

Chapter 2

FOREST-WIDE LAND MANAGEMENT POLICIES

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Chapter 2

FOREST-WIDE LAND MANAGEMENT POLICIES

INTRODUCTION

This chapter contains forest-wide land management policies for each resource or land use category: fish and wildlife, forest resources, forest protection, recreation, subsurface resources and materials, water and riparian systems, and transportation.

The policies in this chapter consist of goals, and management guidelines, which combine the general conditions the plan intends to achieve (goals) and more specific directives that can be applied on the ground by land managers as development occurs (guidelines). Management intent statements contribute to these general forest-wide goals and guidelines in Chapter 3, providing policy language for specific geographic delineation in the Forest. In the absence of specific guidelines for a resource use found in Chapter 3 for a unit or subunit, the goals and guidelines from this chapter will apply.

Goal: A general statement of management policy, usually not quantifiable nor having a specified date of completion. Goals identify desired long-range conditions.

Management Guidelines: Standards or procedures framing the policy for the issuance of permits, leases, or other authorizations for the use of state land or resources. Guidelines range in their level of specificity, providing detailed management direction, general guidance, or the identification of factors that need to be considered in decision making.

Management Intent Statements: Statements defining DNR's near and long-term objectives and the approach for achievement. These statements have a specific geographic scope pertaining to specific management units and subunits and are included in Chapter 3.

Note: The policies that follow only pertain to state land managed by DNR designated as the Haines State Forest. They do not apply to private lands, Native allotments, land managed by the University of Alaska or the Mental Health Trust Authority, or the Chilkat Bald Eagle Preserve managed by DPOR, all of which are found within the boundaries of the Haines State Forest Resource Management Area.

1 **MANAGEMENT POLICIES**

2 **FISH AND WILDLIFE HABITAT**

3 ***Goals***

4 The Forest contains habitats for fish and wildlife species that support the economy and
5 subsistence lifestyle of the local communities and contribute to the important sustainable
6 use goals of the State for these resources. The ADFG manages fish and wildlife in the
7 Forest and the DFFP contributes to the State management of these resources in this
8 policy. The DFFP management of the Forest provides a balanced approach to resource
9 use and fish and wildlife habitat protection with the following goals:

- 10 1. Maintain and enhance the fish and wildlife habitat resources that support
11 commercial, recreational, and subsistence activities in the Forest.
- 12 2. Maintain or improve the level of water quality through land management, stream
13 bank management, and silvicultural practices.
- 14 3. Maintain and enhance the existing diversity of fish and wildlife habitat through
15 coordinated interagency management, habitat enhancement and/or site
16 rehabilitation projects.

17 ***Management Guidelines***

18 **1. Mitigation**

19 All Forest resource use activities should be conducted with planning and implementation
20 to avoid or minimize adverse effects on fish and wildlife populations or their habitats.

21 Mitigation should include the following:

- 22 A. Avoid the loss of natural fish and wildlife habitat during resource development
23 activities.
- 24 B. Where habitat loss cannot be avoided, reduce loss and the need for habitat
25 restoration or maintenance efforts. Procedures for this can include the following:
- 26 • Include fish and wildlife habitat and use considerations in the early phases of
27 project planning and design to minimize or eliminate the spatial and temporal
28 extent of impacts.

- Provide information on best management practices to local, state, and federal resource and development agencies as well as to private individuals.

C. When loss of existing habitat during resource planning is identified, consider compensation with restoration or enhancement of similar habitats in areas of the Forest where those benefits can be realized.

2. Permits, Leases, and Plans of Operations for Non-Water Dependent Facilities

Commercial and industrial facilities, transportation facilities, and pipelines will, where feasible, require setbacks between these facilities and adjacent water bodies to maintain stream bank access and protect adjacent fish habitat, public water supplies, and public recreation. The width of this setback may vary depending upon the type and size of the non-water dependent facilities. The setback width shall be adequate to maintain access and protect adjacent waters from degradation meeting the water quality standards established by the Alaska Department of Environmental Conservation (ADEC). Adjacent to designated anadromous fish spawning habitat, the setback will, to the extent feasible, not be less than 100 feet landward of ordinary high water.

Where it is not feasible to maintain a setback adjacent to fish habitat, public water supplies, or recreational waters, other measures will be implemented to meet the intent of this guideline.

This guideline will be implemented in conjunction with the special management zone guideline in the Forest Timber Resources section of this chapter.

3. Structures and Activities in Fish Habitat

An Alaska Statute Title 16 Fish Habitat Permit, issued by ADFG, is required prior to any in-water work in anadromous fish streams, and for water intakes, dams, culverts, stream diversions, or other potential impediments to fish passage within resident fish habitat.

4. Water Intake Structures

When issuing water appropriations in fish habitat, DNR will, to the extent feasible and prudent, require that practical water intake structures be installed that do not entrain or impinge upon fish.

Water intake structures will be screened, and intake velocities will be limited to minimize entrapment, entrainment, or injury to the species of fish found in the water. The structures supporting intakes should be designed to prevent fish from being led into the intake. Other effective techniques may also be used to achieve the intent of this guideline. Screen size, water velocity, and intake design will be determined in consultation with ADFG and will be approved in a Fish Habitat Permit.

1 **5. Alteration of the Hydrologic System**

2 To the extent feasible, channelization, diversion, or damming that will alter natural
3 hydrological conditions and have a significant adverse impact on important riverine
4 habitat will be avoided.

5 **6. Operation of Heavy Equipment in Saturated Soils in or adjacent to Identified
6 Riparian Areas**

7 Permits issued for activities that require the use of heavy equipment will require that
8 damage to identified riparian wetland vegetation be avoided. Whenever feasible, access
9 in or across these areas should be limited to frozen ground conditions in winter. DNR will
10 consult with other agencies prior to issuing such permits.

11 **7. Land Designated Wildlife Habitat**

12 Land designated as Wildlife Habitat will be managed primarily for the protection of fish
13 and wildlife habitat resources present. Other compatible resource uses and appropriate
14 management strategies may be identified for each management unit and/or subunit and
15 are described in Chapter 3.

16 **8. Impacts on Subsistence**

17 Potential impacts to subsistence activities will be considered in management decisions
18 and through consultation with ADFG similarly to other sustainable resources found in the
19 Forest.

20 **9. Intertidal Areas**

21 Important intertidal habitats, including estuaries, tide flats, and other land in the intertidal
22 zone will be managed to prevent adverse impacts when developing resource use
23 activities. Unavoidable impacts for approved development will minimize long-term
24 detrimental effects to habitat through collaborative planning with ADFG.

25 **10. Sedimentation**

26 Activities that could generate sedimentation exceeding state water quality standards will
27 be managed to ensure compliance with those standards.

28 **11. Other Guidelines Affecting Fish and Game**

29 Several other guidelines in this chapter may affect fish and wildlife. For details, see the
30 following sections of this chapter:

- 31 • Forest Timber Resources
- 32 • Forest Protection

1 FOREST TIMBER RESOURCES

2 **Goals**

3 The State of Alaska's forest management goal is to provide timber resources for a viable
4 industry balanced with other forest resource uses, maintaining resources for future
5 generations as established in the Alaska Constitution. Generally, the State will offer
6 timber for sale to support wood product industry development with the resources found in
7 the forest and will provide opportunities for the development of carbon offset projects.
8 The specific goals for the Haines State Forest include:

- 9 1. Provide local jobs and jobs in other communities in the region and the state.
- 10 2. Contribute to the stabilization and diversity of the local economy within the
11 HSRMA and other communities in the region and the state.
- 12 3. Provide revenue to the State of Alaska through the sale of renewable public resources.
- 13 4. Provide a sustained yield of forest products for local, state, national, international
14 markets, and personal use.
- 15 A. Offer sales of commercial timber to support local and regional industry growth
16 and help establish value-added timber processing operations.
- 17 B. Provide opportunities for carbon offset projects in the Forest.
- 18 C. Offer cottonwood timber sales for interested purchasers. The 2018 second growth
19 inventory project included cottonwood regeneration and considers this species as
20 a component of the commercial Forest.
- 21 D. Offer personal use houselog and sawlog sales to local residents on a request basis.
22 The timber sold in personal use sales and the products created from the timber
23 must be used for non-commercial purposes. Harvest of personal use timber must
24 follow all provisions of this Forest Plan for timber harvesting.
- 25 E. Offer commercial firewood sales, generally western hemlock, on a request basis.
26 In addition, other forest products such as poles, posts and Christmas trees can be
27 made available on a request basis.
- 28 F. Continue to make up to ten cords per year per person of dead or downed timber
29 available, generally at no charge, for personal use.

- 1 5. Enhance the productivity of land to produce forest products through the planned
2 harvest of mature and regenerating stands, regeneration of harvest sites, intermediate
3 thinning, pruning, and conversion of non-forested "brush" areas using appropriate
4 methods.

5 ***Carbon Management Leasing and Offset Programs***

6 Senate Bill 48, signed into law in May of 2023, created provisions for carbon
7 management leasing and offset programs. AS 38.05.081 authorized the DNR to lease land
8 for carbon management purposes, and AS 38.95.400 established a carbon offset program
9 for state land including the sale of carbon credits. The HSRMA is statutorily authorized
10 under AS 41.15.300(c) and 41.15.315(d) to allow its use for a carbon offset projects. Any
11 carbon management offset program must be developed in accordance with the process
12 established by applicable statutes and regulations. Carbon offset projects are required by
13 AS 41.15.315(e) to be consistent with the applicable management plan, and the
14 management plan must identify the land appropriate for the carbon offset project. AS
15 41.15.315(e) also authorizes DNR to amend a management plan to allow for a carbon
16 offset project. All land use designations in the HSRMA are identified as available for
17 carbon offset projects.

18
19 ***Sustained Yield: Forest Land Use Designations, Forest Inventory, and***
20 ***Annual Allowable Harvest (AAC)***

21 The State Constitution and Alaska Statutes require the management of renewable
22 resources on a sustained yield basis. The Forest will be managed to ensure the perpetual
23 supply of renewable timber resources. In this plan, all land use designations will provide
24 timber resource use including carbon offset projects. The management intent language for
25 each unit and subunit will identify how the Forest is available for timber harvest. The
26 sustained yield of timber resources for the Forest shall be based on the acreages
27 containing commercial timber identified within these designations. Forest Plan primary
28 land designations have remained consistent since the adoption of the original HSFMP in
29 1986 and will be unchanged in this Forest Plan.

30 In the original Forest Plan, General State Lands within the HSRMA were included in
31 the commercial timber base acres contributing to the determination of annual harvest
32 levels; specifically, Mental Health Trust lands and University of Alaska grant lands.³ In
33 2002, the amendment of the Forest Plan excluded these lands from the timber base

³ The “timber base acres” are equivalent to the acres of timber available for harvest according to Forest Plan policy.

1 acreage reflecting the change in management authority of those lands. University of
2 Alaska and Mental Health Trust lands within the HSRMA are managed under the
3 direction of those agency administrations and no longer generally managed by the DNR.

4 The DFFP and the federal government collaborated on the first Forest inventory project
5 to establish baseline mature stand condition and existing timber volume per acre in 1965.
6 Standard forest tree measurement methods were used based on fixed short log lengths,
7 and a conservative volume available for annual harvest was calculated for the Forest.
8 Prior to the adoption of the Forest Plan in 1986, a second Forest inventory project was
9 completed to provide a contemporary estimate of mature stand condition and existing
10 volume using the same tree measurement method as the initial inventory. The Forest
11 volume results of the second inventory project, which reasonably reproduced the 1965
12 results, were published in 1995 and used in the calculation of the Annual Allowable
13 Harvest volume in the 2002 Forest Plan amendment.

14 In 2012 DFFP completed a third inventory of mature timber stands by remeasuring the
15 same trees sampled in 1965 and 1985 beginning the process to develop a Forest growth
16 model. Current forest tree measurement standards were used producing a timber volume
17 based on the variable log length method. The results of the third inventory of mature
18 timber in the Forest yielded an increase in volume per acre due to the variable log length
19 tree measurement method. In 2018 DFFP completed a comprehensive inventory of
20 regenerating stands across the Forest with the results contributing to the first Forest
21 sustained yield determination based on actual tree growth calculations. The results of the
22 Forest growth data analysis from the 2012 and 2018 inventory projects were reported in
23 2020 and then updated in 2023 using revised regional forest growth model equations.
24 Further updates to the report were completed leading to the adoption of the results by
25 DFFP in 2025.

26 The sustained harvest of timber resources from the Forest is determined using three
27 components of measurement: acres, volume, and age (growth/year). The timber base
28 acres represent the commercial forest area in the Forest Plan. The timber volume per acre
29 is the measured volume from the timber base acres. The Forest stand age is the tree
30 growth cycle demonstrating a sustained timber yield over time as required in the Forest
31 Plan. Therefore, the timber base (the available commercial forest acres), the timber
32 volume per acre, and the Forest age calculate the periodic sustained yield timber harvest
33 from the Forest referred to as the Annual Allowable Cut (or AAC). The commercial
34 timber base area in the Forest is 74,360 acres identified in the 2025 Inventory Report with

1 a net volume per acre of 24,583 board feet in a 120-year Forest growth cycle (rotation
2 age).⁴

3 The DFFP applies reasonable limitations to the determination of the annual sustained
4 harvest in policy resulting in a conservative calculation of harvest volume for long term
5 responsible planning purposes. The Annual Allowable Harvest is calculated using the
6 area control method. A three percent acreage reduction for regulated fisheries and wildlife
7 habitat maintenance across the Forest is applied to the total available acres for
8 commercial timber management.

9 The additional 3% reduction in acres of commercial timber base for the protection of
10 habitat yields a sustained annual allowable harvest of 14.77 million board feet of timber
11 in 601 acres or 147.7 million board feet of timber from not more than 6010 acres over a
12 ten-year period.⁵ The amount of timber harvested annually will vary and may be more or
13 less than the annual allowable harvest figure for the Forest. However, at no time shall the
14 acreage harvested on a decadal basis exceed the allowable harvest for that period.

15 ***Management Guidelines***

16 All activities related to timber harvest must comply with the State of Alaska Forest
17 Resources and Practices Act and Regulations. These documents contain, in part,
18 requirements and/or guidelines concerning the following:

- 19 • Road Construction and Maintenance
- 20 • Harvesting
- 21 • Cleanup and Stabilization
- 22 • Aesthetics
- 23 • Log Transfer and Storage Facilities
- 24 • Reforestation
- 25 • Insect and Disease Prevention and Control
- 26 • Carbon Offset Projects
- 27 • Forest Fire Protection

28 **1. Stand Management**

29 Based on the production capabilities of the land, DNR will assure a non-declining
30 sustained yield of a variety of wood products by managing forest stand age classes in the
31 commercial timber base acres of the Forest using the mean annual cumulative growth of
32 the timber (rotation age). The determination of the stand rotation age is based on the
33 results adopted in the current Haines Inventory Report (2025). Methods to achieve

⁴ A “board foot” is a unit of measure for tree volume calculations.

⁵ See the “Resource Allocation” sub-section below for further explanation of the sustainable harvest determination for the Forest Plan

1 sustained yield of Forest timber resources will consider carbon sequestration projects and
2 ecological conservation efforts contributing to the calculation of the available timber base
3 acres for management. The annual allowable harvest of commercial timber may be
4 adjusted based on the results of future forest inventory assessments. The determination
5 of the annual allowable harvest with adoption of a revised harvest level is independent
6 from this planning document.

7 Timber harvest “salvage” may occur in the Forest under circumstances listed in the
8 guidelines found in the section (Salvage of Damaged Trees) and 11 AAC 71.010.

9 **2. Regenerating Stand Treatments**

10 Silviculture treatments such as pre-commercial thinning, commercial thinning, pruning,
11 and controlled burning, or other appropriate treatments, may be applied to regenerating
12 stands meeting forest health management goals to address timber stand wood quality,
13 overall health, individual tree growth, and revenue to the State. Where feasible, the site
14 productivity of poorly stocked timber stands will be managed through rehabilitation and
15 stand improvement activities such as scarification and seedling establishment.

16

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Map 2-1: Commercial Timber Management

Please Click on the map link to view Map 2-1

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3. Harvesting

Timber harvest is primarily allowed in lands designated as Forest and Resource Management. Other land use designations allow for timber harvest as a secondary use. See Chapter 3 for specific unit descriptions and resource use guidelines.

Harvest methods may be chosen to meet harvesters' capabilities, specific current site conditions, intended site conditions, or other resource considerations for diverse management of forest stands. Harvest methods will be managed as follows:

- A. Even-aged Harvest (Clearcuts) - Individual harvest units may be smaller than but will not exceed 160 acres without agency review and approval of the Commissioner. Items considered when reaching a decision will be topography, proximity to other natural or artificial open areas, visual effects, effects on fish and wildlife habitats, regulation requirements, transportation and harvest system function, and relative total costs of preparation, logging, and administration.
- B. Selective Harvest (Partial Cutting) - Harvesting in these methods may be used across the Forest with applications defined in a particular timber sale Forest Land Use Plan (FLUP).
- C. Salvage of Damaged Trees - Trees damaged by wind, insects, disease, or other natural event may be harvested in all land use designations unless the management statements specifically prohibit salvage harvest. Salvage harvest may be accomplished using an even-age method to address the cause of the impacts effectively. The size of the harvest unit may exceed 160 acres with agency approval since the area that is affected will define the area of harvest treatment. Alternative harvest methods may also be applied to salvage projects if appropriate to address Forest protection. Consideration of the primary unit/subunit(s) designation in the design of the harvest activity should be demonstrated in the FLUP for the project.
- D. Utilization of Merchantable Timber - Generally, utilization standards to be employed on the Forest are as follows:
 - (1) Any live or dead tree is merchantable which is 12.0 inches in diameter outside bark at breast height and in the judgment of the State contains at least one merchantable piece.
 - (2) Merchantable piece is defined as any portion of the harvested tree which is at least 12 feet long, at least 6 inches in diameter inside the bark at the small end and has a net scale of at least 33 1/3 percent of its gross scale.

1 (3) In addition, any portion of a merchantable utility log which is at least 12
2 feet long, at least 6 inches in diameter inside the bark at the small end,
3 which will produce not less than 50 percent of the gross volume in firm
4 usable (sound) chips. An example: a log 18 inches in diameter at the small
5 end with only a 3-inch rind of solid wood on the outside will meet the 50
6 percent sound requirement under contract.

7 E. Logging Methods. Two systems for timber harvest are available to industry
8 professionals, aerial and ground. Aerial systems include cable platform and
9 aircraft technologies, and ground systems are either track or rubber tire
10 equipment.

11 Aerial harvest systems are preferable on slopes steeper than 35 percent to
12 minimize soil impacts. These systems reduce the construction of roads necessary
13 to access timber and can also be used where wet ground or soil compaction limits
14 the use of ground-based systems.

15 Ground skidding systems will generally be restricted to slopes of 35 percent or
16 less. Where wet ground or soil compaction are operating concerns, ground
17 systems can be used during periods of dry or frozen ground conditions.

18 Whether aerial or ground systems will be used for operations in the Forest will
19 be decided on a case-by-case basis consistent with the provisions of this plan and
20 the Forest Resources and Practices Act and Regulations.

21 Due to the type of equipment currently used by local operators in the Forest,
22 timber harvesting under the Small Negotiated Sale program will be designed to
23 accommodate ground skidding systems. As areas with terrain suitable for ground
24 skidding become less available, harvest areas necessitating the use of
25 inexpensive cable yarding systems (aerial platforms), such as a jammer or A-
26 frame, may be incorporated into the program.

27 F. Special Management Zone (SMZ) Anadromous Fish Streams and Lakes. A 300-
28 foot-wide SMZ, as measured from the ordinary high-water mark, is established on
29 each side of all catalogued anadromous streams, AS 41.17.118. A 500-foot-wide
30 SMZ is established in the Forest around lakes containing anadromous fish in
31 addition to the requirements in Forest Resources and Practices Act (FRPA).
32 Beaver ponds are not considered “lakes” but are to be considered “streams” in the
33 application of designating a SMZ, if they contain anadromous fish populations.
34 Site specific circumstances may contribute to the establishment of a SMZ wider
35 than designated due to steepness of slope or presence of saturated soils in the
36 riparian zone, for example. The management objective for SMZs is to maintain or

1 enhance anadromous fish habitat. Only activities that are or can be compatible
2 with this objective through mitigation measures will be allowed in these zones.
3 DNR will consult with ADFG before and throughout project planning to
4 determine the appropriateness of a project, buffers and their widths, and the
5 design and maintenance of projects that meet the objectives of the management
6 zone.

7 G. Sequence of Entry. The decision on which areas of the forest to enter for
8 commercial harvest will be guided by several considerations including but not
9 limited to accessibility, cost, markets, quality of timber, and environmental
10 impacts.

11 Generally, the existing commercial timber base acres will be managed through a
12 series of entries that are dispersed over a 120-year period. Advantages of multiple
13 entries include limited disturbance to soils, maintenance of diverse ages of stands
14 that provide edge effect, migration corridors, shelter for wildlife, and
15 infrastructure maintenance over the growth cycle. Smaller units under a system of
16 multiple entries also increase the probability of adequate natural restocking of the
17 harvest site.

18 H. Personal Use Timber. The harvesting of timber for personal use is allowed in all
19 units of the Forest unless the management language for a particular subunit
20 prohibits personal use timber harvest. The amount of personal use timber
21 harvested shall not exceed 2,500 lineal feet or 10,000 board feet per household
22 per year, with a maximum of two sales per household. Consideration of the
23 primary subunit designation in the design of this harvest activity must be
24 prioritized.

25 I. Best Interest Findings (BIF) and Forest Land Use Plans (FLUP). Although the
26 Forest Plan establishes the area of the Forest designated for timber harvest and
27 carbon projects, it does not establish specific timber harvest or carbon project
28 decisions. Timber management decisions require a Best Interest Finding and the
29 sale of timber also requires a Forest Land Use Plan specific to the project pursuant
30 to AS 38.05.112 for all sales greater than 10 acres.⁶ The BIFs and FLUPs are
31 issued by the DNR to determine whether a proposed timber resource project is in
32 the best interest of the state.⁷

⁶ Under the designation of Resource Management, timber harvest may only occur if designated in the subunit intent and guidelines (see specific subunit, Chapter 3).

⁷ All timber resource sales, including carbon sales, must be in the best interest of the state.

1 When a written Best Interest Finding is required under AS 38.05.035, it may be
2 included as part of the FLUP for a timber sale, or it may be a separate decision
3 document making the determination prior to the preparation of a FLUP.
4 Negotiated timber sales of less than 10 acres in size or less than 500 MBF do not
5 require a Best Interest Finding but may require a FLUP if they are greater than 10
6 acres in size. In either case, FLUPs must adhere to the Forest Plan's goals and
7 guidelines identified in Chapter 2 as well as the management statements for a unit
8 or subunit found in Chapter 3.

9 **4. Harvest Site Management**

10 A. Where slash disposal is determined to be necessary either for stand improvement
11 or wildfire prevention, broadcast or pile burning, mechanical means, YUM
12 yarding, or a combination of these methods will be used. Typical mechanical
13 methods of slash disposal will be either crushing or piling. Steepness of terrain
14 and the potential of soil compaction are the two main limiting environmental
15 factors when considering mechanical means. A burn plan for either broadcast or
16 pile burning will be developed by the Forester in charge and approved by the
17 Regional Forester and Regional Fire Management Officer.

18 B. Treatment of brush competition may be conducted by means of prescribed
19 burning, mechanical or hand scarification, or a combination of both to support
20 tree growth in these areas.

21 **5. Reforestation**

22 Areas with an even-age harvest method applied in the Forest will be designed to allow
23 seeds from adjoining stands to restock the harvest area. Harvest design methods will
24 consider topography, initial stand stocking and composition, and unit shape and/or size to
25 accomplish adequate seeding results. The seed source, with these design considerations,
26 will promote the natural seeding of the area.

27 If natural regeneration is not adequate within five years of harvest, manual reforestation
28 will be done. Generally, plantings of suitable seedlings from appropriate seed source
29 zones within the Forest or Region will be the method used.

30 **6. Carbon Offset Projects**

31 Carbon management projects will be made available throughout the Forest. Generally, the
32 value of a project will be determined based on the average annual growth of the forest
33 and the gross volume per acre with specific market parameters that may apply.

7. Other Guidelines Affecting Forest Resources

Several other guidelines in this chapter may affect forest resources. For details of those guidelines, see the following sections of this chapter:

- Wildlife and Habitat
- Forest Protection
- Recreation
- Subsurface Resources and Materials
- Transportation
- Water and Riparian Areas

Resource Allocation Summary

The DFFP manages nearly 260,000 acres under DNR statutory authority within the HSRMA. Approximately 29 percent of predominantly hemlock-spruce timber stands comprise the commercial forest component in the management area. The remainder of the Forest is either river bottom or above timberline consisting of tundra, rock outcrops, snow and ice, gravel bars, or brush and non-commercial forest, with cottonwood typically along the rivers.

To develop the Forest Timber Resources portion of the Forest Plan, forest lands were analyzed and segregated into three broad management categories: commercial forest lands, non-commercial forest lands, and commercial forest lands primarily designated for other uses allowing for timber harvest as a secondary use. An illustration of the distribution of forest land is displayed in Table 2-1. The table shows the commercial and non-commercial forest lands distributed through each land designation by management unit.

The fundamental principles contained in the policies of this chapter can be summarized to represent DFFP's general strategy for managing the commercial timber base of the Forest. These points are:

- Even-age harvest units may not exceed 160 acres without commissioner and/or agency approval.
- To calculate the sustained yield timber harvest from the Forest, the forest growth cycle (rotation age) will be 120 years.
- The commercial timber base acres of the Forest will be harvested through multiple entries over a 120-year period. The decision of when to enter an area and how much to harvest will be based on markets, accessibility, and environmental

1 impacts among other factors. These decisions will be developed from the
2 proposed harvests listed in the Five-Year Sale Schedule.

- 3 • Carbon projects will be allowed throughout the Forest.

4 **1. Commercial Forest**

5 There are 74,360 acres of predominantly Western Hemlock-Sitka Spruce commercial
6 forest stands that are available for harvest in the Forest. These acres are the commercial
7 timber base acres that will be included in the timber volume annual allowable harvest
8 (AAC) calculations in the Forest Plan. More than 80 percent of the commercial timber
9 base acres in the Forest are site "100" or better, meaning an acre can produce trees at least
10 100 feet tall in 100 years.

11 Currently a majority of the timber base acres contain mature timber averaging 200 years
12 in age (2012 Inv.). During the last 65 years, nearly 11,000 acres were harvested, most of
13 those acres from 1965 to 1975. In the previous planning period, based on the allowable
14 harvest volume for that plan, less than 1/3 of the annual allowable harvest of commercial
15 timber was cut and is contributing to future diverse regenerating timber stands. More than
16 85 percent of the existing commercial timber base in the Forest contains trees of saw
17 timber size, ranging in diameter at breast height from 11 inches to 45 inches. The net
18 volume per acre of mature commercial forest is 30mbf/ac (2012 Inv.). The volume sold
19 annually since 1962 is illustrated by Figure 2-1.

20 On a 120-year cycle, 74,360 acres of Forest commercial timber base will be managed
21 with an Annual Allowable Harvest of 14.77 million board feet (MMBF) of timber. Under
22 this management plan regenerating young trees can contribute to the sustained timber
23 base at a rate of 601 acres a year if harvested. Net sawmill volumes at rotation age are
24 expected to range from 13,762 board feet per acre to 37,616 board feet, with trees varying
25 in diameter at breast height from 12 to 32 inches and in total height from 74 to 115 feet.
26 The 2025 inventory report states the basal area per acre, a standard measurement of forest
27 volume, is 187 square feet with an estimated average gross volume of timber on an acre
28 of 27,446 board feet. The inventory report also calculates an annual growth increment of
29 214 net board feet per acre during the 120-year rotation period providing 15.9 million
30 board feet of growth in the Forest yearly. Timber products can include saw logs, house
31 logs, poles, piling, pulpwood, chips, and including timber resource use as carbon credits.

32 **2. Carbon Offsets**

33 Carbon Credits are calculated from the measurement of carbon dioxide contained by a
34 forested acre where one metric ton of carbon dioxide is equal to one carbon credit. The
35 carbon present on an acre of forest is composed of the stored carbon at the time of
36 measurement and the ability of the trees to store additional carbon annually. The basal

1 area per acre represents the stored carbon and the annual growth increment presents the
2 potential for additional carbon storage on a yearly basis in the Forest.

3 Proposed Carbon Offset projects will require forest measurement and analysis for the
4 accurate determination of carbon/acre and carbon credits available in an acre of Forest.
5 The DNR Office of Project Management and Permitting (OPMP) will lead the carbon
6 program in the Forest with support from DFFP to ensure HSF management goals are
7 achieved.

8

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Table 2-1: Forested Acres by Land Designation in Haines State Forest

MANAGEMENT UNIT	COMMERCIAL FOREST					NON-COMMERCIAL FOREST				
	Forest Lands	Public Recreation Lands	Resource Management Lands	Wildlife Habitat Lands	Total	Forest Lands	Public Recreation Lands	Resource Management Lands	Wildlife Habitat Lands	Total
1	12,879	27	853	0	13,760	300	0	595	0	895
2	6,467	0	99	0	6,566	1,145	0	404	0	1,549
3	11,751	662	691	966	14,070	967	0	387	28	1,383
4	8,212	1,132	0	0	9,344	954	1	0	0	954
5	0	0	0	7,547	7,547	0	0	0	925	925
6	0	3,119	0	0	3,119	0	115	0	0	115
7	0	0	556	0	556	0	0	2,958	0	2,958
8	0	2,668	4,392	4,959	12,019	0	394	1,392	459	2,245
9	4,629	0	2,749	0	7,379	787	0	1,238	0	2,025
TOTAL	43,938	7,608	9,340	13,472	74,360	4,153	510	6,974	1,412	13,049

1 **3. Non-Commercial Forest**

2 There are 13,049 acres of Forest which are considered non-commercial. This area
3 contains forest vegetation, shrubs, brush, and non-merchantable trees either
4 predominantly or in combination. This forest component contributes to the natural
5 diversity of the Forest.

6 **4. Cottonwood**

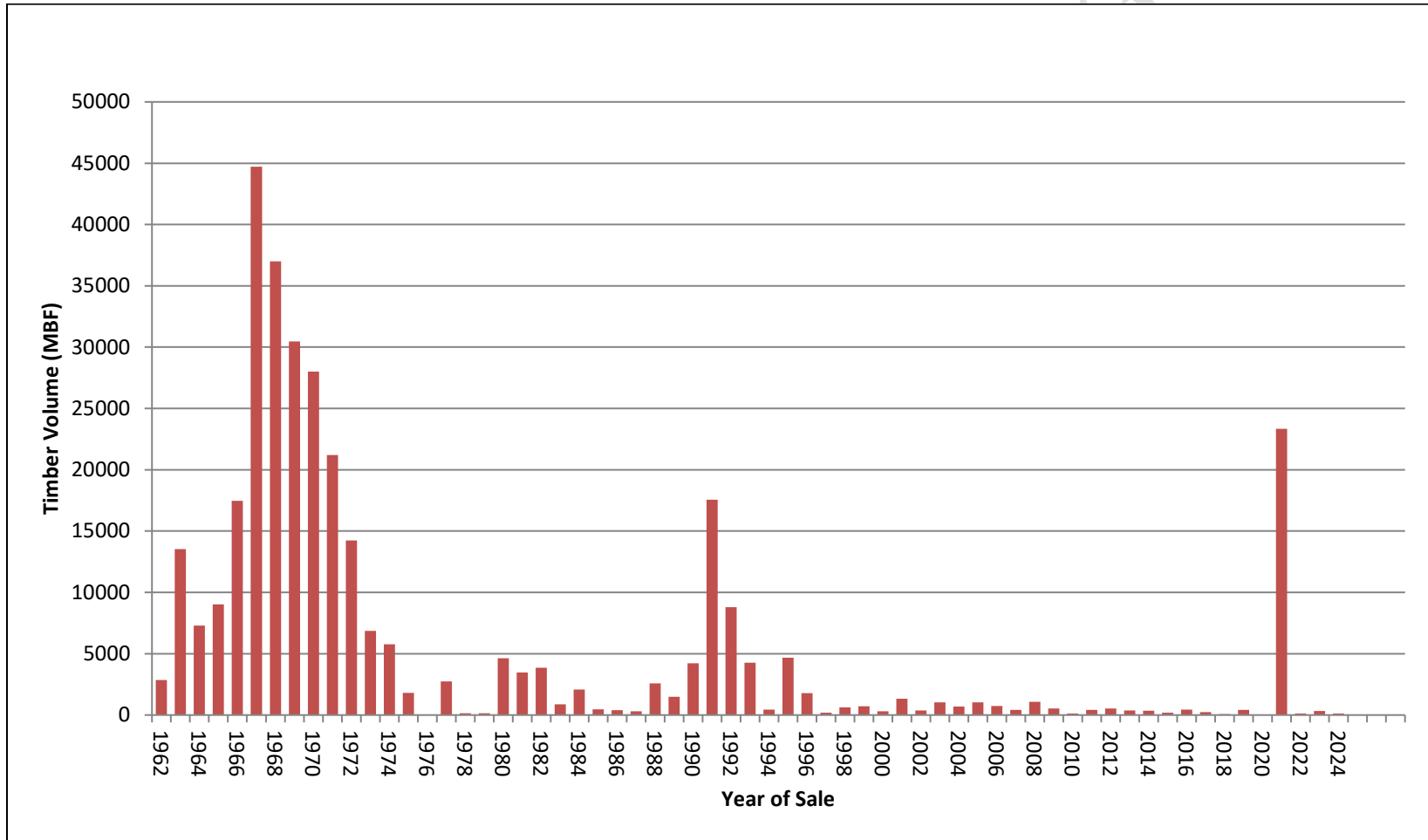
7 Cottonwood was not included in the previous Forest Plan volume calculations. The 2018
8 second growth inventory data collection included cottonwood as a component of forest
9 growth and with these sample results the species can be included in the sustained yield of
10 forest resources.

11 **5. Non-Forested Land**

12 There are approximately 172,000 acres of non-forested land in the HSFRMA. These
13 lands range from stream bottoms to mountaintops and encompass a variety of habitats
14 from riparian areas to alpine and ice fields. Management of these lands is described in the
15 Fish and Wildlife, Recreation, Subsurface Resources and Materials, and other appropriate
16 sections of the Forest Plan in this Chapter.

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Figure 2-1: Timber Sold within the Haines State Forest 1962 - 2024



FOREST PROTECTION

Goal

Protect forest resources from wildfire, insects, disease, and other destructive agents. The Division of Forestry & Fire Protection will provide for the protection of human life and property from wildfire within the Forest. Wildland Fire protection will be managed under an interagency management agreement with the USDA Forest Service, Tongass National Forest, initially implemented in 2017, which is the Alaska Interagency Fire Management Plan. The suppression duties will be performed by the federal agency offices based in Juneau and across the Tongass. Cooperation and support from DOF in a successful wildfire suppression program will include coordination of wildfire suppression tactics, provision of suppression supplies and equipment, and follow the agreement for wildland fire suppression. The Division of Forestry & Fire Protection and USDA Forest Service will review and may modify the suppression agreement annually to improve wildland fire suppression actions in the Forest.

Management Guidelines

The Forest Resources and Practices Act provides guidance for the protection policy in the Forest. The Alaska Interagency Fire Management Plan provides additional policy direction for managing suppression actions in the Forest. These documents contain requirements and/or guidelines concerning the following:

- Insect and Disease Control
- Burn Permits
- Emergency Closure
- Equipment for Operations

1. Forest Health Management

Forest health issues can include any insect, disease, or competing vegetation that is detrimental to the productivity of the forest.

- A. Methods. The primary approach to pest control in the Forest will be prevention assisted by suppression. Prevention will consist of stand manipulation (i.e. pre-commercial thinning, pruning, windthrow salvage, etc.) to maximize natural mortality of insect pests and decrease the likelihood of disease or competing vegetation spread, thereby minimizing the need for suppression. However, other direct management measures may be required in areas where failure to mitigate impacts could result in loss of resource values.

1 B. Insecticides.

2 i. Pesticides. Herbicides will not be used as a means of eliminating
3 competing vegetation in the Forest, however consideration of
4 herbicide use to prevent spread of invasive species along forest
5 roads will be allowed. Approval of the use of herbicides along the
6 Forest road system will be made in consultation with ADFG and
7 DEC, with concurrence of the proposed application before use.

8 Other pesticides such as insecticides or fungicides may not be used
9 in the Forest.⁸ Exceptions are allowed only if recommended,
10 supported by other agencies with the expertise and authority to
11 approve treatments, and if benefits to forest health and/or the
12 public can be realized.

13 Any pesticides approved for application in the Forest must be
14 applied in accordance with all labeling and applicable regulations.

15 C. Monitoring. An annual detection survey will be conducted by DFFP in
16 cooperation with the USFS to determine current insect and disease activity in the
17 Forest and throughout the region.

18 D. Insect Outbreaks. In the 1980's and 90's, Sitka Spruce trees in the Chilkat Valley
19 were impacted by a spruce beetle (*Dendroctonus rufipennis*) outbreak. This
20 outbreak affected approximately 40,000 acres with stand impacts have ranging
21 from 100 percent mortality to only 20 percent loss of the mature spruce
22 component normally present in Forest stands. Spruce beetle is common in
23 Alaska's forest environments and at endemic levels provide background level
24 mortality of stressed or damaged trees. Outbreaks of this insect, though, can result
25 in dramatic impacts to the Sitka Spruce across the Forest. Similarly, outbreaks of
26 defoliating insects such as the western blackheaded budworm can affect the
27 productivity of the hemlocks and occasionally spruce, they defoliate. DFFP, in
28 cooperation with the USFS, monitors these and other insect populations to help
29 detect outbreaks and address and evaluate forest conditions before, during, and
30 after the outbreak. Many forest insect populations in Alaska experience periodic
31 or cyclical outbreak levels with varying durations and impacts across the
32 landscape over time.

⁸ The use of semiochemicals (insect- or tree-generated scents used in attracting or repelling insects) in monitoring or investigating forest insect populations, is allowed within this provision.

- 1 E. Cooperative Research. The DFFP will work with other agencies and landowners
2 to assess forest resource impacts and develop improved control techniques for
3 insects, diseases, and competing vegetation. This collaborative effort may include
4 development of studies, identification of areas impacted, collection of data, and
5 providing support for other agencies leading research projects in the Forest.

6 **2. Fire Management**

- 7 A. Forest Fire Protection. DFFP will prioritize the suppression of wildland fires that
8 threaten human life and physical developments consistent with the physical and
9 economic capabilities of the State of Alaska and its cooperating Federal agencies.

- 10 B. Prescribed Burning. DFFP will use prescribed fire as a management tool and
11 apply it in a manner consistent with existing policy and procedures to achieve
12 resource management objectives.

- 13 C. Fire Prevention. DFFP will provide leadership support of prevention activities
14 throughout the forest as needed and in cooperation with Federal agencies assigned
15 suppression duties.

16 **3. Other Guidelines for Forest Protection**

17 Several guidelines in this chapter may affect forest protection. For details of those
18 guidelines, see the following sections of this chapter:

- 19 • Fish and Wildlife
20 • Forest timber Resources
21 • Transportation
22

1 RECREATION

2 The Haines State Forest will be managed for multiple uses, consistent with the purpose of
3 the establishment of the Forest (AS 41.15.300). The statute recognizes the importance of
4 the "continuation of other beneficial uses including traditional uses and other recreational
5 activities". The Forest will be managed to allow the public to pursue "generally allowed"
6 recreational activities (11 AAC 96), except in those instances where a Special Use
7 Designation affects portions of the Forest. In these instances, the number of allowed uses
8 may be reduced, and specific restrictions placed on their operation. Additionally,
9 activities that may be permitted as a "generally allowed" use by the public may be
10 restricted as a daily use only for commercial users and registration of the use with
11 associated fees may apply (11 AAC 96.018(a)). Commercial users must apply for these
12 uses with DMLW. Recreation activities permitted within the HSFRMA through
13 cooperation with DMLW must be approved by DFFP prior to issuance of a decision to
14 permit the activity.

15 **Goals**

- 16 1. Encourage the development of recreational uses consistent with the management
17 intent and guidelines for the unit and the general policy described in this section.
- 18 2. Provide for dispersed recreation activities which are consistent with generally allowed
19 uses broadly across the Forest.
- 20 3. Public recreation development activities shall be primarily located in the areas of the
21 Forest designated *Public Recreation*, PR.
- 22 4. To the extent feasible, complement or protect recreational values when conducting
23 timber harvest, fire control activities, related road and trail development, mining,
24 habitat improvement, and other development activities.
- 25 5. Contribute to the local economy providing tourism and commercial recreation
26 opportunities in the Forest.
- 27 6. Support a wide range of recreational uses of the Forest through collaboration with
28 other agencies and the public and develop projects that consider multiple resource use
29 throughout the Forest.
- 30 7. When planning development of the Forest for recreation purposes, minimize impacts
31 to protect natural features, fish and wildlife, and scenic views and viewsheds.

- 1 8. Allow commercial development of recreational facilities and services through leases
2 or other authorizations where management policy supports recreational development
3 in the Forest.

4 ***Management Guidelines***

5 **1. Public Access**

6 Access to the Forest shall be provided to the public but may be limited or curtailed at
7 certain times to protect public safety, allow special uses, and prevent harm to the
8 environment. Examples of conditions that may require limiting public access are fire
9 management, timber harvest operations, and high soil moisture content when traffic may
10 cause extensive damage to roads and trails. Statutes address restrictions to easement and
11 right-of-way use (AS 38.04.058) and restrictions of traditional means of access
12 (AS 38.04.200) and must be considered when contemplating access use restrictions.

13 **2. Trails**

14 The need for trail maintenance or upgrades and/or the development of new trail routes
15 will be evaluated based on input from DPOR, local governments, or other public
16 organizations. These groups, or an individual, may bring proposals directly to DFFP HSF
17 managers to initiate public planning that may support project development. The DFFP is
18 represented on the CBEP advisory council to provide for collaborative management of
19 State resources within the Forest and the Preserve.

20 A forest access road may be converted to a trail after its use as a road has terminated. The
21 nature of the road may require that it be first “put-to-bed” or decommissioned as a
22 maintained Forest road. Thus, the new "trail" may have water bars, removed culverts,
23 grass seeding, or other measures to prevent erosion which other trails may not have.
24 These "trails" can be reverted to the original intended use as required by DFFP. Roads,
25 put-to-bed as such, will be converted to trails only after consideration in applicable Forest
26 Land Use Plans.

27 The public may construct trails on the Forest under AAC 11 96.020 “Generally Allowed
28 Uses” without a permit requirement from DNR if meeting the stipulations described
29 under this section. In the Forest, no cutting of trees larger than 5 inches in diameter
30 measured 4 feet above the ground surface can be done without the approval of the DFFP
31 when constructing a trail as a generally allowed use under AAC 11 96.020. Use
32 restrictions may apply to commercial recreation users under “generally allowed uses” as
33 stated in 11 AAC 96.018(a) and mentioned previously in this section. Commercial users
34 must apply for these uses with DMLW.

1 **3. Management of Lands Designated Public Recreation**

2 Land designated *Public Recreation* (PR) in the Forest Plan is designated as such for the
3 primary purpose of public non-commercial use. Other resource use is allowed as
4 described in each PR unit. See the intent and guidelines for specific PR units and subunits
5 in Chapter 3. The following guidelines apply across the Forest.

- 6 A. Forest designated as PR will be primarily managed for the purposes of
7 maintaining and enhancing the use of these areas for public recreational uses.⁹
8 Most PR lands will allow for a wide variety of public recreational uses (both non-
9 motorized and motorized), though not all recreational uses may be appropriate in
10 some units. In these instances, the management intent and management guidelines
11 for the unit or subunit found in Chapter 3 specify the uses allowed or not allowed
12 under those conditions. Private, commercial, or not-for-profit operations may be
13 allowed in the Forest, but all such uses must be compatible with the management
14 intent and management guidelines of specific units and their subunits if
15 authorized under the permitting requirements described in this section.
- 16 B. Areas designated as PR will be open to timber harvest for personal and
17 commercial use unless specifically restricted in the unit policy found in Chapter 3.
- 18 C. Mining activities may only occur under leasehold location requirements unless a
19 Mineral Closing Order affects the area, which prohibits mining. See management
20 guidelines for Subsurface Resources and Materials.
- 21 D. Construction of roads for access to privately-owned land, state land, federal land,
22 municipal land, or valid mining claims, is allowed to assure reasonable, timely,
23 and economically feasible access.
- 24 E. Other uses will be allowed following the unit's specific management intent
25 statements, management guidelines, and the special use designations included in
26 the appendices; and, if commercial recreation use is compatible with the
27 procedures and standards of 'Private Recreation Facilities and Uses' in this
28 chapter.
- 29 F. The DFFP shall coordinate with DPOR in the management of recreational
30 activities in areas where the Preserve adjoins the Forest. DFFP will also

⁹ Recreation activities may also occur in other land use designations. See the listing of allowed recreational uses identified in the use tables for management subunits included in Chapter 3. These use tables occur at the end of the section that describes a management unit. Generally, dispersed recreation is allowed throughout the State Forest. More specific requirements apply to private recreation facilities or uses. See subsequent sections on the permitting of private recreation uses and the distribution of recreational activities throughout the Forest.

coordinate with the DMLW where general state land adjoins the Forest, or where there is another need to coordinate state recreational management.

4. Historical and Archaeological Sites

Prior to approval of projects on State land that may affect sites of historical or archaeological significance, the State Office of History and Archeology (SHPO) will evaluate the potential impact to the sites. Upon discovery of historic or archaeological resources, all work in the vicinity of the discovery site shall cease, pending field investigation by the SHPO (AS 41.35.070).

5. Public Use Cabins and Trails

Public use cabins and trails may be established in the Forest. Public use cabins and trails may be constructed where other resource development is planned and in conjunction with the development needs of those projects. Generally, location of cabins and trails will occur in the units and/or subunits designated *Public Recreation* and the remainder of the Forest is broadly designated for dispersed recreation activities. Recreation development activities requiring permitting through the DMLW will be reviewed by DFFP, DPOR, and ADFG for consistency with designated authority, policy, and goals for compatible management of the resources within the HSFRMA. The coordinated agency review process may provide the public opportunity to contribute to development decisions through surveys, meetings, or other appropriate methods. Public use cabins will be sited to avoid conflicts with other resource uses in the Forest.

6. Private Recreation Facilities and Uses

Private facilities or uses for private profit making, or private not-for-profit recreation operations which may serve the public, including facilities and uses associated with tourism, may be authorized if the following conditions are met:

- Significant public access or recreational opportunities will not be lost or blocked by the facility or operation, or reasonable alternative access to areas that otherwise would be blocked can be provided.
- The amount of use generated by the activity or facility shall be consistent with the primary land use designation, management intent and guideline statements, and applicable Special Use Designations for the unit.
- The proposed use or facility shall not create adverse impacts to sensitive fish and wildlife populations, fish and wildlife habitat, water quality and quantity, wetlands or sensitive riparian areas, or those resources identified as important for protection in the management statements in the subunit, or management measures

1 shall be provided/imposed to ensure resource sustainability and any such impacts
2 are precluded or mitigated.

- 3 • The facility or use shall be located, designed, and operated to preclude or
4 minimize conflicts with personal recreational, subsistence, and traditional uses.
- 5 • The permitting process for the construction of recreation facilities shall begin with
6 the DFFP FLUP process for the requested project. The following project
7 development process will apply:
- 8 ○ A recreation development project proposal submitted to DFFP will allow
9 for the development of a FLUP for the activity in the Forest. The proposal
10 will include details of the development and activity proposed for
11 recreation use as required to complete a FLUP. The development of the
12 FLUP for the project will be a collaborative effort between the DFFP and
13 the proposal individual or entity.
 - 14 ○ DFFP will prepare and process the FLUP decision for the project proposal
15 similarly to other FLUPs developed for proposed projects in the Forest,
16 including agency and public review prior to adoption. The DFFP approval
17 decision for this development project FLUP can be made by the HSF Area
18 Manager.
 - 19 ○ Subsequent to the DFFP FLUP decision, the applicant may pursue the
20 required land use authorization with DNR, DMLW to receive final
21 approval for project development in the Forest.

22 DNR may issue either a permit or a lease for activities and facilities consistent with these
23 conditions. DNR will determine the duration of this authorization. The Director of the
24 DMLW may impose fees appropriate for the type and intensity of use authorized. The
25 DMLW is responsible for administering permits or leases or other authorizations on
26 behalf of the DOF under a Cooperative Management Agreement (See appendix I) and
27 may impose those conditions of approval necessary to assure adherence to the standards
28 defined above and to ensure that the overall best interest of the state is met.¹⁰
29 Applications judged inconsistent with these standards shall either be denied, or
30 stipulations shall be imposed to the final permit or lease that will reasonably assure
31 adherence to these standards.

¹⁰ Examples of the types of management techniques that might be applied are limitations on the areas of use, hours of operation, and days of use as well as stipulations to mitigate the impacts that might be caused by commercial recreation uses, which include siting, operating, and development stipulations.

7. Distribution of Recreation

The intensity of recreational use for certain types of commercial operations, motorized and non-motorized, is controlled in a few subunits. This occurs within subunits 6a (West Chilkat Inlet), 5 (Takhin/Kicking Horse), 7a (Haines Highway), 8b (Chilkoot Lake), 8c (Lutak Inlet), and 8d (Chilkoot Alpine). The remaining areas of the Forest are open to both commercial and personal use, and both motorized and non-motorized uses. Refer to each unit and/or subunit in Chapter 3 for a description of the management policy for that area of the Forest.

Because the pattern of recreational activities is likely to change somewhat over time, the DFFP will periodically re-evaluate recreational activities within the Forest during in the course of project work development and in consultation with DPOR and DMLW.

Recreation activities involving private operations and high intensity levels, often associated with the use of facilities, are to be concentrated within certain areas of the Forest.¹¹ These areas are identified in the management intent language of specific subunits: occurring within subunit 6b (Davidson Lake and Glacier) and 8b (Chilkoot Lake). Other than these areas, high intensity recreation activities may be permitted if consistent with the management language within a particular unit and/or subunit, and if the permitting requirements pertinent to private uses are met (See the Private Recreation Facilities and Uses section, previous.). Private commercial operations will not be authorized in areas where public recreation facilities are provided (campgrounds, public use cabins, or other developed recreation facilities).

8. Traditional Uses and Modes of Transportation

Traditional means of access as well as access to traditional use areas will be maintained in the Forest. The statute establishing the Forest (AS 41.15.300) includes as a primary purpose the "continuation of other beneficial uses including traditional uses and other recreational activities". The definition of, and protection for, traditional uses is further established in AS 38.04.200. This section of statute, which is applicable to the Forest in addition to general state land, states that DNR may not manage state lands or waters so that a traditional means of access for traditional outdoor activities is to be restricted for the purpose of protecting aesthetic values, except under certain limited conditions.

Traditional means of access means those types of transportation for which a popular pattern of use is developed. Traditional outdoor activities include those types of activities that people use for sport, subsistence, personal enjoyment, or that have been historically conducted as part of an individual, family, or community life pattern. These management restrictions protect personal use, either motorized or non-motorized. They do not extend

¹¹ Private commercial operations with a client load of 40 or more clients per day are considered "high intensity".

1 to commercial uses of any kind. Accordingly, once patterns of 'popular use' have been
2 established within the Forest, DNR cannot prohibit these uses if the use is of a personal
3 (non-commercial) type.

4 **9. Scenic Values**

5 Development activities such as timber harvesting will be sited, designed, and carried out
6 to minimize impacts to scenic values in certain areas of the Forest. The maintenance of
7 scenic values is an important consideration in areas of the Forest that adjoin the Preserve
8 along the Haines Highway or that can be viewed from the highway, the Chilkat River, or
9 Lutak Highway. Specific management guidelines are recommended for such areas in
10 Chapter 3.

11 **10. Private Remote Cabins**

12 Remote cabins or similar types of private residential facilities are prohibited in the Forest.

13 **11. Information and Education**

14 Interpretive signs, trails, and displays are encouraged to provide recreational and
15 educational opportunities along Forest roads and designated recreation facilities.

16 **12. Other Recreation Guidelines**

17 Other guidelines may affect recreation management practices. For details of these
18 guidelines, see the following sections of this chapter:

- 19 • Fish and Wildlife
- 20 • Forest Timber Resources
- 21 • Transportation
- 22 • Water and Riparian Areas

23 ***Resource Allocation Summary***

24 Much of the recreation activity that occurs in the Forest is based on fish and wildlife
25 resources: hunting, fishing, trapping, subsistence, photography, nature study, and
26 sightseeing. Other activities include skiing, snowmobiling, dog sledding, berry picking,
27 hiking, boating, recreational driving, gold panning, rafting, scenic viewing, bird
28 watching, mountaineering, and camping.

29 Under multiple use management, the entire Forest is open to recreation activity. Access to
30 the recreational resources of the Forest largely relies on the existing forest roads. The
31 DFFP functionally provides new forest road access through the development of timber
32 resources, furthering subsistence and recreational resource access for the public.

1 Recreational development activities managed by the DFFP will be coordinated with
2 ADFG, and DPOR management of the CBEP through agency planning and collaboration.

4 SUBSURFACE RESOURCES & MATERIALS

5 The Haines State Forest will be managed for multiple uses, consistent with the purpose of
6 the establishment of the Forest (AS 41.15.300). The DFFP management authority within
7 the HSRMA does not include subsurface resources outside of timber harvest operations.
8 Coordinated management of these resources and materials is implemented with the
9 DMLW for this use within the Forest. Management policy in the Forest Plan supports the
10 State of Alaska management strategy for public lands and resources defined in regulation.

11 **Goals**

- 12 1. Develop mineral and material resources to contribute to the mineral and material
13 supplies of the community, region, state, and nation.
- 14 2. Contribute to the local, regional, and state economy by developing mineral
15 resources and materials which will provide job opportunities and stimulate
16 industry growth.
- 17 3. Aid in the development of infrastructure where feasible and continue to provide
18 mapping and other resource management technical support to the mining industry.
- 19 4. Contribute to the agency review and analysis of the potential impacts to the
20 environment and affected communities from proposed mineral and material
21 development plans.

22 **Management Guidelines**

23 Mining in the HSRMA is governed by the Alaska Constitution Article VIII § 11
24 (“Mineral Rights”), AS 38.05.185 – 38.05.275, and the mining rights regulations located
25 in 11 AAC 86. Material extraction is governed by material sales statutes AS 38.05.550 –
26 38.05.565 and the material sales regulation located in 11 AAC 71. All activities of this
27 type in the Forest must follow these governing laws and adhere to the results of the
28 permit (or other authorization) review processes. The review process will manage these
29 types of activities and impose stipulations necessary to achieve adherence to these
30 authorities including the management requirements of the Forest Plan.

1 **1. Areas Open to Mineral Entry**

2 All areas designated *Forest* and *Resource Management* are open to mineral entry and, if
3 approved under state mining law, mining operations. All lands open to mineral entry are
4 multiple use areas where mineral development will be accommodated and encouraged.
5 DNR may determine that some traditional forms of access will not be allowed in specific
6 areas to protect public safety or avoid resource damage. Any adverse effects of mining on
7 surface resources or uses will be managed through compliance with state laws and
8 regulations and the goals, management intent, and guidelines of this plan.

9 **2. Areas Closed to Mineral Entry**

10 Areas with developed recreation facilities (campgrounds) or particularly significant for
11 recreational use or management are closed to mineral entry under AS 38.05.185 and to
12 mineral leasing under AS 38.05.205. Mineral Closing Order 771 is included in Appendix
13 C. A total of 110.7 acres of Forest are affected by this order.

14 **3. Areas Open to Leasehold Location**

15 All Forest lands not designated *Forest* or *Resource Management* are open to mining
16 through Leasehold Location under AS 38.05.135. Leasehold Location procedures must be
17 followed in areas designated *Wildlife Habitat* or *Public Recreation*. Requiring that
18 locatable mineral developments occur under a lease is a more flexible management tool
19 than mineral closure. DNR shall consult with ADFG and ADEC on proposed mining
20 operations within the Forest open to leasehold location. Any adverse effects of mining on
21 surface resources or uses will be managed through compliance with state laws and
22 regulations and the goals, guidelines, and management intent of this plan. Mineral
23 Leasehold Location Order 25 is included in Appendix D. A total of 101,339.1 acres are
24 affected.

25 **4. Visual Impacts of Mining**

26 The DMLW, in its review of Plans of Operation for mining operations, shall consider the
27 visual impacts of the development proposed on adjacent Forest land and specifically as
28 may be viewed from the Haines Highway.

29 **5. Consolidation of Mining and Timber Access**

30 Where feasible, consolidate timber and mining access. Consolidation should lower costs
31 to all users and avoid unnecessary impacts to other resources by minimizing road
32 construction and stream crossings.

1 **6. Screening of Mining Operations and Material Extraction Sites**

2 To the extent feasible, mining operations and material extraction sites should be screened
3 from roads, residential areas, recreational areas, and other areas of significant public
4 Forest use. Sufficient land should be allocated to the mining operation or material
5 extraction site to allow for such screening.

6 **7. Material Extraction Sites (Sales)**

7 Locating material extraction sites in existing upland material sources is preferred. Using
8 materials from wetlands, lakes, and the active or inactive floodplain of rivers should be
9 reviewed by the DFFP with consultation from ADFG, and ADEC where applicable. Sales
10 or permits for gravel extraction will not be permitted in fish spawning beds. The Corps of
11 Engineers may also regulate material extraction from water sources.

12 If the only feasible and prudent source of gravel is an active or inactive floodplain of a
13 river or stream, the guidelines from "Gravel Removal Studies in Arctic and Subarctic
14 Floodplains in Alaska" (USFWS, June 1980) should be used.

15 **8. Other Guidelines that Affect Mining and Materials**

16 Several other guidelines may affect subsurface resource and material management. For
17 details of these guidelines, see the following sections of this chapter:

- 18 • Forest Resources
- 19 • Forest Protection
- 20 • Transportation
- 21 • Water and Riparian Areas

22 ***Resource Allocation Summary***

23 **1. Minerals**

24 Most land in the Forest is open to mineral entry and location. Areas around Chilkat Lake,
25 Chilkat River, Takhin River, Tsirku River, Herman and Walker Lakes, Mosquito Lake,
26 Kicking Horse River, and a portion of the beach at Taiyasanka Harbor are open to the
27 staking of leasehold locations. Consult 11 AAC 86.300-.321 concerning leasehold
28 locations on state land.

29 Placer Mining presently represents a small industry in the Forest with operations active
30 on Porcupine, McKinley, Nugget, and Little Salmon creeks. Other creeks and placer
31 properties are also being prospected at this time in the Forest.

1 Three different major mineralized belts are recognized in the Haines area that might
2 contain commercial mineral deposits.

3 A. Slate belt containing gold-bearing quartz veins similar to the Juneau gold belt:

4 The Haines area slate belt is credited with supplying the gold placers of the
5 Porcupine, McKinley, Cahoon, Glacier, Christmas, Cottonwood, Nugget,
6 Rosaunt, and Nataga creeks and the Tsirku, Little Salmon, and Kelsall rivers.
7 These slate belts could contain possible commercial lode gold deposits and
8 additional placer gold deposits.

9 B. The ultra basic rocks containing pyroxene, olivine, and plagioclase with magmatic
10 concentrations of magnetite and ilmenite: This belt is exposed on the east side of
11 the Chilkat Valley at Klukwan, at 4 mile on the Haines Highway, and on the
12 Chilkat Peninsula beginning at the Haines graveyard to slightly northwest of Port
13 Chilkoot. This basement belt probably extends at least to Battery Point where
14 there is a known magnetic disturbance.

15 C. Basaltic marine volcanics containing barite, lead, zinc, copper, gold, silver, and
16 possibly cobalt and nickel: The mineral deposit is exposed near the Canadian
17 border at the headwaters of the Jarvis and Glacier Creeks. This belt has good
18 commercial potential, though its entire extent is not currently known.

19 Other potential commercial mineral deposits worthy of mention are cement grade
20 limestone deposits exposed at 39-mile Haines Highway and clay deposits that have
21 produced some bricks and pottery in the past.

22 There may be some mineralized skarn (copper, silver) deposits in the Forest area similar
23 to the Maid of Arin mine in Canada near 55-mile old Haines Highway. These deposits
24 would be associated with diorite intrusive into limestones.

25 The Division of Geological and Geophysical Surveys, in cooperation with the U.S.
26 Bureau of Mines, conducted three investigations and printed the results in 1984 and 1985.
27 The reports or maps include: "Stream Sediment, Float, and Bedrock Sampling in the
28 Porcupine Mining Area, Southeast Alaska" (1984); "Geology and Geochemistry of the
29 Skagway B-2 Quadrangle, Southeastern Alaska" (1984); and "Preliminary Bedrock
30 Geologic Map of the Skagway B-4 Quadrangle, Alaska" (1985). Copies of these reports
31 and maps are available at the Division of Geological and Geophysical Surveys office in
32 Juneau.

33 **2. Materials**

34 Materials, such as sand and gravel, are an important resource in the development of any
35 community. The Forest area has abundant material resources in major glacial river

1 floodplains which tend to provide an easily developable source of materials. There are
2 also talus slopes, glacial moraines, and beach deposits available as material sources.

3 With the Forests’ area proximal to major glacial rivers, a shortage of material sources is
4 not likely in the foreseeable future.

5 Materials may be extracted from most state land in the Forest consistent with the goals,
6 management intent, and management guidelines of the specific unit and this chapter.
7 Material extraction may be prohibited on lands designated *Public Recreation*.

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1 TRANSPORTATION

2 **Goals**

- 3 1. Manage the Haines Highway corridor in cooperation with DOT&PF for
4 transportation and scenic values. Timber harvest activities will be limited to small
5 commercial and personal use sales adjacent to the corridor (See Chapter 3, Unit
6 3).
- 7 2. Expand the existing Forest road system to provide safe and economical access for
8 timber harvest, as well as mining, public recreation, fire protection, and other
9 resource management activities.
- 10 3. Design, construct, and maintain all roads with consideration for environmental
11 values in the Forest.
- 12 4. Maintain state-owned timber access roads and bridges for public access subject to
13 available funding, safety concerns, and environmental conditions.
- 14 5. Provide collaborative planning and design efforts on access and facility
15 development in the Forest to meet the transportation management goals of the
16 State.

17 **Management Guidelines**

18 **1. Road Construction (DFFP Forest Road Standards)**

19 **A. General Conditions**

- 20 (1) State inspectors will be present on site during most road construction
21 activities, especially in environmentally sensitive areas.
- 22 (2) Road width: 20 feet, including ditch and 35 feet where designated turnouts are
23 built.
- 24 (3) Surfacing width: 14-16 feet.
- 25 (4) Surfacing: the minimum necessary to allow log trucking without surface
26 deformation.
- 27 (5) Turnouts: intervisible, with a surfaced length of 50 feet at full width.

1 (6) Grade: the maximum favorable grade is 20 percent. The maximum adverse
2 grade is 10 percent unless otherwise designated.

3 (7) Degree of curvature: The ordinary designed minimum horizontal curve radius
4 is set by road use classification: in Region 1, Coastal Alaska, primary roads
5 will be 360 degrees, secondary roads will be 140 degrees, and spur roads will
6 be 50 degrees, and winter roads will be 76 degrees.

7 B. Clearing and Grubbing

8 (1) The clearing boundary limits may be marked with colored ribbon on both
9 sides of the road except where the road passes through harvest units.

10 (2) Snags and trees, leaning heavily over the roadway, that are outside the
11 clearing limits shall be felled. Snags up to a tree length from the running
12 surface will be felled in conjunction with cutting the regular right-of-way.

13 (3) All stumps, any portion of which falls within the cut and/or fill slopes, must
14 be removed.

15 (4) All stumps that extend within three feet of the finished sub-grade or road
16 shoulders must be removed.

17 (5) No debris resulting from the clearing and grubbing operation will be permitted
18 to remain under any portion of the embankment within the cleared right-of-
19 way.

20 (6) Debris from road development will not be piled or pushed against remaining
21 live trees within or outside of a harvest unit.

22 C. Grading

23 (1) The roads shall be constructed according to the state's horizontal and vertical
24 control profiles.

25 (2) All material within the control lines must be removed with excess excavation
26 used to widen the embankments. End-haul may be required.

27 (3) All fills six feet deep and over shall be widened two feet for each six feet of
28 centerline depth to a maximum width of 36 feet. Embankment slopes shall
29 not be steeper than 1-1/4:1 for common and 1:1 for rock. Fills shall be
30 compacted in two-foot layers.

- 1 (4) Cut slopes shall be constructed as designated on slope stakes and reference
2 markers or as design details indicate. Generally, these slopes will be 3/4:1
3 below 70 percent, 1/2:1 above 70 percent, and vertical in rock.

4 **D. Drainage Structures**

- 5 (1) Culverts will be galvanized corrugated metal pipe (not aluminum),
6 minimum 18" diameter or the equivalent in plastic pipe.
- 7 (2) Culverts will be buried at least 20 percent of the diameter or a minimum of
8 12"(inches), whichever is greater, and will project three feet beyond the fill
9 on the inlet and outlet.
- 10 (3) Culverts will be laid at a slope of two to six percent unless specified
11 otherwise. Culverts will be placed at the natural stream gradient on
12 anadromous fish streams. Bottomless crossing structures may be employed
13 on anadromous fish streams where appropriate. All stream crossings that
14 contain fish habitat must be approved and permitted by ADFG.
- 15 (4) All bridges shall meet minimum standards defined in DFFP Forest Road and
16 Bridges Standard Design specifications. All bridges that do not meet
17 minimum load carrying specifications will be repaired, replaced, or posted
18 for reduced load minimums.

19 **E. Location: Access to Mining Claims, Private Property, and Material Sites**

- 20 (1) Roads constructed within the Forest for the purpose of accessing private
21 ownership, mineral claim sites, material lease sites, etc., will be to the
22 location and quality specifications as designated by the DFFP on a case-by-
23 case basis.
- 24 (2) Reasonable, timely and economically feasible access will be cooperatively
25 determined by all parties concerned.
- 26 (3) No land use designation will prohibit construction of roads for these access
27 purposes.

28 **2. Road Design**

- 29 **A.** Roads will be designed to maximize resource access while minimizing adverse
30 environmental impact.
- 31 **B.** Design for roads through critical fisheries and wildlife areas should be done in
32 consultation with the ADFG. These areas may include moose and goat winter

1 concentration areas, eagle nesting trees, bear denning areas, and salmon spawning
2 and rearing habitat.

3 C. Approval of Forest road designs by agencies will be achieved with the decision
4 approval of FLUPs.

5 **3. Road Maintenance**

6 A. Forest resource access roads will be maintained under the following guidelines:

7 (1) Primary haul roads are to be maintained and open for public access. Closure
8 can be considered on a case-by-case basis. This maintenance does not include
9 winter snow removal.

10 (2) Secondary haul roads can be considered for closure on a case-by-case basis.
11 Those not designated to be maintained may be closed according to
12 requirements defined by future use.

13 (3) Spur roads, with very few exceptions, will be closed according to
14 requirements defined by future use.

15 (4) If maintenance funds are not available, roads that may adversely impact
16 anadromous fish habitat may be closed in consultation with ADFG to prevent
17 potential impacts to anadromous fish habitat.

18 B. For purposes herein, properly "closed" may include but is not necessarily limited
19 to removal of bridges or culverts, construction of water bars, and grass seeding
20 where necessary to reduce erosion potential.

21 C. The primary source of maintenance of state-owned timber harvest access roads,
22 including bridge maintenance and replacement, is through timber sale contracts.

23 D. The Department of Transportation and Public Facilities shall conduct periodic
24 inspections on all state-maintained bridges, spans 20 feet or greater.

25 E. Treatment (removal) of encroaching roadside brush may be by hand, or by
26 mechanical means to maintain safety standards for vehicle use.

27 **4. Protection of Cultural Resources**

28 Known historic and archaeological sites should be avoided during construction of
29 transportation facilities unless no other feasible alternative exists. Management of access
30 development will comply with State Historic Preservation Office requirements to
31 preserve these resources.

1 **5. Curtailing Public Access**

2 Access to public lands along the Forest road system may be limited at certain times to
3 protect public safety, to allow special uses, and to prevent harm to the environment.
4 Examples of conditions that may require controlling public access along Forest roads are
5 fire management, lack of maintenance funds, timber harvest operations, other agency
6 required management actions, and high soil moisture content when traffic may cause
7 extensive damage to facilities.

8 **6. Right-of-Way Across Alaska Native Allotments**

9 Right-of-way access across Alaska Native Allotments should be coordinated with the
10 Southeast Agency responsible for overseeing the rights of access on Alaska Native
11 Allotments in the area.

12 **7. Land Use Authorization**

13 The DFFP received Right-of-Way easements for two sections of Forest road crossing
14 University of Alaska Land, one segment on the Little Salmon River Road and the other on
15 the Sunshine Mountain Road. These two short sections of road, not included in the 1985
16 deed dedicating land rights to the University of Alaska for the purpose of resource
17 management, have provided access to HSF resources for some 55 years. The “relocateable
18 easements” assign management rights for the “prism of the road, and all crossing
19 structures therein” to DFFP maintaining historic access for the public across these lands
20 while protecting the rights to the land for the University.

21 The DFFP has received Right-of-Way authorization for four sections of Forest road from
22 private landowners. Two sections of Forest road cross private property above Mosquito
23 Lake. One section of Forest road crosses a native allotment at approximately 5 mile of the
24 Kelsall 100 road where private land ownership is clearly marked along the roadway by the
25 allotee in ownership of the land. The third section of road crosses a patented mining claim
26 in the Porcupine Mining District west of Porcupine Creek.

27 The legal records of public use rights for these access routes can be found on the State of
28 Alaska website, DNR – Recorder’s Office.

29 **8. Other Guidelines Affecting Transportation**

30 Several other guidelines may affect transportation. For details of those guidelines, see the
31 following sections of this chapter:

- 32 • Fish and Wildlife
- 33 • Forest Timber Resources
- 34 • Recreation

- Water Quality, Quantity, and Riparian Areas

WATER QUALITY, QUANTITY, AND RIPARIAN AREAS

Goals

1. Improve, maintain, or cause minimal temporal impact to existing stream and overall hydrological conditions.
2. Ensure surface and groundwater quality and conditions are minimally impacted by Forest Management activities in accordance with the Department of Environmental Conservation (DEC) standards and regulations.
 - A. Minimize the amount of point and non-point source pollution, including untreated storm water, siltation from road construction and timber harvest activities, and hydrocarbon contamination from fuel storage tanks and Forest roads.
 - B. Manage public use activities to ensure the protection of habitat areas, riparian areas, and wetlands important to habitat or hydrologic function.
3. Preserve and protect riparian areas and vegetation important to the maintenance of fish and wildlife habitat.
4. Limit impacts to riparian areas when constructing forest roads, installing culverts and bridges, or developing recreation facilities through collaboration with ADFG and ADEC.

Management Guidelines

1. Water Quality on Commercial Forest Land

In areas of timber harvest, maintain water quality, drainage patterns, wetlands, and riparian areas by deliberate design and location of roads, location and placement of culverts, and design and layout of harvest areas.

2. Facilities and Riparian Areas

Structures, recreation facilities, and road and bridge projects should be sited, designed, and developed so that impacts to riparian areas essential to habitat functions within the Forest are minimized or, if possible, precluded. Generally, structures and facilities should not be sited within the stream areas defined by ordinary high water.

1 **3. Diversion, Channelization, and Dam Construction**

2 Diversion, channelization, or dams that will alter the natural hydrological conditions and
3 that have a significant adverse impact on important riverine habitat should be avoided.

4 **4. Stream Bank Management**

5 Maintain water quality by protecting the integrity of stream banks when carrying out
6 management responsibilities. Methods may include the maintenance of stream bank
7 vegetation to the maximum extent feasible, installing infrastructure to stabilize stream
8 banks and prevent erosion in affected areas, and provide for the replacement of
9 vegetation impacted by development activities along stream banks.

10 **5. Activities in Special Management Zones**

11 To the extent feasible and prudent, commercial and industry uses, transportation facilities,
12 and pipelines will be located outside a Special Management Zone unless these uses are
13 water dependent.¹² Where this is not feasible, other measures will be implemented to
14 meet the intent of these guidelines. Timber harvest may occur in special management
15 zones with approval from ADFG, and if it is sited and designed to be consistent with the
16 resource goals of this Chapter.

17 **6. Cooperation With Other Landowners**

18 Participate with other landowners in cooperative watershed management programs
19 designed to maintain the water quality of local streams and rivers.

20 **7. Other Guidelines Affecting Water Resources**

21 Several other guidelines may affect hydrological resources. For details see the following
22 sections of this chapter:

- 23 • Forest Timber Resources
- 24 • Forest Protection
- 25 • Recreation
- 26 • Subsurface: Resources and Materials
- 27 • Transportation
- 28

¹² See Forest Resources, Management Guidelines, Special Management Zones in this Chapter for a description of this guideline.