

CHAPTER 4: IMPLEMENTATION

Upon signature by the Commissioner of the Alaska Department of Natural Resources (DNR), this plan will become policy for the management of state lands in the Tanana Valley State Forest. All DNR land use authorizations, timber sales, road building, mineral leases, and other actions on these state lands shall comply with the provisions of this plan.

This chapter describes additional actions that support the management intent detailed in previous chapters for this working state forest. Such actions include potential management agreements, priority research topics, additions to the state forest, and procedures for plan amendment. This plan remains effective until revised.

AGENCY LAND MANAGEMENT RESPONSIBILITIES

The DNR Division of Forestry and Fire Protection (DOF) has overall land management authority within state forests. The DOF 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 DNR (Appendix D), the Forest Service must approve all activities in the Experimental Forest, including timber harvest, road construction, and mineral exploration and development.

CITIZENS' ADVISORY COMMITTEE FOR THE TANANA VALLEY STATE FOREST

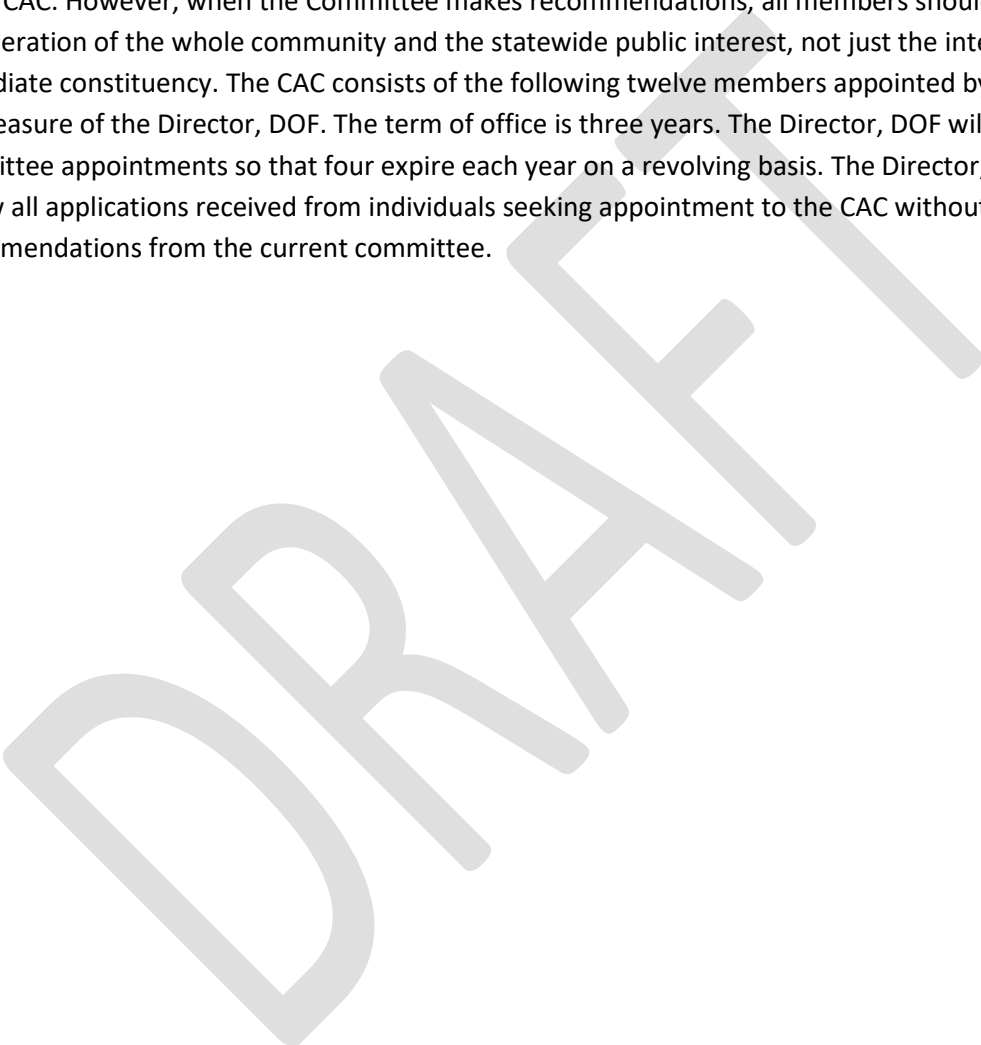
A Citizens' Advisory Committee (CAC) for the TVSF and other forested land managed by the DNR in the Tanana River Basin was authorized and established by past versions of the TVSF Management Plan and has proven a valuable mechanism for achieving multiple uses of the forest without conflict. The Committee, in an advisory capacity, will provide recommendations to the DNR on forest management issues on these lands. The Committee does not conflict with the Board of Forestry established by AS 41.17.041. The Committee's purpose is to:

- Review and provide Committee recommendations to the DOF 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, DOF. 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.

- 1 • Review issues and activities on DNR-managed forested land and recommend management
2 policies to the Director, DOF.
- 3 • Help disseminate information about the TVSF and other DNR-managed forested land to the
4 public.

5 Each member should represent the full range of interests within his or her constituency. All CAC
6 members should work to establish two-way communications with other groups and individuals within
7 the interest they represent. Members are expected to bring their constituencies' interests and concerns
8 to the CAC. However, when the Committee makes recommendations, all members should act in
9 consideration of the whole community and the statewide public interest, not just the interest of their
10 immediate constituency. The CAC consists of the following twelve members appointed by and serving at
11 the pleasure of the Director, DOF. The term of office is three years. The Director, DOF will make
12 committee appointments so that four expire each year on a revolving basis. The Director, DOF will
13 review all applications received from individuals seeking appointment to the CAC without requiring
14 recommendations from the current committee.

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Table 4.1. 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. Representatives should not be currently employed by a State agency other than the University of Alaska.
Alaska Native Community	Represents both individual Alaska Natives and Alaska Native organizations in the Tanana Basin who use the forest or will be directly impacted by forest management.
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, including commercial, non-commercial, consumptive, and non-consumptive uses. This representative should reside in the eastern Tanana River Valley between Banner Creek and the Canadian border.
Regional Representative - Lower Tanana Valley	Represents the public on a regional basis, including commercial, non-commercial, consumptive, and non-consumptive uses. This representative should reside in the western Tanana River Valley west of the Fairbanks North Star Borough.

2 When appointing CAC members, the Director, DOF will seek region-wide geographic representation. The
 3 CAC will elect its own presiding officer. The CAC will adopt its own by-laws subject to approval by the
 4 Director, DOF.

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1 PROCESS FOR REVIEWING APPLICATIONS FOR PERMITS, LEASES, DISPOSALS, AND
2 EASEMENTS

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

8 Other land management proposals may be initiated by other agencies or private individuals and may
9 include requests for easements, commercial leases, material sales, or permits for mineral activity,
10 trapping cabins, or grazing. The following process will be used to review these authorization or
11 conveyance requests. All applications for use of State Forest land, including mining or prospecting, will
12 be forwarded to the DOF. The DMLW will distribute applications for review by agencies, including the
13 DOF. The DOF will review applications for consistency with this plan and other existing laws and policies.
14 The DOF will then return applications to the DMLW with stipulations for processing. The DOF may also
15 require additional review of applications after interagency or public comment. Although preliminary
16 decisions or final findings will continue to be made by the DMLW, applications must be consistent with
17 stipulations provided by the DOF. No permits, leases, easements, or disposals will be authorized for use
18 of State Forest land that are not consistent with stipulations from the DOF.

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

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1 PLAN MODIFICATION

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

5 **Periodic Review**

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

10 **Procedures for Plan Changes**

11 Three kinds of changes are allowed by regulations in 11 AAC 55.030. "A revision to a land use plan is
12 subject to the planning process requirements of AS 38.04.065. For the purposes of this section and AS
13 38.04.065, a 'revision' is an amendment or special exception to a land use plan as follows:

14 1. An 'amendment' permanently changes the land use plan by adding to or modifying the basic
15 management intent for one or more of the plan's subunits or by changing its allowed or
16 prohibited uses, policies, or guidelines." A proposal to remove an area from the commercial
17 timber base, to harvest the timber from an area where it is prohibited, or to close an area not
18 identified in this plan to mineral entry are examples of changes requiring amendment. However,
19 amending the Forest Practices Regulations, for example, and inserting those changes in this plan
20 do not require an amendment of the plan. Amendments require public notice, public hearings,
21 and approval by the Commissioner. Amendments may be proposed by agencies, municipalities,
22 or members of the public. Requests for amendments are submitted to the Northern Regional
23 Office of the DOF. The Director of DOF determines what constitutes an amendment or just a
24 minor change.

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

34 3. A minor change to a land use plan is not considered a revision under AS 38.04.065. A 'minor
35 change' is a change that does not modify or add to the plan's basic intent, and that serves only
36 to clarify the plan, make it consistent, facilitate its implementation, or make technical
37 corrections. Authority: AS 38.04.065, AS 38.04.900, AS 38.05.020, AS 38.05.300.

1 FORESTWIDE IMPLEMENTATION ACTIVITIES

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

5 WILDLIFE HABITAT ENHANCEMENT

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

12 RECREATION FACILITIES

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

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

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1 Table 4.2. Potential Recreational Activities.

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 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 1. Establish self-guiding interpretive trail 2. 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

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3 **RESEARCH**

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

6 **TIMBER AND ROAD DEVELOPMENT**

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

15 **FIRE DISTURBANCE**

16 Recognizing that the boreal forest is disturbance-driven is essential. Forest condition in the Interior is
17 changing as a result of increased insect and disease activity, greater fire risk, and increased stress on

1 trees caused by climatic change. Previous fire control efforts contribute to the shortage of young to
2 intermediate aged stands, especially in upland forests. Some form of disturbance, natural or man-
3 caused, is necessary to maintain the forest and its biological diversity. Maintenance of a rich landscape
4 mosaic is needed to prevent biodiversity losses. In the Tanana Valley State Forest, fires will continue to
5 be suppressed near settlements and where there are infrastructure investments. Current and proposed
6 timber sales will receive fire protection commensurate with the values at risk. However, where feasible,
7 wildland fires will be allowed to burn and suppression will be limited in other areas to decrease the long-
8 term risk of damaging fires and to maintain natural diversity of forest stands, stand ages, and habitat
9 types. Where allowing wildland fire is not feasible, the DOF will use timber harvest, prescribed fire, or
10 habitat enhancement techniques to disturb the forest and maintain a natural range of forest types and
11 stand ages. Annual reviews of protection levels are an important aspect of the fire plan. Social,
12 environmental, and economic conditions determine the need to review and change protection levels.
13 Each Area Office is responsible for a periodic review of protection levels in their geographic area.
14 Suggested changes will be coordinated with the regional office, neighboring landowners, and will follow
15 the guidelines established by the Alaska Interagency Wildland Fire Management Plan (FMP). The FMP
16 addresses the process for protection level changes on pages 38-40 in a section entitled: Wildland Fire
17 Management Option Revisions. For additional information on fire management topics in the Tanana
18 Valley State Forest, see the Interagency Fire Management Plan Section in Chapter 1 and the Fire
19 Management parts of the Scientific Resources and the Timber Management sections of Chapter 2. Any
20 proposed changes of fire management options (protection levels) will be provided to affected land
21 owners and managers and resource management agencies in accordance with the Alaska Interagency
22 Wildland Fire Management Plan.

23 RECOMMENDATIONS FOR ADDITIONS AND WITHDRAWALS FROM THE TANANA VALLEY 24 STATE FOREST AND OTHER LEGISLATIVE CHANGES

25 Additions and withdrawals of land from Alaska’s State Forest system occur through legislative
26 designation, following the procedural guidelines described in AS 38.04.005 and AS 38.04.060 -
27 38.04.070. Recommendations of parcels for addition to the TVSF can be found in the ETAP and YTAP,
28 under the *Forestry* heading in Chapter 2: Area-wide Land Management Policies. In addition, the Alaska
29 Timber Jobs Task Force published recommendations in 2012, identifying over one million acres of forest
30 classified land in the Tanana Basin recommended for addition to the TVSF. Any proposed changes in
31 legislative designation for a parcel of land will be coordinated with the DMLW Resource Assessment and
32 Development Section (RADS), as well as the DMLW Lands Office.

33 RESEARCH NEEDS

34 All research on the resources, features, uses, and economics of the State Forest will improve DNR's
35 ability to manage the State Forest. A number of research projects have been done to help improve
36 decision-making in the last 20 years. However, the environment continues to change which requires
37 new and/or better knowledge of the boreal forest. The knowledge may allow DNR to increase the
38 benefits available from the forest, and in some cases the knowledge is needed to validate plan
39 recommendations. Reforestation on carbon sequestration projects were initially considered early in

1 market scoping (Alden 2001). The following research projects are those most needed to improve the
2 quality of planning decisions and increase TVSF benefits in the order of priority.

3 Silvicultural Research

- 4 a) Compilation of on-going and completed research relevant to Alaska. The compilation will help
5 find existing information and know what research will further help with management decision
6 making.
- 7 b) Potential advantages and disadvantages of reforestation with non-native, non-invasive tree
8 species after timber harvest or natural mortality events is uncertain. How would naturalized
9 species in Alaska like lodgepole pine or Siberian larch influence carbon sequestration, future
10 timber supply, and fish and wildlife habitat in boreal forest? Prior to adopting forest
11 regeneration at an operational scale that include non-native trees, a Science and Technical
12 Committee and an Implementation Committee should be convened to consider pros and cons to
13 forest health, ecosystem services, the forest industry and provide guidance for implantation and
14 monitoring.
- 15 c) Remote sensing technologies. Can we use remote sensing technology, including UAV, airplane,
16 satellite, visible and hyperspectral images, and LiDAR, to obtain high-quality data at low cost?
17 What types of applications, such as timber cruising, inventory, regeneration survey, fuel
18 assessment, aerial direct seeding, and fire management are feasible?
- 19 d) Assisted migration. Monitoring of existing provenance and species trials will help assess the
20 adaptability of seed sources and non-native species. Can we find optimal sites for local seeds
21 under changing climate? Incorporate seeds from southern latitude and non-native species on
22 selected sites for reforestation after timber harvest in a systematic way to assess adaptability,
23 growth, and optimal spacing.
- 24 e) Landscape scale fire resilience and resource outcomes. Can we pattern harvest of hardwood or
25 mixed species stands to regenerate fuel types that reduce risk of fire spread into mid-aged white
26 spruce (protect future sawlogs)? Can we use timber sale size and configuration to emulate fire
27 disturbance patterns to maintain desired assemblages of wildlife species in managed forest? Can
28 we use these timber harvest patterns to evaluate wildlife ecosystem services beneficial to forest
29 regeneration and resilience to insect irruptions?
- 30 f) Wildlife use of cutover areas. Can we systematically evaluate existing timber sales for
31 understanding habitat attributes predictive of the occurrence or abundance of wildlife species
32 or species assemblages that may aid design of future timber sales for evaluating both timber
33 and desired wildlife outcomes?
- 34 g) Timber growth and yield. The Interior Alaska FVS variant was recently released and needs to be
35 validated using existing timber sales, Levels of Growing Stock sites, Cooperative Alaska Forest
36 Inventory, and other available long-term research sites. Growth and yield model should also
37 include non-native species, such as lodgepole pine and Siberian larch, to assess their economic
38 feasibility.
- 39 h) Seedling. What are the capabilities of growing high-quality seedlings within the state? Should
40 additional nursery infrastructure be established in-state? Are there BMPs to consider when
41 collecting seed? What does a resilient seed storage bank look like on a statewide level?
- 42 i) Mixed wood and hardwood silviculture. What components of the silvicultural prescription
43 should be considered when managing mixed species or hardwood stands? Guidelines of

- 1 management practices, such as harvesting method, need of reforestation management, and
2 timing of each practice will be beneficial for forest land managers.
- 3 j) Tree mortality. Is it possible to mitigate insect outbreaks, especially *Ips* and spruce beetle, using
4 forest management techniques or spatial pattern of harvest? What are the best practices for
5 managing forest health? What are the silviculture prescription components that need to be
6 considered with regard to forest health?
- 7 k) Silvicultural Treatments. Partial cuts, seed tree cuts, selective cuts and other harvest systems
8 need to be studied to determine the impact to soil warming, site productivity, and wildlife
9 response.
- 10 l) Grazing Sites. What are best practices of livestock grazing and range management to mitigate
11 invasive species or pathogens? How could we use livestock grazing as part of forest
12 management?

DRAFT