

Chapter 2

FOREST MANAGEMENT GUIDELINES

Chapter 2- FOREST MANAGEMENT GUIDELINES

Timber operations on state lands must comply with the guidelines in this chapter and in the state land use plans for this region. These guidelines also apply to timber harvesting and forest clearing for habitat enhancement in the SFG area. The following land use plans must be consulted prior to designing timber operations within their boundaries:

- ⇒ Susitna Area Plan
- ⇒ Willow Subbasin Area Plan
- ⇒ Kashwitna Management Plan
- ⇒ Fish Creek Management Plan
- ⇒ Deception Creek Land Use Plan.

These guidelines are based on the management intent and designated uses established by the land use plans, and on the background reports on Timber Resources, Recreation, Fish and Wildlife, Cultural Resources, Transportation and Access, and Land Ownership.¹ (See also *Chapter 1 - Relationship to Land Use Plans.*)

Section I - Forest Management Program

This section describes the overall forest management program, including programs for timber sales and harvesting for personal use. It also provides background information on the amount of timber in the Susitna valley, sets the annual allowable cut and rotation length, sets guidelines for establishing research natural areas and experimental forests, and describes the existing wildfire management program.

TIMBER SALE PROGRAM AND TIMBER BASE

General Intent. The goals of the timber sale program are to make timber available for existing timber harvesting and processing businesses, and to expand harvesting and processing to provide additional jobs and income while being compatible with other designated uses of the area. DNR will develop Five-Year Schedules of Timber Sales for a regular, predictable series of sale offerings under AS 38.05.113 and its regulations. Timber sales should be offered in a range of volumes and duration to accommodate different sectors of the industry and the public. Sale offerings will be subject to access, markets, the limits of the annual allowable cut, public comment, and DOF staffing to design and administer sales.

Coordination with Other Landowners. DNR will coordinate its timber sale offerings with timber sale offerings of other landowners when it will increase the viability of the offerings or provide other public benefits. Opportunities for coordinating timber sales will be identified, in part, through public and agency review of the Five-Year Schedule of Timber Sales.

Phase 1, Phase 2, and Phase 3. The Susitna Forestry Guidelines (SFG) area is divided into three areas -- Phase 1, Phase 2, and Phase 3 -- for timing timber management programs and development of access to timber on state land (see map in back pocket for

¹ Copies of these reports are available from the DNR Land & Resources Section, P.O. Box 107005, Anchorage, AK, 99510-7005.

phase boundaries). Units in *Phase 1* are relatively near existing access. Phase 1 includes all South Parks Highway subunits, all Petersville Road subunits except the portion of subunit 1a west of Kroto Creek, all Willow Subbasin units except unit 8 (Susitna Corridor), Susitna Lowlands 10a (Chijuk Creek), and the west blocks of Mount Susitna 2b and 2c. Timber management and construction of new access for timber management can take place within the Phase 1 area at any time, subject to the Susitna Forestry Guidelines, the land use plans, and the Forest Practices Act (AS 38.05.112-113 and AS 41.17). The Mount Susitna subunits are near existing winter roads. Harvesting in the west blocks of these subunits could occur in conjunction with harvesting in the Tyonek area.

Units in *Phase 2* are more remote. Phase 2 includes Susitna Lowlands units 9, 10, 11, 12, and 14, the portion of Petersville Road 1a west of Kroto Creek, and Willow unit 8 (Susitna Corridor). Existing road access is limited to winter roads in the northern part of the area or ice bridges across the Susitna River. Land use designations in this area are controversial and will be reviewed when the Susitna Area Plan is updated. New access and commercial timber sales on state land that will require new access (including new or upgraded winter roads) are prohibited in the Phase 2 area until after 1996 or until the Susitna Area Plan update is adopted. If the update is adopted before 1996, timber sales will be allowed on Phase 2 lands subject to the SFG and the designations of the updated plan. If the update is not completed by 1996, the SFG must be amended before sales requiring new access are allowed in the Phase 2 area on state land. Individual permits for personal use, community woodlots, or small commercial sales that do not require new or upgraded access are allowed in the Phase 2 area before 1996 (See *Commercial Sales in Phase 2 and Phase 3* in this section).

Phase 3 is the most remote part of the SFG area, west of the Kahiltna and lower Yentna rivers. It includes all Sunflower Basin and Alaska Range units, Susitna Lowlands units 1-8 and 13, the east blocks of Mount Susitna 2b and 2c, Mount Susitna 3, 4, 5 and 6. Building access for timber harvesting will be expensive because of distances and barriers such as the Yentna, Skwentna, and Kahiltna rivers. On state land, new timber access and commercial timber sales that will require new access (including new or upgraded winter roads) are prohibited in the Phase

3 area until after 2001. Individual permits for personal use, community woodlots, or small commercial sales that do not require new or upgraded access are allowed in the Phase 3 area before 2001 (See *Commercial Sales in Phase 2 and Phase 3* in this section). The decision to defer activities requiring new access in the Phase 3 area will be reviewed when the Susitna Forestry Guidelines are updated.

Other Land Ownership and Land Uses. Restrictions on new road access in Phase 2 and Phase 3 apply only to access for timber management on state land. They do not apply to access for other activities on state land, nor to rights-of-way across state land for access to land in other ownerships for any purpose, including timber management. For example, if the borough applies for a right-of-way across state land to reach timber on borough land, the SFG shall not be used to deny the right-of-way.

Timber Base. Gross Timber Base. Timber resource estimates are based on the inventory of timber resources prepared by the U.S. Forest Service, US Soil Conservation Service, and Alaska Department of Natural Resources in 1978-80. *Appendices C -1 and C-2, Timber Acreage by Subunit and Gross Timber Volume by Subunit* shows estimates of the gross acreage and volume of timber in each subunit. The gross timber base totals about 526,000 acres of high site and low site forest which support about 463 MMcf of timber.

Prohibited Areas. Within the units where forestry is one of the designated uses, there are some sites where harvesting for most uses is prohibited. These areas reduce the amount of timber available for harvesting. Prohibited areas include the following. Estimated acreage of forest land within the prohibited areas is shown in parentheses.

- ◆ Land within 100' of lakes and most streams, 200'-300' on islands in large braided rivers, 200' along the shore in Willow 6 and 8a, and within 1/4-mile of Little Willow Creek (see *Rivers, Streams, and Lakes* in Section III of this chapter). (22,080 - 47,900 acres)
- ◆ Land within 330' of the right-of-way along the Willer-Kash (Kashwitna) Road (see *Fish and Wildlife Habitat - General, Willer-Kash Road* in Section III of this chapter). (890 acres)
- ◆ Land within 300' of the Kashwitna River for 1/4-mile upstream and downstream of the Parks Highway crossing (see *Recreation and Scenic Resources - Parks Highway Scenic Values* in Section III of this chapter). (10 acres)

- ◆ Land within 300' of known historic sites listed in the Alaska Heritage Resource Survey, including land within 300' of the Iditarod National Historic Trail (see *Heritage Sites* in Section III of this chapter). (320-600 acres)
- ◆ Land within 330' of bald eagle nesting sites. (Some sites may have larger buffers. See *Bald Eagle Habitat* in Section III of this chapter.) (180-250 acres)
- ◆ Five recreation sites in the Petersville Road area and Kashwitna Management Plan (see *Recreation and Scenic Resources - Petersville Road 1a and Kashwitna 1a and 1b* in Section III of this chapter). (230 acres)
- ◆ South Parks Highway 12b and the portion of 12a between the Kashwitna River and the North Fork Kashwitna River (see *Recreation and Scenic Resources - South Parks Highway 12a and 12b* in Section III of this chapter). (11,120 acres)
- ◆ Land within 300' each side of centerline along the Petersville Road in Petersville Road Subunit 3 (see *Moose Habitat - Petersville Road 3a* in Section III of this chapter). (0-70 acres)

An estimated 14-20% of the gross timber base in Phase 1 is within these no-harvest areas and 5-8% of the timber base in Phase 2. Approximately 3-8% of the Phase 3 timber base is in standard no-harvest areas such as stream setbacks or eagle nest areas, but Phase 3 has not been reviewed for unique sites. The majority of land in no-harvest areas is in setbacks from streams. See *Appendices C-1 and C-2 - Gross Timber Acreage by Subunit and Gross Timber Volume by Subunit* for estimates of the acreage affected in each phase.

The 100' stream setback and the 330' zone around eagle nesting trees are established by the Alaska Forest Resources and Practices Act. They do not allow for any timber harvesting. The other prohibited areas are established by the SFG or land use plans. Harvesting may be allowed for special, limited purposes in these areas. For example, harvesting is allowed to prevent or control outbreaks of insects or disease, to suppress wildfire, or to remove hazards to public safety in the other areas under certain conditions. In some areas, harvesting is also allowed to enhance wildlife habitat or improve scenic vistas under certain conditions.

Net Timber Base. The net timber base is the gross timber base minus the prohibited areas. The estimated net timber base for each phase follows.

Area	Acreage	Volume
Phase 1 -		
East side	97,500-106,100 ac	90-97 MMcf
Mt. Susitna	19,000- 19,400 ac	13-14 MMcf
Phase 2		
	131,000-135,800 ac	117-121 MMcf
Phase 3		
	217,900-230,300 ac	190-200 MMcf

Harvesting in the Mount Susitna subunits in Phase 1 will likely occur in conjunction with harvesting in the Tyonek area. Timber in the Mt. Susitna units of Phase 1 will be considered part of the timber base and annual allowable cut in the Division of Forestry's Kenai Area. The annual allowable cut for Phase 1 in the Susitna valley will include only the east side (South Parks Highway, Petersville Road, and Willow) units.

The net timber base figures include state lands in the guidelines area that are designated with forestry as one of the primary or secondary uses, and lands designated resource management. (See *Appendix C-1 and C-2 - Gross Timber Acreage by Subunit and Gross Timber Volume by Subunit* for the acreage in each designation.) They include lands where forestry is designated for personal use only; lands open only to personal use comprise about 5% of the volume in the net timber base. The figures do not include lands designated for disposal as settlement or agriculture lands. The figures include both high site and low site forest lands (see *Appendix A - Glossary* for definitions of high and low sites). About 80% of the forest land acreage and 91% of the timber volume is on high site forest lands.

All units are managed for multiple use – forestry is only one of the designated uses. All co-primary uses must be accommodated. In subunits where forestry is a secondary use, it is allowed only when consistent with the primary designations and the management intent. Therefore, these figures are the upper limit of timber volume and acreage available for harvest in each phase. Some reduction to the volume and acreage available for harvest will occur to accommodate other uses on these lands.

The area from which DOF determines timber can feasibly be harvested may change as new information is gathered on soil drainage, vegetation type, feasibility of regeneration, and other factors that affect tree growth. If land use designations change when the land use plans are updated, the new designations will also change the amount of timber available. (See also *Annual Allowable Cut* and *Rotation Length* in this section.)

Conditional Areas. Some land within the net timber base is in conditional harvest areas. Timber harvesting is allowed in these areas, but review of site-specific factors in conditional harvest areas during timber sale planning is likely to reduce the timber available on some of the sites. Conditional areas include the following. Estimated acreage in the conditional areas is shown in parentheses.

- ◆ Shoreline management zones. These are 200' wide along lakes and most streams adjacent to the no-harvest zone, but wider zones are established for certain rivers and streams in the Phase 1 area (see *Rivers, Streams, and Lakes* in Section III of this chapter). (37,400 -89,000 acres)
- ◆ Land in the Iditarod National Historic Trail corridor that are more than 300' from the trail and lands within 150' of regional public trails (see *Trail Corridors - Iditarod Trail, Regional Trails* in Section III of this chapter). (3,900-4,830 acres)
- ◆ Land within 1/4-mile of trumpeter swan nesting areas (see *Trumpeter Swan Nesting Areas* in Section III of this chapter). (2,090-4,890 acres)
- ◆ Land outside the no-harvest zone and within 500' of the Willer-Kash (Kashwitna) Road right-of-way (see *Fish and Wildlife Habitat - General, Willer Kash Road* in Section III of this chapter). (450 acres)
- ◆ Land on slopes 40% in the Deception Creek Land Use Plan (see *Deception Creek - Slope Restrictions* in Section III of this chapter). (340 acres)
- ◆ Recreation site in Susitna Lowlands Subunit 11c (see *Recreation and Scenic Resources -Susitna Lowlands 11c- Recreation site* in Section III of this chapter). (0-640 acres)

An estimated 17-31% of the net timber base in Phase 1 and 16-25% of the net timber base in Phase 2 is within areas where timber harvesting is subject to special guidelines that may affect the amount of timber that can be harvested. Approximately 5-17% of the Phase 3 net timber base is in standard condi-

tional areas such as stream and trail corridors, but Phase 3 has not been reviewed for unique sites. Most land in conditional areas is in the shoreline management zones along rivers and streams. See *Appendix C-1 and C-2 - Gross Timber Acreage by Subunit* and *Gross Timber Volume by Subunit* for estimates of the amount of timber land in conditional areas in each working circle.

Commercial Sales in Phase 2 and Phase 3. Commercial harvesting in Phase 2 prior to 1996 or the adoption of the updated Susitna Area Plan and in Phase 3 prior to 2001 is subject to the following limitations.

1. Harvest operations must use existing access. Harvests requiring new access or upgrading of existing access (for example, converting a foot trail to a road) will not be allowed.
2. Sales harvested by seed tree methods or clear-cuts (see *Appendix A - Glossary*) will be limited to a total of 25 acres of cutting units. Sales harvested by selective methods will be limited to a total of 80 Mbf.

Annual Allowable Cut. The annual allowable cut is the average amount of timber that may be cut from a forest that will maintain a balance between net growth and harvest while meeting the management intent for the forest land. It estimates the maximum amount of timber that can be harvested each year without cutting more timber than grows back.

The annual allowable cut for the SFG area is set by the Susitna Forestry Guidelines. Revisions of the annual allowable cut will be done through updates or amendments to the Guidelines. Site-specific reconnaissance of forest lands is done during timber sale planning for the Five-Year Schedule of Timber Sales. This reconnaissance may identify changes to the timber base that will be incorporated when the annual allowable cut is revised. The annual allowable cut will be reviewed, and if appropriate, revised at least every five years. Revisions may occur more often if warranted by new information on growth rates, regeneration, or other factors that affect harvestable volume, or if land use plan updates change the amount of land where forestry is one of the designated uses.

The initial annual allowable cut follows. The annual allowable cut was developed based on volume regulation – the standing volume of each species in the net timber base is divided by the rotation length to determine the amount that can be cut each year. See *Rotation Length* in this section for the guidelines on rotations.

Phase	Mcf/year
Phase 1 - East side	880-930
Mt. Susitna	130-140
Phase 2	1,110-1,140
Phase 3	1,460-1,520
TOTAL	3,580-3,730

Prior to 1996, most commercial harvesting is limited to the Phase 1 area (see *Phase 1, Phase 2, and Phase 3* in this section). In the Phase 1-East side area, the initial annual allowable cut is 890-940 Mcf per year: about 220-240 Mcf spruce, 380-400 Mcf birch and aspen, and 290-300 Mcf cottonwood. This volume is equivalent to the volume on about 940-990 acres.

Five-Year Schedule of Timber Sales and Mental Health Lands. The annual allowable cut sets the maximum amount of timber that can be offered for sale. The actual amount proposed for sale is set by the Five-Year Schedule of Timber Sales prepared annually by the DNR Division of Forestry, and reviewed by the public.

The passage of legislation in 1991 proposed a settlement to the lawsuit between the Mental Health Trust and the State of Alaska. This law identified forest land in the Susitna valley as part of a land pool for possible selection by the Trust. Until these selections are complete, DNR cannot take any actions that would diminish the value of these lands to the Trust. Therefore, the Division of Forestry withdrew the draft Five-Year Schedule of Timber Sales for FY 92-96 and cannot offer any timber sales or designated personal use areas in FY 92.

Sustained Yield. Sustained yield is defined in AS 41.17.950 (15) (see *Appendix A - Glossary* for definition). In addition, on state lands in the Susitna Forestry Guidelines area, harvesting in any five-year period shall not exceed five times the annual allowable cut. The amount of timber available in any year equals five times the annual allowable cut minus the volume harvested in the previous four years. For example, if the harvest on state lands in one year is five times the annual allowable cut for the Phase 1 area, state timber shall not be harvested from that area for the following four years. This guideline is intended to allow flexibility in scheduling harvests to respond to fluctuations in timber markets, while ensuring that timber is available for harvest

throughout the rotation and that the lands in the guidelines area continue to support forests of a variety of ages to support wildlife, recreation, tourism, and other public uses.

Rotation Length. Stand rotation length in the Susitna Forestry Guidelines area shall be based on the management intent and use designations set by the land use plans.

Some values, such as marten and grouse habitat or recreation in traditional, semi-traditional, or semi-primitive settings (see *Appendix E - Recreation Opportunity Spectrum for the Susitna Forestry Guidelines Area*) require older forests and relatively long stand rotations. Wood production, moose and hare habitat, and related recreation activities such as moose hunting, are optimized with younger forests and shorter rotations. The schedule for cutting on any individual site will be determined by the management intent for that site (see also *Timber Sale Design - Cut and Leave Areas* in Section II of this chapter).

The intent of the SFG is to create and maintain a mix of stand ages to provide a balance of all these uses. Therefore, a portion of the state-owned land where forestry is one of the designated uses will be managed on "standard" rotations that produce relatively young forests, and "long" rotations that maintain older forests. In the Susitna Forestry Guidelines, rotations are defined as follows:

Species	Standard Rotation	Long Rotation
White spruce	100 years	140 years
Paper birch	80 years	100 years
Cottonwood	75 years	95 years
Aspen	60 years	80 years

The standard rotations approximate the age at which timber is mature enough to provide natural regeneration and large enough to provide a mix of wood products such as fuelwood and sawtimber. The long rotation provides approximately 40 years of mature spruce forest between cutting cycles and extends the mature hardwood forests to the approximate age at which significant decay occurs. Rotations could change as more information becomes available on the condition of trees and forest stands at different ages. Rotation ages will be reviewed when the guidelines are updated. (See *Chapter 3 - Periodic Review and Research.*)

Timber management is an allowed use on lands where forestry is designated one of the primary or secondary uses, and on resource management lands (see *Appendix A - Glossary* for definitions of these terms). The proportion of timber managed under standard and long rotations will depend on the land use designation for the affected area, and on the goal to maintain at least 40% of each subunit in cover habitat at all times (see *Timber Sale Design - Cut and Leave Areas* in Section II of this chapter). The rotation lengths that will be used to set annual allowable cut follow.

On Lands With Forestry A Co-primary Use: 60% of the operable timber base will be managed on standard rotations. This will provide wood products and maintain or enhance habitat for species that benefit from younger forests. The remaining 40% will be managed on long rotations to provide wood products and maintain habitat for species that benefit from older forests, and maintain opportunities for recreation that benefits from less disturbance and older forests.

On Lands With Forestry A Secondary Use: 40% of the timber will be managed on standard rotations. In these subunits, habitat and recreation are usually the primary use designations. Habitat needs for moose are likely to be the main impetus for timber harvesting. For estimating annual allowable cut, it is assumed that timber is not actively managed on the remaining land; management will depend on the primary uses.

Resource Management Lands: 40% of the timber will be managed on standard rotations and 60% on long rotations to provide a mix of benefits. The proportion is the reverse of the levels for primary use areas because the long-term designation of these lands has not been determined.

Specific sites or subunits may be managed on rotations shorter than the standard rotation if the management intent is to manage for younger forests. For example, where supplying moose browse is the emphasis, shorter rotations may be used as long as the annual allowable cut for the working circle is not exceeded.

PERSONAL USE WOOD

General Intent. Continuing to provide wood products for personal use is one of the goals for forest lands in the SFG area. DNR will continue to make wood available for personal use within the constraints of budget, access, and the annual allowable cut. Sources of wood for personal use include individual permits in remote areas, designated personal use harvesting areas in accessible regions, designated community woodlots, negotiated personal use sales, use of wood residues in commercial harvesting areas, and harvest of dead and down wood. Personal use harvesting is allowed in subunits where forestry is one of the designated uses and in areas designated Settlement. No permit is needed to harvest wood that is both dead and down in the SFG area.

Regulations on Personal Use. Wood obtained for personal use may not be sold, bartered or used for commercial purposes. Negotiated personal use sales are subject to the regulations in 11 AAC 71.050. Permits for personal use wood are issued for up to 3200 linear feet of houselogs, 10 Mbf of sawlogs, or 10 cords of fuelwood. For each established personal use harvesting area, the Division of Forestry sets the number of cords allowed per permit.

Personal Use Subunits. The Susitna Area Plan directs that timber be managed for harvesting only for personal use in South Parks Highway subunits 4a, 4f, 4g, and 10b, Susitna Lowlands 4b, Mount Susitna 4a, and Alaska Range 1b. These areas have scarce wood resources and current or proposed concentrations of private lands that are likely to result in high demand for the limited wood resources.

In addition, the Susitna Forestry Guidelines establish the following subunits as area where timber will be managed for personal use only.

Petersville Road 2b. Because of the high demand for personal use from surrounding lands and potential conflicts between public recreation use and road access, timber in this unit will be managed for personal use under individual permits.

Petersville Road 3g. Because of the demand for timber for personal use from surrounding lands, timber in this subunit will be managed for personal use.

Petersville Road 7c. In general, timber in subunit 7c will be managed for personal use. It is accessible by road and close to areas where demand for fuelwood is high. The study Scenic Highway Study for the Parks Highway recommends additional openings to improve views along the highway in the northern part of this subunit. North of the line between sections 20 and 29 T25N R5W S.M., commercial timber harvests with cutting units up to five acres may be designed to improve views from the highway. To minimize conflicts between moose and motorists, remaining stands and reforestation should be managed to provide wildlife cover rather than browse production. Selective harvesting, harvesting of birch and leaving spruce, and other techniques for creating openings without adversely impacting visual quality and habitat may be used in this area. Cutting areas designed to improve visual quality should be designed by DPOR in consultation with DOF and DFG.

Willow 12d. Because of the limited extent of timber in this subunit, the SFG recommend that the Willow Subbasin Area Plan update reconsider the designation in this subunit (See Chapter 3 - Recommendations for Changes in Land Use Plans, Willow 12d). In the interim, the limited timber resources in this subunit will be managed for individual personal use permits.

Subunits designated for personal use will be managed for a sustained yield of wood for personal use.

Coordination with Commercial Sales. Demand for personal use wood may exceed the supply available within disposal boundaries or on private parcels outside disposal areas in the following disposal areas. The FLUP for timber sales in these areas will state whether or not there will be wood residues in the sale area available for personal use.

Areas where demand for personal use wood is likely to exceed supply in the next five to ten years based on the amount of private land already patented include:

- ◆ South Parks 12a adjacent to Bartlett Hills subdivision,
- ◆ Petersville Road 1a and 3g adjacent to Amber Lake and Amber Lake North subdivisions,

- ◆ Susitna Lowlands 2d, 2f, and 3a adjacent to Onestone Lake and Shell Hills subdivisions,
- ◆ Susitna Lowlands 5f and 13e adjacent to Kutna Creek subdivision,
- ◆ Susitna Lowlands 6e near Otter Lakes subdivision,
- ◆ Susitna Lowlands 12a and 13b adjacent to Neil Lake remote parcel area,
- ◆ Mount Susitna 2c adjacent to Alexander Creek West subdivision,
- ◆ Mount Susitna 3c adjacent to Dinglishna Hill subdivision.

Areas where demand for personal use wood may exceed supply in the next five to ten years if additional parcels are patented and developed include:

- ◆ Susitna Lowlands 1a adjacent to Whiskey Lake subdivision,
- ◆ Susitna Lowlands 2f adjacent to Shell Lake North subdivision,
- ◆ Susitna Lowlands 3a and Mount Susitna 5a adjacent to Canyon Lake subdivision,
- ◆ Susitna Lowlands 6a and 6e adjacent to Kutna remote parcel area and Trail Ridge subdivision,
- ◆ Susitna Lowlands 11a and 12a adjacent to Parker Lake and Kahiltna Flats subdivisions,
- ◆ Susitna Lowlands 12a and 13b adjacent to Lockwood Lake subdivision.

Compliance with Other Guidelines. Personal use harvesting is subject to the same guidelines as commercial harvesting for stream buffers, trails, eagle nests, heritage sites and other guidelines to protect fish, wildlife, and recreation values. Timber volumes harvested for personal use will be subject to the annual allowable cut for the area in which the harvesting occurs (see also *Timber Sale Program and Timber Base - Annual Allowable Cut* in this section).

South Parks Highway 9c - Talkeetna Woodlot. The Talkeetna Community Council is interested in establishing a community woodlot. This subunit is a candidate for a woodlot for the Talkeetna area, particularly if a woodlot could be established on both state and borough lands.

RESEARCH NATURAL AREAS AND EXPERIMENTAL FORESTS

Research natural areas (RNA's) may be established in the Susitna Forestry Guidelines Area. Proposals for research natural areas identified after the guidelines are adopted will be recommended to the director of the DNR Division of Land. The director will review the proposal and make a determination on whether the site should be established as an RNA. The director will make the determination in consultation with the DNR Division of Forestry and the Department of Fish and Game. DNR will provide public notice of proposed establishment of an RNA to organizations and individuals on the mailing list described in *Public Notice and Interagency Coordination - Five Year Schedule of Timber Sales - Annual Notice 2*, in Section V of this chapter. If warranted by the level of controversy, the director may hold a public meeting before making a determination.

Objectives for research natural areas are to establish sites that:

- ◆ preserve undisturbed examples of vegetation types or communities (including forest types), unique ecological sites, or geologic features for comparison with those influenced by humans,
- ◆ provide educational and research areas for ecological and environmental studies,
- ◆ preserve gene pools for typical and rare and endangered plants and animals.

RNAs in the SFG area should protect features that are not already protected by legislative or administrative action on other public lands.

RNAs should be of the minimum size necessary to protect the features of interest. No significant human intervention or manipulation will be allowed in research natural areas except where required to maintain features for which the area was set aside.

Experimental Forests. The objectives for experimental forests are to:

- ◆ provide research areas for forest management and fish and wildlife habitat studies, including manipulative research on vegetation and habitat.
- ◆ protect existing gene pools and manage areas to provide seed for reforestation.
- ◆ provide educational areas for resource management and environmental studies.

Experimental forests may be established in the Susitna Forestry Guidelines. Proposals for experimental forests identified after the guidelines are adopted will be recommended to the director of the DNR Division of Land. The director will review the proposal and make a determination on the site. The director will make his determination in consultation with the DNR Divisions of Forestry and Parks and Outdoor Recreation (DPOR) and the Department of Fish and Game.

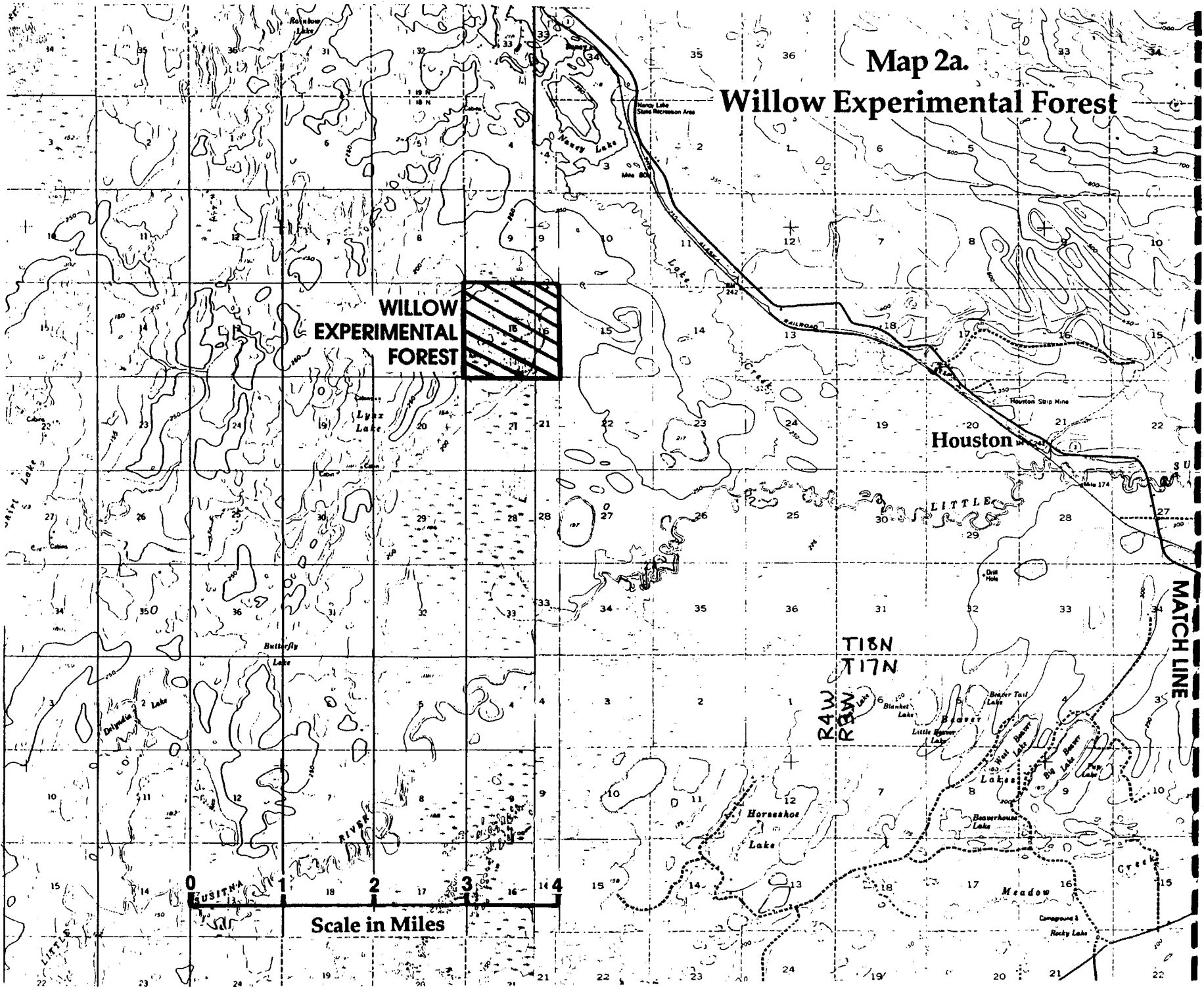
Management Plan. A management plan should be prepared for each research natural area and experimental forest. Each management plan should state the goals for managing the RNA or experimental forest. The management plan should emphasize the process for approving and monitoring research and other activities in these areas, not identifying specific research projects.

Until a plan is adopted, DNR will manage these areas to protect the features for which they were established. Activities will not be allowed that will adversely impact those features. Management of experimental forests includes manipulative research; management of research natural areas does not.

Research Outside the Guidelines. Most research in experimental forests will comply with the Susitna Forestry Guidelines. However, experiments may be needed to assess the effectiveness of the guidelines or identify better techniques for achieving forest management goals. Research projects may be exempted from the guidelines only with prior public notice and prior approval by the DNR divisions of Forestry and Land and consultation with DFG and only if consistent with the management plan for the experimental forest. A management plan for the experimental forest must be adopted before exceptions to the guidelines may be granted.

Willow Experimental Forest and Houston Demonstration Forest. The Willow Experimental Forest northwest of Wasilla (T18N R2W sect. 25 E1/2) and the Houston Demonstration Forest (T18N R3W S.M. section 16) are subject to the Susitna Forestry Guidelines (see Maps 2a and 2b, pages 15 and 16).

Map 2a. Willow Experimental Forest



**WILLOW
EXPERIMENTAL
FOREST**

Houston

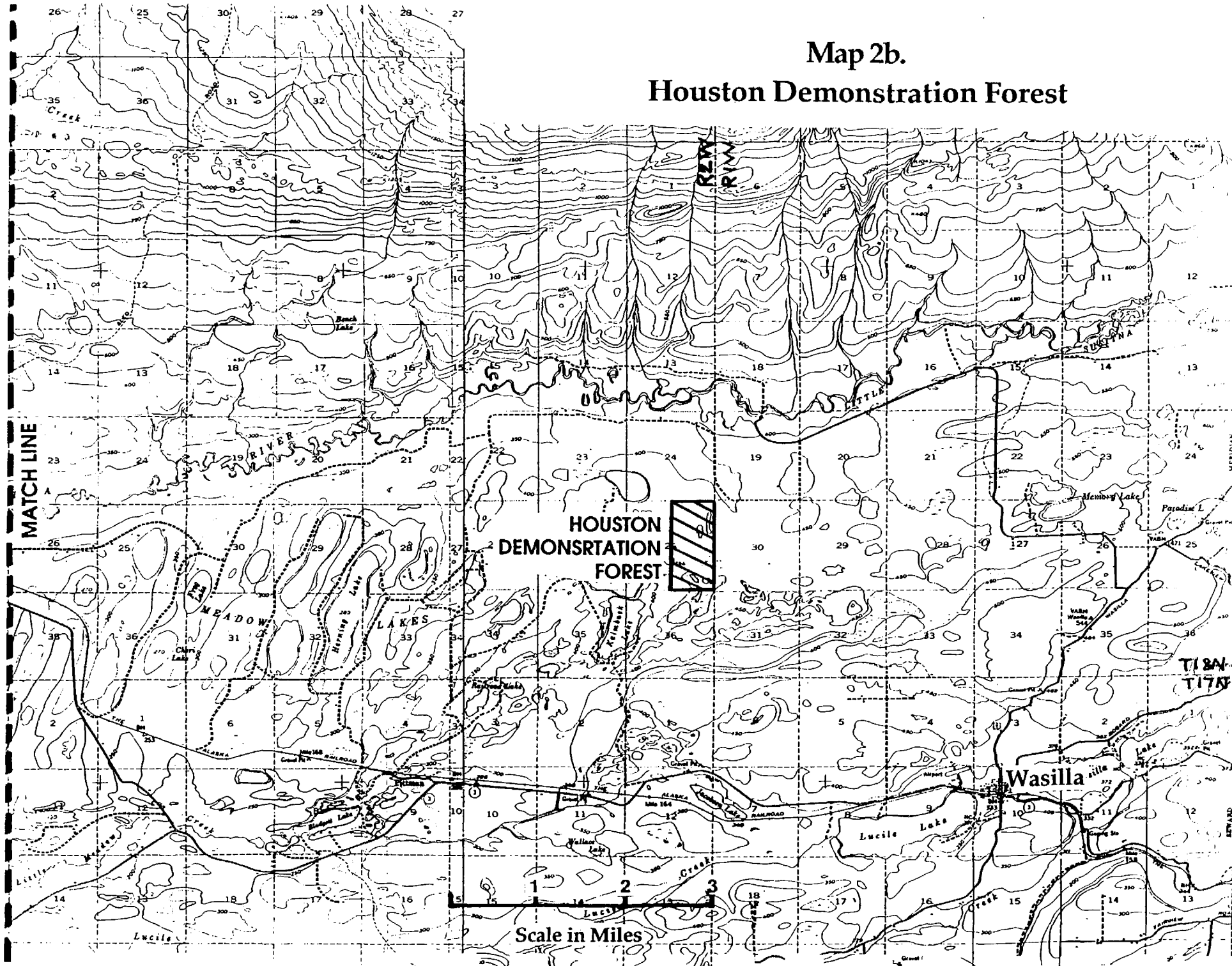
T18N
T17N

RAW
RAW

0 1 2 3 4
Scale in Miles

MATCH LINE

Map 2b. Houston Demonstration Forest



FIRE MANAGEMENT

Fire management is directed by the Alaska Interagency Fire Management Plan for the Matanuska/Susitna area². Fire management practices, including suppression priorities and prescribed burning, are designed to implement the land management policies laid out in the land use plans for this area.

The highest level of protection from wildfire is given to critical protection areas (see Map 3, page 18). These are populated areas and areas with physical developments. In this region, critical protection areas include the roaded area from Palmer to Willow, the Talkeetna and Trapper Creek areas, and cabin sites scattered through the valley. Most of the remaining lowlands are in the next level of protection, the full protection zone. The third level of protection, the modified action area, applies to the Susitna Flats State Game Refuge, the high elevation areas from Mount Susitna to Beluga Mountain, the lower slopes of the Talkeetna Mountains, upper Lake Creek, and the Happy River valley. In the area affected by the Susitna Forestry Guidelines, only the upper Skwentna drainage receives the lowest level of protection -- a limited action area. See *Appendix A - Glossary* for definitions of the protection levels.

Section II - Timber Sale Design & Management

This section sets guidelines that apply throughout the SFG area. These guidelines cover timber sale design, harvesting systems and schedules, slash disposal, site preparation, and reforestation, and use of chemicals for forest management.

PUBLIC USE

Timber harvest areas will be available for public use except when special restrictions are necessary to protect public safety, prevent damage to natural resources including regrowth, or protect the safety of the operator and security of the operator's equipment or materials.

See also:

Road Management - Public Use
in Section IV of this chapter.

² ADNR. 1986. Alaska Interagency Fire Management Plan-Mat/Su Planning Area. Anchorage, AK. 51 pp.+ maps

TIMBER SALE DESIGN

Overall Intent. Forest management in the Susitna Forestry Guidelines area is intended to create and maintain a mosaic of age classes that will provide for a mixture of cut and uncut areas to provide and protect fish and wildlife habitat, and produce timber. Forests will also be managed to provide areas for public recreation in a variety of settings (also *Appendix E - Recreation Opportunity Spectrum*). To meet this intent, DOF will use the practices described in this section when designing timber sales. These general guidelines may be varied on a site-by-site basis by DOF in consultation with DFG.

Multiple Use. Forested lands open to timber harvesting shall be managed in a manner consistent with the maintenance of the site-specific conditions necessary for multiple use and with the management intent for the subunit.

Cut and Leave Areas. To ensure that adequate year-round cover is available to meet wildlife species needs, harvests will be designed to leave no less than 40% of the cover habitat in each subunit in cover at all times. Leave areas can be cut after the original harvests regenerate enough to function as cover habitat similar to the uncut areas. All buffers set aside from harvesting that meet the criteria for cover habitat (see *Appendix A - Glossary*) are included in the cover area calculations. Vegetation left as cover habitat may contain either commercial forests or non-commercial vegetation, but must be suitable cover. Visual quality and recreation needs will also be considered in determining what percentage of cover to retain in each subunit.

The DNR Division of Forestry, after interagency review with the DNR divisions of Land and Parks and Outdoor Recreation and the Department of Fish and Game, will determine the rotation age, reentry timing, and species composition for each stand. These decisions will be based on co-primary designations and management intent, site characteristics, markets, habitat conditions, and objectives for wildlife management, recreation, and visual quality within the stand and in the surrounding forest. (See *Appendix E - Recreation Opportunity Spectrum for the Susitna Forestry Guidelines Area* for the range of recreation opportunities and setting considered in the SFG.)

Fish and Wildlife. DFG will identify the main fish and wildlife species managed in each timber sale area. This information will be included in the Five-Year Schedule of Timber Sales and Forest