5	102.9	156.0
140-160	--	--	21.4	35.7	57.1
160-180	--	--	3.0	23.8	26.8
180-200	--	--	--	12.2	12.2
200-300	--	--	5.4	41.8	47.2
300 AND OVER	--	--	--	6.1	6.1
MIXED AGES	--	22.6	20.0	23.8	66.4
ALL AGES	21.9	794.1	862.5	516.2	2,194.7

Estimates are subject to sampling error.

-- = no data were collected.

^{1/}Totals may be off because of rounding.

TABLE 9--AREA OF MARGINAL TIMBERLAND BY STAND AGE AND STAND SIZE CLASS, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

STAND AGE	NONSTOCKED AREAS	STAND SIZE CLASS			TOTAL
		SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	
YEARS		THOUSAND ACRES			
1-10	--	--	--	--	--
10-20	--	--	--	--	--
20-30	--	--	--	--	--
30-40	--	--	--	--	--
40-50	--	--	--	--	--
50-60	--	--	3.3	--	3.3
60-70	--	--	9.4	--	9.4
70-80	--	--	17.6	--	17.6
80-90	--	--	11.9	--	11.9
90-100	--	--	12.9	2.8	15.7
100-120	--	4.7	71.6	17.9	94.2
120-140	--	--	23.1	12.4	35.5
140-160	--	--	13.0	9.6	22.6
160-180	--	--	3.2	6.5	9.7
180-200	--	--	12.3	5.0	17.3
200-300	--	--	11.4	12.3	23.7
300 AND OVER	--	--	--	--	--
MIXED AGES	--	--	19.7	3.2	22.9
ALL AGES	--	4.7	209.4	69.7	283.8

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

TABLE 10--NUMBER OF GROWING STOCK TREES ON TIMBERLAND BY DIAMETER CLASS AND SPECIES, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

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	32,259.8	--	393,016.4	151,304.9	189,545.6	766,126.7
3.0-4.9	15,233.3	--	177,208.0	101,367.1	79,090.1	372,898.5
5.0-6.9	11,485.2	10,167.9	71,972.4	45,687.9	46,892.4	186,205.8
7.0-8.9	4,164.9	3,219.4	34,158.0	15,811.3	33,870.5	91,224.1
9.0-10.9	2,405.1	385.0	14,284.3	4,022.5	24,478.4	45,575.3
11.0-12.9	1,342.2	135.2	3,411.1	775.9	13,960.2	19,624.6
13.0-14.9	469.4	10.1	659.2	166.8	7,316.0	8,621.5
15.0-16.9	142.3	--	105.7	96.0	3,131.0	3,475.0
17.0-18.9	11.6	--	14.6	38.4	1,205.2	1,269.8
19.0-20.9	15.9	--	--	--	443.6	459.5
21.0-28.9	--	--	--	--	188.0	188.0
29 AND OVER	--	--	--	--	2.5	2.5
ALL CLASSES	67,529.7	13,917.6	694,829.7	319,270.8	400,123.5	1,495,671.3

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

TABLE 11--NUMBER OF GROWING STOCK TREES 5.0-INCH D.B.H. AND LARGER ON MARGINAL
TIMBERLAND BY 5-FOOT HEIGHT CLASS AND SPECIES, TANANA INVENTORY UNIT, INTERIOR
ALASKA, 1971-75 ^{1/}

HEIGHT CLASS	BALSAM POPLAR	BLACK SPRUCE	PAPER BIRCH	QUAKING ASPEN	WHITE SPRUCE	ALL SPECIES
THOUSAND TREES						
0-30	1,548.7	2,092.6	3,509.1	1,978.8	9,520.1	18,649.3
31-35	1,705.7	4,837.0	6,360.0	3,293.9	12,650.4	28,847.0
36-40	2,373.0	7,114.0	15,310.7	7,892.4	21,094.1	53,784.2
41-45	2,392.7	6,769.0	21,280.7	10,691.1	22,660.9	63,794.4
46-50	5,090.6	4,778.6	33,484.3	18,969.6	25,796.3	88,119.4
51-55	3,367.1	2,498.8	26,059.9	10,659.8	20,725.3	63,310.9
56-60	1,960.0	1,056.0	18,462.1	9,004.1	16,376.4	46,858.6
61-65	992.6	415.2	9,782.1	4,484.9	13,314.3	28,989.1
66-70	556.2	140.4	3,485.0	2,395.3	10,577.9	17,154.8
71-75	189.6	--	1,043.7	681.3	7,079.5	8,994.1
76-80	206.4	16.1	278.1	257.4	4,446.1	5,204.1
81-85	151.5	--	--	32.7	3,338.6	3,522.8
86-90	28.0	--	19.7	126.7	1,622.2	1,796.6
91-95	42.7	--	--	--	836.2	878.9
96-100	--	--	--	--	442.6	442.6
100 AND OVER	--	--	--	--	157.8	157.8
ALL CLASSES	20,604.8	29,717.7	139,075.4	70,468.0	170,638.7	430,504.6

Estimates are subject to sampling error.

-- = no data were collected.

^{1/}Totals may be off because of rounding.

TABLE 12--NET VOLUME OF GROWING STOCK ON TIMBERLAND, IN CUBIC FEET AND VOLUME PER ACRE, BY FOREST TYPE AND STAND SIZE CLASS, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 ^{1/}

FOREST TYPE AND UNIT	SAWTIMBER	POLETIMBER	SEEDLINGS AND SAPLINGS	NONSTOCKED AREAS	TOTAL
BALSAM POPLAR:					
FT ³	15,254,227	41,405,937	14,420,922	--	71,081,086
ACRES	8,998	34,233	41,186	--	84,416
FT ³ /ACRE	1,695	1,210	350	--	842
BLACK SPRUCE:					
FT ³	2,743,930	33,579,614	365,621	--	36,689,165
ACRES	3,042	37,623	2,666	--	43,331
FT ³ /ACRE	902	826	137	--	847
WHITE SPRUCE:					
FT ³	883,602,644	281,845,003	49,519,566	--	1,214,967,213
ACRES	407,169	219,002	126,449	--	752,620
FT ³ /ACRE	2,170	1,287	392	--	1,614
PAPER BIRCH:					
FT ³	134,711,368	457,490,847	79,264,210	--	671,466,427
ACRES	85,253	407,017	396,662	--	888,932
FT ³ /ACRE	1,580	1,124	200	--	755
QUAKING ASPEN:					
FT ³	14,547,633	199,619,504	64,494,216	--	278,661,353
ACRES	11,747	164,613	227,148	--	403,509
FT ³ /ACRE	1,238	1,213	284	--	691
TAMARACK:					
FT ³	--	--	--	--	--
ACRES	--	--	--	--	--
FT ³ /ACRE	--	--	--	--	--
NONSTOCKED:					
FT ³	--	--	--	184,603	184,603
ACRES	--	--	--	21,872	21,872
FT ³ /ACRE	--	--	--	8	8
ALL TYPES:					
FT ³	1,050,859,802	1,013,940,906	208,064,535	184,603	2,273,049,846
ACRES	516,209	862,488	794,111	21,872	2,194,679
FT ³ /ACRE	2,035	1,176	262	8	1,036

Estimates are subject to sampling error.

-- = no data were collected.

^{1/}Totals may be off because of rounding.

TABLE 13--NET VOLUME OF TIMBER ON TIMBERLAND AND MARGINAL TIMBERLAND BY CLASS OF TIMBER AND BY SOFTWOODS AND HARDWOODS, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

CLASS OF TIMBER	TIMBERLAND			MARGINAL TIMBERLAND		
	SOFTWOODS	HARDWOODS	TOTAL	SOFTWOODS	HARDWOODS	TOTAL
<i>MILLION CUBIC FEET</i>						
SAWTIMBER TREES:						
SAW-LOG PORTION	911.5	86.0	997.5	112.3	3.0	115.3
UPPER-STEM PORTION	72.8	25.1	97.9	12.0	1.0	13.0
TOTAL	984.3	111.1	1,095.4	124.3	4.0	128.3
POLETIMBER TREES	368.7	809.1	1,177.8	150.2	62.6	212.8
ALL GROWING STOCK TREES	1,353.0	920.2	2,273.2	274.5	66.6	341.1
ROUGH TREES	4.4	2.9	7.3	2.4	--	2.4
ROTTEN TREES	2.9	22.1	25.0	.8	2.2	3.0
SALVABLE TREES	29.3	4.5	33.8	4.8	.1	4.9
ALL CLASSES	1,389.6	949.7	2,339.3	282.5	68.9	351.4

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

TABLE 14--NET VOLUME OF GROWING STOCK ON TIMBERLAND BY DIAMETER CLASS AND SPECIES, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 ^{1/}

DIAMETER CLASS	SOFTWOODS			HARDWOODS				ALL SPECIES
	BLACK SPRUCE	WHITE SPRUCE	TOTAL	BALSAM POPLAR	PAPER BIRCH	QUAKING ASPEN	TOTAL	
INCHES AT BREAST HEIGHT	MILLION CUBIC FEET							
5.0-6.9	22.0	116.1	138.1	20.2	170.7	120.7	311.6	448.9
7.0-8.9	17.6	213.1	230.7	19.4	193.9	91.8	305.1	535.8
9.0-10.9	4.0	291.7	296.7	18.2	135.1	39.0	192.3	488.0
11.0-12.9	2.0	261.6	263.6	18.4	44.7	12.3	75.4	339.0
13.0-14.9	.2	201.8	202.0	8.7	12.2	3.5	24.4	226.4
15.0-16.9	--	118.4	118.4	3.6	2.2	2.5	8.3	126.7
17.0-18.9	--	60.0	60.0	.3	.3	1.6	2.2	62.2
19.0-20.9	--	28.5	28.5	.9	--	--	.9	29.4
21.0-28.9	--	15.6	15.6	--	--	--	--	15.6
29.0 AND OVER	--	0.4	0.4	--	--	--	--	.4
ALL CLASSES	45.8	1,307.2	1,353.0	89.7	559.1	271.4	920.2	2,273.2

Estimates are subject to sampling error.

-- = no data were collected.

^{1/}Totals may be off because of rounding.

TABLE 15--NET VOLUME OF GROWING STOCK ON TIMBERLAND AND MARGINAL TIMBERLAND BY DIAMETER CLASS AND SPECIES, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 ^{1/}

DIAMETER CLASS	SOFTWOODS			HARDWOODS				ALL SPECIES
	BLACK SPRUCE	WHITE SPRUCE	TOTAL	BALSAM POPLAR	PAPER BIRCH	QUAKING ASPEN	TOTAL	
INCHES AT BREAST HEIGHT								
MILLION CUBIC FEET								
5.0-6.9	47.9	158.1	206.0	20.2	188.5	127.0	335.7	541.7
7.0-8.9	37.8	275.2	313.0	20.3	214.3	97.4	332.0	645.0
9.0-10.9	8.6	349.8	358.4	18.7	143.3	41.9	203.9	562.3
11.0-12.9	2.7	297.2	299.9	18.5	47.1	13.1	78.7	378.6
13.0-14.9	.9	219.0	219.0	8.6	12.5	3.6	24.7	244.5
15.0-16.9	.2	122.7	122.9	3.6	2.3	2.6	8.5	131.4
17.0-18.9	--	61.7	61.7	.4	0.3	1.6	2.3	64.0
19.0-20.9	--	29.6	29.6	.9	--	--	.9	30.5
21.0-28.9	--	15.6	15.6	.1	--	--	.1	15.7
29.0 AND OVER	--	.4	.4	--	--	--	--	.4
ALL CLASSES	98.1	1,529.2	1,627.3	91.3	608.3	287.2	986.8	2,614.1

Estimates are subject to sampling error.

-- = no data were collected.

^{1/}Totals may be off because of rounding.

TABLE 16--NET VOLUME OF SAWTIMBER ON TIMBERLAND BY DIAMETER AND CLASS SPECIES, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 ^{1/}

DIAMETER CLASS	SOFTWOODS			HARDWOODS				ALL SPECIES
	BLACK SPRUCE	WHITE SPRUCE	TOTAL	BALSAM POPLAR	PAPER BIRCH	QUAKING ASPEN	TOTAL	
INCHES AT BREAST HEIGHT								
MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE								
9.0-10.9	23.0	1,547.7	1,570.7	--	--	--	--	1,570.7
11.0-12.9	11.2	1,445.6	1,456.8	60.0	188.9	51.5	300.4	1,757.2
13.0-14.9	1.3	1,153.3	1,154.6	35.5	55.3	15.9	106.7	1,261.3
15.0-16.9	--	687.7	687.7	17.3	11.8	11.5	40.6	728.3
17.0-18.9	--	352.3	352.3	1.6	1.5	7.8	10.9	363.2
19.0-20.9	--	170.1	170.1	4.7	--	--	4.7	174.8
21.0-28.9	--	93.4	93.4	--	--	--	--	93.4
29.0 AND OVER	--	2.4	2.4	--	--	--	--	2.4
ALL CLASSES	35.5	5,452.5	5,488.0	119.1	257.5	86.7	463.3	5,951.3

Estimates are subject to sampling error.

-- = no data were collected.

^{1/}Totals may be off because of rounding.

TABLE 17--NET VOLUME OF SAWTIMBER ON TIMBERLAND AND MARGINAL TIMBERLAND BY DIAMETER CLASS AND SPECIES, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 ^{1/}

DIAMETER CLASS	SOFTWOODS			HARDWOODS				ALL SPECIES
	BLACK SPRUCE	WHITE SPRUCE	TOTAL	BALSAM POPLAR	PAPER BIRCH	QUAKING ASPEN	TOTAL	
INCHES AT BREAST HEIGHT								
MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE								
9.0-10.9	47.1	1,879.9	1,927.0	--	--	--	--	1,927.0
11.0-12.9	15.0	1,645.7	1,660.7	60.0	199.2	55.0	314.3	1,974.9
13.0-14.9	5.3	1,248.4	1,253.7	35.5	56.9	16.0	108.4	1,362.1
15.0-16.9	.7	711.2	711.9	17.4	11.8	11.9	41.1	753.0
17.0-18.9	--	361.7	361.7	3.7	1.5	7.8	13.0	374.7
19.0-20.9	--	176.5	176.5	2.6	--	--	2.6	179.1
21.0-28.9	--	93.4	93.4	1.0	--	--	1.0	94.4
29.0 AND OVER	--	2.4	2.4	--	--	--	--	2.4
ALL CLASSES	68.1	6,119.2	6,187.3	120.2	269.4	90.7	480.3	6,667.6

Estimates are subject to sampling error.

-- = no data were collected.

^{1/}Totals may be off because of rounding.

TABLE 18--GROSS VOLUME OF SAWTIMBER ON TIMBERLAND BY DIAMETER CLASS AND SPECIES, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 ^{1/}

DIAMETER CLASS	SOFTWOODS			HARDWOODS				ALL SPECIES
	BLACK SPRUCE	WHITE SPRUCE	TOTAL	BALSAM POPLAR	PAPER BIRCH	QUAKING ASPEN	TOTAL	
INCHES AT BREAST HEIGHT								
MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE								
9.0-10.9	23.8	1,570.0	1,593.8	--	--	--	--	1,593.4
11.0-12.9	12.0	1,476.7	1,488.7	65.6	247.5	56.6	369.7	1,858.4
13.0-14.9	1.3	1,180.6	1,181.9	41.1	74.0	18.8	133.9	1,315.8
15.0-16.9	--	712.1	712.1	19.5	17.1	14.4	51.0	763.1
17.0-18.9	--	373.7	373.7	2.0	2.7	9.0	13.7	387.4
19.0-20.9	--	178.4	178.4	4.7	--	--	4.7	183.1
21.0-28.9	--	95.5	95.5	--	--	--	--	95.5
29.0 AND OVER	--	2.4	2.4	--	--	--	--	2.4
ALL CLASSES	37.1	5,589.4	5,626.5	132.9	341.3	98.8	573.0	6,199.5

Estimates are subject to sampling error.

-- = no data were collected.

^{1/}Totals may be off because of rounding.

TABLE 19--GROSS VOLUME OF SAWTIMBER ON TIMBERLAND AND MARGINAL TIMBERLAND BY DIAMETER CLASS AND SPECIES, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 ^{1/}

DIAMETER CLASS	SOFTWOODS			HARDWOODS				ALL SPECIES
	BLACK SPRUCE	WHITE SPRUCE	TOTAL	BALSAM POPLAR	PAPER BIRCH	QUAKING ASPEN	TOTAL	
INCHES AT BREAST HEIGHT								
MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE								
9.0-10.9	49.6	1,908.5	1,958.1	--	--	--	--	1,958.1
11.0-12.9	15.8	1,684.9	1,700.7	65.8	259.3	60.6	385.7	2,086.4
13.0-14.9	5.3	1,281.0	1,286.3	41.1	76.0	18.8	135.9	1,422.2
15.0-16.9	1.2	737.2	738.4	19.6	17.1	15.5	52.2	790.6
17.0-18.9	--	384.2	384.2	2.0	2.7	9.0	13.7	397.9
19.0-20.9	--	184.6	184.6	4.7	--	--	4.7	189.3
21.0-28.9	--	95.5	95.5	1.0	--	--	1.0	96.5
29.0 AND OVER	--	2.4	2.4	--	--	--	--	2.4
ALL CLASSES	71.9	6,278.3	6,350.2	134.2	355.1	104.0	593.2	6,943.4

Estimates are subject to sampling error.

-- = no data were collected.

^{1/}Totals may be off because of rounding.

TABLE 20--NET VOLUME OF GROWING STOCK ON TIMBERLAND BY FOREST TYPE AND STAND SIZE CLASS, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

FOREST TYPE	NONSTOCKED AREAS	STAND SIZE CLASS			TOTAL
		SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	
		MILLION CUBIC FEET			
BALSAM POPLAR	--	14.4	41.5	15.3	71.2
BLACK SPRUCE	--	0.4	26.9	2.7	30.0
PAPER BIRCH	--	79.3	457.5	134.7	671.5
QUAKING ASPEN	--	64.4	199.6	14.6	278.6
WHITE SPRUCE	0.2	49.5	288.5	883.6	1,221.8
ALL TYPES	0.2	208.1	1,013.9	1,050.9	2,273.1

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

TABLE 21--NET VOLUME OF GROWING STOCK ON MARGINAL TIMBERLAND BY FOREST TYPE AND STAND SIZE CLASS, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

FOREST TYPE	NONSTOCKED AREAS	STAND SIZE CLASS			TOTAL
		SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	
		MILLION CUBIC FEET			
BALSAM POPLAR	--	--	--	--	
BLACK SPRUCE	--	--	62.4	--	62.4
PAPER BIRCH	--	--	39.1	--	39.1
QUAKING ASPEN	--	--	18.8	--	18.8
WHITE SPRUCE	--	3.4	113.1	102.2	218.7
ALL TYPES	--	3.4	233.4	102.2	339.0

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

TABLE 22--NET VOLUME OF SAWTIMBER ON TIMBERLAND BY FOREST TYPE AND STAND SIZE CLASS, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 ^{1/}

FOREST TYPE	NONSTOCKED AREAS	STAND SIZE CLASS			TOTAL
		SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	
		<i>MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE</i>			
BALSAM POPLAR	--	11.0	86.9	62.8	160.7
BLACK SPRUCE	--	--	47.6	9.5	57.1
PAPER BIRCH	--	121.2	537.8	459.5	1,118.6
QUAKING ASPEN	--	30.7	99.8	46.8	177.3
WHITE SPRUCE	--	136.3	632.4	3,668.9	4,437.6
ALL TYPES	--	299.2	1,404.5	4,247.6	5,951.3

Estimates are subject to sampling error.

-- = no data were collected.

^{1/}Totals may be off because of rounding.

TABLE 23--NET VOLUME OF SAWTIMBER ON MARGINAL TIMBERLAND BY FOREST TYPE AND STAND SIZE CLASS, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 ^{1/}

FOREST TYPE	NONSTOCKED AREAS	STAND SIZE CLASS			TOTAL
		SEEDLING AND SAPLING	POLETIMBER	SAWTIMBER	
		<i>MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE</i>			
BALSAM POPLAR	--	--	--	--	--
BLACK SPRUCE	--	--	49.6	--	49.6
PAPER BIRCH	--	--	34.0	--	34.0
QUAKING ASPEN	--	--	9.2	--	9.2
WHITE SPRUCE	--	12.6	203.4	407.4	623.4
ALL TYPES	--	12.6	296.2	407.4	716.2

Estimates are subject to sampling error.

-- = no data were collected.

^{1/}Totals may be off because of rounding.

TABLE 24--NET VOLUME OF SAWTIMBER ON TIMBERLAND BY SPECIES AND LOG GRADE, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

SPECIES	LOG GRADE <u>2/</u>				TOTAL
	1	2	3	4 <u>3/</u>	
<i>MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE</i>					
SOFTWOODS:					
BLACK SPRUCE	--	--	29.4	6.1	35.5
WHITE SPRUCE	5.7	118.8	4,540.7	787.4	5,452.6
TOTAL	5.7	118.8	4,570.1	793.5	5,488.1
HARDWOODS:					
BALSAM POPLAR	.7	21.6	84.8	11.9	119.0
PAPER BIRCH	--	21.9	172.5	63.0	257.4
QUAKING ASPEN	1.6	11.3	65.8	7.9	86.6
TOTAL	2.3	54.8	323.1	82.8	463.0
ALL SPECIES	8.0	173.6	4,893.2	876.3	5,951.1

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

2/Forest Products Laboratory. Hardwood log grades for standard lumber. USDA For. Prod. Lab. Rep. R1737; 1959. 61 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.

3/Logs for local use.

TABLE 25--NET VOLUME OF SAWTIMBER ON MARGINAL TIMBERLAND BY SPECIES AND LOG GRADE, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

SPECIES	LOG GRADE <u>2/</u>				TOTAL
	1	2	3	4 <u>3/</u>	
MILLION BOARD FEET, INTERNATIONAL 1/4-INCH RULE					
SOFTWOODS:					
BLACK SPRUCE	--	--	19.8	12.1	31.9
WHITE SPRUCE	--	4.0	495.7	166.6	666.3
TOTAL	--	4.0	515.5	178.7	698.2
HARDWOODS:					
BALSAM POPLAR	--	--	1.2	--	1.2
PAPER BIRCH	0.7	.7	9.0	1.4	11.8
QUAKING ASPEN	--	--	1.3	2.6	3.9
TOTAL	.7	.7	11.5	4.0	16.9
ALL SPECIES	.7	4.7	527.0	182.7	715.1

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

2/Forest Products Laboratory. Hardwood log grades for standard lumber. USDA For. Prod. Lab. Rep. R1737; 1959. 61 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.

3/Logs for local use.

TABLE 26--NET ANNUAL GROWTH OF GROWING STOCK ON TIMBERLAND AND MARGINAL TIMBERLAND BY SPECIES, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

SPECIES	TIMBERLAND	MARGINAL TIMBERLAND	TOTAL
<i>THOUSAND CUBIC FEET</i>			
SOFTWOODS:			
BLACK SPRUCE	2,151.8	1,780.6	3,932.4
WHITE SPRUCE	22,316.4	3,553.9	25,870.3
TOTAL	24,468.2	5,334.5	29,802.7
HARDWOODS:			
BALSAM POPLAR	2,240.4	20.2	2,260.6
PAPER BIRCH	19,306.0	1,186.5	20,492.5
QUAKING ASPEN	15,324.1	389.3	15,713.4
TOTAL	36,870.5	1,596.0	38,466.5
ALL SPECIES	61,338.7	6,930.5	68,269.2

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

TABLE 27--NET ANNUAL GROWTH OF SAWTIMBER ON TIMBERLAND AND MARGINAL TIMBERLAND BY SPECIES, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

SPECIES	TIMBERLAND	MARGINAL TIMBERLAND	TOTAL
THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE			
SOFTWOODS:			
BLACK SPRUCE	2,004.7	2,462.0	4,466.7
WHITE SPRUCE	145,372.7	28,937.8	174,310.5
TOTAL	147,377.4	31,399.8	178,777.2
HARDWOODS:			
BALSAM POPLAR	6,258.0	19.0	6,277.0
PAPER BIRCH	21,304.8	292.2	21,597.0
QUAKING ASPEN	8,019.8	93.1	8,112.9
TOTAL	35,582.6	404.3	35,986.9
ALL SPECIES	182,960.0	31,804.1	214,764.1

Estimates are subject to sampling error.

1/Totals may be off because of rounding.

TABLE 28--ANNUAL MORTALITY OF GROWING STOCK ON TIMBERLAND
AND MARGINAL TIMBERLAND BY SPECIES, TANANA INVENTORY UNIT,
INTERIOR ALASKA, 1971-75 1/

SPECIES	TIMBERLAND	MARGINAL TIMBERLAND	TOTAL
<i>THOUSAND CUBIC FEET</i>			
SOFTWOODS:			
BLACK SPRUCE	227.7	22.9	250.6
WHITE SPRUCE	4,527.3	336.2	4,863.5
TOTAL	4,775.0	359.1	5,134.1
HARDWOODS:			
BALSAM POPLAR	333.1	--	333.1
PAPER BIRCH	990.7	26.2	1,016.9
QUAKING ASPEN	44.8	42.4	87.2
TOTAL	1,368.6	68.6	1,437.2
ALL SPECIES	6,143.6	427.7	6,571.3

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

TABLE 29--ANNUAL MORTALITY OF SAWTIMBER ON TIMBERLAND AND MARGINAL TIMBERLAND BY SPECIES, TANANA INVENTORY UNIT, INTERIOR ALASKA, 1971-75 1/

SPECIES	TIMBERLAND	MARGINAL TIMBERLAND	TOTAL
<i>THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE</i>			
SOFTWOODS:			
BLACK SPRUCE	740.3	--	740.3
WHITE SPRUCE	17,347.1	1,181.3	18,528.4
TOTAL	18,087.4	1,181.3	19,268.7
HARDWOODS:			
BALSAM POPLAR	--	--	--
PAPER BIRCH	166.9	--	166.9
QUAKING ASPEN	--	--	--
TOTAL	166.9	--	166.9
ALL SPECIES	18,254.3	1,181.3	19,435.6

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

TABLE 30--ANNUAL MORTALITY OF GROWING STOCK ON TIMBERLAND AND MARGINAL
TIMBERLAND BY CAUSE AND BY SOFTWOODS AND HARDWOODS, TANANA INVENTORY UNIT,
INTERIOR ALASKA, 1971-75 1/

CAUSE	TIMBERLAND			MARGINAL TIMBERLAND		
	SOFTWOODS	HARDWOODS	TOTAL	SOFTWOODS	HARDWOODS	TOTAL
THOUSAND CUBIC FEET						
FIRE	1,828.3	697.4	2,525.7	--	--	--
INSECTS	595.3	83.1	678.4	67.3	--	67.3
DISEASE	197.0	42.7	239.7	--	--	--
WINDTHROW	597.8	75.9	673.7	118.0	42.4	60.4
LOGGING	239.6	--	239.6	--	--	--
OTHER	884.3	274.6	1,158.9	79.6	--	79.6
UNKNOWN	412.7	194.9	607.6	94.2	26.2	120.4
TOTAL	4,755.0	1,368.6	6,123.6	359.1	68.6	427.7

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

TABLE 31--ANNUAL MORTALITY OF SAWTIMBER ON TIMBERLAND AND MARGINAL TIMBERLAND BY
CAUSE AND BY SOFTWOODS AND HARDWOODS, TANANA INVENTORY UNIT, INTERIOR ALASKA,
1971-75 1/

CAUSE	TIMBERLAND			MARGINAL TIMBERLAND		
	SOFTWOODS	HARDWOODS	TOTAL	SOFTWOODS	HARDWOODS	TOTAL
THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE						
FIRE	7,545.6	166.9	7,712.5	167.9	--	167.9
INSECTS	2,632.7	--	2,632.7	--	--	--
DISEASE	1,503.1	--	1,503.1	--	--	--
WINDTHROW	2,784.6	--	2,784.6	464.4	--	464.4
LOGGING	650.7	--	650.7	--	--	--
OTHER	2,021.9	--	2,021.9	320.8	--	320.8
UNKNOWN	948.8	--	948.8	228.2	--	228.2
TOTAL	18,087.4	166.9	18,254.6	1,181.3	--	1,181.3

Estimates are subject to sampling error.

-- = no data were collected.

1/Totals may be off because of rounding.

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Statistical report preparation: Willem W. S. van Hees.

Metric Equivalents

1 inch = 2.54 centimeters (cm)
1 foot = 0.3048 meter (m)
1 mile = 1.609 kilometers (km)
1 acre = 0.4047 hectares (ha)
1 cubic foot = 0.0283 cubic meter (m³)
1 cubic foot per acre = 0.069 97 cubic meter
per hectare (m³/ha)
20 cubic feet per acre = 1.3994 cubic meters
per hectare (m³/ha)
1 square foot basal area per acre = 0.2296 square
meter per hectare (m²/ha)

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van Hees, Willem W. S. Timber resource statistics for the Tanana inventory unit, 1971-75. Resour. Bull. PNW-109. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1983. 36 p.

Statistics on forest area, total gross and net timber volumes, and annual net growth and mortality are presented for the 1971-75 timber inventory of the Tanana unit, Alaska. This report summarizes statistics previously published for the four inventory blocks of the unit: Fairbanks, Kantishna, Upper Tanana, and Wood-Salcha. Timberland area is estimated at 2.19 million acres (888 164 ha), net growing stock volume at 2.27 billion cubic feet (64.36 million m³), and annual net growth and mortality at 61.34 and 6.14 million cubic feet (1.74 and 0.17 million m³), respectively.

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

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