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Timber Resource Statistics for the Talkeetna Block, Susitna River Basin Multiresource Inventory Unit, Alaska, 1979

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Abstract

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A multiresource inventory of the Talkeetna block, Susitna River basin inventory unit, was conducted in 1979. Statistics on forest area, timber volumes, and growth and mortality from this inventory are presented. Timberland area is estimated at 562,105 acres and net growing stock volume, mostly hardwood, at 574.7 million cubic feet. Net annual growth of growing stock is estimated at 13.6 million cubic feet and annual mortality at 2.7 million cubic feet.

Keywords: Forest surveys, timber inventory, multiresource inventory, statistics (forest), resources (forest), Alaska (south-central).

Summary

The Forest Inventory and Analysis (FIA) work unit of the Pacific Northwest Forest and Range Experiment Station conducted its first multiresource inventory for Alaska in the Susitna River basin. Field work began in 1978 in the Willow block. The 5,622,935-acre Talkeetna block was inventoried in 1979. The Talkeetna block lies north of Cook Inlet and is bounded on the north by the Alaska Range, the Talkeetna Mountains on the east, and by Mount Susitna, Beluga Mountain, and Yenlo Hills on the west.

Statistics on forest area, timber volumes, and net annual growth and mortality are presented from the 1979 multiresource inventory of the Talkeetna block. Timberland area is estimated at 562,105 acres and net growing stock volume at 574.7 million cubic feet. Net annual growth of growing stock is estimated at 13.6 million cubic feet and annual mortality at 2.7 million cubic feet.

Preface

Forest Inventory and Analysis 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 inventories in Alaska, California, Hawaii, Oregon, and Washington.

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Highlights [1/]

Area

- Gross area of the Talkeetna block is 5,622,935 acres.

- Forest land area is 1,799,299 acres, which is equivalent to 32.0 percent of the gross area in the block.

- Timberland accounts for 562,105 acres, or 31.2 percent of all forest land. Timberland is capable of producing 20 cubic feet or more of wood per acre per year.

- Birch is the predominant forest type, accounting for 847,018 acres and about 47 percent of the total forest land. The white spruce type follows with 459,756 acres and about 26 percent of the total forest land. The remaining 27 percent is in black spruce and cottonwood types.

- The predominant vegetation class is closed deciduous forest, old stands-deciduous/mixed. This class occupies 26.4 percent of the timberland and 23.9 percent of all forest land.

- Site class 4 land (capable of producing 20-49 cubic feet per acre per year) supports 97 percent of the timberland, or 30 percent of the total forest land, and averages 1,017 cubic feet of growing stock volume per acre.

Inventory

- Growing stock volume on timberland is 574.7 million cubic feet, with the majority of it, 72 percent, in sawtimber trees.

- Of the sound wood volume on timberland, 8.1 percent is from rough, rotten, and salvable dead trees, or 50.5 million cubic feet.

- Paper birch makes up 40 percent of the growing stock volume on timberland and 29 percent of the sawtimber volume. The remaining volume is mostly black cottonwood.

1/ Values presented in this section are estimates and are subject to sampling error.

- Average softwood growing stock volume per acre of timberland is 223 cubic feet and 980 board feet, International 1/4-inch rule. Hardwood growing stock volume equals 799 cubic feet and 2,813 board feet per acre.

- There are an average of 29 trees per acre of sawtimber-sized growing stock on timberland.

- There are an average of 217 trees per acre of growing stock less than sawtimber size on timberland.

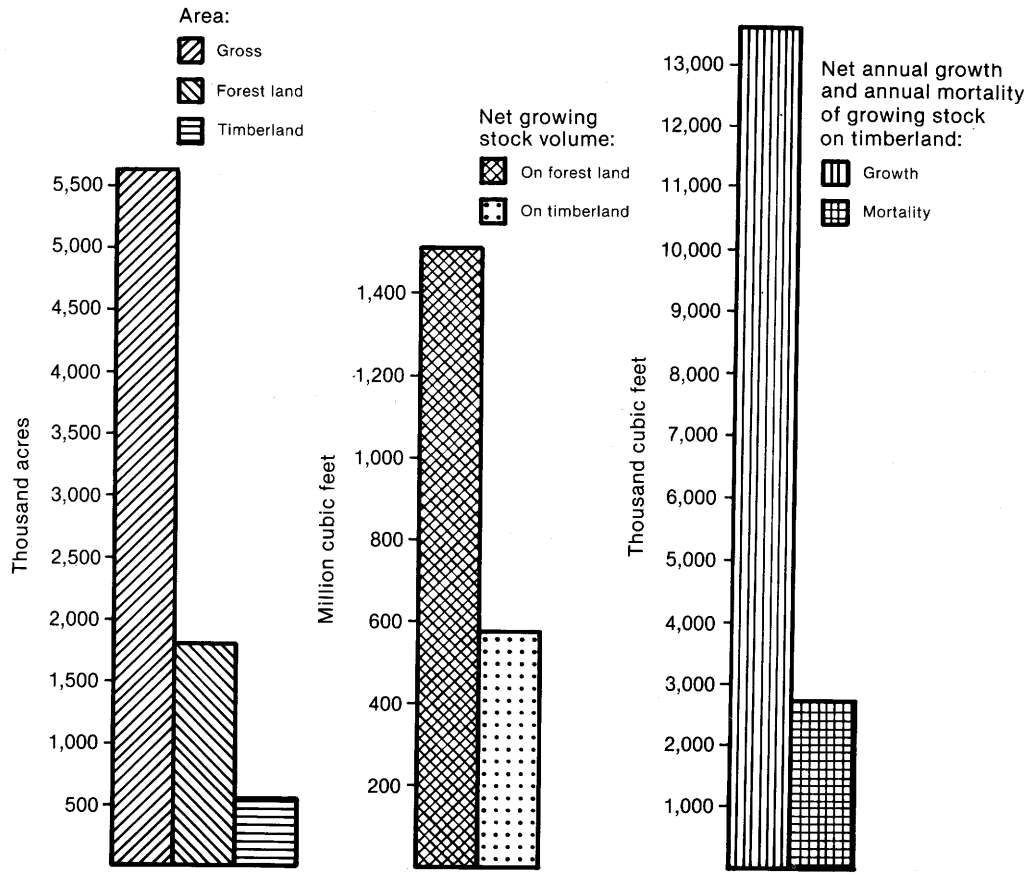
Growth

- Net annual growth of growing stock on timberland is 13.6 million cubic feet. Of the growing stock, 77 percent, or 10.5 million cubic feet, is in the birch type.

Mortality

- Annual mortality of growing stock on timberland is 2.7 million cubic feet.

Talkeetna Block at a Glance



Introduction

In 1977, the Alaska Forest Inventory and Analysis (FIA) work unit of the USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, joined with other agencies to plan and conduct a multiresource inventory of the Susitna River basin in south-central Alaska. Cooperating agencies were the USDA Forest Service, Alaska Region, State and Private Forestry; USDA Soil Conservation Service; and the State of Alaska, Department of Natural Resources. This report deals with the timber resource. Other resources will be addressed in a joint publication being prepared by the Soil Conservation Service and FIA and scheduled for release in 1984.

The 5,622,900-acre Talkeetna block is part of the Susitna River basin multiresource inventory unit. The Susitna River basin is bordered on the north and west by the Alaska Range, on the south by Cook Inlet, and on the east by the Copper River plateau (figs. 1-3). The Talkeetna block is between 61°15' and 63°25' N. latitude, and 151°45' and 148°15' W. longitude. Major drainages in the block are the Susitna, Chulitna, Yentna, Kahiltna, Kashwitna, and Talkeetna Rivers.

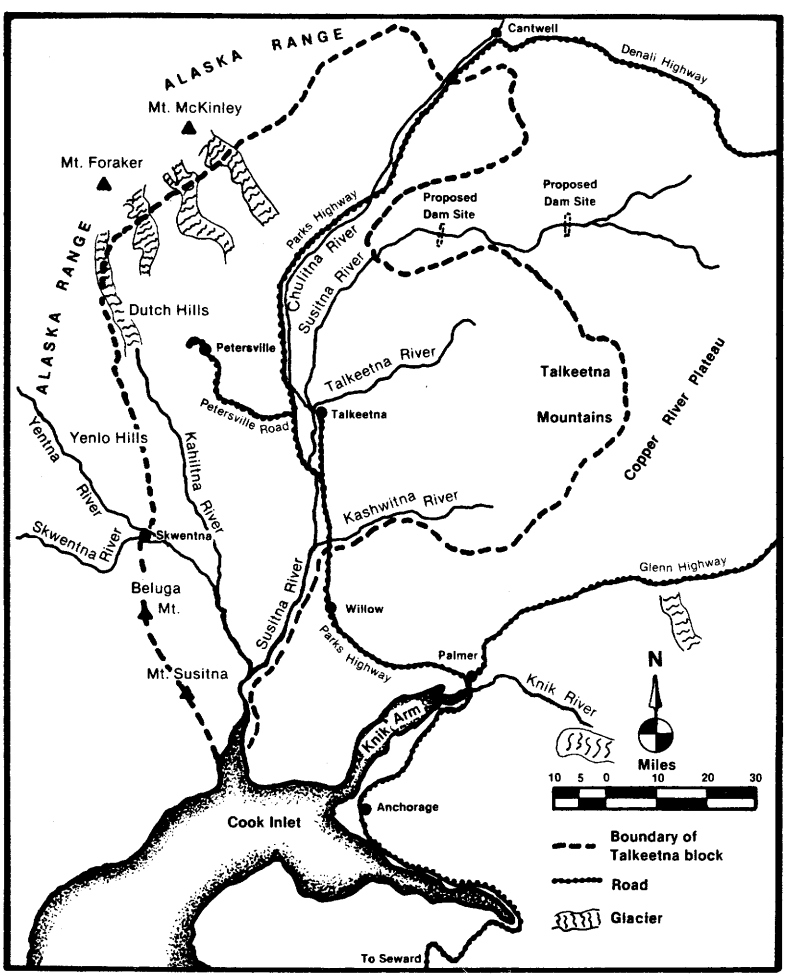


Figure 1.--Talkeetna block, Susitna River basin.

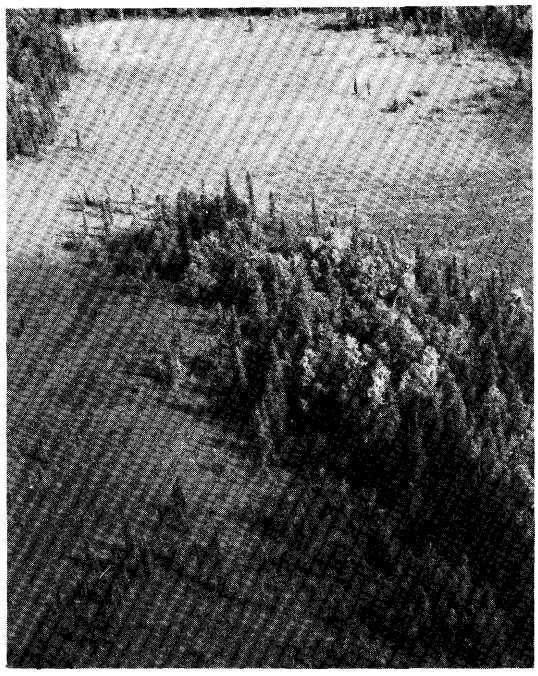


Figure 2.--Topography in the Talkeetna block includes large expanses of relatively flat land. Bogs, often vegetated by herbaceous plants or timbered with black spruce, frequently occur on poorly drained areas.

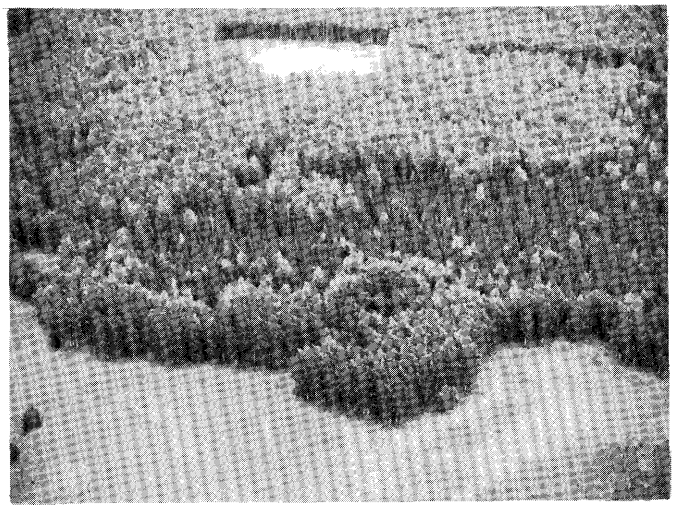


Figure 3.--Birch is the predominant forest type in the Talkeetna block, accounting for about 47 percent of all forest land. The type occurs as pure birch and also mixed, mostly with white spruce.

The Talkeetna block was the second portion of the Susitna unit to be inventoried. Fieldwork was conducted in 1979. Considerable development may occur in the block if the Susitna Hydroelectric Project, presently in the planning stage, is constructed. Several dam sites proposed for the Project are near the study area. Also, the town of Talkeetna is a major site for beginning and terminating climbs on Mount McKinley.

Inventory Procedures

Sampling strata for the Talkeetna block follow. Land cover/vegetation classes for all strata except water are detailed beginning on page 13.

Forest and woodland (greater than 10-percent tree crown cover):
- Stratum 1. Closed forest (greater than 50-percent tree crown cover)
- Stratum 2. Open forest (10- to 50-percent tree crown cover)

Nonforest (less than 10-percent tree crown cover):
- Stratum 3. Nonforest
- Stratum 4. Cultural influence
- Stratum 5. Nonvegetated-barren
- Stratum 6. Water

Forest, nonforest:
- Stratum 7. Unclassified.

Vegetation for the study area was mapped according to type on 1:120,000-scale color infrared aerial photography enlarged to approximately 1:60,000. This provided a stratum or polygon map that could be associated with estimates of mean volumes made for each stratum. A double sampling method was used to derive estimates (Bickford 1952).

To be mapped, type polygons had to be at least 5 acres in size. Each polygon was labeled with a primary vegetation type or land class code. Secondary and tertiary labels were added if a polygon contained small inclusions (less than 5 acres) of other vegetation.

Sampling of a representative number of type polygons followed, using a double sampling procedure. Primary aerial photo points were located at 3 000 meter Universal Transverse Mercator (UTM) intersections on 1:63,360-scale quadrangle maps of the U.S. Geological Survey. Next, these points were visually transferred to aerial photos. A sampling stratum for each point was then interpreted and a predominant vegetation type assigned to the usually circular, 5-acre area surrounding each point. Points for ground measurements were located in the same mapped polygons as the associated intersections of the grid.

Proportionally to the number of photo points in each type, 152 were selected for ground observation and measurements. Sample points were established in 10-point clusters and measured within each 5-acre location. These measurements are the basis for the estimates given in this paper.2/

On forested points, measurements of trees larger than 5 inches in d.b.h. were made on variable radius plots using a nonmetric prism with 40 basal area factor. Trees less than 5 inches were measured on 1/300-acre, circular, fixed radius plots.

2/ Mead, Bert R. Field procedures for the cooperative vegetation inventory of the Susitna River basin, Alaska, Talkeetna block. Anchorage: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station, Forestry Sciences Laboratory; 1978. 151 p. Unpublished report.

Reliability of Inventory Data

Area and volume statistics reported here are estimates based on sampling and, therefore, are subject to sampling error. The reliability of the inventory is expressed in terms of relative sampling errors at the 68-percent confidence level:

	Design sampling error 3/	Sampling error achieved	Sampling error of the total estimate
		Percent	
Timberland area:			
Per million acres	3.0	12.6	
For the total 562,105 acres			±16.8
Other forest land area:			
Per million acres	10.0	12.5	
For the total 1,237,194 acres			±11.2
Net growing stock volume:			
Per billion ft^3	10.0	14.7	
For the total 574.668 million ft^3			±19.4
Net growth of growing stock:			
Per billion ft^3	10.0	2.6	
For the total 13.619 million ft^3			±22.4

The estimate of net growing stock volume for the Talkeetna block is 574.668 million cubic feet, ± 19.4 percent, yielding 68-percent confidence limits of 686.154 and 463.182 million cubic feet. A 68-percent confidence level means that if repeated samples are taken of this population, the total volume would be between 686.154 and 463.182 million cubic feet 68 percent of the time.

Design sampling errors for timberland area (3 percent), other forest land area (10 percent), and cubic-foot net growing stock volume (10 percent) were not met. Design sampling error for net growth (10 percent) was met.

3/ Forest Service Handbook 4813.1, Chapter 10, Operational Procedures 11.1--1; 1967.

Terminology [4/]

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

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.

Area condition class codes--

10 Areas 100 percent or more stocked with desirable trees and not overstocked. Stands in this category generally do not require any treatment at present to maintain high level of growth.

20 Areas 100 percent or more stocked with desirable trees and overstocked. Stands in this category need a treatment such as thinning to produce maximum levels of growth of desirable trees.

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, inhibiting vegetation, slash, or nonstockable conditions. Stands in this category generally have conditions favorable for natural improvement of stocking without special treatment.

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. Stands in this category generally have little prospect for improvement in desirable tree stocking without special treatment such as thinning or cull tree removal.

50 Areas less than 60 percent stocked with desirable trees but with 100 percent or more stocking with growing stock trees. Stands in this category generally have little prospect for improved desirable tree stocking without special treatment. Stands almost to rotation age would usually not be treated.

4/ Terminology is from the manual of field procedures for the Susitna River basin inventory (see footnote 2), and Forest Service Handbook 4813.1 (see footnote 3).

60 Areas less than 60 percent stocked with desirable trees but with 60- to 100-percent stocking with growing stock trees. Stands in this category generally have little prospect for improved desirable tree stocking without special treatment such as timber stand improvement or planting.

70 Areas less than 60 percent stocked with desirable trees and with less than 60-percent stocking with growing stock trees. Stands in this category generally have little prospect for improved desirable tree or growing stock stocking without treatment such as site preparation or regeneration.

Basal area--A measure of square feet of space occupied by the stem of a tree at diameter breast height.

Census water--Streams, sloughs, estuaries, and canals more than one-eighth mile wide; and lakes, reservoirs, and ponds of more than 40 acres.

Commercial species--Tree species presently or potentially suitable for industrial wood products.

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 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.

Diameter class--A classification of trees based on diameter of the trees outside the bark, measured at breast height (4-1/2 feet above the ground). Two-inch diameter classes are commonly used by FIA, with the even inch the approximate midpoint for a class.

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

Forest trees--Woody plants having a well-developed stem and usually more than 12 feet tall at maturity.

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.

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 major rivers. It hybridizes extensively with balsam poplar where their ranges overlap, and in this overlap area types are not easily 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.

Gross growth--Annual increase in net volume of trees that have not been cut or have not died.

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 in d.b.h. and larger, from stump to a minimum 4.0-inch top outside the bark or to the point where the central stem breaks into limbs.

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

Inoperable timberland--Forest land with a gross volume of less than 800 cubic feet per acre.

International 1/4-inch rule--A log rule using diameter and length to give yields of logs in board feet of lumber produced when 1-inch boards are cut. It assumes one-half inch of taper per 4 feet of log and a saw kerf of one-fourth inch.

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 wide; and lakes, reservoirs, and ponds less than 1 acre in area.

Land class--A classification of land by the predominant vegetative cover on it, such as forest land. The minimum size area for classification is 1 acre.

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 timberland is the ability to produce at least 20 cubic feet per acre per year.

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 and one-eighth mile wide; and lakes, reservoirs, and ponds between 1 and 40 acres in area.

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

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

Other 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). 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. Also included is productive forest land withdrawn from commercial timber use by statute or administrative regulation.

Other forest land, inoperable--Other forest land with a gross volume less than 800 cubic feet per acre.

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

Overstocked areas--Areas where growth of trees is substantially 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 in d.b.h. for softwoods and 5.0 to 10.9 inches in d.b.h. for hardwoods.

Rotten trees--Live trees 5.0 inches 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 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 in d.b.h.

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 of 6 inches inside the bark for softwoods and 8 inches 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 outside the bark for softwoods and 9.0 inches 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--The volume of sawtimber trees measured in board feet. Net volume equals gross volume less deductions for rot, sweep, crook, and other defects that affect use for lumber.

Seedling--An established tree less than 1.0 inch 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 of this stocking.

Site class--A classification of forest land based on its capacity to grow crops of industrial wood. Site classifications are based on the mean annual cubic-foot growth of growing stock attainable in fully stocked stands at culmination of mean annual increment.

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

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

Stand volume class--A classification of forest land based on cubic-foot or board foot timber volume per acre.

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.

Timber class--A classification of trees based on characteristics of quality such as vigor, size of limbs and knots, and presence or absence of rot. Classes include growing stock; desirable and acceptable trees; and rough, rotten, and salvable dead trees.

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 per year of industrial wood under management.

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

Type map--A map showing classifications of vegetated and barren land, based on interpretation of aerial photographs. Like areas are delineated, labeled, and referred to as polygons.

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.

UTM--Universal transverse mercator grid system is a 1000-meter grid named for the map projection on which it is based. It consists of 60 grid zones, each 6° longitude in width. The origin of the grid zone lies at the intersection of the central meridian, which is a straight north-south line passing through Greenwich, England, and the equator, a straight east-west line. Grid lines within a zone are parallel and delineated on USGS quadrangle maps by blue tick marks on map margins.

Vegetation class--A classification of forest and nonforest vegetation based on species, canopy coverage, and height and/or age of vegetation. A classification system unique to FIA was developed for the Susitna River basin multiresource inventory. Classes are defined in the following section.

Water--See Census water and non-Census water.

Vegetation/Land Cover Classes

I. Forest and woodland (greater than 10-percent crown cover)

A. Closed coniferous forest (greater than 50-percent crown cover)

1. Short stands-white spruce. Main canopy usually less than 30 feet tall. Usually found at higher elevations as isolated pockets in areas dominated by alder; grassland; or open, mixed stands.

2. Tall stands-white spruce. Main canopy usually greater than 30 feet tall. Usually found at lower elevations on better sites; almost always found mixed with old and decadent, deciduous trees (very rarely found as a pure type in Susitna River basin).

3. Short stands-black spruce. Main canopy usually less than 30 feet tall. Generally found on wet and/or cold (poor) sites; may be found mixed with birch of poor quality but usually found as a pure type forming islands and stringers in bog areas or transition zones between bog area and forest areas. Understory is usually a thick moss and/or sedge mat.

4. Tall stands-black spruce. Main canopy usually greater than 30 feet tall. Can usually be identified as a fire-formed stand, on relatively good sites. Stands are remarkably pure, and the stocking density is usually quite high; may be found mixed with very scattered birch.

B. Closed deciduous forest (greater than 50-percent crown cover)

1. Young stands-deciduous/mixed. Canopy is usually very finely textured when viewed from above; openings in stands are very rare. Composed mostly of birch and/or aspen. This type very rarely mixed with other types except when found as a remnant condition in burned areas. Spruce is not usually evident as a component of the overstory in these young stands. Stands are 0-40 years old.

2. Medium age stands-deciduous/mixed. Canopy is usually fine textured when viewed from above; openings may be fairly common but are usually small. Vegetation elements of this type include birch, spruce, and aspen. Birch is usually found as a main component of this type, but percent composition may vary greatly depending on a number of factors: as the type increases in age, the percentage of white spruce as a crown component usually increases with the amount of understory and number of stand openings. Stands are 40-100 years old.

3. Old stands-deciduous/mixed. Canopy is usually somewhat coarse textured when viewed from above; openings are common and may appear in nearly half the stand. Canopy may also appear smooth, but openings appear as definite holes in the crown. Deciduous trees in these old stands are usually decadent. Spruce is often becoming the dominant species. The understory is usually visible from above and most commonly includes *Calamagrostis* sp. and *Alnus* sp. Stands are always older than 100 years.

4. Young stands-cottonwood. Most commonly found on new islands, downstream ends of old islands, and point bars of rivers. Cottonwood or poplar is usually mixed with large alder and/or willow; understory is sparse to nonexistent. Stands are 0-40 years old.

5. Medium age stands-cottonwood. Most commonly found within a mile of a river (alluvial soils). Stands are usually pure cottonwood or poplar; spacing is even and crown closure approaches 100 percent. Understory in the Susitna River basin is dominated by alder and devil's club. Stands are 40-100 years old.

6. Old stands-cottonwood. Most commonly found near rivers (alluvial soils). Stands may be mixed with young white spruce. Cottonwood trees are extremely large (30-40 inches in diameter) and decadent (larger trees may be only shells). Stands appear somewhat clumpy because of openings. Understory includes large quantities of alder, devil's club, and willow. Stands are older than 100 years.

C. Open coniferous forest (10- to 50-percent crown cover)

1. Short stands-white spruce. Usually found at higher elevations as a transition type between closed forest and high elevation, nonforest areas. Usually found mixed with vegetation elements of the higher elevation type: if the higher elevation type is a mixture of alder and grass, the open white spruce transition type will normally be forming a complex type with alder and grass. Trees are shorter than 30 feet.

2. Tall stands-white spruce. Same as short stands of white spruce normally found at lower elevations or on better sites. Commonly found in creek bottoms mixed with alder/willow and grass. Trees are taller than 30 feet.

3. Short stands-black spruce. Found in association with bog types. Black spruce trees are usually of very poor form. Site is either wet or cold or both. Trees are usually shorter than 15 feet tall.

D. Open deciduous forest (10- to 50-percent crown cover)

1. Medium age stands-deciduous/mixed. Similar to short stands of white spruce except normally found at lower elevations (as elevation increases, so does proportion of spruce in mixed types). Although birch/aspen stands are not usually found as a transition type between forest and high elevation, nonforest areas, they are often found just below areas of open, short white spruce. Stands are 0-40 years old.

2. Old stands-deciduous/mixed. Found in same general location as open, tall stands of white spruce. Found in association with grass and alder. Birch is usually found growing in very small, tight clumps. Spruce is usually found to have an open-grown form and is normally much younger than the hardwood component of the type.

3. Medium age stands-cottonwood. Usually found at tree line just above elevational limit of open white spruce. Found in pockets among low shrubs.

4. Old stands-cottonwood. Two elevational phases of this type seem to occur. The high elevation phase, consisting of balsam poplar, may be found mixed with streamside alder/willow along flowing water on high elevation flats. The low elevation phase, consisting of cottonwood, may be found on major river flood plains growing with a confusing mixture of other types such as open spruce, open birch, alder, and grass.

II. Nonforest (0- to 10-percent crown cover)

A. Tall shrub

1. Alder. This type is dominated by tall (10-15 feet) alder growing in dense thickets with grasses, ferns, and a great variety of forbs growing in the understory. Devil's club can be found as a dominant understory to the alder on wetter and steeper sites. Devil's club will normally exclude other understory vegetation. The type is found at or above tree line.

2. Alder willow (streamside vegetation). This type is dominated by a mixture of very large alder and willow and is normally found on frequently flooded ground such as new islands and point bars. Understory is sparse but may include *Equisetum* and *Calamagrostis*. This type is often found mixed with young, open cottonwood; in younger stands the cottonwood is almost indistinguishable from the willow and alder.

B. Low shrub (willow-resin birch)

This type is dominated by either willow or resin birch or a combination thereof. The type is often found in sheltered areas at high elevations such as draws in mountainous terrain. This type is found at and above the transition between tall shrubland and tundra.

C. Grassland (*Calamagrostis*)

This type is dominated by *Calamagrostis* 3-6 feet tall. Fireweed and various ferns are sometimes common. This type is most often found as an understory in the more open forest types and woodland areas where it is commonly associated with alder patches; it can also be found unassociated with other types along small streams.

D. Tundra

1. Sedge-grass tundra. This type is found above tree line on relatively flat, wet areas. Vegetation consists almost entirely of various wet sedges.

2. Herbaceous tundra. This type is found above tree line and is almost always found mixed with and above shrub tundra. The variety of species found is immense, consisting mainly of various grasses and forbs. Soil varies in depth and may be intermixed with rock outcroppings. Vegetation may not be continuous.

3. Shrub tundra. This type is dominated by dwarf shrub birch and ericaceous shrubs along with various short grasses and a large number of forbs. This type is almost always found mixed with and below herbaceous tundra. Density of the shrubs varies considerably and may often appear quite patchy.

4. Mat and cushion tundra. This type is dominated by such plants as dryas, crowberry, bearberry, sedge, grass, lichens, and low-growing forbs. Climatic conditions are extreme at the elevation where this type is found. Vegetation cover may be complete (closed mat cushion) or relatively sparse (scattered mat cushion) with a large percentage of the vegetation being lichens. This type is often mixed with rock.

E. Saltwater wetlands

1. Grassland. *Elymus*-dominated grassland in areas of tidal influence. Usually found at edge of normal high water in sandy soil, where the shoreline gradient is relatively steep, and as a belt of grass along the shore.

2. Low shrub. *Myrica*-dominated shrubland located on tidal flats. Water level is usually fluctuating seasonally. In areas that are more continuously wet, sedge replaces *Myrica* sp.

3. Tidal marsh. Usually found in areas with many shallow lakes and little topographic relief (within tidal influence). Vegetation is dominated by sedges. Woody plants may occur on the drier sedge and peat ridges that are common to this type.

F. Fresh water wetlands

1. *Sphagnum* bog. Cover is dominated by varying amounts of sedge, *Equisetum* and moss (especially *Sphagnum*). This type is usually found as a floating mat over several feet of water or as a thick mat directly over saturated or frozen soil. Shrubs and stunted trees (if present) may be found on drier peat ridges. This type is similar to tidal marsh except that shallow lakes are less common, the peat ridges form a more continuous and regular pattern and the type is found inland beyond tidal reach. Usually found as a pure type.

2. *Sphagnum*/shrub bog. Vegetation of this type is dominated by a thick moss mat (*Sphagnum*) and/or sedge tussocks. Grass, ericaceous shrubs, *Salix*, blueberry, and cranberry may also be present. Ground water level usually varies seasonally, but this type is usually not as wet as a *Sphagnum* bog. Usually mixed with open stands of short black spruce. Many other types may also be found in close association with this type; they are usually found on glacial moraines and eskers within the bog area.

III. Cultural influence

May be broadly defined as land that has been obviously affected by human activity. Includes agricultural land, urban areas, and land developed to support or provide services to agricultural and urban land. This "type" may be vegetated, but vegetation that is present may not be natural in either composition or spacing.

IV. Nonvegetated-barren

A. Mud flat. Confined to tidal areas (for example, Cook Inlet) and the mouths of major rivers. This "type" may appear vegetated on infrared and normal color photography or from the air, but the "vegetation" is usually algal blooms, and/or other sea plants. Mud flats are usually well patterned with ripple marks or water drainage patterns, are normally submersed during high tide, and may be used as resting and feeding areas by waterfowl.

B. Rock. Includes exposed bedrock and scree commonly found with mat and cushion tundra at high elevations. This "type" is also used to describe large landslides, fresh moraines, and other natural barren areas.

C. Snow field. High-elevation snow accumulation areas. Appears to be a permanent or nearly year-round part of the landscape. May be found as small pockets on slopes protected from the sun, on lee slopes, or in gulleys. Usually found over bare ground. Can be found over bare ground or mixed with mat and cushion tundra.

D. Glacier. Includes both icefields and glaciers. Usually found covering several square miles. Considered a permanent part of the landscape. This "type" covers much larger areas than does the snowfield type; crevasses, moraines, and other glacial features are usually present.

V. Unclassified

Locations or "points" that could not be classified because of cloud cover or deep shadows on the aerial photographs.

Names Of Trees

Common Name	Scientific Name 5/
Softwoods:	
Black spruce	*Picea mariana* (Mill.) B.S.P.
White spruce	*Picea glauca* (Moench) Voss
Hardwoods:	
Balsam poplar	*Populus balsamifera* L.
Black cottonwood	*Populus trichocarpa* Torr. and Gray
Paper birch	*Betula papyrifera* Marsh.
Quaking aspen	*Populus tremuloides* Michx.

5/ 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 VEGETATION/LAND COVER CLASS AND LAND CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

VEGETATION/ LAND COVER CLASS	LAND CLASS									
	TIMBERLAND	OTHER FOREST LAND, OPERABLE	OTHER FOREST LAND, INOPERABLE	TOTAL FOREST LAND	NONFOREST LAND	NON-CENSUS WATER	TOTAL NONFOREST	CENSUS WATER	UNCLASSIFIED	ALL CLASSES
					ACRES					
CLOSED CONIFEROUS FOREST	--	59,328	--	59,328	--	--	--	--	--	59,328
CLOSED DECIDUOUS FOREST	355,968	308,366	118,656	782,990	--	--	--	--	--	782,990
OPEN FOREST	206,137	227,180	523,664	956,981	--	--	--	--	--	956,981
SHRUBLAND	--	--	--	--	669,833	--	669,833	--	--	669,833
GRASSLAND	--	--	--	--	93,572	--	93,572	--	--	93,572
TUNDRA	--	--	--	--	888,934	--	888,934	--	--	888,934
BOG	--	--	--	--	669,836	--	669,836	--	--	669,836
CULTURAL INFLUENCE	--	--	--	--	9,283	--	9,283	--	--	9,283
NONVEGETATED-BARREN	--	--	--	--	1,359,901	--	1,359,901	--	--	1,359,901
WATER	--	--	--	--	--	--	--	132,277	--	132,277
UNCLASSIFIED	--	--	--	--	--	--	--	--	--	--
ALL CLASSES	562,105	594,874	642,320	1,799,299	3,691,359	--	3,691,359	132,277	--	5,622,935

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 2--AREA OF FOREST LAND BY VEGETATION/LAND COVER CLASS, STAND SIZE CLASS, AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

VEGETATION/ LAND COVER CLASS AND STAND SIZE CLASS	SITE CLASS (CUBIC FEET) 1/ 1-9	10-14	15-19	20-49	50-84	UNCLASSIFIED	ALL CLASSES
				ACRES			
CLOSED CONIFEROUS FOREST, TALL STANDS-WHITE SPRUCE:							
SAWTIMBER	--	14,832	--	--	--	--	14,832
POLETIMBER	--	--	--	--	--	--	--
SEEDLING AND SAPLING	--	--	--	--	--	--	--
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	--	14,832	--	--	--	--	14,832
CLOSED CONIFEROUS FOREST, SHORT STANDS-BLACK SPRUCE:							
SAWTIMBER	--	--	--	--	--	--	--
POLETIMBER	26,559	--	--	--	--	--	26,559
SEEDLING AND SAPLING	--	14,832	--	--	--	--	14,832
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	26,559	14,832	--	--	--	--	41,391
CLOSED CONIFEROUS FOREST, TALL STANDS-BLACK SPRUCE:							
SAWTIMBER	--	--	--	--	--	--	--
POLETIMBER	14,832	29,664	--	--	--	--	44,496
SEEDLING AND SAPLING	--	--	--	--	--	--	--
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	14,832	29,664	--	--	--	--	44,496
CLOSED DECIDUOUS FOREST, YOUNG STANDS-DECIDUOUS/MIXED:							
SAWTIMBER	--	--	--	--	--	--	--
POLETIMBER	--	--	--	--	--	--	--
SEEDLING AND SAPLING	--	--	--	14,832	--	--	14,832
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	--	--	--	14,832	--	--	14,832
CLOSED DECIDUOUS FOREST, MEDIUM AGE STANDS-DECIDUOUS/MIXED:							
SAWTIMBER	--	--	29,664	14,832	--	--	44,496
POLETIMBER	--	14,832	44,495	88,991	14,832	--	163,151
SEEDLING AND SAPLING	--	14,832	--	--	--	--	14,832
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	--	29,664	74,159	103,823	14,832	--	222,479
CLOSED DECIDUOUS FOREST, OLD STANDS-DECIDUOUS/MIXED:							
SAWTIMBER	--	74,160	163,152	133,488	--	--	370,800
POLETIMBER	--	14,832	29,664	14,832	--	--	59,328
SEEDLING AND SAPLING	--	--	--	--	--	--	--
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	--	88,992	192,816	148,320	--	--	430,128
CLOSED DECIDUOUS FOREST, MEDIUM AGE STANDS-COTTONWOOD:							
SAWTIMBER	--	--	--	44,496	--	--	44,496
POLETIMBER	--	--	--	--	--	--	--
SEEDLING AND SAPLING	--	--	--	--	--	--	--
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	--	--	--	44,496	--	--	44,496

See footnotes at end of table.

TABLE 2--AREA OF FOREST LAND BY VEGETATION/LAND COVER CLASS, STAND SIZE CLASS, AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979--CONTINUED

VEGETATION/ LAND COVER CLASS AND STAND SIZE CLASS	SITE CLASS (CUBIC FEET) 1/ 1-9	10-14	15-19	20-49	50-84	UNCLASSIFIED	ALL CLASSES
				ACRES			
CLOSED DECIDUOUS FOREST, OLD STANDS-COTTONWOOD:							
SAWTIMBER	26,559	14,832	--	29,664	--	--	71,055
POLETIMBER	--	--	--	--	--	--	--
SEEDLING AND SAPLING	--	--	--	--	--	--	--
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	26,559	14,832	--	29,664	--	--	71,055
OPEN CONIFEROUS FOREST, SHORT STANDS-WHITE SPRUCE:							
SAWTIMBER	--	--	--	--	--	--	--
POLETIMBER	--	--	--	--	--	--	--
SEEDLING AND SAPLING	46,786	--	--	--	--	--	46,786
NONSTOCKED AREAS	--	--	46,786	--	--	--	46,786
TOTAL	46,786	--	46,786	--	--	--	93,572
OPEN CONIFEROUS FOREST, TALL STANDS-WHITE SPRUCE:							
SAWTIMBER	--	61,618	26,558	26,559	--	46,786	161,521
POLETIMBER	--	26,558	--	--	--	--	26,558
SEEDLING AND SAPLING	--	--	--	--	--	--	--
NONSTOCKED AREAS	--	--	26,559	--	--	--	26,559
TOTAL	--	88,176	53,117	26,559	--	46,786	214,638
OPEN DECIDUOUS FOREST, MEDIUM AGE STANDS-DECIDUOUS/MIXED:							
SAWTIMBER	--	--	26,559	--	--	--	26,559
POLETIMBER	--	--	--	--	--	--	--
SEEDLING AND SAPLING	26,558	--	--	73,344	--	46,786	146,688
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	26,558	--	26,559	73,344	--	46,786	173,247
OPEN DECIDUOUS FOREST, OLD STANDS-DECIDUOUS/MIXED:							
SAWTIMBER	14,832	59,328	97,613	53,117	--	--	224,890
POLETIMBER	--	26,558	14,832	--	--	--	41,390
SEEDLING AND SAPLING	--	--	--	--	--	--	--
NONSTOCKED AREAS	--	14,832	--	--	--	--	14,832
TOTAL	14,832	100,718	112,445	53,117	--	--	281,112
OPEN DECIDUOUS FOREST, MEDIUM AGE STANDS-COTTONWOOD:							
SAWTIMBER	--	--	--	--	--	--	--
POLETIMBER	--	26,559	--	--	--	--	26,559
SEEDLING AND SAPLING	--	--	--	--	--	--	--
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	--	26,559	--	--	--	--	26,559
OPEN DECIDUOUS FOREST, OLD STANDS-COTTONWOOD:							
SAWTIMBER	--	--	73,344	53,117	--	--	126,461
POLETIMBER	--	--	--	--	--	--	--
SEEDLING AND SAPLING	--	--	--	--	--	--	--
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	--	--	73,344	53,117	--	--	126,461
ALL CLASSES	156,126	408,269	579,227	547,273	14,832	93,572	1,799,299

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Potential yield per acre, mean annual increment.

TABLE 3--AREA OF FOREST LAND BY FOREST TYPE, STAND SIZE CLASS, AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

FOREST TYPE AND STAND SIZE CLASS	SITE CLASS (CUBIC FEET) 1/ 1-9	10-14	15-19	20-49	50-84	UNCLASSIFIED	ALL CLASSES
				ACRES			
BLACK SPRUCE:							
SAWTIMBER	--	--	--	--	--	--	--
POLETIMBER	41,391	56,222	44,496	--	--	--	142,109
SEEDLING AND SAPLING	46,786	14,832	--	--	--	46,786	108,404
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	88,177	71,054	44,496	--	--	46,786	250,513
WHITE SPRUCE:							
SAWTIMBER	14,832	106,114	67,949	53,117	--	46,786	288,798
POLETIMBER	--	41,391	14,832	--	--	--	56,223
SEEDLING AND SAPLING	26,558	14,832	--	--	--	--	41,390
NONSTOCKED AREAS	--	--	73,345	--	--	--	73,345
TOTAL	41,390	162,337	156,126	53,117	--	46,786	459,756
COTTONWOOD:							
SAWTIMBER	26,559	14,832	73,344	100,719	--	--	215,454
POLETIMBER	--	26,558	--	--	--	--	26,558
SEEDLING AND SAPLING	--	--	--	--	--	--	--
NONSTOCKED AREAS	--	--	--	--	--	--	--
TOTAL	26,559	41,390	73,344	100,719	--	--	242,012
BIRCH:							
SAWTIMBER	--	103,824	275,597	201,437	--	--	580,858
POLETIMBER	--	14,832	29,664	103,824	14,832	--	163,152
SEEDLING AND SAPLING	--	--	--	88,176	--	--	88,176
NONSTOCKED AREAS	--	14,832	--	--	--	--	14,832
TOTAL	--	133,488	305,261	393,437	14,832	--	847,018
ALL TYPES AND CLASSES	156,126	408,269	579,227	547,273	14,832	93,572	1,799,299

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Potential yield per acre, mean annual increment.

TABLE 4--AREA OF TIMBERLAND BY CUBIC-FOOT STAND VOLUME CLASS AND FOREST TYPE, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

STAND VOLUME CLASS	BLACK SPRUCE	WHITE SPRUCE	COTTONWOOD	ASPEN	BIRCH	ALL TYPES
CUBIC FEET PER ACRE			*ACRES*			
0-299	--	--	--	--	76,450	76,450
300-799	--	26,558	14,832	--	97,613	139,003
800-1,499	--	26,559	14,832	--	189,710	231,101
1,500-2,199	--	--	29,664	--	29,664	59,328
2,200 AND MORE	--	--	41,391	--	14,832	56,223
ALL CLASSES	--	53,117	100,719	--	408,269	562,105

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 5--AREA OF TIMBERLAND BY STAND VOLUME CLASS, INTERNATIONAL 1/4-INCH RULE, AND FOREST TYPE, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

STAND VOLUME CLASS	BLACK SPRUCE	WHITE SPRUCE	COTTONWOOD	ASPEN	BIRCH	ALL TYPES
BOARD FEET PER ACRE, INTERNATIONAL 1/4-INCH RULE			*ACRES*			
0-299	--	--	--	--	29,664	29,664
300-799	--	--	--	--	106,114	106,114
800-1,499	--	--	--	--	29,664	29,664
1,500-2,199	--	26,559	--	--	41,390	67,949
2,200-2,999	--	--	--	--	56,223	56,223
3,000-4,999	--	--	29,664	--	115,550	145,214
5,000-6,999	--	26,553	--	--	14,832	41,390
7,000 AND OVER	--	--	71,055	--	14,832	85,887
ALL CLASSES	--	53,117	100,719	--	408,269	562,105

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 6--AREA OF TIMBERLAND BY CUBIC-FOOT STAND VOLUME CLASS AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

STAND VOLUME CLASS	SITE CLASS (CUBIC FEET) 1/ 20-49	50-84	85-119	ALL CLASSES
CUBIC FEET PER ACRE		*ACRES*		
0-299	76,450	--	--	76,450
300-799	139,004	--	--	139,004
800-1,499	216,269	14,832	--	231,101
1,500-2,199	59,328	--	--	59,328
2,200 AND OVER	56,222	--	--	56,222
ALL CLASSES	547,273	14,832	--	562,105

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Potential yield per acre, mean annual increment.

TABLE 7--AREA OF TIMBERLAND BY AREA CONDITION CLASS AND FOREST TYPE, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

AREA CONDITION CLASS	BLACK SPRUCE	WHITE SPRUCE	COTTONWOOD	ASPEN	BIRCH	ALL TYPES
			ACRES			
10 and 20	--	--	--	--	--	--
30 and 40	--	--	--	--	41,390	41,390
50	--	--	--	--	88,992	88,992
60	--	--	71,055	--	171,773	242,828
70	--	53,117	29,664	--	106,114	188,895
ALL CLASSES	--	53,117	100,719	--	408,269	562,105

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 8--NUMBER OF GROWING STOCK TREES ON TIMBERLAND BY DIAMETER CLASS AND SPECIES, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

	SOFTWOODS			HARDWOODS					
DIAMETER CLASS	WHITE SPRUCE	BLACK SPRUCE	TOTAL SOFTWOODS	PAPER BIRCH	BALSAM POPLAR	QUAKING ASPEN	BLACK COTTONWOOD	TOTAL HARDWOODS	ALL SPECIES
INCHES AT BREAST HEIGHT					*THOUSAND TREES*				
1.0-2.9	13,069	2,670	15,739	22,982	797	--	8,991	32,770	48,509
3.0-4.9	11,921	445	12,366	20,540	--	--	1,242	21,782	34,148
5.0-6.9	2,555	1,450	4,005	14,842	--	1,475	418	16,735	20,740
7.0-8.9	3,160	702	3,862	7,587	--	1,444	376	9,407	13,269
9.0-10.9	2,030	--	2,030	4,583	--	488	422	5,494	7,524
11.0-12.9	1,469	--	1,469	3,362	--	488	240	4,090	5,559
13.0-14.9	916	--	916	2,320	--	--	613	2,933	3,849
15.0-16.9	404	--	404	731	--	--	481	1,212	1,616
17.0-18.9	521	--	521	451	--	--	529	980	1,501
19.0-20.9	--	--	--	135	--	--	271	406	406
21.0-22.9	22	--	22	22	--	--	270	293	314
23.0-24.9	35	--	35	18	--	--	237	256	290
25.0-26.9	--	--	--	31	--	--	170	201	201
27.0-28.9	--	--	--	--	--	--	96	96	96
29.0-30.9	--	--	--	--	--	--	174	174	174
31.0-32.9	--	--	--	--	--	--	32	32	32
33.0-34.9	--	--	--	--	--	--	19	19	19
35.0-36.9	--	--	--	--	--	--	--	--	--
37.0-38.9	--	--	--	--	--	--	8	8	8
39.0 AND LARGER	--	--	--	4	--	--	13	17	17
ALL CLASSES	36,102	5,267	41,369	77,608	797	3,895	14,605	96,905	138,274

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 9--NUMBER OF ROUGH TREES ON TIMBERLAND BY DIAMETER CLASS AND SPECIES, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

	SOFTWOODS			HARDWOODS					
DIAMETER CLASS	WHITE SPRUCE	BLACK SPRUCE	TOTAL SOFTWOODS	PAPER BIRCH	BALSAM POPLAR	QUAKING ASPEN	BLACK COTTONWOOD	TOTAL HARDWOODS	ALL SPECIES
INCHES AT BREAST HEIGHT					*THOUSAND TREES*				
1.0-2.9	3,115	890	4,005	7,609	--	--	--	7,609	11,613
3.0-4.9	--	890	890	1,335	--	--	--	1,335	2,225
5.0-6.9	876	--	876	--	--	--	--	--	876
7.0-8.9	179	--	179	166	--	--	--	166	345
9.0-10.9	--	--	--	128	--	--	--	128	128
11.0-12.9	--	--	--	899	--	--	257	1,156	1,156
13.0-14.9	--	--	--	174	--	--	51	225	225
15.0-16.9	--	--	--	131	--	--	235	366	366
17.0-18.9	--	--	--	135	--	--	99	234	234
19.0-20.9	--	--	--	53	--	--	77	130	130
21.0-22.9	--	--	--	--	--	--	172	172	172
23.0-24.9	--	--	--	--	--	--	89	89	89
25.0-26.9	--	--	--	--	--	--	32	32	32
27.0-28.9	--	--	--	--	--	--	24	24	24
29.0-30.9	--	--	--	--	--	--	55	55	55
31.0-32.9	--	--	--	--	--	--	--	--	--
33.0-34.9	--	--	--	--	--	--	--	--	--
35.0-36.9	--	--	--	--	--	--	--	--	--
37.0-38.9	--	--	--	--	--	--	--	--	--
39.0 AND LARGER	--	--	--	--	--	--	--	--	--
ALL CLASSES	4,169	1,780	5,949	10,629	--	--	1,091	11,720	17,669

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 10--NUMBER OF ROTTEN TREES ON TIMBERLAND BY DIAMETER CLASS AND SPECIES, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	SOFTWOODS			HARDWOODS					ALL SPECIES
	WHITE SPRUCE	BLACK SPRUCE	TOTAL SOFTWOODS	PAPER BIRCH	BALSAM POPLAR	QUAKING ASPEN	BLACK COTTONWOOD	TOTAL HARDWOODS	
INCHES AT BREAST HEIGHT					*THOUSAND TREES*				
1.0-2.9	--	--	--	--	--	--	--	--	--
3.0-4.9	--	--	--	--	--	--	--	--	--
5.0-6.9	--	--	--	--	--	--	--	--	--
7.0-8.9	--	--	--	550	--	--	--	550	550
9.0-10.9	--	--	--	232	--	--	--	232	232
11.0-12.9	--	--	--	155	--	--	--	155	155
13.0-14.9	--	--	--	210	--	--	--	210	210
15.0-16.9	--	--	--	246	--	--	--	246	246
17.0-18.9	--	--	--	130	--	--	33	163	163
19.0-20.9	--	--	--	132	--	--	--	132	132
21.0-22.9	--	--	--	24	--	--	--	24	24
23.0-24.9	--	--	--	--	--	--	21	21	21
25.0-26.9	--	--	--	--	--	--	16	16	16
27.0-28.9	--	--	--	--	--	--	--	--	--
29.0-30.9	--	--	--	--	--	--	24	24	24
31.0-32.9	--	--	--	--	--	--	--	--	--
33.0-34.9	--	--	--	--	--	--	27	27	27
35.0-36.9	--	--	--	--	--	--	9	9	9
37.0-38.9	--	--	--	--	--	--	--	--	--
39.0 AND LARGER	--	--	--	--	--	--	--	--	--
ALL CLASSES	--	--	--	1,679	--	--	130	1,809	1,809

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 11--NUMBER OF LIVE TREES ON TIMBERLAND BY DIAMETER CLASS AND SPECIES, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	SOFTWOODS			HARDWOODS					ALL SPECIES
	WHITE SPRUCE	BLACK SPRUCE	TOTAL SOFTWOODS	PAPER BIRCH	BALSAM POPLAR	QUAKING ASPEN	BLACK COTTONWOOD	TOTAL HARDWOODS	
INCHES AT BREAST HEIGHT					*THOUSAND TREES*				
1.0-2.9	16,184	3,560	19,744	30,591	797	--	8,991	40,379	60,122
3.0-4.9	11,921	1,335	13,256	21,875	--	--	1,242	23,117	36,373
5.0-6.9	3,430	1,450	4,881	14,842	--	1,475	418	16,735	21,616
7.0-8.9	3,339	702	4,041	8,303	--	1,444	376	10,123	14,164
9.0-10.9	2,030	--	2,030	4,944	--	488	422	5,854	7,884
11.0-12.9	1,469	--	1,469	4,416	--	488	497	5,402	6,870
13.0-14.9	916	--	916	2,704	--	--	664	3,368	4,284
15.0-16.9	404	--	404	1,108	--	--	716	1,824	2,228
17.0-18.9	521	--	521	716	--	--	661	1,377	1,898
19.0-20.9	--	--	--	319	--	--	349	668	668
21.0-22.9	22	--	22	46	--	--	442	488	510
23.0-24.9	35	--	35	18	--	--	347	366	400
25.0-26.9	--	--	--	31	--	--	218	248	248
27.0-28.9	--	--	--	--	--	--	120	120	120
29.0-30.9	--	--	--	--	--	--	254	254	254
31.0-32.9	--	--	--	--	--	--	32	32	32
33.0-34.9	--	--	--	--	--	--	46	46	46
35.0-36.9	--	--	--	--	--	--	9	9	9
37.0-38.9	--	--	--	--	--	--	8	8	8
39.0 AND LARGER	--	--	--	4	--	--	13	17	17
ALL CLASSES	40,271	7,047	47,319	89,917	797	3,895	15,825	110,435	157,751

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 12--NET VOLUME OF GROWING STOCK BY FOREST TYPE AND LAND CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

FOREST TYPE	TIMBERLAND	OTHER FOREST LAND, OPERABLE	OTHER FOREST LAND, INOPERABLE	TOTAL FOREST LAND	NONFOREST LAND	ALL CLASSES
			THOUSAND CUBIC FEET			
BLACK SPRUCE	--	79,954	42,418	122,371	--	122,371
WHITE SPRUCE	39,291	86,348	118,899	244,538	--	244,538
COTTONWOOD	186,289	203,557	--	389,846	--	389,846
BIRCH	349,088	320,093	77,059	746,239	12,720	758,959
UNCLASSIFIED	--	--	--	--	18,576	18,576
ALL TYPES	574,668	689,951	238,375	1,502,995	31,296	1,534,291

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 13--NET VOLUME OF SAWTIMBER BY FOREST TYPE AND LAND CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

FOREST TYPE	TIMBERLAND	OTHER FOREST LAND, OPERABLE	OTHER FOREST LAND, INOPERABLE	TOTAL FOREST LAND	NONFOREST LAND	ALL CLASSES
			THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE			
BLACK SPRUCE	--	82,375	57,261	139,636	--	139,636
WHITE SPRUCE	207,475	309,919	470,563	987,958	--	987,958
COTTONWOOD	935,621	957,318	--	1,892,940	--	1,892,940
BIRCH	988,852	1,040,394	241,827	2,271,073	75,924	2,346,997
UNCLASSIFIED	--	--	--	--	50,852	50,852
ALL TYPES	2,131,948	2,390,006	769,651	5,291,607	126,776	5,418,383

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 14--NET VOLUME OF GROWING STOCK ON TIMBERLAND BY DIAMETER CLASS AND FOREST TYPE, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	BLACK SPRUCE	WHITE SPRUCE	COTTONWOOD	ASPEN	BIRCH	ALL TYPES
INCHES AT BREAST HEIGHT			*THOUSAND CUBIC FEET*			
5.0-6.9	--	--	817	--	40,873	41,690
7.0-8.9	--	1,715	1,496	--	64,978	68,189
9.0-10.9	--	--	6,022	--	65,267	71,289
11.0-12.9	--	7,529	4,532	--	64,279	76,340
13.0-14.9	--	10,747	16,682	--	50,454	77,883
15.0-16.9	--	--	15,954	--	32,699	48,653
17.0-18.9	--	16,763	25,654	--	15,254	57,671
19.0-20.9	--	--	13,917	--	3,287	17,204
21.0-22.9	--	--	20,110	--	3,098	23,208
23.0-24.9	--	2,536	23,893	--	251	26,680
25.0-26.9	--	--	19,256	--	1,171	20,427
27.0-28.9	--	--	10,731	--	--	10,731
29.0-30.9	--	--	17,698	--	3,002	20,700
31.0-32.9	--	--	4,674	--	--	4,674
33.0-34.9	--	--	3,524	--	--	3,524
35.0-36.9	--	--	--	--	--	--
37.0-38.9	--	--	1,330	--	--	1,330
39.0 AND LARGER	--	--	--	--	4,473	4,473
ALL CLASSES	--	39,291	186,289	--	349,088	574,668

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 15--NET VOLUME OF SAWTIMBER ON TIMBERLAND BY DIAMETER CLASS AND FOREST TYPE, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	BLACK SPRUCE	WHITE SPRUCE	COTTONWOOD	ASPEN	BIRCH	ALL TYPES
INCHES AT BREAST HEIGHT		*THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE*				
9.0-10.9	--	--	--	--	113,568	113,568
11.0-12.9	--	43,803	14,998	--	283,079	341,880
13.0-14.9	--	57,999	71,110	--	249,241	378,350
15.0-16.9	--	--	77,525	--	172,811	250,336
17.0-18.9	--	92,994	127,780	--	77,683	298,457
19.0-20.9	--	--	76,119	--	19,727	95,846
21.0-22.9	--	--	115,124	--	18,708	133,832
23.0-24.9	--	13,680	130,516	--	2,191	146,387
25.0-26.9	--	--	108,888	--	7,027	115,915
27.0-28.9	--	--	60,825	--	--	60,825
29.0-30.9	--	--	96,800	--	16,788	113,588
31.0-32.9	--	--	27,160	--	--	27,160
33.0-34.9	--	--	21,463	--	--	21,463
35.0-36.9	--	--	--	--	--	--
37.0-38.9	--	--	7,312	--	--	7,312
39.0 AND LARGER	--	--	--	--	28,029	28,029
ALL CLASSES	--	207,475	935,621	--	988,852	2,131,948

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 16--NET VOLUME OF GROWING STOCK ON TIMBERLAND BY DIAMETER CLASS AND CUBIC-FOOT STAND VOLUME CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	STAND VOLUME CLASS (CUBIC FEET PER ACRE)					
	0-299	300-799	800-1,499	1,500-2,199	2,200 AND MORE	ALL CLASSES
INCHES AT BREAST HEIGHT	*THOUSAND CUBIC FEET*					
5.0-6.9	1,829	2,100	29,951	6,371	1,440	41,691
7.0-8.9	2,875	9,742	38,270	10,602	6,700	68,189
9.0-10.9	3,826	16,467	34,650	11,010	5,337	71,289
11.0-12.9	--	15,396	38,021	18,181	4,742	76,340
13.0-14.9	--	11,712	34,779	10,485	20,907	77,883
15.0-16.9	5,407	13,385	10,166	8,196	11,499	48,653
17.0-18.9	--	8,928	19,460	4,147	25,137	57,671
19.0-20.9	--	3,493	2,319	3,006	8,385	17,204
21.0-22.9	--	771	4,054	7,225	11,159	23,209
23.0-24.9	--	--	4,771	3,305	18,603	26,679
25.0-26.9	--	998	1,171	5,405	12,854	20,426
27.0-28.9	--	--	1,740	5,961	3,029	10,731
29.0-30.9	--	--	7,211	--	13,489	20,701
31.0-32.9	--	--	1,079	3,595	--	4,674
33.0-34.9	--	--	1,752	1,772	--	3,524
35.0-36.9	--	--	--	--	--	--
37.0-38.9	--	--	1,330	--	--	1,330
39.0 AND LARGER	--	1,427	2,263	783	--	4,473
ALL CLASSES	13,937	84,419	232,987	100,044	143,281	574,668

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 17--NET VOLUME OF TIMBER ON TIMBERLAND BY TIMBER CLASS AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

TIMBER CLASS	SITE CLASS (CUBIC FEET) 1/ 20-49	50-84	85-119	ALL CLASSES
	THOUSAND CUBIC FEET			
SAWTIMBER TREES:				
SAW-LOG PORTION	369,248	3,337	--	372,585
UPPER STEM PORTION	39,775	1,259	--	41,033
TOTAL	409,023	4,596	--	413,619
POLETIMBER TREES	147,353	13,697	--	161,050
ALL GROWING STOCK	556,376	18,293	--	574,668
ROUGH TREES:				
SAWTIMBER	37,401	--	--	37,401
POLETIMBER	2,315	--	--	2,315
TOTAL	39,716	--	--	39,716
ROTTEN TREES:				
SAWTIMBER	9,852	--	--	9,852
POLETIMBER	607	--	--	607
TOTAL	10,459	--	--	10,459
SALVABLE DEAD TREES:				
SAWTIMBER	--	--	--	--
POLETIMBER	349	--	--	349
TOTAL	349	--	--	349
ALL CLASSES	606,900	18,293	--	625,193

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Potential yield per acre, mean annual increment.

TABLE 18--NET VOLUME OF TIMBER ON TIMBERLAND BY TIMBER CLASS AND DIAMETER CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

TIMBER CLASS	DIAMETER CLASS (INCHES AT BREAST HEIGHT)									
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9
	THOUSAND CUBIC FEET									
SAWTIMBER TREES:										
SAW-LOG PORTION	--	--	17,545	58,960	67,904	44,474	54,407	16,300	22,438	26,062
UPPER STEM PORTION	--	--	2,574	17,380	9,980	4,179	3,264	905	770	617
TOTAL	--	--	20,119	76,340	77,883	48,653	57,671	17,204	23,209	26,679
POLETIMBER TREES	41,691	68,189	51,170	--	--	--	--	--	--	--
ALL GROWING STOCK	41,691	68,189	71,289	76,340	77,883	48,653	57,671	17,204	23,209	26,679
ROUGH TREES:										
SAWTIMBER	--	--	--	7,663	1,924	6,883	3,349	3,057	5,726	2,062
POLETIMBER	1,025	849	441	--	--	--	--	--	--	--
TOTAL	1,025	849	441	7,663	1,924	6,883	3,349	3,057	5,726	2,062
ROTTEN TREES:										
SAWTIMBER	--	--	--	403	308	1,585	861	1,236	485	133
POLETIMBER	--	326	281	--	--	--	--	--	--	--
TOTAL	--	326	281	403	308	1,585	861	1,236	485	133
SALVABLE DEAD TREES:										
SAWTIMBER	--	--	--	--	--	--	--	--	--	--
POLETIMBER	349	--	--	--	--	--	--	--	--	--
TOTAL	349	--	--	--	--	--	--	--	--	--
ALL CLASSES	43,064	69,365	72,011	84,407	80,115	57,121	61,882	21,497	29,419	28,874

See notes at end of table.

TABLE 18--NET VOLUME OF TIMBER ON TIMBERLAND BY TIMBER CLASS AND DIAMETER CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979--CONTINUED

TIMBER CLASS	DIAMETER CLASS (INCHES AT BREAST HEIGHT)								
	25.0-26.9	27.0-28.9	29.0-30.9	31.0-32.9	33.0-34.9	35.0-36.9	37.0-38.9	39.0 AND LARGER	ALL CLASSES
	THOUSAND CUBIC FEET								
SAWTIMBER TREES:									
SAWLOG PORTION	19,952	10,516	20,309	4,585	3,457	--	1,305	4,372	372,585
UPPER STEM PORTION	475	214	392	89	67	--	25	101	41,033
TOTAL	20,426	10,731	20,701	4,674	3,524	--	1,330	4,473	413,619
POLETIMBER TREES	--	--	--	--	--	--	--	--	161,050
ALL GROWING STOCK	20,426	10,731	20,701	4,674	3,524	--	1,330	4,473	574,668
ROUGH TREES:									
SAWTIMBER	1,286	1,809	3,642	--	--	--	--	--	37,401
POLETIMBER	--	--	--	--	--	--	--	--	2,315
TOTAL	1,286	1,809	3,642	--	--	--	--	--	39,716
ROTTEN TREES:									
SAWTIMBER	624	--	1,152	--	2,579	487	--	--	9,852
POLETIMBER	--	--	--	--	--	--	--	--	607
TOTAL	624	--	1,152	--	2,579	487	--	--	10,459
SALVABLE DEAD TREES:									
SAWTIMBER	--	--	--	--	--	--	--	--	--
POLETIMBER	--	--	--	--	--	--	--	--	349
TOTAL	--	--	--	--	--	--	--	--	349
ALL CLASSES	22,336	12,540	25,495	4,674	6,102	487	1,330	4,473	625,193

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 19--NET VOLUME OF TIMBER ON TIMBERLAND BY TIMBER CLASS AND SPECIES, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

TIMBER CLASS	SOFTWOODS			HARDWOODS					ALL SPECIES
	WHITE SPRUCE	BLACK SPRUCE	TOTAL SOFTWOODS	PAPER BIRCH	BALSAM POPLAR	QUAKING ASPEN	BLACK COTTONWOOD	TOTAL HARDWOODS	
				THOUSAND CUBIC FEET					
SAWTIMBER TREES:									
SAW-LOG PORTION	92,228	--	92,228	97,605	--	6,742	176,011	280,358	372,585
UPPER STEM PORTION	6,086	--	6,086	22,452	--	2,101	10,395	34,947	41,033
TOTAL	98,314	--	98,314	120,056	--	8,842	186,407	315,305	413,619
POLETIMBER TREES	21,250	5,730	26,980	109,699	--	16,507	7,864	134,070	161,050
ALL GROWING STOCK	119,564	5,730	125,294	229,755	--	25,349	194,271	449,375	574,668
ROUGH TREES:									
SAWTIMBER	--	--	--	9,237	--	--	28,165	37,401	37,401
POLETIMBER	1,492	--	1,492	823	--	--	--	823	2,315
TOTAL	1,492	--	1,492	10,060	--	--	28,165	38,225	39,716
ROTTEN TREES:									
SAWTIMBER	--	--	--	4,437	--	--	5,415	9,852	9,852
POLETIMBER	--	--	--	607	--	--	--	607	607
TOTAL	--	--	--	5,044	--	--	5,415	10,459	10,459
SALVABLE DEAD TREES:									
SAWTIMBER	--	--	--	--	--	--	--	--	--
POLETIMBER	--	--	--	349	--	--	--	349	349
TOTAL	--	--	--	349	--	--	--	349	349
ALL CLASSES	121,056	5,730	126,786	245,208	--	25,349	227,850	498,407	625,193

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 20--NET VOLUME OF GROWING STOCK ON TIMBERLAND BY BASAL AREA CLASS AND SPECIES, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

BASAL AREA CLASS	SOFTWOODS			HARDWOODS					ALL SPECIES
	WHITE SPRUCE	BLACK SPRUCE	TOTAL SOFTWOODS	PAPER BIRCH	BALSAM POPLAR	QUAKING ASPEN	BLACK COTTONWOOD	TOTAL HARDWOODS	
SQUARE FEET PER ACRE				*THOUSAND CUBIC FEET*					
1-19	4,360	--	4,360	1,492	--	--	--	1,492	5,852
20-39	21,822	--	21,822	12,487	--	--	1,427	13,914	35,736
40-59	56,518	--	56,518	44,125	--	--	31,942	76,067	132,585
60-79	24,162	3,174	27,337	84,772	--	7,382	52,469	144,623	171,960
80-99	5,306	2,556	7,862	59,896	--	17,967	108,432	186,295	194,156
100-119	7,396	--	7,396	26,983	--	--	--	26,983	34,379
120 AND OVER	--	--	--	--	--	--	--	--	--
ALL CLASSES	119,564	5,730	125,294	229,756	--	25,349	194,270	449,375	574,668

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 21--NET VOLUME OF SAWTIMBER ON TIMBERLAND BY BASAL AREA CLASS AND SPECIES, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

BASAL AREA CLASS	SOFTWOODS: WHITE SPRUCE	SOFTWOODS: BLACK SPRUCE	SOFTWOODS: TOTAL SOFTWOODS	HARDWOODS: PAPER BIRCH	HARDWOODS: BALSAM POPLAR	HARDWOODS: QUAKING ASPEN	HARDWOODS: BLACK COTTONWOOD	HARDWOODS: TOTAL HARDWOODS	ALL SPECIES
SQUARE FEET PER ACRE	*THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE*								
1-19	24,899	--	24,899	--	--	--	--	--	24,899
20-39	93,012	--	93,012	25,398	--	--	8,975	34,373	127,385
40-59	298,816	--	298,816	151,679	--	--	154,717	306,396	605,212
60-79	84,298	--	84,298	165,469	--	4,970	262,563	433,002	517,300
80-99	26,865	--	26,865	125,401	--	30,788	557,882	714,072	740,937
100-119	23,031	--	23,031	93,185	--	--	--	93,185	116,216
120 AND OVER	--	--	--	--	--	--	--	--	--
ALL CLASSES	550,921	--	550,921	561,132	--	35,758	984,137	1,581,027	2,131,948

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 22--NET ANNUAL GROWTH OF GROWING STOCK ON TIMBERLAND BY FOREST TYPE AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

FOREST TYPE	SITE CLASS (CUBIC FEET) 1/: 20-49	50-84	85-119	ALL CLASSES
	THOUSAND CUBIC FEET			
BLACK SPRUCE	--	--	--	--
WHITE SPRUCE	939	--	--	939
COTTONWOOD	2,222	--	--	2,222
BIRCH	9,127	1,332	--	10,459
ALL TYPES	12,288	1,332	--	13,619

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Potential yield per acre, mean annual increment.

TABLE 23--NET ANNUAL GROWTH OF SAWTIMBER ON TIMBERLAND BY FOREST TYPE AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

FOREST TYPE	SITE CLASS (CUBIC FEET) 1/ 20-49	50-84	85-119	ALL CLASSES
	THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE			
BLACK SPRUCE	--	--	--	--
WHITE SPRUCE	4,571	--	--	4,571
COTTONWOOD	14,537	--	--	14,537
BIRCH	43,290	9,829	--	53,119
ALL TYPES	62,398	9,829	--	72,227

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Potential yield per acre, mean annual increment.

TABLE 24--NET ANNUAL GROWTH OF GROWING STOCK ON TIMBERLAND BY DIAMETER CLASS AND FOREST TYPE, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	BLACK SPRUCE	WHITE SPRUCE	COTTONWOOD	ASPEN	BIRCH	ALL TYPES
INCHES AT BREAST HEIGHT			*THOUSAND CUBIC FEET*			
5.0-6.9	--	--	380	--	5,051	5,431
7.0-8.9	--	79	141	--	2,188	2,408
9.0-10.9	--	--	183	--	1,634	1,817
11.0-12.9	--	209	128	--	1,292	1,629
13.0-14.9	--	305	326	--	454	1,085
15.0-16.9	--	--	1/ -51	--	409	358
17.0-18.9	--	290	-63	--	142	369
19.0-20.9	--	--	-99	--	-272	-371
21.0-22.9	--	--	140	--	-192	-52
23.0-24.9	--	56	381	--	1	438
25.0-26.9	--	--	270	--	-296	-26
27.0-28.9	--	--	169	--	--	169
29.0-30.9	--	--	148	--	28	176
31.0-32.9	--	--	96	--	--	96
33.0-34.9	--	--	54	--	--	54
35.0-36.9	--	--	--	--	--	--
37.0-38.9	--	--	18	--	--	18
39.0 AND LARGER	--	--	--	--	19	19
ALL CLASSES	--	939	2,222	--	10,459	13,619

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Negative net annual growth indicates that annual mortality exceeded gross annual growth.

TABLE 25--NET ANNUAL GROWTH OF SAWTIMBER ON TIMBERLAND BY DIAMETER CLASS AND FOREST TYPE, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	BLACK SPRUCE	WHITE SPRUCE	COTTONWOOD	ASPEN	BIRCH	ALL TYPES
INCHES AT BREAST HEIGHT	*THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE*					
9.0-10.9	--	--	--	--	3,678	3,678
11.0-12.9	--	1,078	5,141	--	47,291	53,510
13.0-14.9	--	1,639	1,912	--	3,018	6,569
15.0-16.9	--	--	36	--	2,529	2,565
17.0-18.9	--	1,556	--	--	864	2,420
19.0-20.9	--	--	1/ -442	--	-1,629	-2,071
21.0-22.9	--	--	1,027	--	-1,256	-229
23.0-24.9	--	297	2,257	--	13	2,567
25.0-26.9	--	--	1,649	--	-1,679	-30
27.0-28.9	--	--	1,046	--	--	1,046
29.0-30.9	--	--	843	--	165	1,008
31.0-32.9	--	--	617	--	--	617
33.0-34.9	--	--	352	--	--	352
35.0-36.9	--	--	--	--	--	--
37.0-38.9	--	--	101	--	--	101
39.0 AND LARGER	--	--	--	--	125	125
ALL CLASSES	--	4,571	14,537	--	53,119	72,227

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Negative net annual growth indicates that annual mortality exceeded gross annual growth.

TABLE 26--NET ANNUAL GROWTH OF GROWING STOCK ON TIMBERLAND BY BASAL AREA CLASS AND SPECIES, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

	SOFTWOODS			HARDWOODS					
BASAL AREA CLASS	WHITE SPRUCE	BLACK SPRUCE	TOTAL SOFTWOODS	PAPER BIRCH	BALSAM POPLAR	QUAKING ASPEN	BLACK COTTONWOOD	TOTAL HARDWOODS	ALL SPECIES
SQUARE FEET PER ACRE	*THOUSAND CUBIC FEET*								
1-19	40	--	40	13	--	--	--	13	53
20-39	401	--	401	780	--	--	10	791	1,192
40-59	1,503	--	1,503	923	--	--	377	1,300	2,803
60-79	400	208	608	2,981	--	297	1,052	4,330	4,938
80-99	150	70	219	2,045	--	992	827	3,864	4,083
100-119	120	--	120	430	--	--	--	430	550
120 AND OVER	--	--	--	--	--	--	--	--	--
ALL CLASSES	2,614	278	2,891	7,172	--	1,289	2,266	10,728	13,619

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 27--NET ANNUAL GROWTH OF SAWTIMBER ON TIMBERLAND BY BASAL AREA CLASS AND SPECIES, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

BASAL AREA CLASS	SOFTWOODS			HARDWOODS					ALL SPECIES
	WHITE SPRUCE	BLACK SPRUCE	TOTAL SOFTWOODS	PAPER BIRCH	BALSAM POPLAR	QUAKING ASPEN	BLACK COTTONWOOD	TOTAL HARDWOODS	
SQUARE FEET PER ACRE	*THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE*								
1-19	229	--	229	--	--	--	--	--	229
20-39	430	--	430	531	--	--	68	599	1,029
40-59	6,882	--	6,882	8,446	--	--	1,904	10,351	17,232
60-79	126	--	126	11,575	--	136	8,141	19,853	19,979
80-99	731	--	731	14,095	--	12,278	4,938	31,311	32,042
100-119	270	--	270	1,446	--	--	--	1,446	1,716
120 AND OVER	--	--	--	--	--	--	--	--	--
ALL CLASSES	8,668	--	8,668	36,093	--	12,414	15,051	63,560	72,227

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 28--NET ANNUAL GROWTH OF GROWING STOCK ON TIMBERLAND BY DIAMETER CLASS AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	SITE CLASS (CUBIC FEET) 1/			ALL CLASSES
	20-49	50-84	85-119	
INCHES AT BREAST HEIGHT	*THOUSAND CUBIC FEET*			
5.0-6.9	4,309	1,122	--	5,431
7.0-8.9	2,312	96	--	2,408
9.0-10.9	1,794	23	--	1,817
11.0-12.9	1,551	78	--	1,629
13.0-14.9	1,085	--	--	1,085
15.0-16.9	345	13	--	358
17.0-18.9	369	--	--	369
19.0-20.9	2/ -371	--	--	-371
21.0-22.9	-52	--	--	-52
23.0-24.9	439	--	--	439
25.0-26.9	-26	--	--	-26
27.0-28.9	169	--	--	169
29.0-30.9	176	--	--	176
31.0-32.9	96	--	--	96
33.0-34.9	54	--	--	54
35.0-36.9	--	--	--	--
37.0-38.9	18	--	--	18
39.0 AND LARGER	19	--	--	19
ALL CLASSES	12,287	1,332	--	13,619

Estimates are subject to sampling error.

Totals may be off because of rounding.

- = no data were collected.

1/ Potential yield per acre, mean annual increment.

2/ Negative net annual growth indicates that annual mortality exceeded gross annual growth.

TABLE 29--NET ANNUAL GROWTH OF SAWTIMBER ON TIMBERLAND BY DIAMETER CLASS AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	SITE CLASS (CUBIC FEET) 1/ 20-49	50-84	85-119	ALL CLASSES
INCHES AT BREAST HEIGHT	*THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE*			
9.0-10.9	3,678	--	--	3,678
11.0-12.9	43,779	9,731	--	53,510
13.0-14.9	6,569	--	--	6,569
15.0-16.9	2,467	98	--	2,565
17.0-18.9	2,419	--	--	2,419
19.0-20.9	2/ -2,070	--	--	-2,070
21.0-22.9	-229	--	--	-229
23.0-24.9	2,567	--	--	2,567
25.0-26.9	-30	--	--	-30
27.0-28.9	1,046	--	--	1,046
29.0-30.9	1,007	--	--	1,007
31.0-32.9	617	--	--	617
33.0-34.9	352	--	--	352
35.0-36.9	--	--	--	--
37.0-38.9	101	--	--	101
39.0 AND LARGER	125	--	--	125
ALL CLASSES	62,398	9,829	--	72,227

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Potential yield per acre, mean annual increment.

2/ Negative net annual growth indicates that annual mortality exceeded gross annual growth.

TABLE 30--ANNUAL MORTALITY OF GROWING STOCK ON TIMBERLAND BY FOREST TYPE AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

FOREST TYPE	SITE CLASS (CUBIC FEET) 1/ 20-49	50-84	85-119	ALL CLASSES
	THOUSAND CUBIC FEET			
BLACK SPRUCE	--	--	--	--
WHITE SPRUCE	--	--	--	--
COTTONWOOD	1,531	--	--	1,531
BIRCH	1,174	--	--	1,174
ALL TYPES	2,705	--	--	2,705

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Potential yield per acre, mean annual increment.

TABLE 31--ANNUAL MORTALITY OF SAWTIMBER ON TIMBERLAND BY FOREST TYPE AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

FOREST TYPE	SITE CLASS (CUBIC FEET) 1/ 20-49	50-84	85-119	ALL CLASSES
	THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE			
BLACK SPRUCE	--	--	--	--
WHITE SPRUCE	--	--	--	--
COTTONWOOD	8,370	--	--	8,370
BIRCH	6,585	--	--	6,585
ALL TYPES	14,955	--	--	14,955

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Potential yield per acre, mean annual increment.

TABLE 32--ANNUAL MORTALITY OF GROWING STOCK ON TIMBERLAND BY DIAMETER CLASS AND FOREST TYPE, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	BLACK SPRUCE	WHITE SPRUCE	COTTONWOOD	ASPEN	BIRCH	ALL TYPES
INCHES AT BREAST HEIGHT			*THOUSAND CUBIC FEET*			
5.0-6.9	--	--	--	--	--	--
7.0-8.9	--	--	--	--	--	--
9.0-10.9	--	--	--	--	72	72
11.0-12.9	--	--	--	--	--	--
13.0-14.9	--	--	--	--	284	284
15.0-16.9	--	--	360	--	--	360
17.0-18.9	--	--	550	--	--	550
19.0-20.9	--	--	328	--	301	629
21.0-22.9	--	--	293	--	216	509
23.0-24.9	--	--	--	--	--	--
25.0 AND LARGER	--	--	--	--	302	302
ALL CLASSES	--	--	1,531	--	1,174	2,705

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 33--ANNUAL MORTALITY OF SAWTIMBER ON TIMBERLAND BY DIAMETER CLASS AND FOREST TYPE, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	BLACK SPRUCE	WHITE SPRUCE	COTTONWOOD	ASPEN	BIRCH	ALL TYPES
INCHES AT BREAST HEIGHT			*THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE*			
9.0-10.9	--	--	--	--	--	--
11.0-12.9	--	--	--	--	--	--
13.0-14.9	--	--	--	--	1,618	1,618
15.0-16.9	--	--	1,798	--	--	1,798
17.0-18.9	--	--	2,943	--	--	2,943
19.0-20.9	--	--	1,888	--	1,836	3,724
21.0-22.9	--	--	1,741	--	1,412	3,153
23.0-24.9	--	--	--	--	--	--
25.0 AND LARGER	--	--	--	--	1,719	1,719
ALL CLASSES	--	--	8,370	--	6,585	14,955

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 34--ANNUAL MORTALITY OF GROWING STOCK ON TIMBERLAND BY BASAL AREA CLASS AND SPECIES, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

BASAL AREA CLASS	SOFTWOODS			HARDWOODS					ALL SPECIES
	WHITE SPRUCE	BLACK SPRUCE	TOTAL SOFTWOODS	PAPER BIRCH	BALSAM POPLAR	QUAKING ASPEN	BLACK COTTONWOOD	TOTAL HARDWOODS	
SQUARE FEET PER ACRE	*THOUSAND CUBIC FEET*								
1-19	--	--	--	--	--	--	--	--	--
20-39	302	--	302	--	--	--	--	--	302
40-59	--	--	--	113	--	--	--	113	113
60-79	284	--	284	475	--	--	328	803	1,087
80-99	--	--	--	--	--	--	1,203	1,203	1,203
100-119	--	--	--	--	--	--	--	--	--
120 AND OVER	--	--	--	--	--	--	--	--	--
ALL CLASSES	586	--	586	588	--	--	1,531	2,120	2,705

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 35--ANNUAL MORTALITY OF SAWTIMBER ON TIMBERLAND BY BASAL AREA CLASS AND SPECIES, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

BASAL AREA CLASS	SOFTWOODS			HARDWOODS					ALL SPECIES
	WHITE SPRUCE	BLACK SPRUCE	TOTAL SOFTWOODS	PAPER BIRCH	BALSAM POPLAR	QUAKING ASPEN	BLACK COTTONWOOD	TOTAL HARDWOODS	
SQUARE FEET PER ACRE	THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE								
1-19	--	--	--	--	--	--	--	--	--
20-39	*1,719*	--	*1,719*	--	--	--	--	--	*1,719*
40-59	--	--	--	*700*	--	--	--	*700*	*700*
60-79	*1,618*	--	*1,618*	*2,548*	--	--	*1,888*	*4,436*	*6,054*
80-99	--	--	--	--	--	--	*6,482*	*6,482*	*6,482*
100-119	--	--	--	--	--	--	--	--	--
120 AND OVER	--	--	--	--	--	--	--	--	--
ALL CLASSES	*3,337*	--	*3,337*	*3,248*	--	--	*8,370*	*11,618*	*14,955*

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

TABLE 36--ANNUAL MORTALITY OF GROWING STOCK ON TIMBERLAND BY DIAMETER CLASS AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	SITE CLASS (CUBIC FEET) 1/ 20-49	50-84	85-119	ALL CLASSES
INCHES AT BREAST HEIGHT	*THOUSAND CUBIC FEET*			
5.0-6.9	--	--	--	--
7.0-8.9	--	--	--	--
9.0-10.9	72	--	--	72
11.0-12.9	--	--	--	--
13.0-14.9	284	--	--	284
15.0-16.9	360	--	--	360
17.0-18.9	550	--	--	550
19.0-20.9	629	--	--	629
21.0-22.9	509	--	--	509
23.0-24.9	--	--	--	--
25.0-26.9	302	--	--	302
27.0-28.9	--	--	--	--
29.0-30.9	--	--	--	--
31.0-32.9	--	--	--	--
33.0-34.9	--	--	--	--
35.0-36.9	--	--	--	--
37.0-38.9	--	--	--	--
39.0 AND LARGER	--	--	--	--
ALL CLASSES	2,705	--	--	2,705

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Potential yield per acre, mean annual increment.

TABLE 37--ANNUAL MORTALITY OF SAWTIMBER ON TIMBERLAND BY DIAMETER CLASS AND CUBIC-FOOT SITE CLASS, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

DIAMETER CLASS	SITE CLASS (CUBIC FEET) 1/ 20-49	50-84	85-119	ALL CLASSES
INCHES AT BREAST HEIGHT	*THOUSAND BOARD FEET, INTERNATIONAL 1/4-INCH RULE*			
1.0-2.9	--	--	--	--
3.0-4.9	--	--	--	--
5.0-6.9	--	--	--	--
7.0-8.9	--	--	--	--
9.0-10.9	--	--	--	--
11.0-12.9	--	--	--	--
13.0-14.9	1,618	--	--	1,618
15.0-16.9	1,798	--	--	1,798
17.0-18.9	2,943	--	--	2,943
19.0-20.9	3,724	--	--	3,724
21.0-22.9	3,153	--	--	3,153
23.0-24.9	--	--	--	--
25.0-26.9	1,719	--	--	1,719
27.0-28.9	--	--	--	--
29.0-30.9	--	--	--	--
31.0-32.9	--	--	--	--
33.0-34.9	--	--	--	--
35.0-36.9	--	--	--	--
37.0-38.9	--	--	--	--
39.0 AND LARGER	--	--	--	--
ALL CLASSES	14,955	--	--	14,955

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Potential yield per acre, mean annual increment.

TABLE 38--NUMBER OF GROWING STOCK TREES, CUBIC-FOOT VOLUME PER ACRE, AND VOLUME PER ACRE IN INTERNATIONAL 1/4-INCH RULE ON TIMBERLAND AND ALL FOREST LAND BY FOREST TYPE, TALKEETNA BLOCK, SUSITNA UNIT, ALASKA, 1979

FOREST TYPE	TREES PER ACRE 1/	VOLUME PER ACRE	VOLUME PER ACRE
	NUMBER	*CUBIC FEET*	*BOARD FEET, INTERNATIONAL 1/4-INCH RULE*
TIMBERLAND:			
BLACK SPRUCE	--	--	--
WHITE SPRUCE	35	740	3,906
COTTONWOOD	45	1,850	9,290
ASPEN	--	--	--
BIRCH	121	855	2,422
ALL TIMBERLAND	99	1,022	3,793
FOREST LAND:			
BLACK SPRUCE	127	488	557
WHITE SPRUCE	74	532	2,149
COTTONWOOD	55	1,611	7,822
ASPEN	--	--	--
BIRCH	114	881	2,681
ALL FOREST LAND	97	835	2,941

Estimates are subject to sampling error.

Totals may be off because of rounding.

-- = no data were collected.

1/ Trees 5.0 inches in d.b.h. and larger.

Metric Equivalents

1 inch = 25.4 millimeters (mm)
1 inch = 0.0254 meter (m)
1 foot = 0.3048 meter (m)
1 mile = 1.609 kilometers (km)
1 acre = 0.4047 hectare (ha)
1 cubic foot = 0.0283 cubic meter (m^3)
1 cubic foot per acre = 0.069 97 cubic meter per hectare (m^3/ha)
20 cubic feet per acre = 1.3994 cubic meters per hectare (m^3/ha)
1 square foot of basal area per acre = 0.2296 square meter per hectare (m^2/ha)

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Setzer, Theodore S.; Carroll, Gary L.; Mead, Bert R. Timber resource statistics for the Talkeetna block, Susitna River basin multiresource inventory unit, Alaska, 1979. Resour. Bull. PNW-115. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station; 1984. 47 p.

A multiresource inventory of the Talkeetna block, Susitna River basin inventory unit, was conducted in 1979. Statistics on forest area, timber volumes, and growth and mortality from this inventory are presented. Timberland area is estimated at 562,105 acres and net growing stock volume, mostly hardwood, at 574.7 million cubic feet. Net annual growth of growing stock is estimated at 13.6 million cubic feet and annual mortality at 2.7 million cubic feet.

Keywords: Forest surveys, timber inventory, multiresource inventory, statistics (forest), resources (forest), Alaska (south-central).

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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