

CHAPTER 4 IMPLEMENTATION

I. AGENCY LAND MANAGEMENT RESPONSIBILITIES

Agency responsibilities for land management within the Tanana Valley State Forest remain largely the same as those for other State lands. The chief exception is that the DNR Division of Forestry has overall land management authority within state forests. The Division of Forestry will coordinate multiple use planning in the State Forest and is responsible for timber management. The DNR Division of Mining, Land and Water will continue to be responsible for adjudicating land and water use applications and mineral permitting.

Administrative procedures, such as cooperative agreements, may be used to establish the applicability of Division of Parks and Outdoor Recreation regulations to the management of campgrounds, public use cabins, and other recreational facilities.

The USDA Forest Service, Pacific Northwest Research Station, has management authority for the Bonanza Creek Experimental Forest (Subunit 5B). As outlined in the lease granted to the Forest Service by the Department of Natural Resources (Appendix D), the Forest Service must approve all activities in the Experimental Forest, including timber harvest, road construction, and mineral exploration and development.

II. CITIZENS' ADVISORY COMMITTEE FOR THE TANANA VALLEY STATE FOREST

A Citizens' Advisory Committee (CAC) for the Tanana Valley State Forest (TVSF) and other forested land managed by the Department of Natural Resources (DNR) in the Tanana River Basin is authorized. The Committee, in an advisory capacity, will provide recommendations to the Department of Natural Resources on forest management issues on these lands. The Committee does not conflict with the Board of Forestry established by Alaska Statute 41.17.041. The Committee's purpose is to:

- Review and provide Committee recommendations to the Division of Forestry on updates and amendments to the TVSF Management Plan and Five-Year Schedules of Timber Sales (including reforestation and transportation schedules). Site specific Forest Land Use Plans (FLUPs) will be made available to each member for review, during the established review period, however, the Committee is not required to make recommendations on these documents.
- Provide a forum for gathering public opinion on management of state forested land, help to develop a regional consensus on forest management, and provide management recommendations to the Director, Division of Forestry. When consensus cannot be reached on a Committee recommendation, the Committee should forward the majority's recommendation and any different views not represented by the majority's recommendation to the Division.
- Review issues and activities on DNR-managed forested land and recommend management policies to the Director, Division of Forestry.
- Help disseminate information about the TVSF and other DNR-managed forested land to the public.

Each member should represent the full range of interests within his or her constituency. All CAC members should work to establish two-way communications with other groups and individuals within the interest they represent. Members are expected to bring their constituencies' interests and concerns to the CAC. However, when the Committee makes recommendations, all members should act in consideration of the whole community and the statewide public interest, not just the interest of their immediate constituency.

The CAC consists of the following twelve members appointed by and serving at the pleasure of the Director, Division of Forestry. The term of office is three years. The Director, Division of Forestry will make committee appointments so that four expire each year on a revolving basis. The Director, Division of Forestry will review all applications received from individuals seeking appointment to the CAC without requiring recommendations from the current committee.

Table 13. Citizens' Advisory Committee constituencies.

Seat	Constituency
Forest Industry	Represents businesses involved in harvesting and/or processing timber resources.
Value-Added Processing	Represents businesses involved in the manufacture of finished wood products and minor forest products.
Environmental Interests	Represents environmental organizations and individuals with environmental interests.
Private Forest User	Represents the incidental forest user for both consumptive and non-consumptive activities including subsistence and personal use.
Forest Science	Represents the forest science community. Background should include training, experience and a current knowledge of multiple forestry specialties related to forest ecosystem management to insure adequate representation of the forest science community. Representative should be a forest scientist not currently employed by a state agency other than the University.
Native Community	Represents both individual Alaska Natives and Native organizations in the Tanana Basin who use the forest or will be directly impacted by forest management actions.
Recreation	Represents the non-commercial users who visit the forest and take advantage of both consumptive and non-consumptive benefits for pleasure and enrichment of life.
Tourism Industry	Represents the commercial operators who directly use forest lands as well as those whose customers are incidentally exposed.
Fish and Wildlife Interests	Represents the full range of interests in fish and wildlife, including sport, and commercial users.
Mining Industry	Represents organizations and individuals involved in the mineral exploration, extraction, and processing industries.
Regional Representative-Upper Tanana Valley	Represents the public on a regional basis. This includes both commercial and non-commercial as well as consumptive and non-consumptive uses. The representative should reside in the eastern Tanana Valley between Banner Creek and the Canadian border.
Regional Representative- Lower Tanana Valley	Represents the public on a regional basis. This includes both commercial and non-commercial as well as consumptive and non-consumptive uses. The representative should reside in the western Tanana Valley west of the Fairbanks North Star Borough.

When appointing CAC members, the Director, Division of Forestry will seek region-wide geographic representation.

The CAC will elect its own presiding officer. The CAC will adopt its own by-laws subject to approval by the Director, Division of Forestry.

III. PROCESS FOR REVIEWING APPLICATIONS FOR PERMITS, LEASES, DISPOSALS, AND RIGHTS-OF-WAY

For timber sales, the Forest Land Use Plans will identify proposed access routes and materials sites both within and outside the Tanana Valley State Forest. Temporary routes will be authorized by the Division of Forestry through the FLUP process. Long-term routes will be authorized through a right-of-way (ROW). The Division of Forestry will identify the proposed ROW in the FLUP. Following FLUP review, DOF will submit the ROW application to the Division of Mining, Land and Water (DMLW) to authorize and record the route on the status plats.

Other land management proposals may be initiated by other agencies or private individuals and may include requests for rights-of-way, commercial leases, timber or material sales, or permits for mineral activity, trapping cabins, or grazing. The following process will be used to review these permit or conveyance requests. All applications for use of State Forest land, including mining or prospecting, will be forwarded to the Northern Regional Office of the Division of Mining, Land and Water. The Division of Mining, Land and Water will distribute applications for review by agencies, including the Northern Regional Office of the Division of Forestry. The Division of Forestry will review applications for consistency with this plan and other existing laws and policies. The Division of Forestry will then return applications to the Division of Mining, Land and Water with stipulations for processing. The Division of Forestry may also require additional review of applications after interagency or public comment. Although preliminary decisions or final findings will continue to be made by the Division of Mining, Land and Water, applications must be consistent with the stipulations given by the Division of Forestry. No permits, leases, disposals, or rights-of-way will be authorized for use of State Forest land that are not consistent with stipulations from the Division of Forestry.

For mining operations, temporary routes will be authorized by the DMLW through its Miscellaneous Land Use Permit (MLUP). For long-term routes, DMLW will issue a ROW.

IV. PLAN MODIFICATION

The land use designations, policies, implementation actions, and management guidelines of this plan may be changed periodically as new data and new technologies become available and as changing economic, social, and environmental conditions place different demands on public lands.

A. Periodic Review

The plan will be reviewed at least every 5 years to determine if revisions are necessary. An interagency planning team chaired by the Division of Forestry will coordinate this periodic review at the request of the Department of Natural Resources Commissioner. The plan review will include meetings with interested groups and the general public.

B. Procedures for Plan Changes

Three kinds of changes are allowed by regulations in 11 AAC 55.030. “A revision to a land use plan is subject to the planning process requirements of AS 38.04.065. For the purposes of this section and AS 38.04.065, a ‘revision’ is an amendment or special exception to a land use plan as follows:”

1. “An ‘amendment’ permanently changes the land use plan by adding to or modifying the basic management intent for one or more of the plan's subunits or by changing its allowed or prohibited uses, policies, or guidelines.”

A proposal to remove an area from the commercial timber base, to harvest the timber from an area where it is prohibited, or to close an area not identified in this plan to mineral entry are examples of changes requiring amendment. However, amending the Forest Practices Regulations, for example, and inserting those changes in this plan do not require an amendment of the plan. Amendments require public notice, public hearings, and approval by the Commissioner. Amendments may be proposed by agencies, municipalities, or members of the public. Requests for amendments are submitted to the Northern Regional Office of the Division of Forestry. The Director of the Division of Forestry determines what constitutes an amendment or just a minor change.

2. “A ‘special exception’ does not permanently change the provisions of a land use plan and cannot be used as the basis for a reclassification of the subunit. Instead, it allows a one-time, limited-purpose variance of the plan's provisions, without changing the plan's general management intent or guidelines. For example, a special exception might be used to grant an eligible applicant a preference right under AS 38.05.035 to purchase land in a subunit designated for retention in public ownership. A special exception might be made if complying with the plan would be excessively burdensome or impractical or if compliance would be inequitable to a third party, and if the purposes and spirit of the plan can be achieved despite the exception.”

3. “A minor change to a land use plan is not considered a revision under AS 38.04.065. A ‘minor change’ is a change that does not modify or add to the plan's basic intent, and that serves only to clarify the plan, make it consistent, facilitate its implementation, or

make technical corrections. Authority: AS 38.04.065, AS 38.04.900, AS 38.05.020, AS 38.05.300."

V. FORESTWIDE IMPLEMENTATION ACTIVITIES

This section describes management activities necessary to implement this plan. Projects are designed to serve as reference material for agencies to develop elements of the Five-Year Schedule of Timber Sales or other public review process.

A. Wildlife Habitat Enhancement

Pursuant to AS 41.17.400(e), ADF&G's Division of Wildlife Conservation, in cooperation with the Division of Forestry, may manipulate forest stands to increase available moose browse and begin staggered rotations of hardwood forest beneficial to ruffed grouse and other early- to mid-successional wildlife species. Among the techniques that may be used are: prescribed burning, silvicultural methods, tractor crushing of riparian willow and bulldozer shearblading or felling of hardwoods. Habitat enhancement projects will be discussed in the Five-Year Schedule of Timber Sales or by some other public process.

B. Recreation Facilities

The following list of potential recreation facilities assumes that DNR will provide all funding and support for a particular facility. However, DNR may seek agreements with various groups to assume responsibility for the establishment and management of public use cabins, campgrounds, trails, and other facilities. Another means to minimize budget outlays will be to refurbish and use unauthorized cabins as public use cabins.

Development of the recreation site visitor center at Nenana Ridge and campgrounds at the Chatanika River, Nenana Ridge, Robertson River, and Eagle Trail State Recreation Site will require a detailed feasibility study and interagency review. This feasibility study and interagency review should be coordinated through the Five-Year Schedule of Timber Sales or other public review process.

Table 14. Potential recreation facilities.

Unit	Location and Description
1	Public use cabin near Baker Creek
1	Maintain trails in Unit 1A
2	Public use cabin on Kantishna River or Tanana River
4	Boat launch at end of Murphy Dome Extension on Chatanika River. Add gravel, toilets, possibly refuse containers, and make small improvements to launching area.
4	Upgrade of boat launch at end of Murphy Dome Extension on Chatanika River to a campground.
4	Two public use cabins on Chatanika River or in Murphy Dome area.
4	Scenic turnout on Murphy Dome Extension
4	Trail construction and signing
5	Nenana Ridge interpretive site <ol style="list-style-type: none">1. Establish self-guiding interpretive trail2. Construct picnic site with toilets and refuse containers
5	Three public use cabins on the Tanana River between Fairbanks and Nenana
6	Boat launch and parking area on the Chena River at the end of the Grange Hall Road
6	Public use cabin on Lyrad Creek trail system
6	Trail construction and maintenance of Lyrad Creek system

- 6 Public use cabin on Chena River
- 10 Public use cabin on George Creek
- 12 Campground at Alaska Highway crossing of Robertson River

C. Research

Appendix E describes each Research Natural Area's features and the rationale for designating the area as an RNA.

D. Timber and Road Development

Two types of monetary considerations affect the amount of timber that DOF can offer for sale: development costs and budget. Development costs are incurred for reforestation, road construction, and maintenance. Most development costs are assumed by the timber sale operator. Agency budget pays for timber sale preparation and administration. The locations, products, and volumes of timber offered and harvested will depend in part upon the amount of revenue the sale can generate to offset development costs. This will vary with the access, timber quality, volume, harvest costs, and current markets. Consequently, timber sale priority must not only meet forest management goals, but also must be economically feasible.

E. Fire Disturbance

Recognizing that the boreal forest is disturbance-driven is essential. Forest condition in the Interior is changing as a result of increased insect and disease activity, greater fire risk, and increased stress on trees caused by climatic change. Previous fire control efforts contribute to the shortage of young to intermediate aged stands, especially in upland forests. Some form of disturbance, natural or man-caused, is necessary to maintain the forest and its biological diversity. Maintenance of a rich landscape mosaic is needed to prevent biodiversity losses.

In the Tanana Valley State Forest, fires will continue to be suppressed near settlements and where there are infrastructure investments. Current and proposed timber sales will receive fire protection commensurate with the values at risk. However, where feasible, wildland fires will be allowed to burn and suppression will be limited in other areas to decrease the long-term risk of damaging fires and to maintain natural diversity of forest stands, stand ages, and habitat types. Where allowing wildland fire is not feasible, the Division of Forestry will use timber harvest, prescribed fire, or habitat enhancement techniques to disturb the forest and maintain a natural range of forest types and stand ages. Annual reviews of protection levels are an important aspect of the fire plan. Social, environmental and economic conditions determine the need to review and change protection levels. Each Area Office is responsible for a periodic review of protection levels in their geographic area. Suggested changes will be coordinated with the regional office, neighboring landowners, and will follow the guidelines established by the Alaska Interagency Wildland Fire Management Plan (FMP). The FMP addresses the process for protection level changes on pages 38-40 in a section entitled: Wildland Fire Management Option Revisions. For additional information on fire management topics in the Tanana Valley State Forest, see the Interagency Fire Management Plan section in Chapter 1 and the Fire Management parts of the Scientific Resources and the Timber Management sections of Chapter 2.

Any proposed changes of fire management options (protection levels) will be provided to affected land owners and managers and resource management agencies in accordance with the Alaska Interagency Wildland Fire Management Plan.

VI. RECOMMENDATIONS FOR ADDITIONS TO AND WITHDRAWALS FROM THE TANANA VALLEY STATE FOREST AND OTHER LEGISLATIVE CHANGES

A. Recommended changes to AS 41.17.230(b) The Forest Resources and Practices Act requires that DNR review the Tanana Valley State Forest Management Plan at least every five years [AS 41.17.230(b)] and may revise it as necessary. Full review and revision of the Tanana Valley State Forest Management Plan is costly and time-consuming. Procedures for amendments, special exceptions, and minor changes allow for needed changes between full review and revision processes. Therefore, DNR recommends the following change:

"AS 41.17.230(b) The commissioner shall review **and revise a management plan at least once every five years and may revise when necessary.**"

B. Recommended Additions to and Withdrawals from the State Forest

Alaska Statutes Chapter 17, Article 3, (State Forest System) Section 41.17.210 states that State Forest proposals shall consist "primarily of commercially valuable forest land determined by the governor to be necessary for retention in state ownership for management under the principles of multiple use and sustained yield..." On the basis of these criteria, DNR recommends that the following additions and deletions be made to the Tanana Valley State Forest. The TVSF Management Plan Forestwide Map shows recommended additions and withdrawals. The recommended additions all contain commercial forest land and are adjacent to the State Forest. Prior to including them in the State Forest, DNR reviewed the management intent for each unit (currently in the Tanana Basin Area Plan) to be sure it was compatible with the intent of the State Forest. The recommended withdrawals are not commercially valuable forest land and do not otherwise contribute overall to the management goals of the forest. This plan shall be amended if any legislative changes are made in State Forest boundaries.

The following list defines abbreviations that are used in this section.

TBAP: Tanana Basin Area Plan. Dept. Natural Resources, 1991.

Classifications

- Agricultural Land: agr
- Forestry Land: for
- Mineral Resources Land: min
- Public Recreation Land: pur
- Resource Management Land: rmg
- Settlement Land: stl
- Water Resources Land: wrs
- Wildlife Habitat Land: whb

TBAP unit numbers and classifications are shown in brackets in the list below. Examples: [Unit 2I4 for], [Unit 4K1 for, pur]. Descriptions of these units can be found in TBAP.

C. Recommended additions to the Tanana Valley State Forest

a. Subunit: C2J, 4,480 acres.

Classification: TBAP [Unit 2I4 for]

Legal Description: All state lands within:

Township 1 North, Range 6 West, Fairbanks Meridian

Section 1

Sections 12 – 13

Sections 24 – 25

Sections 35 – 36

This strip of land, located between Minto Flats and the adjacent State Forest, contains productive upland forests of white spruce and hardwoods. The unit is presently accessed by the Dunbar-Livengood winter trail and will be accessed by an all-season forest road. Management intent will be the same as for Subunit 4C.

b. Subunit: CIA, CIB, 14,568 acres

Classification: - TBAP

Legal Description:

Township 2 South, Range 4 West, Fairbanks Meridian

Section 4, E1/2, SW1/4 [Unit 1B3 for, pur, whb]

Section 8, those portions of S1/2 NE1/4, SE1/4, E1/2 SW1/4,

SW1/4SW1/4, which lie North of the Parks Highway [Unit 1B3 for, pur, whb]

Section 9, North of Parks Highway [Unit 1B3 for, pur, whb]

Sections 17 - 19, North of Parks Highway [Unit 1B3 for, pur, whb]

Township 2 South, Range 5 West, Fairbanks Meridian

State-owned lands within Sections 24 - 27, South of Parks Highway 1A1 for, pur, whb]

Sections 31 - 36 [Unit 1A1 for, pur, whb]

Township 3 South, Range 5 West, Fairbanks Meridian

Sections 2 – 10 [Unit 1A1 for, pur, whb]

State-owned lands within Sections 17 – 18 [Unit 1A1 for, pur, whb]

These units are on Nenana Ridge, border the State Forest, and have similar values. They are highly productive, easily accessible, upland forests. Adding these units to the State Forest will consolidate the state's highest value forest lands under a single management authority and plan.

Note: If this subunit is added to the State Forest, the following management guidelines will be added to the entire Subunit 5A. “A 300-foot buffer from centerline on each side of the roadway should be managed to maintain or enhance scenic views along the highway. Development activities such as timber harvesting and land-use authorizations may be allowed within this buffer if the activity is designed to maintain or enhance the scenic values of the highway corridor, and to provide opportunities for viewing background scenery.”

c. Classification: TBAP, all state-selected land. 1,080 acres

Township 4 South, Range 8 West, Fairbanks Meridian

Section 12 [for, pur]. This parcel is adjacent to the TVSF.

Section 11, South ½ [for, pur]. This parcel will be adjacent to TVSF if Section 12 is added.

Section 15, E ½ NW ¼, W ½ NE ¼ West of the Tanana River [for]. This parcel will be within ¼ mile of the TVSF if Section 11 is added.

Three small state-selected parcels near Nenana adjacent to the TVSF are recommended for addition to the TVSF if they are conveyed to the State. These parcels are near Nenana and have a high potential for timber management. Highly productive spruce stands grow along the Tanana River. The area is easily accessible in winter, and logging commonly occurred there in the past. The area would be managed for personal use and commercial timber production while protecting public use values of the Tanana River.

d. Subunit: C8B, 21,829 acres

Classification: TBAP

Legal Description:

Township 7 South, Range 7 East, Fairbanks Meridian

State-owned lands north of the Richardson Highway within Sections 19 – 21

[Unit 1Q3 for whb]

State-owned lands north of the Richardson Highway within Section 27

[Forestry classification: not within TBAP]

Township 7 South, Range 8 East, Fairbanks Meridian

Section 22, W1/2 [Unit 7A2 for, pur, whb]

State lands within Section 27, W1/2 [Unit 7A1 pur, whb]

Township 8 South, Range 5 East, Fairbanks Meridian

Section 1, S ½ SW1/4 [Unit 7G1 for whb]

Section 2, S1/2 N of military boundary, S1/2 NW1/4, SW1/4 NE1/4

Section 3, SE1/4 NE1/4, NE1/4 SE1/4 N of military boundary

Section 11 - 13, North of the military reservation [Unit 7G1 for whb]

Township 8 South, Range 6 East, Fairbanks Meridian

Section 1, S1/2 SW1/4, SW1/4 SE1/4

Sections 2 – 3, S1/2S1/2 [Unit 7G1 for whb]

Sections 7-16 [Unit 7G1 for whb]

Sections 17 - 18, North of the military reservation [Unit 7G1 for whb]

Sections 20 - 21, North of the military reservation [Unit 7G1 for whb]

Sections 22 – 26 [Unit 7G1 for whb]

Sections 27 - 28, North of the military reservation [Unit 7G1 for whb]

Township 8 South, Range 7 East, Fairbanks Meridian

Section 13, W1/2, SE1/4, SW1/4NE1/4 [Unit 7G1 for whb]

Section 14, W1/2 SW1/4, E1/2 NE1/4

Section 15, S1/2, NW1/4, S1/2 NE1/4

Sections 16 – 17 [Unit 7G1 for whb]

Section 19, SE1/4SE1/4 [Unit 7G1 for whb]

Sections 20 – 22 [Unit 7G1 for whb]

Section 23, NW1/4, N1/2 SW1/4, NE1/4NE1/4, W1/2 NE1/4 [Unit 7G1 for whb]

Section 24, N1/2 NW1/4 [Unit 7G1 for whb]
Section 27, W1/2 , NW1/4NE1/4 [Unit 7G1 for whb]
Section 28, NE1/4SE1/4, North of the Delta River [Unit 7G1 for whb]
Section 29 [Unit 7G1 for whb]
Section 30, NE1/4NE1/4 [Unit 7G1 for whb]
Section 34, NW1/4NW1/4 [Unit 7G1 for whb]

Township 8 South, Range 8 East, Fairbanks Meridian

Section 18, SW1/4SE1/4, S1/2 SW1/4, NW1/4SW1/4 [Unit 7G1 for whb]
Section 19, N1/2 , N1/2 SE1/4 [Unit 7G1 for whb]
Section 20, SW1/4NW1/4, NW1/4SW1/4 [Unit 7G1 for whb]

This unit comprises the bulk of the timberland occurring between Fort Greely and the Tanana River. The timber consists of productive white spruce stands along the Tanana River and mixed white spruce/hardwood stands on uplands to the South. Management goals would emphasize the area's wildlife, recreation, and timber resources. Because of habitat values in the floodplain, the recommended additions to the State Forest are south of the 1000-foot contour line from the Tanana River.

- e. Subunit: 7D5, 160 acres. This Subunit was created by the 2001 Amendment to TBAP, from the original Subunit 7D4.

Township 9 South, Range 13 East, Fairbanks Meridian

Section 28, NE ¼ [Unit 7D5 (formerly 7D4) pur, whb]

This new subunit lies adjacent to the Tanana Valley State Forest Subunit 10B, the Volkmar Bluffs Research Natural Area. This quarter-section of land within the Tanana Basin planning area encompasses a large prairie feature that appears to be part of the prairie system in the adjacent Tanana Valley State Forest research natural area. This amendment is designed to expand the research natural area to include the remainder of that prairie system.

- f. Subunit: C6F, 9,600 acres

Classification: TBAP

Legal Description:

Township 21 North, Range 8 East, Copper River Meridian

Sections 1 – 5 [Unit 6F2 for, pur, whb]

Township 22 North, Range 8 East, Copper River Meridian

Sections 6 – 7 [Unit 6F2 for, pur, whb]

Section 19 [Unit 6F2 for, pur, whb]

Sections 25 – 26 [Unit 6F2 for, pur, whb]

Section 33 [Unit 6F2 for, pur, whb]

Township 23 North, Range 6 East, Copper River Meridian

Section 13 [Unit 6F2 for, pur, whb]

Sections 24 – 25 [Unit 6F2 for, pur, whb]

Township 23 North, Range 7 East, Copper River Meridian

Section 36 [Unit 6F2 for, pur, whb]

This unit consists of several small parcels of land that were not included in the State Forest because of questionable land status. The primary purpose of adding these to the State Forest is to consolidate land management in the area. Management intent for most of this area would be the same as that for Subunit 12B.

g. Subunit: C6I, C6H. 25,319 acres

Classification: TBAP

Legal Description:

Township 18 North, Range 13 East, Copper River Meridian

Section 3, W1/2 [Unit 6H1 rmg]

Section 4 – 6 [Sec. 4: Unit 6H1 rmg] [Sec. 5: Unit 6H4 for min whb] [Sec. 6: Unit 6D2 for]

Section 7 [Unit 6D2 for]

Township 19 North, Range 12 East, Copper River Meridian

Sections 1 – 3 [Unit 6H4 for min whb]

Section 10 [Unit 6H4 for min whb]

Section 11, excl. F14438 Par B. [Unit 6H4 for min whb]

Section 12 [Unit 6H4 for min whb]

Section 13, excl. F14471 Par B. [Unit 6I1 for pur whb]

Section 14 [Unit 6I1 for, pur, whb]

Section 15, 16 E ½ [Unit 6H4 for, min, whb]

Section 17, S ½ [Unit 6I1 rmg and Unit 6H4 for, min, whb]

Section 19 [Unit 6I1 for, pur, whb and Unit 6H4 for, min, whb]

Section 20, S ½ and NE ¼, excl. USS6011 F024775 Par.E. [Unit 6H4 for, min, whb]

Sections 21 – 36 [Unit 6H4 for, min, whb]

Township 19 North, Range 13 East, Copper River Meridian

Section 17, Southwest of the right bank of the Tanana River [Unit 6I1 for, pur, whb]

Section 18, South of the right bank of the Tanana River [Unit 6I1 for, pur, whb]

Section 19 [Unit 6I1 for, pur, whb]

Sections 20 - 21, West of the right bank of the Tanana River [Unit 6I1 for, pur, whb]

Sections 28 - 29, South of the right bank of the Tanana River [Unit 6I1 for, pur, whb]

Sections 30 – 32 [Unit 6I1 for, pur, whb]

Sections 33 - 35, Southwest of the right bank of the Tanana River [Unit 6I1 for, pur, whb]

These units are located along the Tanana River near Tok between Native lands and the State Forest. The units contain commercial timber, have good access, and would be valuable additions to the State Forest.

h. TBAP Subunit 6F3 and 6F2. 5,600 acres.

Township 21 North, Range 8 East, Copper River Meridian:
Section 6 [Unit 6F3 pur whb]

Township 23 North, Range 6 East, Copper River Meridian:
Sections 2 - 4 [Unit 6F2 for pur whb]

Section 18 [Unit 6F2 for pur whb]

Section 19 [Unit 6F2 for pur whb]

Township 23 North, Range 7 East, Copper River Meridian:
Section 34, NE1/4, S1/2 [Unit 6F2 for pur whb]

Section 35 [Unit 6F2 for pur whb]

Township 24 North, Range 7 East, Copper River Meridian:
Section 31 [Unit 6F3 pur whb]

These isolated units of TBAP lands are located near Dot Lake between Native lands and the State Forest. Their addition to the State Forest will consolidate management authority.

i. Subunit: C6G, 23,040 acres

Classification: Forestry, Wildlife Habitat TBAP

Legal Description:

Township 25 North, Range 7 East, Copper River Meridian [Unit 6G1 for, whb]

This township was apparently left out of the TVSF legislation by a mistake in a legal description that substituted a wrong township. Although the unit is currently inaccessible, including it in the State Forest as originally proposed would offer some management efficiency because it shares common access and similar resource values with adjoining State Forest lands to the west and south. The unit would be included in Unit 11 and managed for multiple use.

j. The following two parcels were excluded in the legal description of the TVSF because of federal interests. However, the federal interests are no longer valid. One of the two federal applications is closed and the other was discovered by BLM to have an incorrect legal description and is actually in another township outside the forest boundary. The legal descriptions of the two parcels follow.

- Parcel 1. 1,794 acres. Sections 5, 6 and 7, T19N, R13E, CRM. F028758 should now be included in the TVSF.
- Parcel 2. Section 17, T20N, R11E, CRM. F12548 should now be included in the TVSF. [Note: This parcel may need further adjudication. The current status plat shows that Native Allotment F12548 still exists, but in Sections 9 and 16.]

D. Recommended Withdrawals from the Tanana Valley State Forest.

a. Subunit: 1C, 1,898 acres

Legal Description:

Township 1 North, Range 11 West, Fairbanks Meridian

Sections 18, 19 and 30, Those portions east of the Tolovana River

Township 2 North, Range 10 West, Fairbanks Meridian
Section 7, S1/2
Township 2 North, Range 11 West, Fairbanks Meridian
Section 10, S1/2
Section 11, S1/2
Section 12, S1/2

These are the portions of Minto Flats along the Tolovana River which are recommended for withdrawal so as to consolidate most wetlands in Minto Flats under a single management intent. The areas are highly productive wildlife habitat but contain very little timberland. The area borders the Minto Flats State Game Refuge, and is recommended as an addition to the Refuge.

b. Subunit: 3B, 2,400 acres

Legal Description:

Township 4 North, Range 7 West, Fairbanks Meridian
Sections 27, 28, 29
Sections 32, N1/2, SW1/4

This area consists of wetlands bordering the Minto Flats State Game Refuge, and is recommended as an addition to the Refuge.

c. Subunit: 4B, 2,400 acres

Legal Description:

Township 3 North, Range 3 West, Fairbanks Meridian
Section 25, S1/2
Section 31, SE ¼
Sections 32 - 35, S1/2
Section 36

This is the eastern portion of Subunit 4B which is recommended as a TVSF withdrawal so that it is available for designation as part of the Chatanika State Recreation River corridor (see the "Management Guidelines and Activities" part of the Unit 4 section of Chapter 3). The area is comprised mostly of poorly drained wetlands along the Chatanika River and contains little timberland. Include in TBAP Unit 1E1 until a legislative designation is made.

d. Subunit: 12A, 19,200 acres

Legal Description:

Township 21 North, Range 10 East, Copper River Meridian
Sections 1 - 22
Sections 27 - 34

This township contains low relief and swampy, noncommercial forest; it was not included in the administration proposal. The unit's inclusion in the State Forest does not

offer any management advantages for adjacent State Forest lands. Include in TBAP Unit 6G1 until a legislative designation is made.

e. Subunit: 12A, 19,200 acres

Legal Description:

Township 25 North, Range 8 East, Copper River Meridian

Sections 1 - 5

Sections 8 - 17

Sections 20 - 30

Sections 33 - 36

This township was apparently included in the State Forest because of a mistake made in the range. This unit is generally at a high elevation with few significant resources appropriate for the State Forest system. Include in TBAP Unit 6G2 until a legislative designation is made.

f. Subunit: 13A, 13B, 21,120 acres

Legal Description:

Township 20 North, Range 13 East, Copper River Meridian

Sections 1 - 18

Township 19 North, Range 15 East, Copper River Meridian

Sections 1 - 15

These areas were not part of the original administration proposal. They are underlain entirely by permafrost and forested with noncommercial black spruce. They have no other important resource values or advantages for inclusion in the State Forest. Include in TBAP Unit 6J3 until a legislative designation is made.

VII. RESEARCH NEEDS

All research on the resources, features, uses, and economics of the State Forest will improve DNR's ability to manage the State Forest. For this plan, many assumptions were made based on limited knowledge. When data were lacking, a conservative approach was taken. Better knowledge may allow DNR to increase the benefits available from the forest, and in some cases the knowledge is needed to validate plan recommendations. The following research projects are those most needed to improve the quality of planning decisions and increase TVSF benefits.

1. Silvicultural Research

- a. Fire suppression. The impacts of fire suppression on the distribution of vegetation types and age classes, and how that in turn effects wildlife in the TVSF, should be studied to help DOF design harvests that are beneficial to the forest and its wildlife.
- b. Wildlife use of cutover areas. Cutover areas are widely assumed to produce increased browse and cover, but factors important to use of cutovers by moose, grouse, hare, lynx, etc. need to be studied if logging will be managed to benefit moose and other wildlife.
- c. Timber growth and yield. Site index curves, volume tables, and mixed wood and single species yield tables need to be greatly improved. Since available data are limited, better data could significantly affect the sustained timber yield of unmanaged stands.
- d. Seeding. Artificial direct seeding offers an economical reforestation method for spruce. Although initial research on direct seeding has been favorable, field trials have shown poor results. Research must be continued until direct seeding is demonstrated to adequately re-establish timber stands.
- e. Mixed wood silviculture. Most of the forest's timberland consists of mixed spruce-hardwood. Silvicultural research to date has focused on pure stands.
- f. Managed timber stand growth and yield. The effects of proper stocking level, thinning, release cutting, and genetic improvement are unknown, so no increases in timber supply were assumed from these practices.
- g. Tree mortality. The role and extent of pests and diseases and their effect on timber yield were not known enough to factor into yield projections for this plan.
- h. Hardwood utilization. Until strong markets are developed for birch and aspen, management of the mixed spruce-hardwood stands may be economically marginal. The vast areas of pure hardwoods will also remain undeveloped.
- i. Older stands. Characteristics and importance of older stands need to be studied, especially white spruce stands in upland and floodplain forests, including the amount and role of coarse woody debris in these stands. DOF will convene a science and technical committee to determine if old growth-dependent biological functions can be demonstrated and recommend management techniques to achieve them. The committee will review literature, identify research needs, and compile professional expertise.
- j. Harvest systems. Partial cuts, seed tree cuts, selective cuts and other harvest systems need to be studied to determine the impact to soil warming, site productivity, and wildlife response.

2. Forest Practices Research and Monitoring

- a. Regional classification system. Develop a regional waterbody classification system for forest practices purposes, map streams by class, and use the system to tailor other research and monitoring studies by stream type. The classification should allow for different reaches of the same stream to be classified differently if needed, and should recognize that conditions of

glacial waters (e.g., turbidity) may change seasonally. Note: The Region III riparian management committee has completed a classification system. The system has been incorporated into a bill currently before the Legislature. If passed, it will establish a classification system for this region.

- b. Baseline conditions. One of the most significant information gaps is the lack of information on the natural variability of stream conditions. It is difficult to assess or predict the impacts from forest management without better data on natural conditions. In particular, baseline data is needed on:
- Stream temperature, particularly in non-glacial waters.
 - Abundance, distribution, and recruitment of large woody debris in non-glacial waters.
 - Sediment loads in both glacial and non-glacial waters.
 - Proportion of streambank cover by cover type under natural conditions (i.e., how many stream miles are in forest cover and other cover types). This information could be extracted from existing GIS databases maintained by the Division of Forestry.
 - Fire history in riparian areas and the impact of fire on characteristics of riparian forests.

Note: The Tanana River Dynamics research project is addressing some of these topics.

- c. Fish habitat. Identify important overwintering, incubation, and rearing habitats in waterbodies supporting anadromous or high-value resident fish species. There is relatively good information on habitat and migration routes for adult salmon. However, much is still unknown about habitat for juvenile fish in glacial and humic-stained systems. Juvenile habitat tends to be in relatively small patches as compared to long continuous corridors needed for adult salmon migration, and the sites vary by species, season, and year. Overwinter incubation of salmon eggs can occur in gravel beds of some sloughs that are seasonally dry, but the extent and location of such habitat is not well known and changes over time. Concern remains over potential overlap of such spawning areas with access routes to timber harvest units.
- d. Glacial river dynamics. Major rivers in the Interior are dynamic, with rapid bank erosion and deposition. Research is needed to:
- Determine natural erosion rates and patterns in aggrading glacial rivers, particularly the Tanana River. Identifying reaches where different erosion patterns occur would require a change analysis using airphotos and remote sensing data. Base data exists in photos and satellite data, but analysis is needed.
 - Determine whether and under what conditions streamside vegetation significantly affects natural rates of erosion.
- e. Winter access. Much of the forest access in the Interior depends on winter roads and ice bridges. The effect of winter access, particularly stream crossings, on fish habitat is uncertain. In particular, it is not known whether ice bridges and roads can cause freezing down into gravels that are important overwintering habitat for fish and invertebrates.
- f. Monitoring. Implementation monitoring is needed to determine whether the Forest Resources and Practices Act and the best management practices in the regulations are being appropriately

implemented. Implementation monitoring is the most immediate monitoring priority. Effectiveness monitoring is also needed to determine whether the FRPA and regulations adequately protect fish habitat and water quality in Interior Alaska.

3. Research Natural Areas

Reports for each Research Natural Area are needed. Reports would include information such as the access to the area, history of its selection as an RNA, the physical environment (climate, geology and soils), biota (plant and animal communities), and the disturbance history.