

Chapter 4

Forest-wide Standards & Guidelines

Introduction

Chapters 2, 3 and 4 of the Forest Plan present the direction for managing the Tongass National Forest. The components and priority of this direction are explained in Chapter 1. This chapter includes the [Forest-wide Standards & Guidelines](#). These standards and guidelines for the protection or management of the different forest resources apply to all or most areas of the Forest, and are used in conjunction with additional standards and guidelines included within each [management prescription](#). Each management prescription (Chapter 3) includes a table indicating which of these Forest-wide Standards & Guidelines apply to the area ([Land Use Designation](#)) covered by that prescription. The Forest-wide Standards & Guidelines are organized by resource, as shown in the table of contents of this Plan.

Standards & Guidelines

AIR

Forest-wide Standards & Guidelines

Air Resource Inventory: AIR111

I. *Baseline Quality and Values*

- A. During project planning, assess air quality conditions on [National Forest System lands](#) by following direction in FSM 2580.

Air Resource Planning: AIR112

I. *Objective*

- A. The objective for the air resource, which is to be managed as a part of the forest [ecosystem](#), is to maintain or improve National Forest air quality by preventing significant deterioration from Forest activities or other sources.
 1. Consider the air resource objectives when planning, designing, and implementing projects, which may affect the air resource, consistent with other multiple-use goals and objectives.

II. *Planning for the Maintenance of Air Quality*

- A. Plan to maintain current air quality, Forest-wide.
 1. Manage on-Forest resource activities to control and minimize air [pollution](#) impacts and to ensure that predicted emissions from all [pollution](#) sources do not exceed [Ambient Air Quality Standards](#) as specified under the Alaska Administrative Code, Title 18, Chapter 50.
 - a) Obtain burning permits from the Alaska Department of Environmental Conservation for all [prescribed fire](#) projects.
 2. Require permittees, contractors, and mine operators to apply for applicable state permits and meet State Air Quality Standards when conducting work on the Forest.
 3. Cooperate with regulatory authorities to prevent adverse effects of air pollutants and atmospheric deposition on forest ecosystems.

Air Coordination: AIR113

I. *Coordination with the State of Alaska*

- A. Cooperate with the Alaska Department of Environmental Conservation to protect the air resource on the National Forest. Join in the assessment of air quality monitoring needs and in the development or revisions of air quality standards and regulations, as needed.
- B. Review and comment on both proposed and existing sources of off-Forest pollution that may significantly affect [ambient air](#) quality on National Forest System lands.
- C. Review the requirements for proposed new emission sources under the [Prevention of Significant Deterioration](#) (PSD) Permitting Process.

BEACH and ESTUARY FRINGE

Forest-wide Standards & Guidelines

Beach & Estuary Description: BEACH1

I. Objectives and Identification

- A. Management objectives of the beach and estuary fringe habitat:
 - 1. To maintain the ecological integrity of beach and estuary fringe forested habitat to provide sustained natural habitat conditions and requirements for wildlife, fish, recreation, heritage, scenery and other resources.
 - 2. To provide a relatively continuous forested **corridor** linking terrestrial landscapes.
 - 3. To provide a variety of recreation opportunities, normally of a primitive or semi-primitive nature and retain the visual quality
 - 4. To maintain an approximate 1,000-foot wide beach fringe of mostly unmodified forest to provide important habitats, corridors, and **connectivity** of habitat for eagles, goshawks, deer, marten, otter, bear and other wildlife species associated with the maritime-influenced habitat. **Old-growth** forests are managed for near-natural habitat conditions (including natural disturbances) with little evidence of human-induced influence on the ecosystem.
 - 5. To maintain an approximate 1,000-foot wide estuary fringe of mostly undisturbed forest that contributes to maintenance of the ecological integrity of the biologically rich tidal and intertidal estuary zone. Habitats for shorebirds, waterfowl, bald eagles, goshawks, and other marine-associated species are emphasized. Old-growth conifer stands, grasslands, **wetlands**, and other natural habitats associated with estuary areas above the mean high tide line are managed for near-natural habitat conditions with little evidence of human-induced **disturbance**.
- B. Beach fringe identification:
 - 1. The beach fringe is an area of approximately 1,000 feet **slope distance** inland from mean high tide around all marine coastline.
- C. Estuary fringe identification:
 - 1. The estuary fringe is an area of approximately 1,000 feet slope distance around all identified estuaries. Estuaries are ecological systems at the mouths of streams where fresh and salt water mix, and where salt marshes and intertidal mudflats are present. The landward extent of an estuary is the limit of salt-tolerant vegetation (not including the tidally influenced stream or river **channel** incised into the forested uplands), and the seaward extent is a stream's delta at mean low water.

Beach & Estuary Management: BEACH2

I. Coordination

- A. Coordinate activities which affect the Coastal Zone with the State of Alaska Office of Management and Budget, Division of Governmental Coordination, to ensure consistency, to the maximum extent **practicable**, with the enforceable policies of the Alaska Coastal Management Program.

II. Management

- A. Management is governed by the **Land Use Designation** (LUD) in which the beach or estuary area is located. Some LUD's (such as Wilderness and most of the natural setting LUD's) highly restrict development. Where the LUD permits development (e.g., moderate and intensive **Development LUD's**) the following standards and guidelines will apply.
- B. Allow facility developments which require in-water access (e.g. docks, floats, or boat ramps.)
 - 1. Locate facilities more than 300 feet from the mouths of intertidal channels of known Class I **anadromous fish** streams or tidal or subtidal beds of aquatic vegetation to avoid **significant impairment**.
 - 2. Avoid filling of intertidal and subtidal areas to the extent **feasible**.
- C. Permit reasonable access to **mining claims** in accordance with the provisions of an approved **plan of operations**. Assure prospectors and claimants their right of ingress and egress granted under the General Mining Law of 1872, **ANILCA**, and National Forest Mining Regulations 36 **CFR** 228.

1. Take advantage of topographic and vegetative screening when locating drill rigs, pumps, roads, rock quarries, structures, and marine transfer facilities.
 2. Consider timing restrictions to minerals activities to avoid adverse impacts to fish and wildlife resources during critical periods.
- D. Emphasize natural recreation settings and continue to provide the spectrum of outdoor recreation and tourism opportunities.
1. Where feasible, schedule activities to avoid change to the existing [Recreation Opportunity Spectrum](#) (ROS) class in marine recreation settings.
 2. In locations where scheduled activities change the recreation setting(s), manage the new setting(s) in accordance with the appropriate ROS guidelines with emphasis on marine-related recreation activities.
 3. Design and locate recreation-related structures (e.g. recreation cabins, lodges, wildlife viewing structures) to be compatible with beach and estuary fringe objectives.
 4. Manage [Off-Highway Vehicle](#) use to prevent [degradation](#) of wildlife and fish habitats.
 5. Manage recreation and tourism use to maintain fish and wildlife habitats.
- E. Allow [subsistence](#) and other [personal use](#) of timber in accordance with ANILCA, Title VIII and other standards and guidelines (e.g. the 330' buffer around bald eagle nests). Personal use is generally inconsistent with beach and estuary objectives but allowed if limited to locally determined areas and feasible opportunities outside the beach and estuary fringe do not exist.
- F. Beach log salvage is permitted.
- G. The beach and estuary fringe are classified as unsuitable for timber harvest. No programmed timber harvest is allowed, however, on a limited basis, unprogrammed timber harvest could be allowed. Among other reasons, unprogrammed timber harvest may include timber sold as part of a salvage sale (see H. below), for specialty wood products, for customary and traditional uses, and for landings, roads, or timber harvest necessary to access timber in adjacent programmed areas where there are not feasible alternatives in project design. Timber harvest necessary to access timber in adjacent programmed areas, where there are no feasible alternatives in project design (e.g., landings for logical yarding settings), will be considered only on the landward edges of the fringe. Silvicultural prescriptions for any harvest must address beach fringe management objectives.
- H. Allow salvage of dead standing and/or down material if the salvage activity is consistent with long-term beach and estuary management objectives. This salvage will not contribute to the [Allowable Sale Quantity](#). Small amounts of standing green timber may be harvested during salvage operations for safety and operational considerations.
- I. Road construction is discouraged in the beach and estuary fringes. Where feasible alternatives are not available, road corridors may be designated.
1. Provide or maintain recreation or community access where needed as identified through project analysis.
- J. [Log Transfer Facilities](#) may be constructed.
1. Use the Alaska Timber Task Force Siting Guidelines (see Appendix G & the Log Transfer Facility standards and guidelines in the Transportation Forest-wide Standards & Guidelines section).
- K. Wildlife habitat restoration of young-growth conifer stands is encouraged to accelerate development of advanced seral stand structure. Treatments may include thinning of young stands, release, pruning, and fertilization.
- L. Other permitted activities (e.g. powerlines, fish camps) may be allowed in the beach and estuary fringe where feasible alternative locations are not available.

FACILITIES

Forest-wide Standards & Guidelines

The recreation and administrative facilities needed to support the management, protection, and utilization of the National Forests including buildings, utility systems, dams, and other constructed features.

Facilities Operations: FAC1

- I. *Administration and Maintenance*
 - A. Assess and document the ability of Forest Service facilities to support planned activities.
 - B. Assess the historic and cultural values of these facilities.
 - C. Provide maintenance and safety inspections on major structures on the Forest in compliance with FSM requirements.
 - D. Maintain current operation and maintenance plans for Forest Service-owned recreation facilities (FSM 2330).

Facilities Improvement Preparation: FAC21

- I. *Plan Development*
 - A. Complete site development plans for all facility needs identified in the Forest Plan implementation schedule or the Forest Facility Master Plan (FSM 7311).
 - B. Maintain a description of the desired future condition for facilities which reflects needs, future development opportunities, and long-term management in the Forest Facility Master Plan. Document the extent and management of these facilities including:
 1. Number of buildings by type and age.
 2. Number of dams by classification.
 3. [Developed recreation](#) sites, such as National Forest campgrounds, picnic areas, and trailheads with recreation facilities.
 4. Number and types of permitted facilities, including dams, ski areas, fences, buildings, etc.
 5. Number (and/or miles) of systems including sewage, water, electrical, and communication networks needed within recreation, permitted, and administrative sites.

Facility Construction: FAC22

- I. *Construction Requirements*
 - A. All remodeling, new construction, or building leasing should be constructed in accordance with an approved site development plan in order to provide safe, functional, aesthetically pleasing, energy efficient, and cost-effective facilities.
 1. Ensure consistency with [Land Use Designation](#) direction.
 - B. Access for persons with disabilities is required for new administrative facilities.
 - C. Consult FSH 7309.11 for gender-related design standards.

Facility Maintenance: FAC23

- I. *Maintenance*
 - A. Maintain facilities to meet codes applicable at the time of construction, unless otherwise required by law.
 - B. Perform accessibility surveys on all existing facilities. Implement improvements to provide barrier-free, accessible facilities appropriate to the site development and ROS level, as funding and opportunity allow. (See also Recreation and Tourism Forest-wide Standards & Guidelines).

FIRE

Forest-wide Standards & Guidelines

Fire Suppression: FIRE12

I. *Protection Options*

- A. Due to weather conditions, fire suppression is not a common need on the Tongass National Forest. Under normal conditions, the period of time for fire starts and spread is short. All [suppression](#) actions will provide for the safety of fire fighters and be applied at a minimum suppression cost, commensurate with the values at risk. Fire suppression shall fall into one of four optional categories: "Critical" (control strategy), "Full" (control strategy), "Modified" (contain strategy), or "Limited" (confine strategy). These options and strategies are further defined and discussed in the interagency Southeast Alaska/Prince William Sound Fire Management Plan. Complete an Escaped Fire Situation Analysis for all suppression actions that fail to confine, contain, or control the fire's spread following the first initial attack shift. (Consult FSM 5132)
1. Critical Protection Option (control): This option is specifically created to differentiate the protection of human life and inhabited property and improvements from natural resource protection. The designation of a site or area with this option is the discretion of the land manager responsible for the fire protection. Unquestioned priority over all other fires will automatically be given to control fires on sites or areas identified in this option.
 2. Full Protection Option (control): Areas assigned this designation will receive aggressive initial attack and aggressive suppression actions until the fire is declared out. This option was designed for the protection of high resource values, cultural sites, historical sites, and those resources which require wildland fire protection, but do not involve protection of human life and habitation.
 3. Modified Protection Option (contain): This option is to provide managers with an alternative for those lands that require a relatively high level of protection during critical burning periods. Its intent is to reduce suppression costs and increase resource benefits where possible during the entire fire season. Some portions of the fire may require aggressive action and others may only require a containment action.
 4. Limited Protection Option (confine): This category recognizes areas where a natural fire program is desirable or the values at risk do not warrant the expenditures of suppression funds beyond initial attack. No suppression actions will be taken unless necessary to confine the fire within the limited areas.

Fuels Improvements: FIRE2

I. *Prescribed fire*

- A. The use of [Prescribed fire](#) as a tool for resource management is often undependable due to shortness of burning opportunities and weather limitations during the burning season. Use Prescribed fire, as appropriate, for silvicultural [site preparation](#), wildlife habitat improvement, or [slash](#) hazard treatment.
1. All prescribed fires must have an approved project plan signed by the appropriate line officer with a designated burn boss, contingency options, and a process for monitoring and evaluating results. All prescribed fires will have a qualified organizational structure, including personnel, to suit the complexity of burn. (Consult FSM 5140)
 2. For silvicultural site preparation, wildlife habitat improvement, and slash hazard treatment, the District Ranger will assure appropriate interdisciplinary specialist participation during planning, executing, monitoring, and evaluation phases of prescribed fire use. Consult FSM 5140, FSH 5709, FSM 6740.

FISH

Forest-wide Standards & Guidelines

Fish Habitat Inventory and Monitoring: FISH111

I. Fish Habitat Inventory

- A. Maintain the [channel type](#) and [stream class](#) (see Glossary) based inventory of all Forest streams.
 - 1. Maintain and update the stream inventory during site-specific project planning and analysis.
 - a) Consult publication *R10-TP-26, A Channel type Users Guide for the Tongass National Forest, Southeast Alaska* (as revised), for descriptions of the channel types.
 - b) Consult the R10 Stream Survey Protocol for descriptions of standardized stream survey methodologies (draft).
- B. Maintain the inventory of Forest streams and watersheds for fish enhancement opportunities.
- C. Maintain, and further develop as necessary, the fish-habitat-objectives database used to measure changes in the natural range and frequency of aquatic habitat conditions. (See FISH 112,IV(B) and Appendix B.)

Fish Habitat Planning: FISH112

I. Fish habitat and channel processes

- A. Recognize [watershed](#) function and [channel](#) processes when planning for the protection, restoration or enhancement of fish habitat. (Consult direction for [watershed analysis](#) (Appendix J) and Riparian Forest-wide Standards & Guidelines RIP2,I,B.)
 - 1. Consider the effects of upstream and upslope activities during site-specific planning.
 - 2. Consider the condition of upstream and upslope areas during site-specific planning.
 - 3. Consider topics such as erosion processes, watershed hydrology, vegetation, stream channel morphology, water quality, species and habitats, and human uses, during analyses.

II. Channel classification and process groups

- A. Use channel type inventories to categorize stream reaches into [channel process groups](#). Use channel types and process groups to plan management activities affecting fish and fish habitat along all lakes and streams. Process groups and the channel types included in each process group are shown in Appendix D, and in *publication R10-TP-26, A Channel type Users Guide for the Tongass National Forest, Southeast Alaska*. These groups may be redefined as more information about channel types becomes available.
 - 1. Map and field-verify streams, lakes and estuaries by channel type and stream class for project planning and implementation.

III. Fish stream value classification

- A. Determine fish value class of all streams in the affected area prior to or during site-specific project planning.
- B. Use the following classification system across the Forest.
 - 1. Class I: Streams and lakes with anadromous or [adfluvial fish](#) habitat; or high quality [resident fish](#) waters listed in Appendix 68.1, Region 10 Aquatic Habitat Management Handbook (FSH 2609.24), June 1986; or habitat above fish migration barriers known to be reasonable enhancement opportunities for [anadromous fish](#).
 - 2. Class II: Streams and lakes with resident fish populations and generally steep (6-15 percent) gradient (can also include streams from 0-6 percent gradient) where no anadromous fish occur, and otherwise not meeting Class I criteria. These populations have limited fisheries values and generally occur upstream of migration barriers or have other habitat features that preclude anadromous fish use.
 - 3. Class III: Perennial and intermittent streams with no fish populations but which have sufficient flow, or transport sufficient [sediment](#) and debris, to have an immediate influence on downstream water quality or fish [habitat capability](#). These streams generally have [bankfull widths](#) greater than 5 feet and are highly incised into the surrounding hillslope.

4. Class IV: Other intermittent, ephemeral, and small perennial channels with insufficient flow or sediment transport capabilities to have an immediate influence on downstream water quality or fish habitat capability. These streams generally are shallowly incised into the surrounding hillslope.
5. Non-streams: Rills and other watercourses, generally intermittent and less than 1 foot in bankfull width, little or no incision into the surrounding hillslope, and with little or no evidence of scour.

IV. Objectives/guidelines for management affecting fish habitat

- A. Maintain or restore the natural range and frequency of aquatic habitat conditions on the Tongass National Forest to sustain the diversity and production of fish and other freshwater organisms.
- B. Use (and update) baseline fish habitat objectives as a reference to evaluate the relative health or condition of riparian and aquatic habitat. Use baseline fish habitat objectives, listed below (and others as developed), (AFHA, 1995) to characterize the natural range of habitat conditions by channel types and [process groups](#).
 1. Pool Area. Expressed as a percentage of the total habitat area.
 2. [Large Woody Debris](#). Defined as woody material greater than 10 cm in diameter and 1 m long, that protrude into the active stream [channel](#) area. Expressed as the frequency of large wood pieces per unit area (1,000 sq. meter) of stream.
 3. Width-to-Depth Ratio. Bankfull channel width-to-depth values are measured at bankfull stream stage which is roughly equivalent to the stream level for a 2-year return-interval flood.
- C. Maintain or restore [stream banks](#) and stream channel processes.
 1. [Stream class I, and Class II streams that flow directly into Class I streams](#). Maintain, restore or improve anadromous, adfluvial, and high value [resident fish habitat capability](#) by providing natural or improved cover/pool ratio, pool-riffle sequences, and habitat features, such as stable large woody debris. Design management activities to maintain stream bank, channel and [flood plain](#) integrity.
 2. [Other Stream class II](#): Maintain or restore habitat capability for resident fish populations by providing natural or improved cover/pool ratio, pool-riffle sequences, and habitat features, such as stable Large Woody Debris. Design management activities to maintain stream bank, channel, and [flood plain](#) integrity. Avoid impacts to downstream [class I](#) streams.
 3. [Stream class III](#): Design management activities to maintain or restore stream bank, channel, and flood plain integrity. Avoid impacts to downstream class I and Class II streams.
- D. Maintain or restore natural and beneficial quantities of Large Woody Debris (LWD) over the short and long-term.
 1. [Stream class I, and Class II streams that flow directly into Class I streams](#). Maintain or restore anadromous, adfluvial, and high value resident fish habitat capability by providing for natural and beneficial volumes of LWD for rearing and spawning, stream energy dissipation, and sources of organic matter to the stream ecosystem. Use biological and physical characteristics of the stream to determine size classes and distribution of LWD.
 2. [Other Stream class II](#): Maintain or restore habitat capability for resident fish populations by providing LWD, and by designing for future sources of LWD at volumes determined by channel type biological and physical characteristics.
 3. [Stream class III](#): Maintain or restore LWD in channels and banks to prevent changes in natural stream bank and stream channel processes.
- E. Maintain or restore water quality to provide for fish production.
 1. [Stream classes I, II, and III](#): Prevent adverse effects to rearing and spawning habitat. Maintain or restore anadromous, adfluvial, and high value resident fish habitat capability. Maintain or restore capability for other resident fish populations to the extent [feasible](#). Assure no chronic [sediment](#) input following soil-disturbing activities. Prevent adverse impacts to fish habitat downstream by minimizing siltation.
 2. Implement applicable [Best Management Practices](#). (See Appendix C).
- F. Maintain or restore optimum water temperatures for salmonids, considering both winter and summer habitat requirements, climate, and natural watershed characteristics.
 1. [Stream class I, and Class II streams that flow directly into Class I streams](#). Maintain or restore optimum salmonid summer stream temperatures at between 50 and 68°F or at natural levels.

Standards & Guidelines

2. *Other Stream class II:* Maintain water temperatures below 68°F, or at natural levels, to maintain or restore habitat capability for resident fish populations. Manage watersheds and riparian streambanks to maintain water temperature standards and guidelines for downstream class I streams.
 3. *Stream class III:* Manage watersheds and riparian streambanks to maintain water temperature standards and guidelines for downstream class I and II streams.
- G. Maintain fish passage through stream crossing structures. (Consult the Aquatic Habitat Management Handbook, FSH 2609.24.)
1. *Stream Class I:* Maintain, restore or improve the opportunities for fish migration.
 - a) Use juvenile coho as the design species for upstream fish migration.
 - b) When a culvert is selected for stream crossing, design, install, and maintain the culvert to prevent the creation of water velocity or height barriers at the outlet of the pipe, and to allow upstream passage of juvenile coho. Passage may be delayed for up to 4 days due to high water velocity during the mean annual flood.
 2. *Stream Class II:* Maintain, restore or improve the opportunities for the natural migration of resident fish, where feasible (see glossary). Overall, the intent is to provide passage of resident fish in all Class II streams, but occasionally it is not feasible to protect short sections of habitat and passage will be restricted.
 - a) In determining feasibility, consider the following:
 - 1) Presence of known sensitive or unique fish populations.
 - 2) The cumulative impacts of not providing fish passage at multiple sites in the same watershed.
 - 3) In Class II streams which flow directly into Class I streams: the upstream and downstream linkages between the anadromous and resident life strategies of the same species.
 - 4) Advice from the Alaska Department of Fish and Game.
 - b) Use Dolly Varden char, rainbow trout, and/or cutthroat trout juveniles (greater than one year old) as the design species for fish migration in Moderate Gradient-Mixed Control (MM) and Flood Plain (FP) process groups (see Appendix D), depending on which specie(s) is(are) present. Use adult Dolly Varden char, rainbow trout, and/or cutthroat trout as the design species in all other process groups.
 3. *Stream Class III:* No fish habitat is found in this stream class.

V. Management Indicators

- A. Use forest plan management indicators to evaluate the potential effects of proposed project management activities affecting fish habitat.

VI. Management Activities

- A. Maintain an Area fish program schedule which includes anticipated inventory needs, monitoring requirements, and proposed habitat improvement and maintenance projects.

VII. Coordination

- A. Coordinate activities that affect fish resources with other Forest disciplines through the [Interdisciplinary Team](#) process, and with state, other Federal, and local agencies and groups.
 1. Develop and maintain Memoranda of Understanding/Agreements with appropriate state, Federal, and local agencies and [aquaculture](#) associations.
 2. Coordinate with the Alaska Working Group on Cooperative Forestry/Fisheries Research, state and Federal agencies, and the Forestry Science Laboratory, in maintaining a continuous program for research, monitoring, and assessment of impacts of land-use activities on fish habitat.
- B. Consider the influence of proposed management activities on fishing use patterns.
- C. Consider effects of [Off-Highway Vehicle](#) (OHV) travel and road closures on fish habitat and populations.

VIII. *Projects*

- A. Use the following priority for fish habitat project work: mitigation for unplanned impacts, [rehabilitation](#)/restoration, enhancement. For both mitigation and rehabilitation, consider alternatives for cost efficiency of performing off-site enhancement (enhancement of a different area than where the impact actually occurs).
 - 1. Location of off-site enhancement shall be governed by the following priorities:
 - a) First priority: same stream reach (same species)
 - b) Second priority: same stream (same species)
 - c) Third priority: same watershed (same species)
 - d) Fourth priority: same anadromous fish harvest area (same species)
 - e) Fifth priority: differing species, using above priority order
- B. Enhance fish habitat to meet the objectives identified in this plan. Opportunities may include, but are not limited to: instream enhancement, lake fertilization, cooperative bio-enhancement (e.g., stocking), incubation boxes, and fishway construction.
 - 1. Use the Cooperative Fisheries Planning process (Consult [ANILCA](#) Section 507 and Appendix H) and/or other cooperative agreements for developing priorities for the enhancement of fish resources.
 - 2. Determine [habitat capability](#) on streams and lakes identified for enhancement in the Cooperative Fisheries Planning process prior to construction of fish projects.
 - 3. Update the fish habitat enhancement list (Cooperative Fisheries Planning process) annually.
- C. Recognize bio-enhancement (e.g., stocking of juveniles, use of egg incubation boxes, transferring of adult fish to seed stream systems) as part of the fish improvement project costs when appropriate. Cooperate/coordinate with fish agencies and [aquaculture](#) associations to facilitate bio-enhancement.

Fish Habitat Improvement: FISH22

I. *Planning*

- A. Improve or restore fish habitat to work toward the habitat and population objectives of the Forest Plan.
- B. Construct projects using the most cost-efficient methods, while achieving desired results consistent with the [Land Use Designation](#).
- C. During project planning consider the need to monitor the accomplishment of project objectives. Need shall be governed by the type of project, with high interest/high investment projects being monitored more intensively.
 - 1. Where needed, develop cooperative agreements with fish/aquaculture agencies and other groups to assess the effectiveness of Forest Service habitat improvement.

II. *Construction Coordination*

- A. Coordinate all fish habitat improvement using an interdisciplinary process.
- B. Coordinate habitat improvement projects with the Alaska Department of Fish and Game and other appropriate agencies and groups.

III. *Monitoring*

- A. Conduct monitoring of fish improvement projects to insure their continued function at the design level of operation.
- B. Monitor fish production on a representative sample of improvement projects to evaluate effectiveness of the improvement program and conceptual designs of individual projects.

Standards & Guidelines

Fish Habitat Maintenance: FISH23

I. *Maintenance*

- A. Provide for the maintenance of fish habitat enhancements.
 - 1. Fund maintenance of existing projects prior to the construction of new ones.
 - 2. Include funding for maintenance in the planning and budgeting for all projects.
 - 3. Maintain improvements to assure that investment objectives are met.
 - 4. If maintenance and operation of an improvement are evaluated, and the improvement becomes inefficient to maintain; redesign or stop maintenance of that improvement.
 - 5. If an improvement becomes inoperable, consider its removal or [reconstruction](#).
- B. Develop a written maintenance responsibilities agreement with project cooperators prior to project construction.

FOREST HEALTH

Forest-wide Standards & Guidelines

Forest Health Management: HEALTH1

I. *Forest Health Management*

- A. Achieve desired future condition of forest health by manipulating insect and disease populations to beneficial levels. Desirable forest health conditions are expected to vary according to different resource goals.
 - 1. Create ecological conditions which improve the health of vegetation by incorporating forest health principles into forest planning, decision-making, and implementation of project activities. The Forest Health Management Group (S&PF) will be responsible for providing the data necessary for project planning to maintain or improve forest health.
 - 2. Consider Forest Health Management information dealing with insects and diseases and recommendations on management alternatives. These recommendations will include analyses of the ecological effects of insects and diseases and management alternatives, including no action, chemical, cultural, mechanical, and biological methods.
 - 3. For direction on the use of pesticides in forest management, consult the "Pesticide Use and Vegetation Management" guidelines in the Timber Forest-wide Standards & Guidelines.
- B. Evaluate insect and disease impact(s) to resources. The Forest Health Management Group will:
 - 1. Conduct on-site evaluations to assess past, current and future insect and disease impacts and their effect upon desired forest health.
 - 2. Use data from these evaluations to assist project planning and analysis.
- C. The Forest Health Management Group will provide training, technology transfer, and technical assistance to area and district personnel to assist in the management of forest insects and diseases.

Forest Insect and Disease Survey & Inventory: HEALTH2

I. *Insect and Disease Detection Survey*

- A. Forest Health Management will conduct an annual insect and disease detection aerial survey in cooperation with the areas and districts.
 - 1. Resource managers will establish survey priorities based on planning needs and current [management concerns](#).
 - 2. Forest Health Management will conduct aerial surveys of a variety of forest cover types and [Land Use Designations](#), concentrating on those areas identified as having the highest management priority.

HERITAGE RESOURCES

Forest-wide Standards & Guidelines

Heritage Resource Activities: HER

I. *Management*

- A. Maintain a heritage resource management program to identify, evaluate, preserve, and protect [Heritage Resources](#) on a Forest-wide and project specific-level in compliance with the National Historic Preservation Act, the [National Environmental Policy Act](#) (NEPA), the American Indian Religious Freedom Act (AIRFA), the Archaeological Resources Protection Act (ARPA), the Native American Graves Protection and Repatriation Act (NAGPRA), their amendments and implementing regulations. Consult Acts, 36 [CFR](#) 800, FSM 2300.
- B. Coordinate management of Heritage Resources with the [State Historic Preservation Officer](#) (SHPO) and the Advisory Council on Historic Preservation (ACHP). Consult 36 CFR 800 and FSM 2300 and the Programmatic Agreement #95MOU-10-029 between the USDA Forest Service, Region 10 and the Advisory Council on Historic Preservation (ACHP) and the Alaska State Historic Preservation Officer (SHPO).
- C. Identify and develop appropriate interpretive messages for heritage resource sites and activities that relate the historical value and contributions of natural and heritage resource management to the Tongass National Forest. Work closely with all interpretive services programs to assure accurate and effective interpretation of Heritage Resources.
- D. Coordinate the management, access, and use of forest products to perpetuate Alaska Native culture and art forms.
- E. Develop a heritage resource management assessment that provides a framework for management decisions. Its objectives are to display the schedule of management activities, to summarize current status, and to identify priorities for future Heritage Resources inventory, evaluation, and protection.
 1. Update the heritage resource assessment annually, for budget implementation and to fulfill requirements of the annual report to SHPO as stipulated in the Programmatic Agreement #95MOU-10-029.
 2. The assessment/annual report should include:
 - a) An overview of new data and data management.
 - b) Identification of projects reviewed under 36 CFR 800 or the Programmatic Agreement #95MOU-10-029 and areas requiring intensive site inventory, including non-project areas of the Forest.
 - c) Identification, classification and evaluation of Heritage Resources located.
 - d) Reevaluation and update of the heritage resource [sensitivity zone](#) system based on new data and/or understandings of each area's Heritage Resources and their locations.
 - e) Identification of measures and priorities for the protection of Heritage Resources from vandalism, theft, and natural deterioration.
 - f) Identification of prioritized needs for the [stabilization](#), restoration, and repair of damaged sites.
 - g) Identification of the need for maintenance of sites on or eligible for inclusion in the [National Register of Historic Places](#).
 - h) Identification of opportunities for interpretation of Heritage Resources for public education and recreation values.
 - i) Identification of the interaction of Heritage Resources and other multiple uses, including consideration of management activities, and their impacts on heritage resource management.
 - j) Identification of the coordination efforts with appropriate state heritage resource plans and planning activities of the State Historic Preservation Officer, State Archaeologist and other state and Federal agencies.

II. *Project Clearance/Inventory*

- A. *Project Clearance:* Any project, activity, or program that can result in changes in the character or use of historic properties and is under the direct or indirect jurisdiction of the Forest, licensed or assisted by the Forest, including new or continuing projects, activities, or programs and any of their elements not previously considered under Sections 106 and 110 of the National Historic Preservation Act of 1966, as amended, shall be considered an undertaking and will require evaluation through inventory and survey.
 - 1. If **feasible**, accomplish **Heritage Resources** clearance for NEPA prior to the release of the draft Environmental Impact Statement or the Environmental Assessment for public review, or prior to signing a decision memo.

III. *Project Implementation*

- A. Inventory and evaluation may be accomplished at the operator's discretion and cost provided that the inventory and evaluation are accomplished under the supervision of a qualified Heritage Resource Specialist authorized by a **Special Use Authorization**.
- B. Include as part of the Clearance Report specific protective and/or mitigative measures to be taken by the operator who is responsible for the cost of any such protective or mitigative measures.
- C. Mark known heritage resource sites within or adjacent to the project area prior to project implementation.
- D. Include in each contract, permit, or lease a statement of the operating conditions required to protect Heritage Resources in the project area. Also include the pertinent clause notifying the operator of his or her responsibility to protect marked sites when working in the project area and the operators liability for damage.
- E. Provide training in the recognition, site inspection, and protection of Heritage Resources for all persons responsible for on-the-ground administration of contracts, permits or leases.
- F. If a site is discovered during project implementation, work shall be suspended by the project administrator to avoid potential site damage. The Forest Supervisor shall notify the State Historic Preservation Office (SHPO) and authorize resumption of work only after the consultation process has been completed. The project administrator shall keep the contractor, permittee, or lessee informed of anticipated delays in work resumption.

IV. *Mitigation*

- A. In cases where in-place **preservation** of heritage values is the objective, the Forest Supervisor shall consider management options such as project design, location, or cancellations in meeting the objective. Consult 36 **CFR** 800 for procedures to be followed in reaching a management decision.
- B. The preferred management of sites listed in, nominated to, or eligible for the **National Register of Historic Places** is avoidance and protection.
 - 1. Sites listed in, nominated to, or eligible for the National Register of Historic Places shall be managed to achieve a "No Adverse Effect" finding, in consultation with the **State Historic Preservation Officer** and the Advisory Council on Historic Preservation. Consult 36 CFR 800.
 - 2. The recovery (collection) of Heritage Resources can occur during the inventory, evaluation, or mitigation (data recovery) phases. Standard requirements include documentation of the resource, labeling of the artifacts, and curation of the recovered materials and resultant records.
 - 3. Collection of artifacts, except under emergency circumstances, must be accomplished or directly supervised by a professional Heritage Resource Specialist. With the approval of the Forest Supervisor, a qualified Heritage Resource Specialist may recover artifacts for purposes of evaluation.
 - 4. Requirements for heritage resource collection are:
 - a) **Emergency collection:** Artifacts collected in emergency situations shall be turned over to the Area Heritage Resource Specialist for appropriate curation.
 - b) Special Agents and other law enforcement officers conducting criminal investigations may collect artifacts as evidence. Any material collected must be cataloged and stored in a secure area.
 - c) Artifact samples may be collected from heritage resource sites, when they can be systematically recovered and properly recorded for further evaluation (caution must be

Standards & Guidelines

exercised to assure that the collection of artifact samples is adequate for the purpose intended without causing unacceptable impacts to the resource).

- d) Data recovery (including collection of artifacts and photographic/archival recordation) must be conducted in accord with a Forest Service/State Historic Preservation Office approved Data Recovery Plan, which shall conform to the published guidelines in the Advisory Council on Historic Preservation, *Handbook for the Treatment of Archaeological Properties*.
5. Disinterment of human remains and associated grave goods, sacred objects and objects of cultural patrimony should occur only when consultation has been completed per NAGPRA with the direct lineal descendants or the representative tribe. A signed MOU shall be in place prior to any disinterment activities.

V. Enhancement

- A. Identify opportunities and priorities for interpretation of [Heritage Resources](#) for public education and recreation.
 1. Manage significant and suitable heritage resource sites to realize their recreational and educational values to the public. Enhancement programs should include in-service funding as well as opportunity for establishing partnerships with the private sector. The measure of suitability should be based upon accessibility, feasibility for protection, condition of the property, compatibility with other management activities, and value to the public.
 2. [Enhance](#) suitable heritage values through interpretation, restoration, and the publication of reports, brochures or films, videos, and slide programs. Interpretive services and facilities should be compatible with the nature, quality, and integrity of the resource selected for enhancement.
 3. Cooperate with museums, universities, and other recognized institutions, agencies, and knowledgeable persons in planning and constructing heritage resource exhibits and providing opportunities for scholarly/scientific use.
 4. Manage Heritage Resources to ensure that properties and their records are protected to prevent [degradation](#) or unauthorized use under authority of the Archaeological Resources Protection Act of 1979 and the regulations in 36 [CFR](#) 296.

VI. Site Inspection

- A. Assess condition, and document [restoration](#) or [stabilization](#) needs of cultural sites. Use this information for reporting the success of mitigation measures and other actions taken to ensure site [preservation](#).
 1. Frequency of inspection should seek to include one documented visit per selected site per year as available resources allow. If site damage is observed, additional inspections may become necessary. If an area is damaged through suspected human [disturbance](#), inspect other sites in that vicinity. (Consult the Area Heritage Resource Specialist and/or Special Agent.)
 2. Coordinate the assessments with District Rangers, the Area Heritage Resource Specialist and the Special Agent.
- B. Assessment procedures should include observations documenting the current site condition. Document assessments through a signed, written report that verifies which site was inspected and the observed condition.
- C. *Damage Assessment Report*. If site damage is observed and it has not been previously recorded, a site damage assessment report will be prepared by the Area Heritage Resource Specialist. The purpose of the damage assessment report is: to identify the damage, to make recommendations to stabilize the site from further deterioration, and to evaluate the actions needed to prevent further damage.
- D. Remain alert to cultural damage potentially attributable to criminal acts and safeguard investigation by avoiding further disturbance of the area.
- E. Prioritize heritage sites to be assessed on a yearly basis as coordinated by the District Ranger, Area Heritage Resource Specialist and Special Agent.
- F. Include resource inspection in the measures for the protection of [Heritage Resources](#) from vandalism, natural destruction, or project activity. Evaluate and recommend measures such as [stabilization](#), data recovery, or no action, for resources that have sustained damage from natural

forces. Vandalism, collecting, illicit excavation, or project damage shall be evaluated for protective measures, such as signing, administrative closure, remote sensing, increased inspection, investigation, stabilization, data recovery or other measures under the authority of the American Antiquities Act of 1906, the Archaeological Resources Protection Act of 1979 and regulations in 36 CFR 261, 36 CFR 296, and 36 CFR 800.

KARST and CAVE RESOURCES

Forest-wide Standards & Guidelines

Karst Resources: KARST

I. *Strategy*

- A. Maintain, to the extent feasible, the natural karst processes and the productivity of the karst landscape while providing for other land uses where appropriate. This strategy is designed to assess a karst resource's vulnerability or sensitivity to a proposed land use and recognize the differences in intensity of karst development across the karst landscape.
- B. The key elements of the karst strategy focus on the openness of karst and its ability to transport water, nutrients, soil and debris, and pollutants into underlying hydrologic systems. Strive to maintain the capability of the karst landscape to regenerate a forest after harvest, to maintain the quality of the waters issuing from the karst hydrologic systems, and to protect the many resources values within underlying significant [cave](#) systems as per the requirements of the Federal Cave Protection Act.

II. *Management*

- A. Maintain a karst resource management program that will identify, evaluate, and provide for karst resources. Evaluate karst resources as to their vulnerability to land uses affecting karst systems, as described in the Karst and Cave Resource Significance Assessment, Ketchikan Area, Tongass National Forest, Alaska (Aley et al., 1993), Karst landscapes and associated resources: a resource assessment (USDA Forest Service Gen. Tech. Rep. PNW-383) (Baichtal and Swanston, 1996), the information provided herein, and within Appendix I.
- B. Seek participation from interested individuals and organizations, such as caving groups, scientists, recreationists, and development interests in managing the karst resources.
- C. Integrate and coordinate karst management with the management of other resources. Consider the function and biological significance of the entire karst landscape; recognize the importance of protection of karst systems, not solely specific karst features.
- D. Public education and interpretative programs should be developed to insure an increased understanding of the components and function of the karst landscape. Use research results to foster and promote conservation and further public education of karst resources.
- E. Work with universities and other appropriate research facilities to foster partnerships to study and characterize the function and biological significance of karst landscapes. In order to maintain existing aesthetic and future scientific values, use non-consumptive research techniques as much as possible. See Appendix B for specific information needs.

III. *Karst Landscape Assessment*

- A. Karst lands impose land management challenges not encountered in non-karst areas because this three dimensional [landform](#) functions differently than do other landforms. Evaluate karst resources as to their vulnerability to land uses affecting karst systems. Classify karst lands as being of low, moderate, and high vulnerability. See Appendix I for additional guidance. This is a four-step process:
 1. Identify Potential Karst Lands - Identify those lands underlain by carbonate rocks. As a practical matter, all lands underlain by carbonate rocks within the Forest should be considered a karst landscape.
 2. Inventory Karst Landscapes and Cave Resources - Prior to the initiation of any project planning effort, determine the project's proximity to or position on a karst landscape. If it is determined that karst may be present in the area, perform an inventory of the area. Record the presence or absence of karst. If karst is present, document the degree to which karst has developed including the degree of epikarst development, the presence of caves, the presence of insurgences and resurgences, sinkholes, collapse channels, and other karst features.
 3. Delineate Karst Hydrologic System and Catchment Area - Define, to the extent feasible, the karst hydrologic system and the recharge-area [watershed](#) or catchment area for each karst system. The character of the catchment area, i.e., the area, slope gradient, vegetation, water

quality, soils, etc., controls the nature of the receiving karst system and defines the volume of runoff available for infiltration into the system. Recharge area delineation should be delineated to assess and characterize possible impacts.

4. Assess Vulnerability of Karst Terrain to Management Activity - Delineate the land into vulnerability categories following completion of the above steps. The recommended vulnerability mapping applies only to carbonate rock areas and areas that contribute waters to such areas. An area's vulnerability rating must be sensitive to potential surface [management practices](#) based on the extent to which epikarst has developed and the openness of the karst system. The vulnerability categories and criteria are as follows:
 - a) Low Vulnerability Karst lands - These are areas of low or negligible vulnerability from a karst management perspective. No special provision for the protection of karst values is considered necessary. It is possible that within and adjacent to areas found to be of low vulnerability, will be found karst areas with high vulnerability. Along such boundaries or margins, apply guidelines described in Appendix I.
 - b) Moderate Vulnerability Karst lands - Provide for other land uses taking into account karst management objectives. Timber harvest and related activities could be conducted in such areas under more restrictive guidelines than normally employed on lands underlain by non-carbonate bedrock. Implications of land use will be determined by the nature of the karst values present. It is probable that within and adjacent to areas found to be of moderate vulnerability, will be found karst areas with high vulnerability. Along such boundaries or margins, apply guidelines described in Appendix I.
 - c) High Vulnerability Karst lands - These areas are of very high significance and sensitivity from a karst conservation perspective. These areas will be managed to insure conservation of karst values. Karst lands found to be of high vulnerability will be identified and removed from the [commercial forest lands](#) suitable land base. Unprogrammed timber harvest, such as for [personal use](#) and for long stringer bridge construction, may be allowed if compatible with conservation of the karst resource.

IV. *Mineral development*

- A. The chemically pure carbonates of southeastern Alaska have long been considered for their commodity values. Values are determined on chemical purity as well as on brightness. The more pure the carbonate bedrock, the more intense karst development. Analyze the impacts of any proposed [mineral development](#) within the karst landscape through the environmental analysis which is triggered once a [Plan of operations](#) is received.

Cave Resources: CAVE

I. *Management*

- A. Manage lands in a manner which, to the extent feasible, protects and maintains significant caves and cave resources. See Appendix I for guidelines for determining cave significance.
- B. Locate, map, and describe caves, and evaluate and document the resource values discovered. Although the word "inventory" is not used in the Federal Cave Resources Protection Act (FCRPA), it is clear that the significant cave designation process is an inventory process for identifying caves that will require some form of management. Carry out data storage and collection in a manner which is consistent, at a minimum, with the processes outlined in 36 [CFR](#) 290 for initial and subsequent nomination, evaluation, and designation of significant caves.
- C. Develop a comprehensive Cave Resource Management Strategy on known cave resources. Strategies for cave resource management are suggested in Appendix I and within these standards and guidelines. As a minimum the strategy should include components which outline processes for cave inventory, record keeping, cave naming, handling of confidential cave information, partnership opportunities, recreational use monitoring, cave access and entry permits, and cave resource evaluations.
- D. Develop public education and interpretative programs to foster an increased appreciation of the function and biological significance of the cave resources, caving ethics and safety, and safe and responsible uses of these resources for research and recreation purposes.

Standards & Guidelines

- E. Classify caves based on management objectives consistent with identified cave resource values. Caves should be placed into one of the following classifications:
 1. *Class 1 - Sensitive Caves.* Caves considered unsuitable for exploration by the general public either because of their pristine condition, unique resources, or extreme safety hazards. These caves will be closed by the Forest Supervisor and entry allowed by permit only.
 2. *Class 2 - Directed Access Caves.* Caves with directed access and developed for public use. These caves are shown on maps or have signs directing visitor access; public visitation is encouraged.
 3. *Class 3 - Undeveloped Caves.* Caves that are undeveloped but are suitable for exploration by persons who are properly prepared. Location of these resources will not be advertised nor shown on maps.
- F. Specific information concerning significant caves on the Forest will not be made available to the public (FCRPA). This information is also not available under Freedom of Information Act requests. Treat this information as confidential and secure it in such a manner as to prevent access by non-authorized individuals. The cave coordinator will maintain the cave files and ensure that access is provided on a need-to-know basis only. Information concerning significant caves may be made available only if the deciding officer determines that disclosure of such information would further the purposes of the Act and would not create a substantial risk of harm, theft, or destruction of a significant cave.
- G. Search and rescue in caves is the primary responsibility of the Alaska State Troopers. Supply appropriate support and equipment where needed and available.

LANDS

Forest-wide Standards & Guidelines

Lands Preparation: LAND11

I. *Land Status*

- A. Perform a land ownership review during early project planning stages, prior to management activities, to ensure protection of state, private, and other Federal agency rights and interests.
 - 1. Consult sources, such as BLM Master Title Plats (MTP's), in addition to the land status atlas, to identify land encumbrances which do not appear in the land status atlas.

II. *Coordinating with Others*

- A. Coordinate activities, including environmental analysis on National Forest System land, with adjacent state and private landowners. Solicit and consider their input when analyzing proposals which might affect them.
- B. Coordinate activities which affect the Coastal Zone with the State of Alaska Office of Management and Budget, Division of Governmental Coordination, to ensure consistency, to the maximum extent [practicable](#), with the enforceable policies of the Alaska Coastal Management Program.
- C. Cooperate with the State of Alaska and local communities in their land and resource planning efforts.
- D. Coordinate activities on encumbered lands with interest holders, as appropriate.

Special Use Administration (non-Recreation): LAND122

I. *Special Use Authorizations*

- A. Manage [Special Use Authorizations](#) to best serve the public interest, in accordance with the following standards and guidelines. (Consult 36 [CFR](#) 251.)
 - 1. Do not authorize private uses of National Forest System lands when such uses can be reasonably accommodated on other lands.
 - 2. Review new special use requests for their compatibility with [Land Use Designations](#), based on a consideration of environmental values, economic feasibility, and a determination of social and economic benefits. (Consult FSM 2700.)
 - 3. In addition to the above criteria, special use applications may be denied if the authorizing officer determines that:
 - a) The proposed use would not be in the public interest
 - b) The applicant is not qualified
 - c) The proposed use would otherwise be inconsistent with applicable Federal or state law; or
 - d) The applicant does not or cannot demonstrate technical or financial capability. (Consult 36 [CFR](#) 251.54.)
 - 4. Review and adjust special use fees on a planned basis to comply with U.S. Office of Management and Budget (OMB) directives and Forest Service policy. (Consult OMB Circular No. A-25, and FSM 2700.)
 - 5. Upon renewal or transfer of a permit, terminate or bring into conformance existing uses which are not compatible with the Forest Plan.
 - 6. On lands encumbered by [state selections](#), obtain concurrence from the Alaska Department of Natural Resources prior to granting a Special Use Authorization, in accordance with the Alaska National Interest Lands Conservation Act, Section 906 (k) and Forest Service Manual policy. (Consult FSM 5450.)
 - 7. Do not issue Special Use Authorizations on lands selected, or withdrawn for selection by a Native corporation without the consent of that Native corporation, unless waived by the Regional Forester. (Consult FSM 5450.)
 - 8. Do not issue Special Use Authorizations on lands for which there is a Native Allotment application without consent from the applicant and the Bureau of Indian Affairs (or their designees), unless the application has been adjudicated by BLM as being invalid and the case has been closed. Contact the Regional Forester prior to granting a Special Use Authorization

Standards & Guidelines

within an active claim area, as Regional Forester authorization may also be required. (Consult FSM 5450.)

9. Coordinate all Special-Use Authorization proposals which affect the Coastal Zone with the State of Alaska Office of Management and Budget, Division of Governmental Coordination, to ensure consistency, to the maximum extent [practicable](#), with the enforceable policies of the Alaska Coastal Management Program. The Coastal Zone excludes all Federal lands.
10. Require that structures be constructed and maintained in a manner to blend with the surrounding environment, and be consistent with management objectives and other allowed activities. To the extent [feasible](#), locate new structures hidden from areas of concentrated visitor use, such as rivers, roads, trails, and public recreation cabins.
11. Manage authorized uses to maintain a neat and sanitary condition of the permit area. The preferred method of litter disposal is to remove all litter from National Forest System lands and dispose of it at appropriate sanitary facilities. If this is not feasible, require the permit holder to burn all burnables on site, at a location designated by the responsible Forest Officer, and remove all materials which cannot be burned (including ash residue) for disposal at an approved disposal site.
12. Locate outdoor toilets away from lakes, rivers, and streams. Follow guidelines in the State Wastewater Disposal Regulations. Outdoor toilet locations will be approved by the Forest Service prior to construction. (Consult 18 AAC 72.)
13. To the extent allowed by law, regulation, and policy, allow permit applicants to conduct environmental analyses and supporting activities (such as [cultural resource](#) surveys) and submit them to the [responsible official](#) for consideration in Forest Service decisions.
14. Have electronic site proponents submit technical data required in Section 48 of the Special Uses Handbook (FSH 2709.11) for site designation, including demand for the site, consideration of alternate locations, compatibility with other electronic uses, interference with other uses, areas of electronic signal coverage, signal paths, and relationship of the proposed site to other sites.

II. *Cabins and Related Structures*

- A. Manage cabins and related structures which were existing but unauthorized prior to [ANILCA](#) (December 2, 1980), in accordance with direction in the Regional Supplement to the Special Uses Handbook (FSH 2709.11) and the following standards and guidelines. (In Wilderness, consult FSM 2320 and the Wilderness prescriptions).
 1. Allow the continuation of customary and traditional uses of cabins and related structures which were existing but unauthorized on December 2, 1980 in accordance with a nontransferable, renewable, five-year [Special Use Permit](#) until the death of the last immediate family member of the original permittee, when such uses are compatible with [Land Use Designation](#) direction, and are otherwise in compliance with the Alaska National Interest Lands Conservation Act (ANILCA), Section 1303(b).
 2. Prior to issuing a permit, in accordance with ANILCA, Section 1303(b)(3), require the permit applicant to:
 - a) reasonably demonstrate by affidavit, bill of sale or other documentation, proof of possessory interest or right of occupancy
 - b) submit a sketch or photograph of the cabin and a map showing its location
 - c) agree to vacate the cabin and remove all personal property from it within a reasonable time period following nonrenewal or revocation of the permit
 - d) acknowledge in the permit application that the applicant has no interest in the real property on which the cabin is located.
 3. When issuing these permits, list all qualifying immediate family members along with the original claimant and require that one person be designated to represent all permit holders. The original claimant is the resident of record, as of December 2, 1980.
- B. Manage cabins and related structures which were authorized on December 2, 1980, in accordance with direction in the Regional Supplement to the Special Uses Handbook (FSH 2709.11) and the following standards and guidelines. (For Wilderness cabins and related structures, consult FSM 2320 and the Wilderness Prescription).

1. Allow the continued use of cabins, homesites, and similar structures which were authorized on December 2, 1980, in accordance with the terms of the original permit. Generally renew these permits (if the terms of the permit in effect on December 2, 1980 allow for renewal), subject to reasonable regulations and provisions of the Alaska National Interest Lands Conservation Act, Section 1303(d), unless continuation of the use would constitute a direct threat or **significant impairment** to the purposes for which the National Forest or conservation system unit was established. A reasonable fee may be imposed on cabins previously under free use or existing fees may be increased by a reasonable amount, to keep pace with inflation, or for other justifiable purposes.
 2. These permits may be transferred to one other person at the election or death of the permittee of record on December 2, 1980, if the conditions of the original permit allow for such transfer.
 3. Names of immediate family members of the holder may be added as additional permit holders. Immediate family members are defined in the Regional Supplement to the Special Uses Handbook (FSH 2709.11).
- C. Manage new cabins and related structures, in accordance with direction in the Regional Supplement to the Special Uses Handbook (FSH 2709.11) and the following standards and guidelines. (For Wilderness, consult FSM 2320.)
1. The construction of new cabins is prohibited with the following limited exceptions. A nontransferable, five-year **Special Use Permit** may be issued in some circumstances, following a determination that:
 - a) the proposed use, construction, and maintenance of the cabin are compatible with **Land Use Designation** objectives
 - b) use of the cabin is directly related to administration of the area or is necessary for continuation of an ongoing activity, allowed within the area
 - c) the permit applicant has no reasonable alternative.
 2. Do not permit construction of new cabins for private recreational or residential uses. Consider permitting new cabins for some commercial uses, when a cabin is necessary to provide a needed public service (generally, public need is identified in a prospectus) or within areas where such commercial use of cabins was an established customary and traditional use prior to December 2, 1980. Consider permitting new cabins for administrative use by other agencies, such as Alaska Department of Fish and Game, when no **feasible** alternatives exist.
 3. All new cabins will be deeded over to, and become the property of, the United States Government, as provided in the Alaska National Interest Lands Conservation Act, Section 1303(b)(4).
 4. Prior to issuing a permit, in accordance with **ANILCA**, Section 1303(b)(3), require the permit applicant to:
 - a) submit a sketch or photograph of the proposed cabin and a map showing its location
 - b) agree to vacate the cabin and remove all personal property from it, within a reasonable time period following nonrenewal or revocation of the permit
 - c) acknowledge in the permit application that the applicant has no interest in the real property on which the cabin will be constructed
 - d) quit claim deed the cabin to the United States Government.
- D. Provide for **subsistence** uses by authorizing temporary facilities, such as tent platforms, rather than new cabins. Follow procedures and design standards for temporary facilities, found in Section 1316 of the Alaska National Interest Lands Conservation Act, the following section on temporary facilities, and the Forest Service Manual. (Consult FSM 2720.)
- III. *Temporary Facilities*
- A. A **temporary facility** is defined as: "Any structure or other human-made improvement which can be readily and completely dismantled and removed from the site when the authorized use terminates." (Consult FSM 2720.)
 - B. Permit temporary campsites, tent platforms, shelters, and other temporary equipment, directly and necessarily related to the taking of fish and wildlife, subject to:
 1. Reasonable regulation to ensure compatibility
 2. Conditions of the Alaska National Interest Lands Conservation Act, Section 1316
 3. Forest Service Manual direction

Standards & Guidelines

4. Consistency with [management prescriptions](#) direction. (Consult FSM 2720. In Wilderness, consult FSM 2320.)
- C. When issuing new permits for [subsistence](#)-related facilities, authorize tent platforms and associated temporary facilities only.
- D. To the extent feasible, locate subsistence camps out of sight of high use areas such as rivers, roads, trails, public recreation cabins, and other user facilities.

IV. *Aquatic farming Permits*

- A. For the direction on the management of [aquatic farm](#) permits, consult the Regional Supplement to the Special Uses Handbook (FSH 2709.11).
- B. "Aquatic farming" should not be confused with "[aquaculture](#)". Consult the glossary for a definition of these and related terms. "Aquatic farming" is provided for in Alaska State Law (AS 16.40.100 - 16.40.199, June 9, 1988). It involves growing aquatic plants or shellfish for sale, either in captivity or under positive control. Typically shellfish are pen-reared. Finfish are generally not included and release of the organism does not result in a product becoming available as a common property resource. "Aquaculture" is provided for in [ANILCA](#), Section 1315(b). It involves the maintenance or improvement of fish stocks. It includes facilities such as fish hatcheries and projects such as fish stocking or lake fertilization. It includes finfish and release results in a product becoming available as a common property resource.
- C. Cooperate with state and other Federal agencies to meet industry and public needs for aquatic farming programs and ensure compatibility with other resources and activities.
 1. During evaluation of requests for Forest Service permits, carefully analyze the effects of aquatic farming activities on other resources and other activities, such as recreational uses and access to adjacent uplands. Oppose aquatic farm development in or adjacent to National Forest System Wilderness.
 2. Coordinate responses to aquatic farming proposals with the Alaska Department of Natural Resources and Alaska Office of Management and Budget, Division of Governmental Coordination.
 3. Initially, issue permits only for low investment, minimum development, temporary support facilities (not to include cabins) which can be readily removed from the site if the project ceases to be viable for the operator. Consider permitting additional support facilities on National Forest System lands, only after a viable business is established and need for the facilities can be demonstrated.

V. *Floathouses*

- A. Manage residential floathouses in accordance with the following standards and guidelines.
 1. Issue Special Use Authorizations for floathouse shorelines only at locations where the activity is specifically provided for in the Alaska Coastal Zone Management Plan or approved coastal zone area plans.
 2. Cooperate with the State of Alaska and local communities to help develop criteria which address floathouse placement. In developing new state or city plans, encourage locating floathouses near communities or adjacent to private uplands. Avoid locating them:
 - a) Adjacent to designated Wilderness or other areas where they would be incompatible with [upland](#) management objectives
 - b) Where they may adversely affect forest resources
 - c) Where they may conflict with higher priority public uses.
 3. As a condition of the Forest Service [Special Use Authorization](#), require applicants to obtain all necessary authorizations from other appropriate agencies, such as Alaska Department of Natural Resources and the U.S. Army Corps of Engineers.

VI. *Fish Camps*

- A. Manage [Special Use Permits](#) for commercial set net fish camps in accordance with direction in the Regional Supplement to the Special Uses Handbook (FSH 2709.11) and the following standards and guidelines.
 1. Where the use of commercial fish camps, including primitive cabins, is a customary and traditional use, allow this use to continue within traditional locations, at approximately

- traditional densities, as established prior to [ANILCA](#) (December 2, 1980), if compatible with [Land Use Designations](#) objectives.
2. New facilities will usually be tent platforms and associated temporary facilities unless a need can be demonstrated for a cabin.
 3. New cabins, if authorized, will not exceed 500 square feet in size. Limit new cabin authorizations to one cabin per set net permit. If needed, authorize additional sites for use with a tent platform.
 4. Assign a permit tenure of five years for cabins and one to five years for tent platforms with the provision that, unless revoked for violation of permit conditions, these permits may be renewed upon expiration.
 5. Assign new fish camp permit holders areas up to 1/4 acre in size, based on need.
 6. Within areas traditionally used for fish camps, allow existing privileges currently under permit to continue. Do not allow fish camp permit holders to engage in outfitter/guide or lodge/resort activities from their fish camps, unless already authorized by permit.
 7. Consider authorizing requests for [subsistence](#) uses from fish camps; however, any authorization for subsistence uses from fish camps will be documented in writing to the permit holder, along with conditions, if any, which may be necessary to protect resources and the rights of other users. Do not permit residential uses of fish camps.
 8. To obtain a fish camp permit, require applicants to hold a commercial set net permit from the Alaska Department of Fish and Game, valid for the area in which the proposed facility is to be located. Camp occupancy will generally correspond to the dates of the open set net season, with exceptions allowed for camp set up and take down (if necessary) and for subsistence uses, if authorized.
 9. Some fish camp permits have traditionally been issued free of charge. In compliance with U.S. Office of Management and Budget (OMB) directives, and Federal Regulations (36 [CFR](#) 251 .57), assess appropriate fees in conjunction with all commercial fish camp uses.
 10. Natural hydrologic changes may lead to use areas being relocated. This need is recognized and new use areas may be authorized, if necessary, following separate environmental analysis, as rivers change their course or other changes lead to shifts in the location of fish runs. Issue permits for tent platforms in new locations where cabin use is not already established.

VII. [Right-of-Way Grants](#)

- A. Grant reasonable [access](#) across [National Forest System land](#) to allow inholders and other landowners use of their land without unnecessarily reducing Forest Service management options or damaging National Forest System lands or resources. (Consult FSM 2730.)
 1. Ensure that all roads constructed through permits or leases are designed according to standards appropriate to the planned uses, considering safety, cost of transportation, and effects upon lands and resources. Ensure these roads are planned and designed to re-establish vegetative cover on the disturbed area within a reasonable period of time (not to exceed 10 years) after the termination of the permit or lease, unless the road is determined necessary as a permanent addition to the National Forest transportation system. (Consult 36 [CFR](#) 219.)
- B. Apply the following approval authorities, as applicable, when processing Right-of-Way grant requests.
 1. Continue to use existing authorities such as the Federal Land Policy and Management Act (FLPMA), the Forest Road and Trail Act (FRTA), and the Highway Act of 1958, except when prohibited by other applicable law.
 2. When proposed rights-of-way cross, or enter upon, a Conservation System Unit (as defined in ANILCA, Section 102(4)), follow procedural requirements found in ANILCA, Section 1104.
 3. When proposed rights-of-way will provide access to state or private inholdings or valid occupancies (such as a mining claim or Special Use Authorization) surrounded by, within, or effectively surrounded by, a Conservation System Unit, use authorities found in ANILCA, Section 1110(b).
 4. When proposed rights-of-way will provide temporary access to non-Federal lands, to or across a Conservation System Unit, for purposes of survey, geophysical, exploratory, or other

Standards & Guidelines

- temporary uses which will not result in permanent resource harm, use authorities found in [ANILCA](#), Section 1111.
5. When proposed rights-of-way will provide access to non-Federal inholdings, either within or outside of a Conservation System Unit, use authorities found in ANILCA, Section 1323(a).
- C. Allow the following activities to occur without requiring a [Special Use Authorization](#). (Consult ANILCA, Section 1110(a).)
1. The use of snowmachines, motorboats, fixed-wing airplanes, and nonmotorized surface transportation methods for traditional activities which are permitted by law and for travel to and from villages and homesites, subject to reasonable regulations to protect resource values. These uses do not require a permit and may be prohibited only following a notice and hearing in the vicinity of the affected area, and a determination that such uses would be detrimental to resource values.
 2. This direction does not authorize the construction or maintenance of improvements or facilities on National Forest System lands, nor does it authorize use of [Off-Highway Vehicles](#), other than snowmachines.
- D. Apply the following standards and guidelines to [Transportation and Utility Systems](#). The primary purpose of these systems is to accommodate public transportation and energy transmission. These Transportation and Utility Systems include significant existing and proposed transportation and utility sites and corridors, and other rights-of-way necessary to accommodate use from a facility or other compatible [Right-of-Way](#), when such rights-of-way cross National Forest System lands. Examples of facilities located within these corridors include, but are not limited to, state and Federal Highways, railroads, powerlines 66kV and above, and pipelines 10 inches or greater in diameter, constructed by holders of a Special Use Authorization. Water pipelines greater than 10 inches are included only if they are a public utility (i.e., if they service a community water supply). A portion of existing and proposed Transportation and Utility Systems have been allocated to the Transportation and Utility System (TUS) [Land Use Designation](#) (LUD) (see the TUS LUD in Chapter 3). This LUD gives additional emphasis to major Transportation and Utility Systems.

These systems will generally include sites where associated facilities, such as dams, reservoirs, or generators, are located. Sites and corridors include the land directly under, and immediately adjacent to the facilities. Sites have significant improvements located within a generally compact area, while corridors are linear in nature. Sites and corridors will generally be void of large vegetation, but may contain low-lying ground vegetation.

1. A [Transportation and Utility System](#) (TUS) "[window](#)" is an area potentially available for the location of transportation or utility corridors and sites. Windows represent areas of future opportunity where the applied [management direction](#) will not conflict with future designation of a TUS. A site-specific analysis is still required during project level planning, to identify resource protection needs within these areas. Windows are designated through the allocation of lands to TUS windows in their standards and guidelines.
2. A TUS "avoidance area" is an area where the establishment and use of transportation or utility corridors and sites is not desirable given the Land Use Designation emphasis. A search for "windows" should be exhausted before TUS facilities are considered in avoidance areas. When feasible, these areas should be avoided through site-specific analysis during project level planning. Avoidance areas often include Congressionally and administratively designated areas. Although special environmental or procedural considerations may be required for these areas, these special designations do not preclude consideration and use as a TUS. Avoidance areas are designated through the allocation of lands to Land Use Designations specifically identified as TUS avoidance areas in their standards and guidelines. In cases where proposed or potential corridors are allocated to the Transportation and Utility System (TUS) LUD that traverse other LUD's identified as TUS "avoidance areas", treat the corridors within such LUD's the same as Transportation and Utility System "windows" (subject to applicable laws).
3. A TUS "exclusion area" is a large area (large enough to cause significant barriers) which legislatively precludes [Transportation and Utility Systems](#). There will be no exclusion areas on the Tongass National Forest due to special authorities provided in ANILCA, Title XI.
4. Accommodate new transportation and utility proposals within existing corridors, to the maximum extent feasible. (Consult 36 [CFR](#) 219.)

- a) Site-specific locations and mitigation measures for unconstructed TUS's will be determined by project level planning which will analyze environment considerations, such as visual resources, wildlife habitat, and soil conditions.

VIII. *Military Training Activities*

- A. Authorize military training activities on National Forest System lands in accordance with the Master Agreement between the Department of Defense and the Department of Agriculture which governs the use of National Forest System Lands for these purposes. (Consult FSM 1530.)
 1. Authorize military training activities on National Forest System lands when these activities:
 - a) Will be compatible with other uses.
 - b) Conform to [Land Use Designation](#) direction.
 - c) After the Department of Defense has determined and substantiated that lands under its administration are either unsuitable or unavailable.
 2. Determine probable effects of proposed activities, necessary mitigation measures, and effective monitoring techniques, on a case-by-case basis, with a site-specific environmental analysis, conducted in accordance with the Master Agreement.
 3. When local supplemental agreements with Military Agencies exist, consult such agreements for additional direction.

IX. *Sanitary Landfills*

- A. Manage landfills in accordance with the following national policy but subject to approved special provisions for Alaska.
 1. Require strict compliance with applicable Environmental Protection Agency guidelines.
 2. Avoid authorizing new solid waste disposal sites and the expansion of existing sites on National Forest System lands, subject to exceptions approved for the Alaska Region.
 3. Provide for solid waste disposal sites through exchange, sale under the Townsite Act (7 U.S.C. 1012a; 16 U.S.C. 478a), or selection by the State of Alaska of National Forest System lands when there is no viable alternative on non-Federal land and where there will be no adverse impacts to other National Forest resources or land. Encourage the State of Alaska to request [conveyance](#) of those areas suitable and needed for solid waste disposal near existing and proposed communities to eliminate the need to use National Forest System lands. Provide conditions for the conveyance document to assure the land will be controlled by a government entity and activities which interfere with the management and protection of adjacent National Forest System lands will not occur.
 4. Solid waste disposals must comply with EPA regulations in 40 [CFR](#) 257 and 258, and State of Alaska Administrative Code 18 AAC 60 et seq. These EPA regulations are very restrictive and may preclude continued operation of small landfills. Encourage close out of landfills on National Forest System lands. Those not closed prior to October 9, 1993, require continued monitoring and management of the landfill by the owner or operator for 30 years after landfill closure, in accordance with EPA regulations. Forest Service policy in FSM 2130 discourages waste disposal on National Forest System lands and allows this activity to occur only where it is determined to be the highest and best use of the land.
 5. Special situations in Alaska may require the continued use of National Forest System lands for some non-community domestic waste disposal in remote locations. Remote locations are island and mainland locations, accessible only by aircraft or boat, with no private land available for solid waste disposal. Even in these special situations, encourage Forest users to burn burnables and pack-out non-burnable waste materials (including ash residue) and remove them from National Forest System lands, to the extent [feasible](#). Examples of typical special situations include:
 - a) Remote lodges under [Special Use Authorization](#)
 - b) Mining activities in remote Forest locations
 - c) Remote Forest Service administrative sites
 - d) Forest Service contractors working in remote locations
 - e) [Aquaculture](#) sites in remote locations
 - f) The needs of the state and other Federal Agencies located in remote National Forest locations.

Land Ownership Administration: LAND123

I. Land Selections

- A. When making land management decisions, appropriately consider valid [State selections](#) (pursuant to the Alaska Statehood Act), [Native selections](#) (pursuant to the Alaska Native Claims Settlement Act, as amended), and Native Allotment claims (pursuant to the Alaska Native Allotment Act of 1906). Protect legal rights of the State of Alaska, Native Corporations, and Native individuals when managing selected or withdrawn lands, or lands under Native claim. Apply the following standards and guidelines to [Land Use Designations](#) encumbered by State selections, Native selections or withdrawals, and Native allotment applications, until these lands are either conveyed into State or private ownership, or they revert back to unencumbered National Forest System land.
1. Cooperate with the State of Alaska, Native Corporations, Native allotment applicants, the Bureau of Land Management, the Bureau of Indian Affairs (or their designee), and other Federal agencies, to assist in processing legitimate claims or applications. Encourage other parties involved to assist in finalizing [conveyance](#) of full legal [entitlement](#) in a timely manner.
 2. Avoid Forest Service investment on lands encumbered by State selections, Native withdrawals or selections, or Native Allotment applications.
 3. Carefully review each selection, prior to conveyance, to identify third party interests and needed [Right-of-Way](#) reservations which are allowed under applicable legislation.
- B. Manage [State selections](#), entered under authority of the Alaska Statehood Act, according to the following standards and guidelines. (Consult 43 [CFR](#) 2627.)
1. Encourage conveyance of State selections adjacent to existing communities. Work with State agencies and local communities to substantially eliminate Forest ownership in and adjacent to communities where State, borough, or community governmental improvements and jurisdiction should logically preside.
 2. Obtain concurrence from the Alaska Department of Natural Resources prior to any surface-disturbing activity or granting any occupancy permit, contract, [easement](#), or other similar use authorization on State selected lands, in accordance with the Alaska National Interest Lands Conservation Act, Section 906(k) and Forest Service Manual policy. (Consult FSM 5450.)
 3. Deposit 90 percent of all proceeds from contracts, leases, licenses, permits, rights-of-way, easements, or from trespass, on unconveyed State selected National Forest System lands, into a suspense account, for future transfer to the State upon conveyance. (Consult Sec. 906(k)(2) of [ANILCA](#).)
- C. Apply the following standards and guidelines to Land Use Designations encumbered by [Native selections](#) or withdrawals, made under authority of the Alaska Native Claims Settlement Act ([ANCSA](#)), as amended, until these lands are either conveyed into private ownership, or they revert back to unencumbered National Forest System land. (Consult 43 [CFR](#) 2650.)
1. Do not issue occupancy permits, contracts, easements, or similar authorizations on lands selected, or withdrawn for selection, by a Native Corporation under authority of ANCSA, without coordination and consent from that Native Corporation, unless permission is first obtained from the Regional Forester. (Consult FSM 5450.)
 2. Do not allow timber harvest on lands selected by a Native Corporation under authority of ANCSA, which fall within a timber sale contract contingency area, except by agreement with that Native Corporation. (Consult ANCSA, as amended by Section 908 of the Alaska National Interest Lands Conservation Act. "Contingency Area" is defined in this section of [ANILCA](#).)
 3. Deposit all proceeds from any contracts, leases, licenses, permits, rights-of-way, easements, or from trespass, on unconveyed National Forest System lands that are selected or withdrawn for selection under ANCSA, into an escrow account, for future transfer to the appropriate Native corporation, upon conveyance. (Consult Sec. 1411 of [ANILCA](#).)
- D. Apply the following standards and guidelines to Land Use Designations encumbered by Native Allotment applications, submitted under authority of the Alaska Native Allotment Act of 1906, until these lands are either conveyed into private ownership, or they revert back to unencumbered National Forest System land. (Consult 43 [CFR](#) 2561.)
1. Do not issue use authorizations, such as permits, contracts, or easements, on lands for which there is a Native Allotment application, without consent from the applicant and the Bureau of

Indian Affairs (or their designee), unless the application has been adjudicated by BLM as being invalid and the case has been closed. Contact the Regional Forester prior to granting use authorizations within a valid claim area, as authorization from the Regional Forester may be required. Do not authorize construction of new roads on a valid claim area unless a Deed of Further Assurance has been obtained and recorded, or clearance has been received from the Regional Forester. (Consult FSM 5450.)

Lands Activity Maintenance and Landline Location: LAND23, LAND24

I. Establishing Forest Boundaries

- A. Apply the following standards and guidelines when maintaining established National Forest property boundary lines and corners, or when locating, surveying, and posting new National Forest property boundaries and corners.
 - 1. Coordinate with the Bureau of Land Management (BLM) for original boundary line survey. Encourage cooperative work with the BLM to mark and post original National Forest/State and National Forest/Native boundaries to Forest Service standards. The Forest Service will maintain these boundary lines and corners after the original survey. These boundaries should not be surveyed, marked or posted, until after [conveyance](#) of the land.
 - 2. Maintain the existing inventory of surveyed and unsurveyed boundary lines to establish survey priorities. Establish program priorities to coincide with Forest Service manual direction. (Consult FSM 7150.)

II. International Boundaries

- A. Apply the following standards and guidelines when locating or maintaining international boundary lines and corners.
 - 1. Ensure compliance with the United States/Canada Treaty of 24 February 1925. Coordinate the location, survey, posting, marking, and maintenance of the International Boundary with the U.S./Canada International Boundary Commission, U.S. Department of State.
 - 2. Ensure compliance with Presidential Proclamations of June 15, 1908 and May 3, 1912. Do not permit any occupancies or management activities, within 60 feet of the United States side of the United States/Canada International Boundary, without prior approval from the International Boundary Commission.

III. Legislated Boundaries

- A. Apply the following standards and guidelines when considering land-disturbing activities in [Land Use Designations](#) adjacent to Wilderness, Wilderness and Nonwilderness National Monument, and legislated LUD II boundaries.
 - 1. Boundaries should be surveyed, marked, and posted prior to implementing land-disturbing activities adjacent to Wilderness, Wilderness and Nonwilderness National Monument, and legislated LUD II. Approximate boundaries are not acceptable.
 - 2. Locating and marking boundaries should be supervised by a professional surveyor with the benefiting function funding all necessary survey activities. Consult FSM 2320, FSH 2309.19, and FSM 7150 (including R10 Supplement) for additional survey and marking standards.
 - 3. The District Ranger or Forest Supervisor who approves a project will ensure adjacent legislated boundaries are located and marked, making certain there is no encroachment.

Rights-of-Way (ROW): LAND25

I. Rights-of-Way Acquired

- A. Acquire, across non-National Forest System land, road and trail rights-of-way which are adequate for the protection, administration, and utilization of the Tongass National Forest. (Consult FSM 5460.)
 - 1. Generally, acquire rights-of-way identified in project plans at least one year prior to scheduled activity.
 - 2. Generally, acquire unlimited easements, granted in perpetuity. Limited easements (e.g., those authorizing administrative use, but not public use) may be acquired when public use is not desirable, as determined through the project planning process.

Standards & Guidelines

3. Encourage the use of cost-share agreements, when [feasible](#), to avoid economic and resource impacts associated with duplicate road systems and [Log Transfer Facilities](#).
 4. Monitor compliance with stipulations of existing rights-of-way to ensure long-term retention of needed rights-of-way. Dispose of rights-of-way which are no longer needed. Review easements acquired under Section 17(b) of the Alaska Native Claims Settlement Act, and take appropriate steps toward construction of transportation facilities prior to [easement](#) expiration dates.
 5. Identify and request all needed rights-of-way across lands selected by the state or Native organizations, as provided by Federal law. Carefully review selections prior to [conveyance](#).
 6. Secure adequate rights-of-way before issuing contracts or constructing facilities in intermingled land ownerships. (Consult FSM 5400.)
 7. Follow the Bureau of Land Management/Forest Service [Memorandum of Understanding on ANCSA 17\(b\)](#) easement administration.
- B. Acquire Log Transfer Facility (LTF) authorizations on tidelands in accordance with the following standards and guidelines.
1. Coordinate LTF activities (location, construction, operation, etc.) with the U.S. Army Corps Engineers, U.S. Environmental Protection Agency, National Marine Fisheries Service, U.S. Fish and Wildlife Service, Alaska Department of Natural Resources, Alaska Office of Management and Budget (Division of Governmental Coordination), Alaska Department of Fish and Game, Alaska Department of Environmental Conservation, local communities, and adjacent landowners, as appropriate. (Also see the Transportation Forest-wide Standards & Guidelines in this Chapter.)
 2. Ensure LTF activities, which affect the Coastal Zone, are coordinated with the State of Alaska Office of Management and Budget, Division of Governmental Coordination, to ensure consistency, to the maximum extent [practicable](#), with the enforceable policies of the Alaska Coastal Management Program.
 3. Acquire long-term leases (preferably at least 25 years) for permanent LTF sites.

Land Ownership Adjustment: LAND26

I. *Priorities*

- A. Land acquisition priorities have been described and summarized in the document, "*Alaska Submerged Lands Act Report, Analysis of Inholdings, Acquisition Priorities and Recommendations to Reduce Impacts on Conservation System Units in Alaska*," dated August 1990, by U.S. Fish and Wildlife Service, Bureau of Land Management, National Park Service, and USDA Forest Service. Base acquisition decisions on this analysis and report, as updated by future revisions. Maps identifying the location of parcels are available from USDA Forest Service, Alaska Regional Office lands personnel. Federal lands available for [conveyance](#) are those lands approved by the Regional Forester for selection by the State of Alaska, those lands selected by Native Corporations under [ANCSA](#), and those Native allotment claims adjudicated valid by the BLM. These lands are available only to the respective applicants described above, as provided by Federal law. If applications or claims are relinquished or declared invalid, the affected lands are no longer available for conveyance. Consider proposals for other lands not described above, on a case-by-case basis, using the following criteria. (Consult FSM 5400.)
1. Work cooperatively with the State of Alaska and Native Corporations to improve land ownership patterns and management opportunities resulting from State and Native land conveyances.
 2. Retain [National Forest System lands](#) which best serve the public interest in Federal ownership.
 3. Consolidate National Forest System lands, when feasible. Attempt to reduce miles of property boundary lines and number of corners, to locate and maintain.
 4. Generally, acquire and convey land with as few reservations and outstanding rights as feasible. (Consult FSM 5420, 5430, and 5470.)
 5. Avoid separating the surface and subsurface estate, unless it is clearly in the public interest. (Consult FSM 5430.)
 6. Consider wetland and [flood plain](#) values.

7. Pursue land adjustments that reduce administrative costs or increase the output of [goods and services](#). Avoid land adjustments that do not enhance Forest Service programs. (Consult FSM 5430.)
8. Generally, pursue [land exchanges](#) on an equal value basis. Exchanges may be made for other than equal value if the parties agree and the exchange is determined to be in the public interest, as provided in Section 1302(h) of the Alaska National Interest Lands Conservation Act and Section 22(f) of the Alaska Native Claims Settlement Act, as amended by Section 17 of Public Law 94-204. (Consult FSM 5430.) When considering land exchanges of unequal value, submit the proposal through proper channels, for Congressional oversight, as appropriate, prior to entering into any binding agreements.

II. *Acquisition*

- A. Apply the following standards and guidelines for land acquisition activities.
 1. Acquire isolated inholdings at critical locations if public benefits will occur.
 2. Within Congressionally designated areas, such as Wilderness, acquire private inholdings as opportunities permit. Wilderness inholdings are priority acquisitions until after the State and [Native selection](#) process is completed.
 3. Within administratively designated areas, such as [Special Interest Areas](#), generally acquire private inholdings, as opportunities arise.
 4. Acquire private lands necessary for efficient management of the Forest.
 5. Generally, acquire lands by exchange or donation. Attempt to purchase lands on a willing seller/willing buyer basis when exchange or donation is not feasible and funds are available for purchase.
 6. In any land adjustment proposal, consider performing a [watershed](#) and other resource condition assessment to determine resource restoration needs. Where [rehabilitation](#) is needed to comply with Federal Law such as the Clean Water Act, prepare a cost estimate for rehabilitation prior to the land acquisition.
 7. Evaluate parcels proposed for acquisition for the presence of hazardous substances, and document the findings, in conformance with established regulatory guidelines for conducting these evaluations.

III. *Conveyance of Federal Lands*

- A. Apply the following standards and guidelines for [conveyance](#) of federal lands to non-federal owners.
 1. Do not exchange National Forest System lands selected by the State of Alaska, or a Native Corporation, or lands under Native allotment application, which have not yet been conveyed, unless specifically provided for in legislation. If the party holding the [encumbrance](#) desires ownership adjustments, they may relinquish their selection. The Forest Service may then pursue land ownership adjustment, if otherwise appropriate.
 2. Convey [National Forest System lands](#) which would best serve the public interest in private ownership, provided the action will not decrease ability to meet National Forest System management objectives. Examples may include:
 - a) Isolated small parcels which are impractical to manage
 - b) Parcels where a greater general public value can be derived in private ownership
 - c) Areas necessary for community expansion. (Consult 36 [CFR](#) 254.)
 3. Within Congressionally designated areas, retain existing National Forest System lands unless exchanging out of these lands to acquire new lands, or interest in lands, for the purposes of [ANILCA](#) (Consult ANILCA Section 1302(h)). Within administratively designated areas, generally retain National Forest System land, unless there are compelling reasons for conveyance.

MINERALS and GEOLOGY

Forest-wide Standards & Guidelines

Minerals and Geology Resource Preparation: MG11

- I. *Resource Inventory*
 - A. Maintain the Mineral Resource Inventory. Include historic and current mining activity, regional and local geology, access routes, and geologic and mineral terranes. (Consult FSM 2880)
- II. *Resource Planning*
 - A. Assemble and provide minerals and geology information as needed for project planning. Such information will normally include a minerals and geology inventory and analysis, forecasts for minerals exploration and development activities, and geologic resource interpretations.
- III. *Resource Preparation*
 - A. Conduct compliance checks, validity and patent exams, and review operating plans, lease proposals, and applications. Provide expert testimony or opinions for contests, hearings, or appeals. Conduct geotechnical engineering and interpretive geology investigations as required.
- IV. *Resource Coordination*
 - A. Coordinate minerals and geology inventories and minerals administration with state and other Federal agencies including the USDI Bureau of Land Management and the Geologic Survey.

Minerals and Geology Administration: MG12

- I. *Forest Lands Withdrawn From Mineral entry*
 - A. Claimants with claims located in areas withdrawn from [mineral entry](#) retain valid existing rights, if such rights are established prior to the withdrawal date.
 - B. Conduct on-the-ground validity examinations by a certified minerals examiner to establish or reject valid existing rights on active [mining claims](#) within wilderness areas and other areas withdrawn from mineral entry.
 - C. Permit reasonable access to mining claims in accordance with the provisions of an approved [plan of operations](#).
- II. *Forest Lands Open To [Mineral entry](#)*
 - A. Encourage the exploration, development, and extraction of locatable and [leasable minerals](#) and energy resources.
 - B. Assure prospectors and claimants their right of ingress and egress granted under the General Mining Law of 1872, [ANILCA](#), and the National Forest Mining Regulations (36 [CFR](#) 228).
 - C. Permit reasonable access to [mining claims](#) in accordance with the provisions of an approved [plan of operations](#).
- III. *Plan of operations*
 - A. A Notice of Intent and/or a [plan of operations](#) is required for locatable, leasable, and salable minerals. (Consult FSM 2810, 2820, 2850, and 36 [CFR](#) 228.)
 1. A plan of operations will receive prompt evaluation and action within the time frames established in 36 [CFR](#) 228.
 2. Conduct an environmental analysis with appropriate documentation for all operating plans.
 - B. Work with claimants to develop a plan of operations that adequately mitigates adverse impacts to Land Use Designation objectives. Include mitigation measures for locatable and salable minerals and standard and special stipulations in leasing actions that are compatible with the scale of proposed development and commensurate with potential resource impacts.
 1. Maintain the habitats, to the maximum extent feasible, of [anadromous fish](#) and other [foodfish](#), and maintain the present and continued productivity of such habitats when such habitats are affected by mining activities. Assess the effects on populations of such fish in consultation with appropriate state agencies. (Consult ANILCA, Section 505(a).)

2. Apply appropriate Transportation Forest-wide Standards & Guidelines to the location and construction of mining roads and facilities.
3. Reclaim disturbed areas in accordance with an approved [plan of operations](#).
4. Apply [Best Management Practices](#) (BMP's) to maintain water quality for the beneficial uses of water. (Consult Appendix C of this document and FSH 2509.22.)
5. Periodically inspect minerals activities to determine if the operator is complying with the regulations of 36 [CFR](#) 228 and the approved plan of operations.

IV. *Bonds*

- A. A bond may be required for locatable, leasable, and salable mineral operations to ensure operator performance and site reclamation are completed. (Consult 36 [CFR](#) 228.)

V. *Mineral Materials*

- A. Permit mineral material sites only after an environmental analysis assures other resources are adequately protected, the site location and operating plan are consistent with the [Land Use Designation](#) emphasis, and such resources are not reasonably available on private land. Require bonds and reclamation as appropriate. (Consult FSM 2850 and 36 [CFR](#) 228.)
- B. Where the opportunity exists, design, excavate, and reclaim material sites to facilitate their use for [dispersed recreation](#) or other desirable uses such as conversion to salmonid rearing ponds and spawning channels.

VI. *Split Estates*

- A. Seek to avoid separating the surface and subsurface estates. Coordinate with BLM, the state, Native Corporations, and private landowners to manage split estates in accordance with individual patents or deeds.

VII. *Paleontologic Resources*

- A. For the collecting of paleontologic (fossil) resources on the National Forest, consult the guidance in FSM 2860.

RECREATION and TOURISM

Forest-wide Standards & Guidelines

Recreation Resource Inventory: REC111

- I. *Recreation Resource Opportunities*
 - A. Maintain the inventory of recreation resource opportunities throughout the Forest.
 1. Use the [Recreation Opportunity Spectrum](#) (ROS) system and Tongass National Forest [Recreation places](#) Inventory. (Consult FSM 2310 and National/Regional ROS Handbooks.)
 2. Update existing ROS inventories as a part of specific project planning and implementation, and whenever project activities cause a change in recreation setting conditions significant enough to reclassify the affected area.
 3. Maintain the necessary data to determine the individual and/or cumulative changes in ROS class distribution throughout the Forest.

Recreation Resource Planning: REC112

- I. *Interagency Planning*
 - A. The principal feature that sets National Forest System lands apart from most other suppliers of outdoor recreation is the ability to provide opportunities for generally unconfined outdoor recreation, free of urban influences. National policy directs that these special opportunities be maintained for current and future generations; and that National Forest recreation focus primarily on activities which require a large land base and provide a contrast to urbanization. As a part of the National Forest role of helping meet national and regional social needs, endeavor to encourage traditional American values such as a conservation ethic, appreciation of nature, national and community pride, and national and community well-being including the stability of lifestyle and character. Accomplish this through providing opportunities and programs which are appropriate to the forest environment, dependent upon natural settings, and which help participants experience and understand nature.
 1. Determine the appropriate role of the National Forest System lands in providing natural resource-based recreation opportunities, sites, facilities, and experiences. Within the context of National policy, cooperate and coordinate with National, state, and local agencies in providing a balance of outdoor recreation opportunities throughout Southeast Alaska.
 2. Use the ROS framework of settings and experience opportunities to define the capabilities of National Forest System lands to meet identified recreation needs and services. (Consult ROS Handbooks and Forest ROS maps.)
 - B. Provide recreation opportunities on National Forest System lands in concert with, and supplemental to, those opportunities which are located on other land ownerships and jurisdictions. Generally, recreation areas, sites, and facilities located on National Forest System lands should:
 1. Complement commercial public services (i.e., resorts, marinas, stores, service stations) within communities or on private or other public land.
 2. Support a system of anchorages suitable for recreation boats along small boat waterways which connect communities or provide access to popular recreation attractions.
 3. Provide other appropriate facilities to meet specific identified recreation needs on a case-by-case basis.
 - C. Cooperatively participate with local communities and user groups when implementing recreation development projects. Implementation should:
 1. Involve the public and affected communities, landowners, and other affected interest groups in the project planning process.
 2. Recognize that recreation use by residents and tourists radiate from communities and service centers to use lands and facilities under a variety of ownerships and jurisdictions.
 3. Verify the local role of the Forest Service in providing recreation opportunities, services, and facilities.
 4. Verify the basis for developing Forest Service recreation-related projects.
 5. Identify sites and activities where joint or cooperative development or management is desirable. Include opportunities for such things as: on-site interpretation of natural and

[cultural resources](#), particularly on lands of mixed ownership; providing public information through joint publications; joint cabin reservation systems; or construction, operation, and maintenance agreements.

6. Consult FSM 2300 and internal Service-wide Handbooks.

II. *Integrated Resource Planning*

- A. During non-recreation project planning, assess the effects of these projects on the diversity and quality of recreation settings and activity opportunities within, and adjacent to, the project area.
 1. Where recreation resources may be affected, analyze the opportunities foregone due to resource management actions. During project planning and design, consider valid substitutes for recreation settings and activity opportunities.
- B. Identify opportunities to [enhance](#) existing, and provide additional, recreation activities, opportunities and services where desirable to meet local or Forest-wide recreation demands. Give particular attention to opportunities which: are in relatively short supply within the day-use travel distance of communities, are important to local users, are important to tourism and commercial service providers, provide a base for visitor use of primitive and semi-primitive areas, compliment recreation programs of communities, the state, and private landowners, contribute to the supply of Semi-primitive Motorized opportunities, and those related to the unique combination of marine, wildlife, and fish resources characteristic of Southeast Alaska. Consider opportunities including, but not limited to:
 - Additional public recreation cabins.
 - Fish viewing, angling, and fishing access.
 - Ice fishing.
 - Fuelwood gathering.
 - Wildlife viewing.
 - Hunting.
 - Interpretation of natural or [cultural resources](#).
 - Interpretation of management activities.
 - Snowmobile and/or cross-country skiing and access.
 - Access to beaches and other attraction features.
 - Loop travel routes (roads, trails, and water routes).
 - Scenic marine and road travel corridors.
 - Parking/camping places for recreation vehicles, bicyclists, and boaters.
 - Resort and lodge opportunities to serve as visitor bases.
- C. Coordinate, to the extent [feasible](#), recreation project development with fish and wildlife habitat improvement, and road projects.
- D. Designate the Forest open to Off-Highway Vehicles (OHV) off of open roads unless site-specific closures are made. Wilderness areas are closed to OHV's except for snowmachines and for local traditional use of OHV's related to [subsistence](#) activities.
 1. Coordinate [Off-Highway Vehicle](#) (OHV) planning and management with other resource concerns and adjacent landowners.
 2. Provide a diversity of OHV recreational opportunities across the forest where consistent with the criteria in FSM 2355, which includes:
 - a) The use is compatible with established land management and resource objectives.
 - b) The use is consistent with the capability and suitability of the resource.
 - c) There is demonstrated demand which cannot be better satisfied elsewhere.
 3. Review OHV plans and temporary designations implemented since the last review (consult 36 [CFR](#) 295). Develop other access and [travel management](#) plans by areas and/or districts as the need arises. Identify specific areas, roads, trails, and water surfaces that are open, restricted, or closed to motorized and non-motorized mechanical [conveyance](#), watercraft, and conditions of use. Recreation, [subsistence](#), and authorized uses may be considered separately depending on the circumstances.

Standards & Guidelines

III. *Tourism*

- A. Tourism is a major industry in Southeast Alaska. The forest provides the backdrop as well as the land base for many tourism activities, including several of the state's leading attractions. The size and extent of the forest has a profound influence on the amount and nature of opportunities for the tourism industry.
 - 1. Work with the tourism industry and government agencies in assessing the value and contribution of the industry to the economy of Southeast Alaska. Identify the role and contribution made by the Tongass National Forest to the industry and the region.
 - 2. Cooperate with the tourism industry and appropriate government agencies in conducting and assessing visitor studies. These studies include: identification of activities, attractions, and attributes visitors seek; response to management activities; demographic traits; and, detection of changing trends.
 - 3. Coordinate information and marketing efforts with tourism providers and promoters to complement efforts, to target markets for new and existing opportunities, and to meet Forest Service management objectives.
 - 4. Work with government agencies, organizations, and the private sector to identify, facilitate, and develop tourism opportunities.
 - 5. Consider access, [infrastructure](#), and other needs of the tourism industry at the project planning level. Incorporate these needs into project design and implementation.

Recreation Use Administration: REC122

I. *Coordination with Wilderness Management*

- A. Evaluate the effects of location, design, and operation of developed sites and roads adjacent to Wilderness. Develop and operate projects to complement wilderness management objectives and to avoid [degradation](#) of wilderness values.
- B. Ensure that special-use activities and facilities adjacent to Wilderness are located, designed, and operated in a manner which complements wilderness management objectives and that avoids degradation of wilderness values.

II. *Recreation Special Uses*

A. Commercial Recreation Opportunities

- 1. Work with recreation service partners and the tourism industry in identifying and developing services and opportunities. Recreation service partners provide services and opportunities that supplement the use and enjoyment of the national forests by a variety of people.
 - a) Identify opportunities for commercial recreation use, services, and developments.
 - b) Facilitate authorizing commercial recreation use, services, and developments by:
 - (1) Authorizing commercial recreational developments and services where there is a public need, and no private lands are available or suitable for development. Refer to each Land Use Designation [management prescription](#) to determine its appropriateness for development.
 - (2) Managing recreation special uses in accordance with the direction in LAND 122 - Special-Use Authorizations (items A.1-13 apply to recreation special uses), and outfitter/guide services in this section.
 - (3) Working with recreation service partners to provide agency identity, customer information and programs, natural resource education, and to instill a land stewardship ethic.
- 2. Use the following guidelines in addressing the appropriateness of recreation special-use proposals in each of the [Land Use Designations](#) after evaluating factors in 1.b. above. They provide a framework to guide major and minor development proposals. Four strategies (not allowed, discouraged, case-by-case, compatible) are identified for guidance; one is assigned to each Land Use Designation to address major and minor proposals (see next page). The definitions and strategies applied to major and minor developments are as follows:

Major Development

Major recreation and tourism developments provided by the private sector involve long-term commitment of the land base, with a moderate to high level of site modification. They involve large buildings or complexes of buildings and facilities, and often provide several services in a concentrated area. Comfort and convenience are provided for guests, and facilities can generally accommodate more than 12 people. The proposals are typically Development Scale 3, 4, or 5, and Roded Natural or Rural ROS settings. Site reclamation involves extensive removal of facilities and improvements, [revegetation](#), recontouring, etc., and greater than 5 years to attain a natural appearance. Examples include destination resorts and lodges, food and beverage services, downhill ski areas, marinas and gas stations, and full service campgrounds.

Minor Development

Minor recreation and tourism developments provided by the private sector involve only minor site modifications. They involve small rustic facilities and/or improvements, generally with a single purpose or service, and may involve several sites or an extensive area. Basic essentials are typically provided, and can generally accommodate 12 or fewer people per site. The proposals are typically Development Scale 1 and 2, with a Semi-Primitive ROS setting. Site reclamation involves simple removal of facilities and little or no [revegetation](#); a natural appearance can be attained in a few years. Examples include cabins, huts, small docks, cross-country ski trails with simple facilities, temporary or portable camps, and simple and rustic campgrounds.

Standards & Guidelines

Major and Minor Recreation-related Developments

	<i>Major</i>	<i>Minor</i>
Not Allowed	Wilderness Wilderness National Monument Research Natural Area Wild River	Wilderness Wilderness National Monument Research Natural Area
Discouraged	Nonwilderness National Monument Remote Recreation Municipal Watershed LUD II Experimental Forest	Municipal Watershed Experimental Forest
Case-by-Case	Special Interest Area Old-growth Habitat Scenic River Modified Landscape Timber production Minerals Transportation and Utility Systems	Nonwilderness National Monument Remote Recreation Special Interest Area Old-growth Habitat Wild River Modified Landscape Timber production Minerals Transportation & Utility System LUD II
Compatible	Semi-Remote Recreation Recreational River Scenic Viewshed	Semi-Remote Recreation Recreational River Scenic Viewshed Scenic River

Definitions

Not Allowed	Recreation special-use developments are not allowed by law or regulation or are not consistent with agency policy and regulations.
Discouraged	Recreation special-use developments are generally not consistent with the objectives of the Land Use Designation . Development proposals require scrutiny of magnitude and scope for LUD conformance.
Case-by-Case	Recreation special-use developments may be compatible with the LUD objectives depending upon the scope, purpose, and magnitude of the proposal. Proposals will be evaluated on a case-by-case basis.
Compatible	Recreation special-use developments are generally compatible with this LUD, and applicants are encouraged to examine these areas first where there is a public need and no private lands are available or suitable for development.

3. When determined that a development or activity is suitable, use information in the following table in addressing the maximum amount of use for each facility or site in each [Land Use Designation](#). **The numbers in the table are guidelines; the actual numbers authorized could be larger or smaller depending on site-specific analysis.** Refer to section 4.d)(3) in this section for allocation guidelines.

Maximum Recreation and Tourism Development Generally Allowed by LUD¹

Land Use Designation	Permanent Overnight Facilities (number of overnight guests)	Day-use Facilities (number of users per day)	Flight-based sightseeing (number of landings per site per day)	Boardwalk Paths and Trails	Equipment Storage	Campgrounds (# of sites per campground - includes RV sites)
Wilderness	none ²	none	3 or 6 ^{3,4}	yes	none ²	none
Wilderness Monument	none ²	none	3 or 6 ^{3,4}	yes	none ²	none
Nonwilderness Monument	none ²	none	3 or 10 ³	yes	none ²	none
Research Natural Area	none	none	none	none	none	none
Special Interest Area	case-by-case ⁵	case-by-case ⁵	case-by-case ⁵	case-by-case ⁵	case-by-case ⁵	case-by-case ⁵
Remote Recreation	10	24	10	yes	yes	none
Municipal Watershed	case-by-case	case-by-case	case-by-case	case-by-case	case-by-case	case-by-case
Old-growth Habitat	24	50	10	yes	yes	none
Semi-Remote Recreation	24/150 ⁶	50/300 ⁶	10/100 ⁶	yes	yes	10/75 ⁶
LUD II	24	50	10	yes	yes	10
Wild River	10	24	10	yes	no	none
Scenic River	100	300	50	yes	yes	40
Recreational River	150	1000	100	yes	yes	75
Experimental Forest	none	none	none	case-by-case	none	none
Scenic Viewshed	150	1000	100	yes	yes	75
Modified Landscape	150	1000	100	yes	yes	75
Timber production	150	1000	100	yes	yes	75
Minerals	case-by-case	500 ⁷	case-by-case	case-by-case	case-by-case	case-by-case

¹ The actual numbers authorized could be larger or smaller depending on site-specific analysis

² Except for [ANILCA](#) exceptions

³ Consistent with existing or adopted ROS class (3 for Primitive ROS, 6 in other ROS classes in wilderness)

⁴ Public helicopter landings are currently prohibited (11/96). A separate analysis is being completed to determine whether helicopter landings are appropriate

⁵ Must be compatible with [Special Interest Area](#) objectives

⁶ First number is for most areas within the LUD and the second is for enclaves of recreation and tourism developments

⁷ To allow for mine tours

Standards & Guidelines

4. Public Outfitter/Guide services
 - a) Authorize the services of qualified outfitters and guides to the public where the need for the service has been identified and is compatible with the objectives and [management direction](#) of the affected [Land Use Designations](#). The services of outfitters and guides should facilitate the use, enjoyment, understanding, and appreciation of National Forest recreation settings.
 - b) Manage outfitter and guide services as partnerships with the Forest Service, as a way to nurture and encourage assistance and support for attaining the objectives of the Land Use Designation, and to assist in increased public understanding and appreciation of the Forest Service's mission and goals.
 - c) Encourage skilled and experienced individuals, organizations, and companies to conduct outfitting and guiding activities in a manner that assures National Forest visitors receive quality services.
 - d) Administer Outfitter/Guide special-use authorizations in accordance with the direction in FSM 2720, FSH 2709.11 and Regional Supplements.
 - (1) Outfitting and guiding operations should not require permanent improvements occupying National Forest System lands. Encourage operations which require only temporary facilities, easily removed at the end of the use season.
 - (2) Authorize outfitter/guide operations on the basis of the following criteria:
 - (a) The affected ecosystem(s) have the capability to accommodate the expected kinds of activities and amounts of use without [degradation](#) of ecosystem composition and structure.
 - (b) Existing or proposed operations and activities are appropriate for the specific ROS settings within the Land Use Designation.
 - (c) Adverse impacts to popular or highly-valued local areas with outfitter/guide operations are minimized.
 - (d) There is a demonstrated public need for the services to be offered and/or the services will [enhance](#) the objectives of the Land Use Designation.
 - (e) The operations can be carried out in a manner that is compatible with existing or expected use by the non-guided public.
 - (f) Adverse impacts to [subsistence](#) users are minimized.
 - (3) Authorize outfitter/guide operations through the issuance of [priority use](#) permits, whenever possible, supplemented with temporary permits. Assign priority use and temporary use permits within a Land Use Designation based on the following:
 - (a) Generally allocate no more than one-half the appropriate capacity of the Land Use Designation to outfitter/guide operations on an administrative area (Chatham, Stikine, Ketchikan) basis. For specific locations, consider different allocations based on historical use, changing demand, spatial zoning, or temporal zoning.
 - (b) *Party size and distribution of groups.*
 - (i) **Wilderness, Monument, and Wild River Land Use Designations, and Primitive ROS settings:** Generally consider a party size of no more than 12 persons for any one site or activity group. A higher group size may be authorized where it is desirable to have a higher guide/client ratio for safety purposes or youth groups.
 - (ii) **Semi-primitive ROS settings outside of Wilderness:** Party size should generally be limited to 12-20 people. Within the LUD II, [Old-growth](#) Habitat, and Semi-Remote Land Use Designations, larger party sizes may be allowed in limited locations for up to 15% of the primary use season for nature-based interpretive activities if physical site conditions can tolerate it. Larger party sizes may be allowed to go ashore at one location and split up into smaller parties not within sight or sound of each other.
 - (iii) **Other ROS settings:** Consider site capacities and impacts to other users and resource values to establish party size limits.

- (4) Where there is surplus capacity not being used by the general public, temporary use for specific periods of time (not to exceed one year) may be authorized. Such temporary use does not qualify for credit toward [priority use](#) by a permit holder.
 - e) Cooperate with state and local authorities and user organizations to resolve situations where illegal outfitters are known to be operating. (Consult FSM 5300.)
- B. Non-commercial Recreation Uses
1. Issue no authorizations to construct new private recreation facilities, such as private recreation cabins.
 2. Maintain non-commercial recreation special-use authorizations except as provided for in FSM 2347. Allow replacement of existing facilities with similar facilities.
 3. Manage cabins and related structures which were existing, but unauthorized, prior to [ANILCA](#) (December 2, 1980), in accordance with the direction in LAND 122 - Cabins.
 4. Manage recreation special uses in accordance with the direction in LAND122 - Special-Use Authorizations.
- III. *Recreation Settings*
- A. Provide a broad spectrum of outdoor recreation opportunities in accordance with the existing capabilities of the National Forest as indicated by the ROS inventory, and in accordance with the ROS guidelines at the end of this section.
1. Manage recreation use in a manner that is compatible with the long-term objectives of the [Land Use Designation](#). Maintain the capability of all Land Use Designations to provide appropriate quality recreation opportunities on a sustained basis.
 2. In Land Use Designations where non-recreation resource management activities are emphasized, manage to continue providing the current settings and opportunities until scheduled activities and practices cause a change in the ROS setting. When scheduled activities change the recreation setting, manage the new setting in accordance with the appropriate ROS guidelines.
- B. Manage recreation resource activities and facilities in accordance with the established Regional guidelines and the ROS guidelines at the end of this section or Wilderness-specific ROS guidelines approved by the Forest Service officer with delegated authority. All recreation planning and management activities will address the setting indicators. They are described by ROS class in the guidelines at the end of this section, and are defined as follows:
1. *Visual Quality* - The [Visual Quality Objective](#) (VQO) describes varying degrees of allowable alteration of the characteristic landscape in each ROS setting. The key to managing landscape character in each ROS setting is to apply the guidelines for the adopted Visual Quality Objective and the Scenery Forest-wide Standards & Guidelines. (Consult FSH 2309.22.)
 2. *Access* - Access includes the mode of transport used within the area and service levels of roads.
 3. *Remoteness* - Remoteness concerns the extent to which individuals perceive themselves removed from the sights and sounds of human activity. Remoteness criteria can be modified to conform to natural barriers, screening, vegetative cover, or topographic relief.
 4. *Visitor Management* - Visitor management includes both the regulation and control of visitor activities, as well as providing information and services to aid their enjoyment and use of an area. A major reason underlying participation in outdoor recreation is to get away from the controls and constraints of the everyday world. Care and sensitivity are exercised in the methods used to implement visitor management. In managing [recreation places](#), resolving behavioral problems should be given a high priority. The presence of controls and the way in which they are implemented is as much a part of the recreation setting as the physical environment.
The type, level, and location of information provided to users can [enhance](#) or detract from the desired experience. Generally, on-site information is appropriate in the more developed ROS settings, while off-site sources are more appropriate in the more primitive ROS settings and Wilderness.

Standards & Guidelines

5. *On-Site Recreation Development* - On-site development refers to the scale and appropriateness of site modification and facilities. Design and location of site development activities should consider the following criteria:
 - a) *Extent of site development.* Is it limited to a few isolated locations or distributed throughout the area?
 - b) *Evidence of the activity.* Are proposed materials compatible with those found in the characteristic landscape? Will the activity meet the adopted [Visual Quality Objective\(s\)](#) of the [Land Use Designation](#)?
 - c) *Complexity and scale of the activity.* Are the scale and complexity appropriate for the intended use and compatible with other structures and attributes of a site?
 - d) *Purpose.* Are facilities for convenience and comfort, or safety and resource protection?
 - e) *Development scale for recreation facilities.* Is the facility development scale compatible with the desired ROS class setting, in accordance with the following definitions?

Development Scale for Recreation Facilities

I. <i>Minimum site modification.</i> Rustic/rudimentary improvements for site protection only.
II. <i>Little site modification.</i> Rustic/rudimentary improvements for site protection and some comfort for user. On-land motorized access with some traffic controls.
III. <i>Moderate site modification.</i> Facilities equally designed for resource protection and user comfort. Contemporary/rustic design of facilities. Interpretive services often informal, but on-site.
IV. <i>Site heavily modified.</i> Some facilities strictly for user comfort and convenience of user. Roads hard surfaced with obvious traffic controls. High density units/acre.
V. <i>High degree of site modification.</i> Facilities mostly designed for comfort and convenience of user. Flush toilets and electrical hook-ups common. Synthetic materials often used. Formal, sophisticated interpretive facilities available. Site often landscaped with exotic materials.

6. *Social Encounters* - The term social encounters refers to the number and type of other people met in the area, along travelways, or camped within sight or sound. They are generally measured by the number of parties an individual or group may encounter. A typical independent party consists of 3-4 people traveling as a social group. Guided or organization groups are typically larger.
 7. *Visitor Impacts* - Visitor impacts refer to the affect of recreation use on other resources such as soil, vegetation, water, air, and wildlife. The management intent is not necessarily how to prevent human-induced change, but one of deciding how much change is acceptable, and the actions needed for control. In general, user expectations are for minimum signs of human-caused alterations at the primitive end of the ROS and more acceptance of alterations near the developed end. One method to reduce visitor impacts is through site hardening. Site hardening includes paving, barriers, campsites, trails, viewing platforms, etc.
 8. Use the ROS charts at the end of this section in project planning and analysis, and as guidelines to establish appropriate levels of use, scale and kinds of facilities, [Visual Quality Objectives](#), types of access, and services to meet local and Regional needs and desired recreation setting conditions.
- IV. *Developed Site Management*
 - A. Implement the Meaningful Measures process for quality recreation management.
 - V. *Recreation Construction and Rehabilitation*
 - A. Provide development facilities appropriate to the ROS setting after determining that the private sector is not able or willing to meet the demand.
 - B. Maintain cost-effective [developed recreation](#) facilities which complement non-Forest Service developments in the same community home range or service center area.

- C. Provide barrier-free, accessible facilities appropriate to the site development level and area ROS setting.
- D. Evaluate the location and need for recreation facilities which lie within identified 100-year [flood plains](#) as to the specific hazards and values involved with the site and its use. Thoroughly explore viable alternatives. (Consult FSM 2527.)
- E. Use the regional recreation capital investment process and criteria for the identification of recreation construction and [reconstruction](#) projects.

VI. *Interpretive Services*

- A. Provide an Interpretive Services Program that is designed to accurately and adequately develop an interest and understanding of the environments of the Forest and Southeast Alaska, and the mission of the Forest Service in managing the National Forest.
- B. Conduct on-site interpretive activities to a level consistent with [Land Use Designation](#) objectives.
- C. Assist visitors and users to understand the role of natural and [cultural resources](#) in the development of industry, heritage and culture in Southeast Alaska. Relate these roles to the rest of the state, Canada, and the nation.
- D. Promote visitor understanding of the National Forest System, Forest Research, and State and Private Forestry programs.
 - 1. Emphasize understanding of stewardship of public lands and their productivity through professional forest management with balanced use of natural resources.
 - 2. Develop Interpretive Services programs for all principal resource management programs. Information should emphasize the integration of management activities designed to achieve the goals and objectives developed for specific areas.
- E. Inform visitors of the distribution, differences, and roles of the Federal, state and private lands found in Southeast Alaska and the range of recreation and cultural interest opportunities and facilities available.
 - 1. Continue to pursue and implement cooperative interpretive partnerships with other Federal and state land management agencies consistent with the principal travel routes and activity centers used by forest visitors.
 - 2. Provide an array of imaginative and dynamic media by which interpretive messages are made available to the visitor. Use a spectrum of media and presentation designs that are appealing, appropriate for the setting, easily understood by the intended audience, and reflect the Forest Service as a professional and caring land management agency.
 - 3. Continue to provide accurate and timely information about Southeast Alaska and the Tongass National Forest. Continue the Forest Service's leadership role for the Southeast Alaska Visitor Center in Ketchikan.
 - 4. Continue to provide or improve interpretive services programs and facilities such as those at Mendenhall Glacier, Centennial Hall (Juneau), and aboard the Alaska Marine Highway ferries. Support shall include identification of current issues and events of interest to forest visitors, adequate staffing to meet program objectives, assistance in training the seasonal and volunteer staff, and objective evaluation of programs to assure accurate and positive coverage of the natural and [cultural resources](#) on the Tongass National Forest and their management.
 - 5. Expand the use of the Alaska Natural History Association (ANHA) as an interpretive partner to provide forest visitors with a broad range of interpretive media. These may include, but are not limited to, publications, video and audio tapes, and other media that feature the natural and cultural resources of the Tongass National Forest and the heritage of Southeast Alaska. Encourage all types of support and donations to ANHA which can be used to develop additional materials and programs.
 - 6. In partnership with communities, organizations, and individuals, develop additional ANHA outlets at locations that will best serve Forest customers.
 - 7. Continue to support the Elderhostel Education Program in local communities and aboard the Alaska Marine Highway as budgets will allow.

Standards & Guidelines

- F. Provide a coordinated program of awareness and training for all employees, and partners (including outfitter/guides and other public service permit holders) to ensure a consistent program of public service.
 - 1. Encourage other agency participation in Forest Interpretive Services training programs.
 - 2. Ensure that the Forest Service mission and image remain predominantly visible at all Forest Service facilities through the use of uniformed Forest Service personnel, the Forest Service shield, and other media.
 - 3. To the extent [feasible](#), provide training about national forest resources, points of interest and management to all interested outfitter/guides, industry representatives and other partners.

VII. *Recreation Use*

- A. Gather recreation use information to use in project and forest planning. Many sources of information should be used to gather data, such as cabin permits, campground, and visitor center use, trailhead registers, dispersed sampling, outfitter/guides, ferry and cruiseship arrivals, and employee or public observations.
- B. Identify those recreation uses that may be in conflict with each other. Reduce recreation user conflicts and polarization. Work with affected publics in finding solutions to defuse or resolve conflicts or concerns.

**ROS Class
Primitive**

Setting Indicators	Standards and Guidelines
Visual Quality	Not to exceed the Retention Visual Quality Objective. An Existing Visual Condition of Preservation is fully compatible and encouraged.
Access	Cross-country travel and travel on non-motorized trails and on waterways is typical. Use of airplanes, helicopters, motorboats and snowmachines for traditional activities, subsistence, emergency search and rescue, and other authorized resource management activities may occur but is rare.
Remoteness	No or infrequent sights and sounds of human activity are present. Setting is located more than 1.5 hours walking or paddling distance, or 3 miles, from any human developments other than infrequently-traveled marine travelways. Areas are generally greater than 5,000 acres, but may be smaller if contiguous with a Semi-primitive class.
Visitor Management	On-site regimentation and controls are very rare. Signing is limited to directional information and safety. There are no on-site interpretive facilities. There is great opportunity for discovery on the part of the users.
On-site Recreation Development	Structures do not exceed Development Scale I, except for public recreation cabins, and are maintained for appropriate levels of use.
Social Encounters	User meets less than 3 parties per day during trip. No other parties are within sight or sound of dispersed campsites or cabins. Maximum party size is generally 12 people.
Visitor Impacts	Visitor-caused impacts to resources are slight and usually not noticeable the following year. Site hardening is limited to boardwalk trails and necessary boat moorings or bearproof food caches and rustic public recreation cabins.

Standards & Guidelines

ROS Class Semi-Primitive Non-Motorized

Setting Indicators	Standards and Guidelines
Visual Quality	Not to exceed the Retention Visual Quality Objective. An Existing Visual Condition of Preservation is fully compatible and encouraged.
Access	Cross-country travel and travel on non-motorized trails is typical. Use of airplanes, helicopters, motorboats and snowmachines for traditional activities, subsistence, emergency search and rescue, and other authorized resource management activities may occur unless specifically restricted for safety and/or resource protection purposes.
Remoteness	Nearby sights or sounds of human activity are rare, but distant sights or sounds may occur. Setting is located more than ½ hour walk or paddle, or approximately ½ mile (greater or less depending on terrain and vegetation, but no less than ¼ mile) from: 1) infrequently traveled waterways; 2) roads and trails open to motorized recreation use, and 3) clearcut harvest areas. Aircraft access is only occasional. Areas are generally greater than 2,500 acres but may be smaller if contiguous with Primitive or Semi-primitive motorized classes.
Visitor Management	On-site regimentation and controls are rare. Visitor information facilities may be used to interpret cultural and natural resource features, but are not elaborate and harmonize with the setting.
On-site Recreation Development	Facilities and structures generally do not exceed Development Scale II and are maintained to accommodate the types and levels of use anticipated for the site. Forest Service recreation cabins are fully compatible.
Social Encounters	User meets less than 10 parties per day (6 parties per day in wilderness) on trails and waterways during 80% of the primary use season. No other parties are within sight or sound of dispersed campsites during 80% of the primary use season. Maximum party size is generally 12-20 people. Outside of wilderness, larger party sizes may occur during less than 15% of the primary use season in limited locations.
Visitor Impacts	Visitor-caused impacts to resources are rare and usually not long-lasting. Site hardening is limited to boardwalk trails, boat tramways, moorings and docks, bearproof food cache facilities and rustic public recreation cabins.

**ROS Class
Semi-Primitive Motorized**

Setting Indicators	Standards and Guidelines
Visual Quality	Not to exceed the Partial retention Visual Quality Objective. Existing Visual Conditions ranging from Preservation through Retention are fully compatible and encouraged.
Access	Travel on motorized and non-motorized trails and Traffic Service Level D roads, although some Traffic Service Level C roads provide access to and through the area. Use by high clearance vehicles and motorized water travel is common. Road density is less than one mile per square mile. Off-road snowmachine travel on snow may occur.
Remoteness	Nearby sights or sounds of human activity are rare, but distant sights or sounds may occur. Setting is located within ½ hour walk or paddle or within ½ mile (greater or less depending on terrain and vegetation but no less than ¼ mile) of infrequently traveled waterways or small aircraft access points and/or roads which are open and maintained for passage by high clearance and four-wheel drive vehicles (Maintenance Level 2) and provide access to recreation opportunities and facilities. Areas are generally greater than 2,500 acres but may be smaller if contiguous with Primitive or Semi-Primitive Non-Motorized classes.
Visitor Management	On-site regimentation and controls are few. Control facilities consist primarily of informational signs and site-specific road closures. Visitor information facilities may be used to interpret cultural and natural resource features, but are not elaborate and harmonize with the setting.
On-site Recreation Development	Facilities and structures generally do not exceed Development Scale II and are maintained to accommodate the types and levels of use anticipated for the site and area. Forest Service recreation cabins are fully compatible.
Social Encounters	User meets less than 10 parties per day (6 parties per day in wilderness) on trails, roads, and shorelines during 80% of the primary use season. During 80% of the primary use season no other parties are visible from campsites. Maximum party size is generally 12-20 people. Outside of wilderness, larger party sizes may occur during less than 15% of the primary use season in limited locations.
Visitor Impacts	Visitor-caused impacts may be noticeable, but not degrading to basic resource elements. Site hardening is very infrequent, but, when it occurs, is in harmony with, and appropriate for, the natural-appearing backcountry setting.

Standards & Guidelines

ROS Class Roaded Natural

Setting Indicators	Standards and Guidelines
Visual Quality	Not to exceed the Modification Visual Quality Objective and typically is Partial retention. Existing Visual Conditions ranging from Preservation through Retention are fully compatible and encouraged.
Access	All forms of access and travel modes may occur. Access to and through the area is typically by passenger vehicle, although motorized use may be restricted to provide for resource protection, user safety, or to provide a diversity of recreation opportunity.
Remoteness	Remoteness is of little importance, but low to moderate concentrations of human sights and sounds are preferred. Setting is located within ½ mile (greater or less depending on terrain and vegetation but no less than ¼ mile) of moderate to heavily-traveled waterways and/or roads which are maintained to Levels 3, 4, and 5 and open for use by the public or those areas that receive heavy small aircraft travel.
Visitor Management	On-site regimentation and controls are obvious. Control facilities such as parking areas, barriers and signs harmonize with the natural environment. Visitor information facilities are not elaborate or complex.
On-site Recreation Development	Facilities and structures generally do not exceed Development Scale III and are maintained to accommodate the types and levels of use anticipated for the site and area. Typical facilities include outdoor interpretive displays and rustic campgrounds and picnic areas.
Social Encounters	User meets less than 20 other parties per day on trails and in dispersed areas, during at least 80% of the primary use season. User may meet numerous other parties on roads and developed recreation sites. Developed sites often are at full capacity but do not exceed 80% of the design capacity over the season of operation.
Visitor Impacts	Visitor-caused impacts are noticeable, but not degrading to basic resource elements nor do they exceed established Visual Quality Objectives. Site hardening may be dominant, but is in harmony with natural-appearing landscape and appropriate for the site and setting.

**ROS Class
Roaded Modified**

Setting Indicators	Standards and Guidelines
Visual Quality	Not to exceed the Maximum Modification Visual Quality Objective. Apply visual management techniques to soften effects of maximum modification conditions in the foreground of sensitive travel routes and recreation sites.
Access	All forms of access and travel modes may occur, although roads are generally not well suited to highway-type vehicles. OHV use on designated routes or areas is encouraged. Use by high clearance vehicles is common.
Remoteness	Remoteness from urban conditions and high concentrations of other people is important. Low concentrations of human sights and sounds in a backcountry roaded setting are preferred. These areas are accessed by Forest roads which are maintained to Levels 2, 3, and 4 and are available for public use. They generally involve areas with timber management activities.
Visitor Management	On-site regimentation and controls are few. Control facilities are appropriate for the predominating backcountry roaded setting. Visitor information facilities may be used to interpret management activities, but are not elaborate and are appropriate for the setting.
On-site Recreation Development	Facilities and structures generally do not exceed Development Scale II and are maintained to accommodate the types and levels of use anticipated for the site and area.
Social Encounters	User meets less than 20 other parties per day on trails and in dispersed areas during at least 80% of the primary use season. Numerous other parties may be encountered on roads. Few, if any, other parties are visible at dispersed campsites.
Visitor Impacts	Visitor-caused impacts are noticeable, but not degrading to basic resource elements. Site hardening may dominate at campsites and parking areas, but is in harmony with, and appropriate for, backcountry roaded setting.

Standards & Guidelines

ROS Class Rural

Setting Indicators	Standards and Guidelines
Visual Quality	Not to exceed Modification in the Foreground and Maximum Modification in middleground.
Access	All forms of access and travel modes may occur, although access to and through the area is primarily by passenger vehicle. Road and trail surfaces are often hardened.
Remoteness	Remoteness is of little importance, and moderate to high concentrations of people and sights and sounds of human activity are acceptable when not continuous. Setting is located within 1/2 mile of heavily traveled roads and state highways or areas that receive heavy aircraft travel.
Visitor Management	On-site regimentation and controls are obvious. Control facilities such as parking areas, medians, and barriers harmonize with natural/exotic landscaping. Information and interpretive facilities may be complex and dominant on developed sites.
On-site Recreation Development	All Development Scales (I-V) are appropriate and maintained at intended standards necessary to accommodate the types and levels of use anticipated for the site and area. Facilities typically include visitor centers, major campgrounds, and other facilities for concentrated use.
Social Encounters	User may meet many (more than 20) other parties per day on trails, in dispersed areas, on roads, and in developed facilities. Developed sites often are at full capacity, but do not exceed 80% of the design capacity over the operating season.
Visitor Impacts	Visitor-caused impacts are noticeable, but not degrading to basic resource elements nor do they exceed established Visual Quality Objectives. Site hardening may be dominant, but is in harmony with natural/exotic landscape and appropriate for the site and setting.

**ROS Class
Urban**

Setting Indicators	Standards and Guidelines
Visual Quality	Not to exceed the Modification Visual Quality Objective in the foreground and Maximum Modification in middle ground.
Access	Access and travel facilities are highly intense, motorized and often with mass transit supplements.
Remoteness	Remoteness is not important. High concentrations of people, and sights and sounds of human activity are acceptable.
Visitor Management	Intensive on-site controls are numerous and obvious. Information and interpretive facilities may be complex and dominant.
On-site Recreation Development	All Development Scales (I-V) are appropriate and maintained at intended standards necessary to accommodate the types and levels of use anticipated for the site and area. Synthetic materials are commonly used. Facility design may be highly complex and refined, but in harmony or complimentary to the site. Facilities typically include visitor centers, major campgrounds and other facilities for concentrated use.
Social Encounters	Interaction between large numbers of users is high. Sites often are at full capacity, but do not exceed 80% of the design capacity over the operating season.
Visitor Impacts	Visitor-caused impacts are noticeable, but not degrading to basic resource elements or exceed established Visual Quality Objectives. Site hardening may be dominant, but is in harmony with natural/exotic landscape and appropriate for the site and setting.

RIPARIAN

Forest-wide Standards & Guidelines

Riparian area: RIP1

I. Definition

- A. Riparian areas encompass the zone of interaction between the aquatic and [terrestrial ecosystems](#), and include riparian streambanks, lakes and [flood plains](#) with distinctive resource values and characteristics.

II. Objectives

- A. Maintain [riparian areas](#) in mostly natural conditions, for fish, other aquatic life, [old-growth](#) and riparian-associated plant and wildlife species, water-related recreation and to provide for ecosystem processes, including important aquatic and land interactions. For further direction, refer to the Fish, Wildlife, Recreation and Tourism, Beach and Estuary Fringe, and Soil and Water Forest-wide Standards & Guidelines. The following is a list of objectives pertaining to riparian areas. (Also consult FSM 2526.)
 1. Assure the protection of riparian habitat. (Consult [Tongass Timber Reform Act](#), Section 103 (a)).
 2. Manage riparian areas for short and long-term biodiversity and productivity.
 3. Maintain natural streambank and stream [channel](#) processes.
 4. Maintain natural and beneficial quantities of [Large Woody Debris](#) over the short and long term.
 5. Provide for the beneficial uses of riparian areas by maintaining water quality. (Consult [Best Management Practices](#), Chapter 10 of the Soil & Water Conservation Handbook, FSH 2509.22 and Appendix C of this document.)
 6. Maintain or restore the natural range and frequency of aquatic habitat conditions on the Tongass National Forest to sustain the diversity and production of fish and other freshwater organisms.
 7. Consider the management of both terrestrial and aquatic resources when managing riparian areas. Consider the effects of terrestrial and aquatic processes on aquatic and riparian resources.
 8. In watersheds with intermingled land ownership, cooperate with the other landowners in striving to achieve healthy riparian areas.
 9. Design and coordinate road management activities to provide for the needs of wildlife and provide passage of fish at road crossings. (Consult the Aquatic Habitat Management Handbook, FSH 2609.24.)
 10. Evaluate the effect of management (including [windthrow](#)) of adjacent areas on riparian habitats.
 11. Coordinate and consult with state and federal agencies on riparian management issues, as appropriate. Coordinate activities which affect the Coastal Zone with the State of Alaska Office of Management and Budget, Division of Governmental Coordination, to ensure consistency, to the maximum extent [practicable](#), with the enforceable policies of the Alaska Coastal Management Program.

RIPARIAN PLANNING: RIP2

I. Project Planning

- A. Identify and delineate [Riparian Management Areas](#) (RMA's) for each project where ground [disturbance](#) will occur. RMA's are areas of special concern to fish, other aquatic resources and wildlife. They are generally delineated as identified in the [process group](#) direction (RIP2, III, E). Areas managed to provide a reasonable assurance of windfirmness of the RMA are not considered to be part of the RMA.
- B. Complete a [watershed analysis](#) before making site-specific adjustments to [Process group](#) standards and guidelines. Adjustments to the guidelines may be made only if the objectives of

the group(s) can be met. Consult Appendix J of the Forest Plan for direction on the use of watershed analysis.

- C. On those projects and activities that are in, or influence, [Riparian Management Areas](#), assure interdisciplinary involvement and consideration of riparian resources in project planning and in the environmental analysis process.
- D. Ensure that permit holders, contractors, and/or purchasers understand Riparian Management Areas and riparian management objectives.
- E. Evaluate Riparian Management Area windthrow risk when locating and designing adjacent management activities. Minimize accelerated [windthrow](#). (Consult BMP 12.6a of the Soil and Water Conservation Handbook and the [Process group](#) Standards and Guidelines (RIP2, III, E)).

II. *General Standards and Guidelines by Activity*

- A. Special Use Administration of Lands (Non-Recreation).
 - 1. Permit activities, consistent with other Special Use direction, which do not significantly reduce the capability of [Riparian Management Areas](#) to: 1) maintain or improve associated fish or wildlife habitat, or 2) protect water quality for beneficial uses.
- B. Minerals and Geology Administration, [plan of operations](#).
 - 1. Use state-of-the-art techniques for developing minerals to reduce impacts to riparian resources to the extent feasible. Include mitigation measures that are compatible with the scale of proposed development and commensurate with potential resource impacts.
 - 2. Apply appropriate Transportation Forest-wide Standards & Guidelines to the location, construction, and maintenance of mining roads affecting [riparian areas](#).
 - 3. Manage [mineral exploration](#) and development activities to be compatible with the [Process group](#) goals and objectives for [Riparian Management Areas](#).
 - 4. Manage mineral activities to maintain the present and continued productivity of [anadromous fish](#) and other [foodfish](#) habitat to the maximum extent feasible. (Consult [ANILCA](#), Sec. 505 (a).)
 - 5. Apply timing restrictions to instream construction and other minerals activities to protect fisheries habitat and mitigate adverse sedimentation, and to avoid critical wildlife mating, hatching, and migrating periods.
 - 6. Minimize the effects of [mineral development](#) and related land [disturbance](#) activities on the beneficial uses of water by applying [Best Management Practices](#).
 - 7. Locate material sites and marine transfer facilities outside Riparian Management Areas if reasonable alternatives exist.
 - 8. Ensure that disturbed areas are revegetated in accordance with project plans.
 - 9. Approve reclamation plans in which mineral activities leave riparian project areas as natural in appearance and function, as is feasible.
- C. Recreation Use Administration
 - 1. Locate, design, and operate only those recreation projects which are necessary to accommodate public use of the water and shoreline areas (i.e., boat or floatplane docks, launching ramps and associated access roads and trails). Where feasible, locate parking, campgrounds, sanitation and other recreation facilities outside the Riparian Management Areas to avoid adverse effects on water quality and riparian function.
 - 2. For existing facilities, consider relocating the facility outside of the Riparian Management Area. Consideration should be based on current and anticipated effects on riparian values, desired recreation experience, [public issues](#), application of [Best Management Practices](#) to minimize the effects of recreation facilities on the beneficial uses of water, and costs of relocating the facility.
- D. Soil Inventory
 - 1. Field verify and define high hazard and very high hazard soils during project level planning.
- E. [Watershed](#) Resource Planning
 - 1. Manage activities to meet State water quality standards and protect aquatic and terrestrial riparian habitats, [channel](#) and streambanks, and provide for [flood plain](#) stability.
 - a) Identify soil and water quality requirements for project-level activities.
 - b) Apply [Best Management Practices](#) to minimize the effects of land disturbing activities on the beneficial uses of water.

Standards & Guidelines

- c) Determine [flood plain](#) values and plan to avoid, where possible, the long and short-term adverse impacts to soil and water resources associated with the occupancy and modification of flood plains.
 - d) Complete a [watershed analysis](#) before making project level site-specific adjustments to [Process group](#) standards and guidelines. Adjustments to the guidelines may be made only if the objectives of the process group(s) can be met. Consult Appendix J of the Forest Plan for direction on watershed analysis. The intensity and scope of watershed analysis will vary according to the issues of concern.
- F. Timber Resources
1. No commercial timber harvest is allowed within 100 feet [horizontal distance](#) either side of Class I streams and Class II streams which flow directly into a Class I stream. (Consult the [Tongass Timber Reform Act](#).)
 - a) Included in the definition of Class II streams flowing directly into a Class I stream are all Class II tributaries of a Class II stream that flow into a Class I stream without an intervening Class III segment. Mandatory minimum 100 foot buffers will not apply to:
 - 1) A Class II stream that flows directly into the ocean or joins a Class I stream only at lower than mean high tide; and
 - 2) A Class II tributary stream segment that flows into a Class III stream that in turn flows into a Class I stream.
 - b) The 100 foot measure is a horizontal distance measure from the bankfull margins.
 2. Protect [Riparian Management Areas](#), in accordance with the intent of the Alaska [Anadromous Fish Habitat Assessment](#) (1995), through application of the direction contained in [Process group](#) standards and guidelines (RIP2, III, E). A project may incorporate site-specific adjustments to the standards and guidelines following completion of a [watershed analysis](#). Adjustments to the standards and guidelines may be made only if the objectives of the process group(s) can be met. Consult Appendix J for direction on implementing watershed analysis.
 3. Apply [Best Management Practices](#) to minimize the effects of timber harvest and related land [disturbance](#) activities on beneficial uses of water.
 4. Avoid [Riparian Management Areas](#) when other [feasible](#) locations for [personal use](#) wood cutting are available. If personal use wood cutting is allowed, design harvest in such away to meet process group objectives (Section III,E).
 5. In locating and designing timber harvest activities, require special consideration and mitigation to ensure that Riparian Management Area characteristics for fish and wildlife habitat, water quality, and other riparian-associated resources are maintained.
 6. Provide protection to fish and wildlife during critical periods of their life cycles by applying seasonal restrictions on timber harvest and road use activities, to the extent feasible.
 7. When stream crossings are required to harvest timber, perform investigations to compare the environmental consequences of road crossings versus yarding corridors, and select the action of least impact.
 8. Streamcourse protection plans (consult BMP 13.16) are required for harvesting activities within the minimum 100 foot required buffers designated in F(1) above.
 9. Plan timber harvest settings that cross or include streamcourses or include [V-notches](#) to avoid adverse impacts to [Riparian Management Areas](#) and soil and water resources. Unless stated otherwise in the [Process group](#) direction, the following apply:
 - a) Trees or tree-parts yarded across or along Class I, II or III streamcourses shall be fully suspended when crossing the streamcourse or yarding the full length of the stream or drainage, unless an alternative is approved in the operating plan or timber sale contract which meets the objectives for Riparian Management Areas.
 - b) Unless agreed otherwise in the operating plan or timber sale contract, and consistent with safe practices, trees identified for harvest will be felled to avoid: (1) Riparian Management Areas designated for "no commercial timber harvest", and, (2) streamcourses. Trees may be wedged, jacked, lined, or otherwise pulled when necessary. Trees accidentally felled into streamcourses or wind fallen trees shall be removed only following approval by the Sale Officer, and only if such removal meets riparian management objectives for the process group.

- c) At the time agreed in the operating plan or timber sale contract, all trees, except those within [guyline circles](#), which cannot be felled to avoid falling in streamcourses, should be left standing until yarding is in progress on the landing to which the trees will be yarded. Trees within the guyline circle will be felled as agreed in the operating plan or timber sale contract.
 - d) Split yard away from streams whenever [feasible](#).
 - e) Allow no timber salvage within 100 feet in width on each side of Class I streams or on those Class II streams which flow directly into Class I streams. In addition, allow no timber salvage in [Riparian Management Areas](#) defined for each [process group](#), with the following exception: salvage could be allowed following [watershed analysis](#) if the salvage activity is needed to meet or further riparian management objectives for the process group. This salvage will not contribute to the [Allowable Sale Quantity](#).
 - f) In accordance with section e. (above), windthrown timber in Riparian Management Areas should not be subject to salvage unless approved by a line officer in consultation with a fishery biologist or hydrologist.
- G. Wildlife Resources
- 1. Integrate [Riparian Management Areas](#) into any modifications to the design and location of small [old-growth](#) reserves (consult the Old-growth Habitat [Land Use Designation](#)).
 - 2. Use [riparian corridors](#) in the design of wildlife travel corridors to provide horizontal [connectivity](#) between watersheds, and vertical connectivity between lowland and alpine areas.
 - 3. Consider wildlife needs in the design and management of Riparian Management Areas. Give special emphasis to habitats of riparian associated species, for example, designated brown bear feeding areas. (See Wildlife Forest-wide Standards & Guidelines.)
- H. Transportation Systems
- 1. Use road closures, maintenance, and other measures to keep road-surface and road-side erosion at low or near background levels. Assure long-term [fish passage](#) through structures at road crossings on class I and II streams as described in [process group](#) direction and the Fish Standards & Guidelines. Utilize [Best Management Practices](#) to control effects of transportation systems on water quality and fish habitat.
- III. *Stream Process group Specific Standards and Guidelines for Timber Harvest*
- A. Stream [Process groups](#) are stream channels which share similar formative processes (consult Appendix D). They reflect the long term interaction of geology, [landform](#), climate, and riparian vegetation. Classification considers the interrelationships among runoff, [sediment](#) transport and vegetation along [stream banks](#). The following standards and guidelines are designed to provide essentially natural [watershed](#) function and [channel](#) processes. Apply these standards and guidelines in [Land Use Designations](#) which allow timber harvest.
- B. Standards and guidelines for process groups are [management direction](#) for [Riparian Management Areas](#). Areas managed to provide a reasonable assurance of windfirmness of the RMA are not considered to be part of the RMA. The standards and guidelines (except for the minimum 100-foot buffers required by TTRA) may be adjusted for a project on a site-specific basis following completion of a [watershed analysis](#). Adjustments to the standards and guidelines may be made only if the objectives of the process group(s) can be met. Consult Appendix J for direction on the use of watershed analysis.
- C. [Stream class](#) IV will be treated as part of the hillside under slope stability standards and guidelines (see Soil and Water Forest-wide Standards & Guidelines). Apply [Best Management Practices](#).
- D. Apply the floodplain process group direction (see "F" below) for estuarine process group channels not buffered using Beach and Estuary Fringe Standards & Guidelines.
- E. The following standards and guidelines (in "F") are designed to meet the intent of the [Anadromous Fish Habitat Assessment](#) (1995) for timber harvest activities occurring in each of the Forest's stream [channel process groups](#). Definitions for terminology used in the Process group Standards and Guidelines follow:
- 1. Where the direction states "no commercial timber harvest", this is a legal mandate of the [Tongass Timber Reform Act](#) of 1990.

Standards & Guidelines

2. Where the direction states "no programmed commercial timber harvest", this is [management direction](#) that means no timber harvest will be scheduled, but that unprogrammed commercial timber harvest could be allowed where it meets the objectives of the [process group](#) (as determined for the project after completion of a [watershed analysis](#)). Forest Products sales (reference FSM 2450) are not permitted unprogrammed activities.
 3. Class II (non-direct) - A Class II stream that does not flow directly into a Class I stream (see the definition under Timber Resources, above).
 4. Buffer measurements - Distance for the first 100 feet from the stream [channel](#) is measured horizontally. All other measured distances are [slope distances](#).
 5. [Salvage harvest](#) - Removal of dead standing or downed trees. Salvage can include the incidental removal of green trees if needed to make logging safe.
 6. Definitions for [site-potential tree](#) height, [stream class](#), [active channel](#), [flood plain](#), and [riparian corridor](#) are located in the glossary.
- F. [Process groups](#) (see following tables).

Process group: Alluvial fan (AF1, AF2 and AF8 channels)

Description: [Alluvial fan](#) channels flow directly over the alluvial fan [landform](#). These are dynamic multi-branched channels that periodically change course within the landform. Stream gradient ranges from 1 to 3 percent on the lower half of the alluvial fan and increases toward the fan apex. The alluvial fan [channel](#) is associated with high gradient contained channels; therefore [streamflow](#) is dependent on mountain slope runoff. [Groundwater](#) discharge is also significant. Surface flow may be intermittent as [substrate](#) consists of sand to cobble size material. During low flow periods stream flow may run subsurface in the middle section of the alluvial fan and emerge on the lower section. [Aggradation](#) of material is the dominant process on the alluvial fan and fine [sediment](#) may be deposited in the low gradient section. The [active channels](#) on alluvial fans often include multiple high flow channels and unvegetated gravel or cobble outwash lobes with ill-defined channel banks. Alluvial fans typically support large spruce with diameters (DBH) of 30 inches and have average [site-potential tree](#) heights of 140 feet. Downed wood serves as nurse logs for [regeneration](#).

Desired condition: Stream systems relocate naturally in an unpredictable pattern across the [alluvial fan](#). Large wood occurs across the fan, and is important for the [retention](#) and metering of [sediment](#) into stream systems, and to create pools for fish rearing habitat. Some amount of large wood is available to the stream wherever the stream may be located on the fan. Wood may be excavated by [fluvial](#) processes on the fan.

Objectives: Maintain near-natural quantities of large wood by assessing the site's [old-growth](#) type and managing for the natural frequency and size distribution for large, downed wood and standing trees on the fan. (Consult "Ecological Definitions for Old-growth Forest Types in Southeast Alaska," Forest Service publication R10-TP-28.) In the stream [channel](#), meet the natural range of aquatic habitat features for large wood size and distribution described in the Alaska [Anadromous Fisheries Habitat Assessment](#) (Forest Service publication R10-MB-279, Appendix C.1. on fish habitat objectives).

Implement BMP 13.9. Provide for natural fish migration. Do not divert stream channels.

Apply the following [management direction](#) at the project level to streams in this [process group](#). Complete a [watershed analysis](#) before making project site-specific adjustments to Process group direction. Adjustments to the direction may be made only if the objectives of the process group can be met.

Stream class/Activity

I, II, (direct)/Timber Harvest

No commercial timber harvest within 100 feet of class I streams and class II streams that flow directly into class I streams. No programmed commercial timber harvest within the [Riparian Management Area](#), which is the greater of the active portion of the [alluvial fan](#) or 140 feet (the height of one [site-potential tree](#)) from the current [channel\(s\)](#). Manage across the remainder of the fan (no more than 10% of the fan harvested in a 30 year period) with the objective of leaving large trees within the stand for future recruitment to stream channels.

II (non-direct), III/Timber Harvest

No programmed commercial timber harvest within the Riparian Management Area, which is the greater of the active portion of the alluvial fan or 140 feet (the height of one site-potential tree) from the current channel(s). Manage across the remainder of the fan (no more than 10% of the fan harvested in a 30 year period) with the objective of leaving large trees within the stand for future recruitment to stream channels.

Standards & Guidelines

I, II & III/Harvest Controls

Yard in a manner to minimize baring of mineral soil and such that new human-caused channelization does not occur across the entire [alluvial fan](#). The objective is to minimize alder growth and formation of new channels (ref. BMP 13.9). Where trees are removed, utility/[cull logs](#) should be left distributed across the alluvial fan.

I, II & III/Roads, Borrow Pits, Drainage Structures

Discourage use as borrow sources. Do not allow borrow pits on active fan. Avoid crossing fans where possible. If required, use bridges or depending on projected use, install vented fords utilizing culvert(s) to provide for controlled overflow to minimize downstream [disturbance](#). The objective is to maintain fish migration where needed and avoid diverting stream channels.

Process group: Flood plain/Glacial Outwash (FP1, FP2, FP3, FP4, FP5, GO1, GO2, GO3 channel types)

Description: Flood plain and glacial outwash channels are associated with the valley bottom flood plain [landform](#). These two [process groups](#) contain low gradient sinuous singular or anabranching channels. Braided channels are more prevalent in the glacial outwash process group. Mountain slope runoff and ground water discharge control stream flow in the flood plain process group while glacial melt controls flow in the glacial outwash group. [Peak flows](#) occur in the spring and fall in the flood plain process group while in summer for the glacial outwash group. [Sediment](#) deposition is the dominant process in both groups. [Substrate](#) material ranges from sand to cobble size material in both groups.

[Flood plains](#) commonly support standing [old growth](#) spruce with heights of up to 130 feet. Downed wood provides nurse logs for [regeneration](#), [sediment retention](#), and infiltration. Flood plain width may exceed 200 feet on FP4 and FP5 channels, but are generally less than 200 feet on FP3 channels. These areas are typically highly productive for fish. Large wood and off [channel](#) rearing areas are of particular significance as habitat features. Early successional forest species, such as black cottonwood, are common in the glacial outwash [process group](#).

Desired condition: [Flood plains](#) are highly productive as fish and wildlife habitat. Natural flood plain functions occur, such as flood mitigation, surface-[groundwater](#) exchange, water temperature moderation and the formation of streams providing off-[channel](#) fish habitat. Large wood is distributed across the flood plain, except where non-forest or early successional species naturally occur. [Old-growth](#) habitat provides high quality habitat for riparian-associated wildlife species.

Objectives: Maintain near-natural quantities of large wood by assessing the site's [old-growth](#) type and managing for the natural frequency and size distribution for large, downed wood and standing trees on the [flood plain](#). (Consult "Ecological Definitions for Old-growth Forest Types in Southeast Alaska," Forest Service publication R10-TP-28.) In the stream [channel](#), meet the natural range of aquatic habitat features for large wood size and distribution, pool size and frequency and channel morphometry. (Consult the Alaska [Anadromous Fisheries Habitat Assessment](#), Forest Service publication R10-MB-279, Appendix C.1. on fish habitat objectives).

Minimize soil [disturbance](#) and the formation of new channels (BMP 13.9). Maintain fish access to entire range of habitat. Avoid diverting surface drainage channels.

Minimize damage to large standing trees from yarding activities.

Apply the following [management direction](#) at the project level to streams in this [process group](#). Complete a [watershed analysis](#) before making project site-specific adjustments to Process group direction. Adjustments to the direction may be made only if the objectives of the process group can be met.

Stream class/Activity

I, II (direct)/Timber Harvest

No commercial timber harvest within 100 feet of class I streams and class II streams that flow directly into class I streams. Although not required by the [Tongass Timber Reform Act](#), no commercial timber harvest in the [flood plain](#) until the completion of [watershed analysis](#). No programmed commercial timber harvest in the [Riparian Management Area](#) (greatest of flood plain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet (the height of one [site-potential tree](#))). Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one site-potential tree height of the Riparian Management Area).

Standards & Guidelines

II (non-direct), III/Timber Harvest

No programmed commercial timber harvest in the [Riparian Management Area](#) (greatest of [flood plain](#), riparian vegetation or soils, riparian associated wetland fens, or 130 feet (the height of one [site-potential tree](#))). Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one site-potential tree height of the Riparian Management Area).

I, II & III/Harvest Controls

Yard in a manner to minimize baring of mineral soil (<1%) and such that new channelization does not occur across the [flood plain](#). The objective is to minimize alder growth and formation of new channels (BMP 13.9).

I, II & III/Roads, Borrow Pits, Drainage Structures

Locate roads only when other [feasible](#) routes do not exist (BMP 14.2). Develop stream course protection plans when stream crossings are necessary. Do not develop borrow pits within the active flood plain (BMP 14.9). The objective is to maintain [fish passage](#) and access to all available habitats and avoid diverting surface drainage channels.

Process group: High Gradient Contained (HC1, HC2, HC3, HC4, HC5, HC6, HC8 and HC9 channels)

Description: High gradient contained channels are located on mountain slopes. These are singular straight incised channels with steep slopes and [channel](#) gradients greater than 6 percent. Stream flow is dependent upon mountain slope runoff and may be intermittent. [Sediment](#) is readily transported through these channels. [Substrate](#) material ranges from cobble to bedrock. [Riparian Management Areas](#) include incised [channel sideslopes](#). Hemlock series dominates vegetation although spruce is also common. Some streams have intermittent flows. Steep gradients (>6%) limit fish capability. Typical [site-potential tree](#) height is 120 feet.

Desired condition: Natural integrity of [channel sideslopes](#) is maintained. [Sediment](#) is "metered out" to downstream reaches by large wood structure. Over the long-term, high gradient contained streams act as conduits to move large wood and gravel into downstream fish bearing streams during debris flow events.

Objectives: Activities should not accelerate sideslope surface erosion or mass wasting. Maintain some instream large wood structure over the long-term where important for downslope [channel](#) processes which require wood as a component of natural [debris torrents](#).

Retain natural drainage patterns and minimize changes to the natural rates of [sediment](#) transport.

Design, install, and maintain stream crossings to pass flow, [bedload](#), and wood debris from peak events with minimal impacts to stream [channel](#) and road integrity.

Apply the following [management direction](#) at the project level to streams in this [process group](#). Complete a [watershed analysis](#) before making project site-specific adjustments to Process group direction. Adjustments to the direction may be made only if the objectives of the process group can be met.

Stream class/Activity

I, II (direct)/Timber Harvest

No commercial timber harvest within 100 feet of class I streams and class II streams that flow directly into class I streams. No programmed commercial timber harvest within the [Riparian Management Area](#), defined as within 100 feet of the stream or to the top of the [V-notch \(side-slope break\)](#), whichever is greater. Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one site-potential tree height of the Riparian Management Area).

II (non-direct)/Timber Harvest

No programmed commercial timber harvest within the [Riparian Management Area](#), defined as within 100 feet of the stream or to the top of the [V-notch \(side-slope break\)](#), whichever is greater. Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one [site-potential tree](#) height of the Riparian Management Area).

III/Timber Harvest

No programmed commercial timber harvest within the [Riparian Management Area](#), defined as the [V-notch \(side-slope break\)](#). Following [watershed analysis](#), Riparian Management Areas which become available for timber harvest will be converted from nonsuitable to suitable forested lands. (On a forest-wide basis, it is anticipated that this change will occur along 25% of the class III streams in this [process group](#).) Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one site-potential tree height of the Riparian Management Area).

Standards & Guidelines

I, II & III/Harvest Controls

Minimize yarding corridors within the [Riparian Management Areas](#).

I, II, & III/Roads, Borrow Pits, Drainage Structures

Borrow pits are generally not appropriate. Road and road crossings should be designed and constructed to minimize soil runoff to the [channel](#), retain natural drainage patterns and minimize changes to the natural rates of [sediment](#) transport.

Process group: Large Contained (LC1 and LC2 channels)

Description: Large contained channels are associated with canyons or sloping lowlands. These are low gradient (less than 3 percent), singular, straight and entrenched channels with gravel to bedrock [substrate](#). [Sediment](#) regime balances input with output. Stream flow is dependent upon mountain slope or lowland runoff. Habitat is often limited by a scarcity of stable large wood structure. Riparian vegetation communities are varied. Riparian width, including [flood plain](#) and sideslope breaks reach 150 feet (LC1) to 190 feet (LC2). A site potential tree reaches an average height of 100 feet.

Desired condition: Natural integrity of [channel sideslopes](#) is maintained. Large wood is recruited and retained in the stream [channel](#). Riparian vegetation provides shade and is a source of organic inputs to the stream. [Old-growth](#) habitat provides high quality habitat for riparian-associated wildlife species.

Objectives: Maintain near-natural quantities of large wood by assessing the site's [old-growth](#) type and managing for the natural frequency and size distribution for large, downed wood and standing trees. (Consult "Ecological Definitions for Old-growth Forest Types in Southeast Alaska," Forest Service publication R10-TP-28.) In the stream [channel](#), meet the natural range of aquatic habitat features for large wood size and distribution, and pool size and frequency. (Consult the Alaska [Anadromous Fisheries Habitat Assessment](#), Forest Service publication R10-MB-279, Appendix C.1. on fish habitat objectives).

Allow no increase over natural rates of [channel sideslope](#) surface erosion or mass wasting.

Minimize changes to the natural rates of [sediment](#) transport. Assure [fish passage](#) for all Class I & II streams.

Apply the following [management direction](#) at the project level to streams in this [process group](#). Complete a [watershed analysis](#) before making project site-specific adjustments to Process group direction. Adjustments to the direction may be made only if the objectives of the process group can be met.

Stream class/Activity

I and II (direct)/Timber Harvest

No commercial timber harvest within 100 feet of class I streams and class II streams that flow directly into class I streams. No programmed commercial timber harvest within the [Riparian Management Area](#), defined as within the [channel sideslope](#) break. Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one [site-potential tree](#) height of the Riparian Management Area).

II (non-direct)/Timber Harvest

No programmed commercial timber harvest within the Riparian Management Area, defined as within 100 feet of the stream or to the top of the [side-slope break](#), whichever is greater. Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one site-potential tree height of the Riparian Management Area).

III/Timber Harvest

No programmed commercial timber harvest within the [Riparian Management Area](#), defined as the [side-slope break](#). Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one site-potential tree height of the Riparian Management Area).

Standards & Guidelines

I & II/Harvest Controls

Fully suspend trees over the bankfull stream when yarding. Minimize yarding corridors within the Riparian Management Area. Yard in a manner to assure: no delivery of [sediment](#) from [channel sideslopes](#); barring of mineral soil is minimized (<1%); and, that new channelization does not occur across the floodplain.

I, II & III/Roads, Borrow Pits, Drainage Structures

Do not develop borrow pits within the active floodplain (BMP 14.9). Where road crossings are required, minimize erosion and sedimentation associated with road crossing approaches within inner gorge. Fish migration should not be impeded by road crossings.

Process group: Moderate Gradient Contained (MC1, MC2 and MC3 channels)

Description: Moderate gradient contained channels are associated with sloping or rolling lowlands. Stream gradient ranges from 2 to 6 percent for these singular, straight and entrenched channels. Stream flow is dependent upon mountain slope runoff. [Sediment](#) is transported through these channels. [Substrate](#) is dominated by cobble, boulder and bedrock material. Habitat is often limited by stable large wood structures. Riparian vegetation communities are varied. Riparian width, including [flood plain](#) and sideslope breaks, reach 60 to 70 feet. A site potential tree height is 100 feet.

Desired condition: Natural integrity of [channel sideslopes](#) is maintained. Large wood is recruited and retained in the stream [channel](#). Riparian vegetation provides shade and is a source of organic inputs to the stream.

Objectives: Maintain near-natural quantities of large wood by assessing the site's [old-growth](#) type and managing for the natural frequency and size distribution for large, downed wood and standing trees. (Consult "Ecological Definitions for Old-growth Forest Types in Southeast Alaska," Forest Service publication R10-TP-28.) In the stream channel, meet the natural range of aquatic habitat features for large wood size and distribution, and pool size and frequency. (Consult the Alaska [Anadromous Fisheries Habitat Assessment](#), Forest Service publication R10-MB-279, Appendix C.1. on fish habitat objectives).

Allow no increase over natural rates of channel sideslope surface erosion or mass wasting.

Minimize changes to the natural rates of [sediment](#) transport. Assure [fish passage](#) for all Class I & II streams.

Apply the following [management direction](#) at the project level to streams in this [process group](#). Complete a NEPA document that includes a [watershed analysis](#) before making site-specific adjustments to Process group direction. Adjustments to the direction may be made only if the objectives of the process group can be met.

Stream class/Activity

I and II (direct)/Timber Harvest

No commercial timber harvest within 100 feet of class I streams and class II streams that flow directly into class I streams. No programmed commercial timber harvest within the remainder of the [Riparian Management Area](#), defined as within the [channel sideslope](#) break. Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one [site-potential tree height](#) of the Riparian Management Area).

II (non-direct)/Timber Harvest

No programmed commercial timber harvest within 100' or within the channel [side-slope break](#), whichever is greater. Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one [site-potential tree height](#) of the Riparian Management Area).

III/Timber Harvest

No programmed commercial timber harvest within the [Riparian Management Area](#), defined as the [side-slope break](#). Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one site-potential tree height of the Riparian Management Area).

Standards & Guidelines

I, II & III/Harvest Controls

Fully suspend trees over the bankfull stream when yarding. Minimize yarding corridors within the Riparian Management Area. Yard in a manner to minimize delivery of [sediment](#) from [channel sideslopes](#).

I, II & III/Roads, Borrow Pits, Drainage Structures

Borrow pits are generally not appropriate. Where road crossings are required, minimize erosion and sedimentation associated with road crossing approaches within inner gorge. Maintain [fish passage](#) at road crossings and avoid diverting surface drainage channels.

Process group: Moderate Gradient/Mixed Control (MM1, MM2, and GO4 channels)

Description: These channels are commonly found in transition zones between high gradient contained streams and flood plain channels. They are located in narrow valleys, footslopes or sloping and rolling lowlands. Stream channel gradients range from 2 to 6 percent. Channel containment is variable as structural control may be intermittent or only along one bank. Overall channel pattern is straight. Stream flow is dependent upon mountain slope runoff and the sediment regime is balanced (input equals output). Channel substrate ranges from coarse gravel to boulder size material. Typical site potential tree is 120 feet.

Desired condition: Large wood is recruited and retained in the stream channel. Riparian vegetation provides shade, is a source of organic inputs to the stream, and maintains dynamic flood plain processes. Large wood is distributed across the flood plain. Old-growth habitat provides high quality habitat for riparian-associated wildlife species.

Objectives: Maintain near-natural quantities of large wood by assessing the site's old-growth type and managing for the natural frequency and size distribution for large, downed wood and standing trees. (Consult "Ecological Definitions for Old-growth Forest Types in Southeast Alaska," Forest Service publication R10-TP-28.) In the stream channel, meet the natural range of aquatic habitat features for large wood size and distribution, pool size and frequency and channel morphometry. (Consult the Alaska Anadromous Fisheries Habitat Assessment, Forest Service publication R10-MB-279, Appendix C.1. on fish habitat objectives).

Minimize soil disturbance and the formation of new channels (BMP 13.9). Maintain fish migration where needed and maintain natural surface drainage patterns for flood plain areas.

Apply the following management direction at the project level to streams in this process group. Complete a watershed analysis before making project site-specific adjustments to Process group direction. Adjustments to the direction may be made only if the objectives of the process group can be met.

Stream class/Activity

I, II (direct)/Timber Harvest

No commercial timber harvest within 100 feet of class I streams and class II streams that flow directly into class I streams. No programmed commercial timber harvest in the Riparian Management Area (greatest of flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet (the height of one site-potential tree)). Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one site-potential tree height of the Riparian Management Area).

II (non-direct), III/Timber Harvest

No programmed commercial timber harvest in the Riparian Management Area (greatest of flood plain, riparian vegetation or soils, riparian associated wetland fens, or 120 feet (the height of one site-potential tree)). Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one site-potential tree height of the Riparian Management Area).

I,II & III/Harvest Controls

Fully suspend trees over the bankfull width of the stream when yarding. Minimize yarding corridors within the Riparian Management Area. Yard in a manner to assure no barring of mineral soil (<1%) and such that new channelization does not occur across the entire floodplain. The objective is to minimize surface soil disturbance and formation of new channels (BMP 13.9).

Standards & Guidelines

I,II & III/ Roads, Borrow Pits, Drainage Structures

Borrow pits are generally not appropriate. Special road construction techniques may be required to ensure [fish passage](#). Maintain fish migration where needed and avoid diverting surface drainage channels.

Process group: Palustrine (PA1,PA2, PA3, PA4 and PA5 channels)

Description: Palustrine channels are associated with lowland [landforms](#) and [wetlands](#). [Channel](#) gradients are less than 1 percent. Palustrine channels are singular and sinuous. Stream flow is dependent on [peatland](#) and lowland runoff. [Sediment](#) storage is the dominant process. [Substrate](#) material ranges from fine organic material to coarse gravel.

Riparian vegetation includes [mixed conifer](#), shore pine, and non-forest. [Site-potential tree height](#) is generally less than 85 feet.

Desired condition: Highly complex stream and riparian systems provide canopy shading, instream organic recruitment for food and cover, and habitat diversity for rearing salmonids. Undercut banks are often present. [Old-growth](#) habitat provides high quality habitat for riparian-associated wildlife species.

Objectives: Maintain near-natural quantities of large wood (primarily for cover habitat) by assessing the site's vegetation type and managing for the natural frequency and size distribution for large, downed wood and standing trees. (Consult "Ecological Definitions for Old-growth Forest Types in Southeast Alaska," Forest Service publication R10-TP-28.) In the stream channel, meet the natural range of aquatic habitat features for large wood size and distribution, and [channel](#) morphometry. (Consult the Alaska [Anadromous Fisheries Habitat Assessment](#), Forest Service publication R10-MB-279, Appendix C.1. on fish habitat objectives).

Maintain streambank structure and wetland functions and values.

Apply the following [management direction](#) at the project level to streams in this [process group](#). Complete a [watershed analysis](#) before making project site-specific adjustments to Process group direction. Adjustments to the direction may be made only if the objectives of the process group can be met.

Stream class/Activity

I & II (direct)/Timber Harvest

No commercial timber harvest within 100 feet of class I streams and class II streams that flow directly into class I streams. No programmed commercial timber harvest in the [Riparian Management Area](#) (greatest of [flood plain](#), riparian vegetation or soils or riparian associated wetland fens). Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one [site-potential tree height](#) of the Riparian Management Area).

II (non-direct)/Timber Harvest

No programmed commercial timber harvest in the Riparian Management Area (greatest of [flood plain](#), riparian vegetation or soils or riparian associated wetland fens). Manage an appropriate distance beyond the no-harvest zone to provide for a reasonable assurance of windfirmness of the Riparian Management Area (pay special attention to the area within one [site-potential tree height](#) of the Riparian Management Area).

III/Timber Harvest

Consider no harvest (or limited harvest) areas to benefit water quality or palustrine-associated wildlife species.

Standards & Guidelines

I, II & III/Harvest Controls

Fully suspend trees over the bankfull stream when yarding. Minimize width and number of yarding corridors within the [Riparian Management Area](#). Yard in a manner to minimize delivery of [sediment](#) from [channel sideslopes](#). Use wetland guidelines

I, II & III/Roads, Borrow Pits, Drainage Structures

Wetland functions and [fish passage](#) receive special attention in locating roads.

Process group: Lakes and Ponds

Description: Lakes and ponds can be located throughout a [watershed](#) from near sea level to the alpine. Very high elevation lakes (over 1,000 feet) are often frozen much of the year. Low elevation lakes are often high quality fish rearing habitat, and provide for many species of wildlife (especially beaver, loons, eagles, swans, and other water birds). Lakes and ponds function to mitigate downstream flooding during large precipitation events, and are important for surface-[groundwater](#) exchange and moderating water temperatures. Low elevation, fish-abundant lakes, are commonly used for customary and traditional [subsistence](#) harvests, sport fishing, and recreational camping. Small ponds, particularly beaver ponds, can be highly productive on a per unit area basis.

Riparian and near-lake vegetation can often be mixed and a mosaic. It can include [old-growth](#) forests, hardwoods (e.g., alder or cottonwood), shore pine, and non-forest.

Desired condition: Low elevation lakes and ponds provide high quality fish rearing, wildlife habitat, and recreation. In forested areas, adjacent [riparian areas](#) provide the lake or pond canopy shading, organic recruitment for food and cover, and habitat diversity for fish. [Old-growth](#) habitat surrounding the lakes and ponds provides high quality habitat for lake and riparian-associated wildlife species. Lakes offer scenic diversity and attract recreationists for both consumptive and non-consumptive pursuits.

Objectives: In forested areas, maintain near-natural quantities of large wood for near-shore lake habitat and for lake and riparian-associated wildlife.

Maintain lake shore character, including vegetation, bank conditions, and near-shore [substrate](#) (except occasionally for localized areas developed for recreation or other conforming uses); maintain hydrologic and wetland function and values.

(Note: since lakes and ponds are so variable in their physical and biological characteristics, additional objectives should be set on a project basis.)

Apply the following [management direction](#) at the project level to lakes in this [process group](#). Complete a [watershed analysis](#) before making project site-specific adjustments to Process group direction. Adjustments to the direction may be made only if the objectives of the process group can be met.

Lake Class/Activity

I (lakes with [anadromous fish](#) or with high value [resident fisheries](#)) and II (lakes with lower value [resident fisheries](#); lakes \geq 3 acres) /Timber Harvest

No programmed commercial timber harvest within 100 horizontal feet of the lake margin or within the [Riparian Management Area](#) (greatest of the riparian vegetation or soils, riparian associated wetland fens, or the height of one-site potential tree (to be determined at the project level)). Consider an additional no harvest (or limited harvest) area beyond the no programmed commercial timber harvest area to benefit lake-associated scenic quality, wildlife species (e.g., spotted frogs, Vancouver Canada geese, tree nesting ducks), and recreation, [subsistence](#), and visitor uses. Typically larger lakes in lesser development LUD's with higher resource values should have wider additional buffers than smaller lakes in the more highly developed LUD's with lower resource values. Manage an appropriate distance beyond any no-harvest zone to provide for a reasonable assurance of windfirmness of the desired standing timber (pay special attention to the area within one [site-potential tree height](#) of the no-harvest zone).

Standards & Guidelines

II (lakes with lower value resident fisheries; lakes < 3 acres), III/Timber Harvest

Consider no harvest (or limited harvest) areas to benefit lake-associated scenic quality, wildlife species and recreation, subsistence, and tourism uses.

I & II Harvest Controls

Yard in a manner to minimize baring of mineral soil (<1%) and such that new channelization does not occur in areas that would drain into a lake, pond or wetland.

I, II, & III/Roads, Borrow Pits, Drainage Structures, Facilities

Special attention shall be given to wetland/riparian functions and values. Normally, locate roads and borrow pits outside the no programmed commercial timber harvest area. Roads, trails and other facilities which are dependent on, or make specific use of, the lake or pond may be located to the lake edge.

RURAL COMMUNITY ASSISTANCE

Forest-wide Standards & Guidelines

Activities: RUR

- I. *Resource Management Decisions Affecting Communities*
 - A. Emphasize, where appropriate, local needs and opportunities for rural community assistance in forest programs and budgets.
 1. Consider rural interests, including Native organizations, in resource decisions by jointly identifying and developing natural resource opportunities.
 - B. Consider social, cultural, and economic issues in resource management by:
 1. Considering local communities' needs in project plans.
 2. Evaluating community-based sources of [goods and services](#) for implementing Forest projects.
 3. Considering community organization and protocol in resource planning and decision processes.
 4. Providing information pertaining to resource management and development on national forests with communities.
 5. Encouraging local [rural development](#) entities to include Forest Service employees in their local rural development planning.

SCENERY

Forest-wide Standards & Guidelines

Scenery Operations: VIS1

I. Scenery Management

- A. This plan adopts [Visual Quality Objectives](#) (VQO's) which provide direction and objectives for landscapes within each [Land Use Designation](#). The long-term desired future visual condition for a specific area is the maintenance of a visual quality level that is at least as high as the adopted VQO for that area. Adopted VQO's are described in the scenery section of each Land Use Designation.
- B. Perform landscape/[viewshed](#) analysis, using as much of the available tools and technology as possible, when planning projects within viewsheds seen from Visual Priority Travel Routes and Use Areas (VPR's). Some level of analysis may be appropriate in some areas involving non-priority use areas. More comprehensive viewshed analysis such as long term, full [corridor](#) planning may be necessary in the most sensitive viewsheds. See Appendix F of this Plan for a listing of the designated VPR's. As a part of the planning for major land-disturbing activities, consider whether changes to the VPR list are necessary.
- C. Consider the visual condition of adjacent non-National Forest System lands during the planning of development activities on the National Forest.
- D. Consult the National Forest Landscape Management Handbooks series (nos. 434, 462, 478, 483, 484, 559, 608, 617, 666) and R10 Forest Service Handbook 2309.22 for scenery management guidance.

Scenery Preparation: VIS11

I. [Visual Quality Objectives](#) (VQO's): APPLICATION

VQO's are applied to any activity which has the potential to affect the visual character of the landscape. Activities could include, but are not limited to: recreation facilities: trails, cabins, restrooms, interpretive displays; timber sales: roads, harvest units, logging camps, sort yards, [Log Transfer Facilities](#); rock pits; gravel pits; [mineral development](#); fish enhancement projects: in-stream fish pass structures, gabions; facilities authorized under [Special Use Permits](#): electronic facilities, hydroelectric projects, etc. In designing activities to meet specific VQO's, a number of factors must be considered. Some of these factors are:

- A. The landscape's [Existing Visual Condition](#) (EVC) rating. This is an inventoried condition which rates the degree of change that has already occurred on-the-ground. It is important to compare the EVC of the project area to the VQO's assigned by the Forest Plan. Should there be conflicting conditions presently existing and the intent of the LUD is not presently met, it would be appropriate to consider either 1) some specific [rehabilitation](#) measures or 2) project deferral which would allow the landscapes in the project area time to regenerate sufficiently.
- B. [Visual Absorption Capability](#) (VAC) which is an estimate of the relative ability of a landscape to absorb management activities. High, Intermediate and Low VAC ratings are used. These ratings reflect the degree of landscape variety in an area, viewing distance, and topographic characteristics. As examples, a Low VAC setting generally has steep slopes, with little landscape variety, while a High VAC setting may be relatively flat and/or has a high degree of variety in the landscape.
- C. Size, shape, orientation to viewer, color, texture, etc. are critical elements in determining whether or not an activity meets the assigned VQO. Consideration for the scenery is essential early on in planning processes, particularly in areas seen from a VPR. However, each landscape setting is different, and should be evaluated on a case-by-case basis. There may be instances where the VQO can be met while the proposed activity is greater than the guideline, or there also may be cases where the activity must be smaller to meet the intent of the VQO.
- D. Depending on the assigned VQO, specific time frames are allowed for meeting the VQO following project completion. Long-term projects (i.e.: those with no specific completion date) should be initially designed to meet the assigned VQO as the project progresses.

II. *Visual Quality Objectives (VQO's): SPECIFIC GUIDELINES*

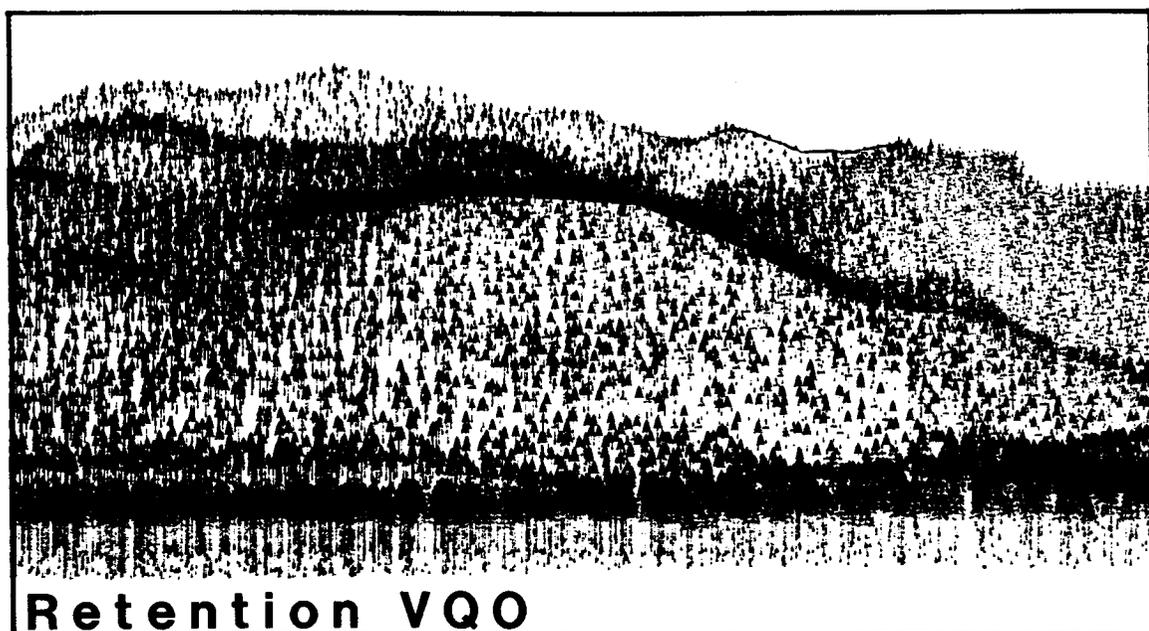
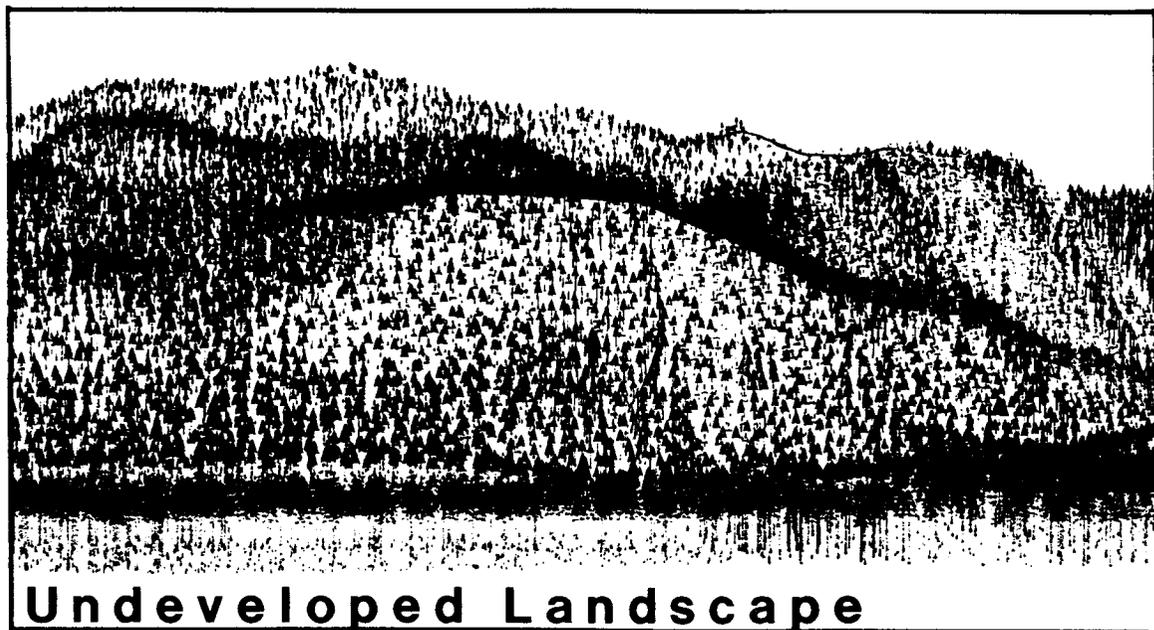
- A. *VQO Retention*: Design activities to not be visually evident to the casual observer. This objective should be accomplished within six months following project completion.
1. Facilities.
 - a) Keep vegetation clearing to a minimum and within close proximity of the site.
 - b) Select materials and colors which blend with those found in the natural surroundings.
 - c) Screening should be used from viewpoints and travel routes if *feasible*.
 2. Transportation.
 - a) *Rock Sources*. When a forest development road is a Visual Priority Route, locate rock sources off the road when possible. Spur road access may be necessary to minimize the visual impact. Rock source development should not be apparent from the road, use area, or marine travel route to meet this visual objective.
 - b) *Corridor Treatment*. Provide for roadside cleanup of ground-disturbing activities. Depending on site conditions, cut stumps as low as possible and angled away from the viewer. Incorporate this treatment in the timber sale contract.
 - c) *Log Transfer Facilities (LTF's)*. LTF's are generally not appropriate in this VQO setting.
 3. Timber Harvest: VAC Setting, Typical Regeneration Method and Unit Size
 - a) Low: Single tree or *group selection* (less than 2 acres)
 - b) Intermediate: Single tree or clearcut (approx. 5 - 15 acres)
 - c) High: Clearcut (approx. 15 - 30 acres)
- B. *VQO Partial Retention*: Design activities to be subordinate to the landscape character of the area. This VQO should be accomplished within one year of project completion.
1. Facilities.
 - a) Keep vegetation clearing to a minimum and within close proximity of the site.
 - b) Emphasize enhancement of views from recreational facilities.
 - c) Select materials and colors which blend with those found in the natural surroundings.
 2. Transportation.
 - a) Design rock sources to be minimally apparent as seen from Visual Priority Travel Routes and Use Areas. *Rehabilitation* is usually necessary following closure of rock source developments. It may be necessary to modify some ground-disturbing activities seen from the *foreground* of Visual Priority Travel Routes and Use Areas.
 - b) *Corridor Treatment*. Roadside cleanup of ground *disturbance* activities may be necessary.
 - c) *LTF's (temporary or permanent)*. Perform a visual quality analysis during LTF planning and design. Consider low profile designs to minimize visibility from Visual Priority Travel Routes and Use Areas. For temporary LTF's, incorporate *rehabilitation* measures into the project analysis and the contract package.
 3. Timber Harvest: VAC Setting, Typical Regeneration Method and Unit Size
 - a) Low: *Group selection* or clearcut (approx. 5-10 acres)
 - b) Intermediate: Clearcut (approx. 15 - 40 acres)
 - c) High: Clearcut (approx. 40 - 60 acres)
- C. *VQO Modification*: Activities may visually dominate the characteristic landscape, but must have visual characteristics similar to those of natural occurrences within the surrounding area or character type. This VQO should be met within one year in the *foreground distance zone* and within five years in the middle and background distance zones following project completion.
1. When planning activities, use naturally established form, line, color and texture found in the landscape.
 2. Facilities. Siting and design should borrow from naturally occurring patterns in the landscape, and should not be visually dominant when viewed in the background distance zone.
 3. Transportation.
 - a) Rock source operations and resulting *landform* modifications may be evident to the casual observer as seen from Visual Priority Travel Routes and Use Areas. However, the quarry location and design should mitigate, to the extent feasible, the apparent visual size and dominance of the activity (for example, shaping of backwalls, roadside screening and general orientation of the opening).

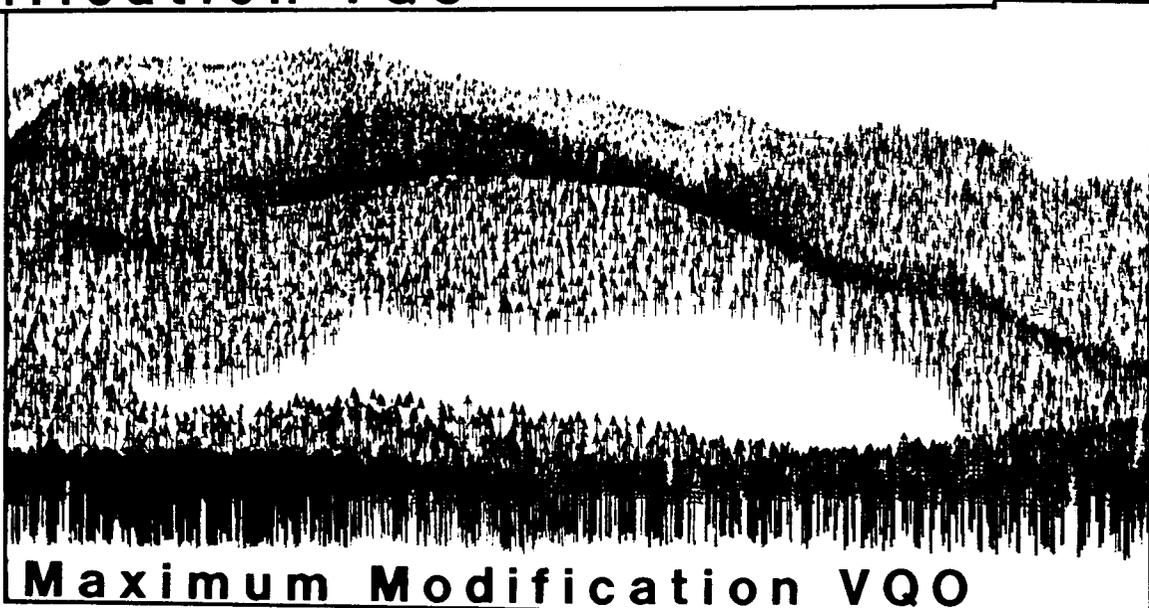
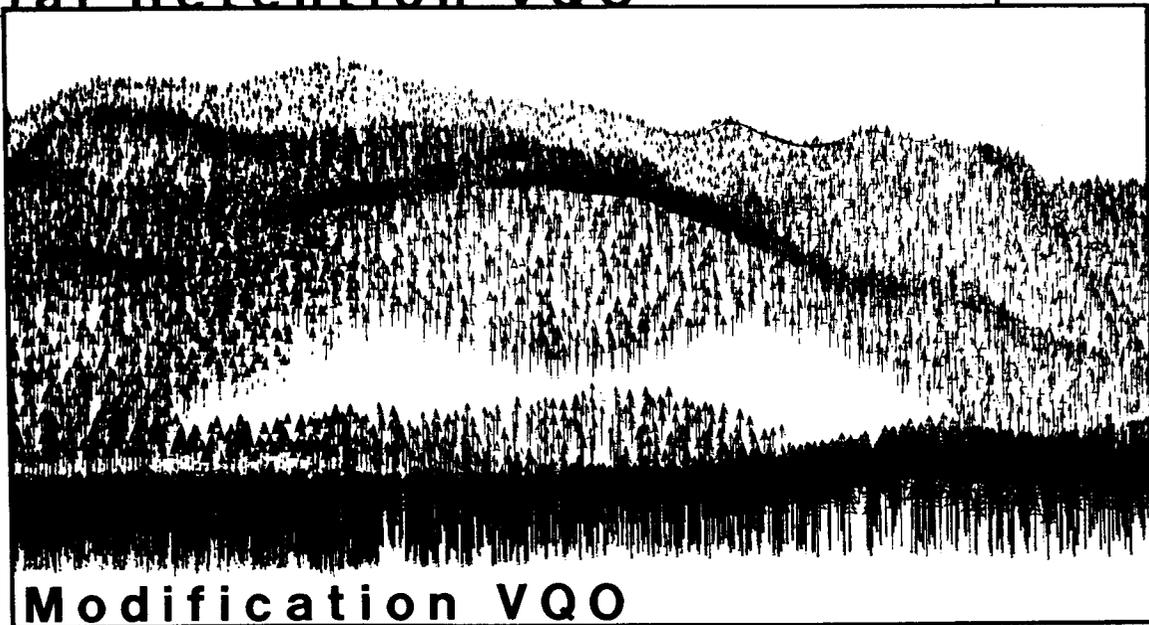
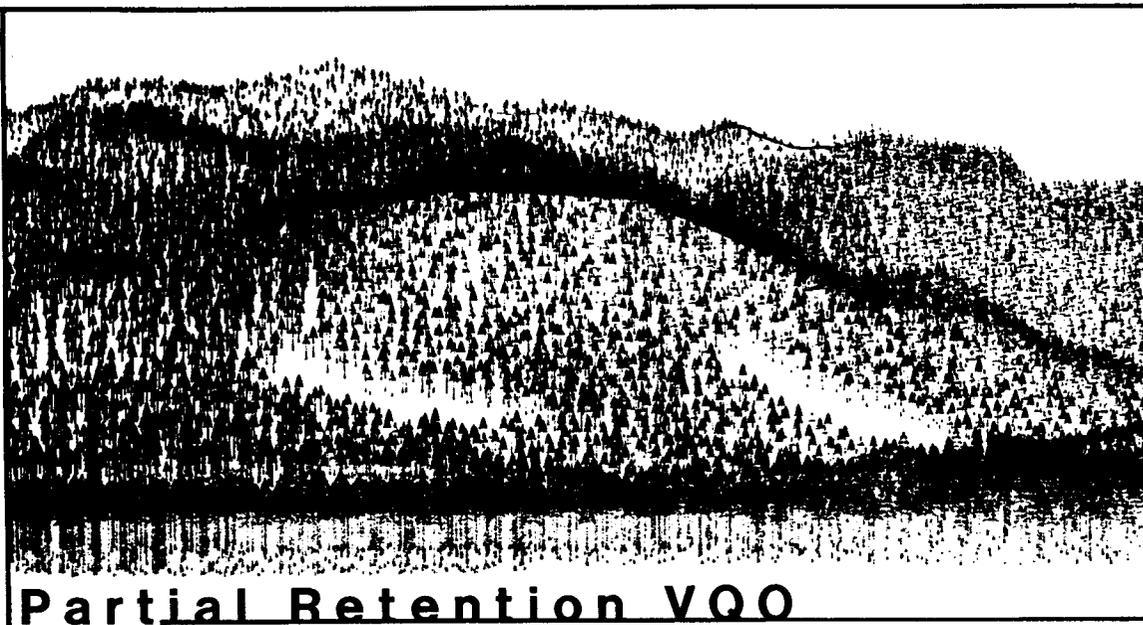
Standards & Guidelines

- b) *LTF's (temporary or permanent)*. Perform a visual quality analysis during LTF planning and design.
- 4. Timber Harvest: VAC Setting, Typical Regeneration Method and Unit Size
 - a) Low: Clearcut (approx. 15 - 40 acres)
 - b) Intermediate: Clearcut (approx. 40 - 60 acres)
 - c) High: Clearcut (approx. 60 - 100 acres)
- D. *VQO Maximum Modification*: Activities may dominate the characteristic landscape, yet when viewed as background, should appear to be a natural occurrence.
 - 1. Locate and design management activities to take advantage of existing (both natural and imposed) pattern and texture found in the landscape when viewed in the [middleground](#) from Visual Priority Travel Routes and Use Areas.
 - 2. Design activities to resemble natural occurrences as viewed in the background [distance zone](#).
 - 3. Timber Harvest: VAC Setting, Typical Regeneration Method and Unit Size
 - a) Low: Clearcut (approx. 50 - 75 acres)
 - b) Intermediate: Clearcut (approx. 80 - 100 acres)
 - c) High: Clearcut (approx. 80 - 100 acres)
- E. The following are graphic illustrations of timber harvest activities designed to meet each [Visual Quality Objective](#). The undeveloped landscape is provided for comparative purposes.

Standards & Guidelines

- E. The following are graphic illustrations of timber harvest activities designed to meet each Visual Quality Objective. The undeveloped landscape is provided for comparative purposes.





Adopted Visual Quality Objectives (VQO) for each Land Use Designation¹

Land Use Designation	Foreground	Middleground	Background	Not Seen or Non-priority
Wilderness Wilderness Nat. Monument Research Natural Area Special Interest Area ^{2 4} Remote Recreation Old-growth Habitat ⁴ LUD II ⁴	Retention	Retention	Retention	Retention
Special Interest Area ^{3 4}	Modification	Partial retention	Partial retention	Not Applicable
Semi-remote Recreation ⁴	Partial retention	Partial retention	Partial retention	Partial retention
Wild River ⁶	Retention	Retention	Retention	Retention
Scenic River ^{4 6}	Retention	Partial retention	Partial retention	Modification
Recreational River ^{4 6}	Partial retention	Modification/Partial retention ⁷	Modification/Partial retention ⁷	Maximum Modification
Scenic Viewshed ⁴	Retention	Partial retention	Partial retention	Maximum Modification
Modified Landscape ⁴	Partial retention	Modification	Modification	Maximum Modification
Timber production Minerals Experimental Forest ⁵	Modification	Maximum Modification	Maximum Modification	Maximum Modification
Transp. & Utility System ⁶ Municipal Watershed	Modification	Not applicable	Not applicable	Not applicable
Nonwild. Nat. Monument	A range of visual conditions may exist in the watershed, which are a result of the municipality's watershed management objectives. Visual impacts should be minimized as seen from Visual Priority Travel Routes and Use Areas.			
	Visual Quality Objectives will range from Retention, in those portions of the Monument without access, to Maximum Modification in those portions developed in connection with mineral activities. Site-specific VQO's will be identified in the specific plan of operation for mineral development.			

¹ The foreground, middleground, and background Visual Quality Objectives are adopted as seen from the Visual Priority Travel Routes and Use Areas (Appendix F). Non-priority travel routes and use areas, and those areas not seen from the Visual Priority Routes and Use Areas, are managed according to the direction listed in the "Not Seen or Non-priority" column.

² Except for the developed recreation and interpretive portions of Special Interest Areas such as Mendenhall Glacier, Ward Cove, and Blind Slough.

³ Applies only to the developed recreation and interpretive portions of Special Interest Areas such as Mendenhall Glacier, Ward Cove, and Blind Slough. Undeveloped areas are managed according to the guidance on the previous line.

⁴ Exceptions for small areas of non-conforming developments, such as recreational developments, transportation developments, Log Transfer Facilities, and mining development, may be considered in these Land Use Designations on a case-by-case basis.

⁵ The Visual Quality Objective may vary depending on the research objectives of the Experimental Forest.

⁶ These objectives apply only to the actual corridor. The area adjacent to this LUD is managed according to the guidelines of the adjacent Land Use Designation.

⁷ Apply the Partial retention VQO in corridors where scenic quality is included as one of the "outstandingly remarkable" values for that corridor. If it is not, apply the lower VQO.

Standards & Guidelines

III. *Visual Quality Objectives - Harvest Methods Other Than Clearcutting*

The timber-harvest-related visual management guidelines described previously are based on several analyses of harvested viewsheds throughout the Tongass that represented different VAC characteristics and different levels and scales of harvest. Similar specific guidelines for other types of silvicultural treatments cannot be provided due to the lack of experience with these treatments. However, the following paragraphs provide some general guidelines concerning the use of harvest methods other than clearcutting.

- A. Harvest Area With Percentage of Stand Left As Legacy Trees (Permanent Reserve trees). Based on a few observations of some recent treatments of this type it would appear that if approximately 20%-40% of the trees within a harvest area are retained, the size of that harvest area might be increased and still meet the same VQO. Also it may be possible to meet a higher VQO by leaving an appreciable percentage of legacy trees within an area. However many factors such as natural vegetative patterns, steepness and obliqueness of slope, likelihood of [blowdown](#), and viewing distance play an important role in determining how to apply this technique in a specific landscape.
- B. Uneven-aged management - single-tree or group selection. Meeting a [retention](#) or [partial retention](#) VQO in a low VAC setting requires a relatively small percentage of stems removed on a [single-tree basis](#) - anywhere from 5 to 20%. The exact amount cannot be stated since a lot depends on the slopes, viewing distances, and natural characteristics of the stand. To meet a modification VQO, it is possible that a larger percentage could be removed. Exactly how much and what the limit would be is also based on the existing landscape characteristics. When utilizing a [group selection method](#), the appropriate size and distribution of the groups are heavily dependent on the VQO, and particularly the natural landscape characteristics such as the size and distribution of natural openings. From observations of the few examples available in Alaska of this type of treatment, the design of the groups should replicate natural openings and avoid the use of geometric shapes. The initial uses of these harvest techniques will have to be experimental in nature, employ a variety of harvest intensities and designs, and be followed by careful monitoring.

Scenery Administration: VIS12

I. *Mitigation, Enhancement and Monitoring*

- A. Minimize potential visual impacts through scheduling or timing of management activities so that they are dispersed and not concentrated, subject to considerations given to other resources (e.g. wildlife).
- B. Rehabilitate, where [feasible](#), existing projects and areas which do not meet the Adopted [Visual Quality Objectives](#). Consider the following in setting priorities:
 1. Relative importance of the area (public sensitivity).
 2. Projected length of time to naturally attain the Adopted VQO in comparison to the use of [rehabilitation](#) techniques. Examples of rehabilitation include: seeding road cuts and fills, recontouring [temporary roads](#), removing roadside [slash](#) and debris, re-shaping harvest unit boundaries, cutting roadside stumps as low as possible, shaping or spreading excess overburden, etc.
 3. Benefits to other resources by accomplishing rehabilitation.
- C. Use enhancement measures, where feasible, to create variety where little variety now exists through addition, subtraction, or alteration of vegetation, earthforms, waterforms, etc. Examples include: opening up vistas or screening out undesirable views and planting of species to give unique form, color or texture to an area.
- D. Consult the Landscape Management Handbook, Region 10, to determine project level monitoring.
 1. Identify and document specific areas to be monitored.

II. *New Scenery Management System*

- A. By early 1997, the development of the new National Scenery Management System should be complete, and a final new manual, *Landscape Aesthetics: A Handbook for Scenery Management*, will be available for use by all National Forests. This new system has been developed to 1) incorporate into one manual the analysis tools that have evolved over the past two decades since the inception of the basic system; 2) redefine and clarify some terms; 3) revise some of the inventory processes; 4) provide a stronger link with [ecosystem management](#); and, 5) provide more

graphic examples of all the system's concepts as they apply to the various landscape types throughout the nation.

1. Appendix B lists information needs associated with implementing the new system. Appendix L includes a schedule for implementing certain aspects of the new system.
2. For project level planning, base the project area analysis on the terminology and concepts of the original Visual Management System and the [Visual Quality Objectives](#) of this Plan. However, after training in the new system is complete, new project planning should begin to use the concepts of landscape ecology, landscape character, and sense of place. (For example, analysis and design of these projects should incorporate landscape character descriptions of the project area, how this character is related to the ecological processes that have taken place in the area, what makes these landscapes important to people and give them a “sense of place,” and how the Forest Plan’s scenery management objectives relate to this landscape character.)

SOIL and WATER

Forest-wide Standards & Guidelines

Soil Inventory: S&W1111

- I. *Inventory*
 - A. Maintain the [Soil Resource Inventory](#) (SRI) or Integrated Resource Inventory (IRI). (Consult FSM 2550, Soil Management Handbook, Ecological Classification and Inventory Handbook (FSH 2090.11-91-1), National Soil Handbook-430-VI, Soil Survey Manual-430-V.)
 1. Determine and implement the level of Soil Resource Inventory (SRI) or Integrated Resource Inventory (IRI) necessary to meet planning and implementation needs for proposed management projects.
 - B. Use the National Hierarchical Framework of Ecological Units (Terrestrial ECOMAP) to inventory and classify ecosystems.

Water Inventory: S&W1112

- I. *Inventory and Evaluation*
 - A. In conducting water investigations, consider and evaluate the following elements in Water Resource Inventories (WRI).
 1. Climate
 2. Water Quality
 3. Water Quantity
 4. [Channel types](#)
 5. Water Uses and Developments
 6. [Watershed](#) Condition
 - B. Consult FSM 2530, Water Resource Inventory Handbook (5/83 R-10 .Supp. 1) and Water Information Management System Handbook (FSH 2509.17).
 1. Determine the level of Water Resource Inventory (WRI) to meet project planning and implementation needs.
 2. Use the National Hierarchical Framework of Ecological Units (Aquatic ECOMAP) to inventory and classify watersheds, streams, lakes, and [groundwater](#) systems.
 - C. Develop and maintain up-to-date inventories and case folders for all public water systems. Consult FSM 2542.

Watershed Resources Planning: S&W112

- I. *Land Use Activities*
 - A. Plan and conduct land use activities to avoid irreversible or serious and adverse effects on soil and water resources.
 1. Include soil and water resource data and interpretations in project analyses. (Consult FSM 2530 and 2550.)
 2. Maintain water quality and quantity to protect the state-designated beneficial uses. Consult the Alaska Nonpoint source Pollution Control Strategy, the Soil and Water Conservation Handbook (Chapter 10, FSH 2509.22), the Soil Management Handbook (FSH 2509.18), and the "Forest Service Alaska Regional Water Quality Management Plan" addressed in the Memorandum of Agreement dated April 6, 1992 (as amended) with the Alaska Department of Environmental Conservation.
 3. Apply [Best Management Practices](#) (BMP's) to all land-disturbing activities as a process to protect the beneficial uses of water from [nonpoint sources](#) of [pollution](#). (Note: Appendix C of the Plan includes a summary of the BMP's which are found in the Soil and Water Conservation Handbook, Chapter 10, FSH 2509.22.) Also consult FSM 2530, Facilities, Transportation, and Fish Forest-wide Standards & Guidelines, U.S. Army Corps of Engineer Regulations (33 [CFR](#) 323.4), and the Clean Water Act.
 4. Apply [soil conservation practices](#) to meet regional [Soil quality standards](#) (SQS) on all land-disturbing activities as a process to prevent detrimental soil [disturbance](#). Detrimental soil disturbance is defined as significant changes or impairment in soil properties that are

- expected to result in reduced short or long-term productivity of the land. (Consult FSM 2520 and 2550, FSH 2509.18 and R10 Supplement to FSM 2554 #2500-92-1, effective Jan. 15, 1992 (as amended)). BMP's also include some soil conservation practices (Soil and Water Conservation Handbook, Chapter 10, FSH 2509.22); develop other specific soil conservation practices during project planning, as needed.
5. Evaluate soil stability, potential soil mass wasting effects, and stability of class IV [channel systems](#). At the forest plan level, slope gradients of 72% or more are removed from the tentatively suitable timber base due to high risk of [soil mass movement](#) and accelerated erosion of class IV channel systems. At the project planning level, the Forest Supervisor or District Ranger may approve timber harvest on slopes of 72% or more on a case-by-case basis, based on the results of an on-site analysis of slope and class IV [channel stability](#) and an assessment of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water, and other resources. (See Fish Forest-wide Standards & Guidelines for definitions of Class IV streams.) For management guidance for class IV streams, consult BMP 13.16 in the Soil and Water Conservation Handbook.
 6. Avoid locating a road on a slope greater than 67%, on an unstable slope, or in a slide-prone area, where [feasible](#).
 7. Where slopes have a grade greater than 67%, are unstable, or are in a slide-prone area, fill material used in construction of a landing must be free from loose stumps and excessive accumulations of [slash](#), and must be mechanically compacted in layers if necessary to prevent soil erosion and mass wasting.
 8. Soil Map Units (SMU's) with McGilvery soil meet the criteria for [tentatively suitable forest land](#), but require harvest systems capable of at least partial suspension over the entire length of the yarding distance over the McGilvery soils. SMU's with McGilvery soil may be considered for harvest on a case-by-case basis.
- B. Seek to avoid adverse impacts to soil and water resources (such as accelerated surface erosion or siltation of fish habitat) when conducting land use activities on [wetlands](#), [flood plains](#), and [riparian areas](#). (Consult [Executive Orders](#) 11988, 11990, and 11514; FSM 2510 and 2520; U.S. Army Corps of Engineers regulations (33 [CFR](#) 323); NFMA Planning Regulations (36 [CFR](#) 219.27); appropriate [Best Management Practices](#) (Chapter 10 of the Soil and Water Conservation Handbook, FSH 2509.22) for wetlands, flood plains and riparian areas; and, Wetlands and Riparian Forest-wide Standards & Guidelines.)
- C. Under applicable state and Federal Law, reserve both ground and surface water rights to manage [National Forest System lands](#). (Consult FSM 2540.)
1. Review projects and reserve water rights or notify the state of water uses for reservation management purposes, when it is determined such uses are necessary for carrying out the purposes of the project. Be sure review of uses and needs includes at least the following items:
 - a) In-stream flow needs
 - b) Adequate flow for fish passes and habitat
 - c) Forest Service administrative and domestic use
 - d) Developed special uses and recreation sites
- D. Consult with state, Federal and local government agencies and Native American communities for the protection, mitigation, and/or improvement of the water and soil resources.
- E. Participate actively in planning by other Federal, state and local agencies where these plans could affect the beneficial uses of water on [National Forest System lands](#).
- F. Cooperate with state and Federal agencies having overlapping resource management responsibilities including the Alaska Department of Fish and Game, Alaska Department of Environmental Conservation, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, National Marine Fisheries Service, and the U.S. Fish and Wildlife Service. Execute plans and decisions in consideration of the statutory responsibilities of these agencies.

Standards & Guidelines

II. *Watershed analysis and Cumulative watershed effects*

- A. Conduct **watershed** analyses as directed in RIP2,I,B and described in Appendix J.
- B. Minimize **cumulative watershed effects** which could adversely affect soil and water resources and change stream **channel** equilibrium, such as: 1) changes in **sediment** transport or stream flow leading to stream **aggradation**, **degradation** and/or streambank erosion; 2) silting in of pools; and, 3) reduction in aquatic **habitat capability**. Evaluate **cumulative effects** at the watershed scale during project planning and analysis. Consult BMP 12.1 (Soil and Water Conservation Handbook, FSH 2509.22) for cumulative watershed effects analysis guidance.

III. *Public Water Systems*

- A. Secure "favorable conditions of water flows" (Organic Administration Act of 1897). Maintain water quality consistent with Alaska Water Quality Standards for water supply (18 AAC 70) and Alaska Drinking Water Regulations for source water protection (18 AAC 80.015(a)). Avoid management activities which are likely to pollute a known public water system or violate Alaska Water Quality Standards. Conduct **watershed analysis** and consult with the Alaska Department of Environmental Conservation before authorizing management activities that create or maintain a condition that has a significant potential to cause the **pollution** or contamination of a public water system.
 1. For incorporated city watersheds, refer to the Municipal Watershed **Land Use Designation**.
 2. For unincorporated communities and other public water systems, coordinate with owners or operators of public water systems to meet **watershed** protection needs on a case-by-case basis. Develop written agreements with owners or operators consistent with 18 AAC 80.520(c)(3) and 36 **CFR** 251.9, if appropriate. Consult with owners or operators before authorizing management activities.

Watershed Resources Improvements: S&W2

I. *Soil and Water Quality Protection and Improvement*

- A. Protect or improve water quality and sustain **soil productivity**. Implement the Alaska Regional Watershed Restoration Strategy (October 1995 version and subsequent updates). Consult and coordinate with other agencies and landowners when implementing and updating the Strategy.
 1. Conduct Watershed Condition Surveys (WCS) to determine treatment needs. Consideration of treatment needs should include looking at changed fish habitat, as measured against natural conditions predicted by baseline fish habitat objectives (see Fish Forest-wide Standards & Guidelines). Identify and prioritize needs on the Forest Watershed Improvement Needs Inventory (WINI) database. Complete **watershed** improvement project plans and coordinate with fish habitat improvement projects. Include projects in Sale Area Improvement Plans and use K-V funds as appropriate. (Consult FSM 2510 and 2520.)
 2. Give priority to cost-effective **watershed** improvement projects with the most erodible conditions directly affecting the beneficial uses of water.
 3. For **revegetation** of disturbed sites, erosion control, fire **rehabilitation**, riparian **restoration**, forage enhancement, and other revegetation projects, consider natural revegetation as an alternative to seeding or planting. Encourage natural revegetation where seed source and soil conditions are favorable. Use native species of seeds and plant in revegetation projects where seeding or planting is appropriate. Native plant material sources include commercial nurseries, agency native seed programs, and local seed collection.
 4. Inspect all **watershed** improvements until the final **evaluation** indicates that maintenance is no longer needed.

SUBSISTENCE

Forest-wide Standards & Guidelines

Subsistence: SUB

I. Subsistence

- A. In accordance with Title VIII of the Alaska National Interest Lands Conservation Act of 1980, it is the policy of the Forest Service that:
 1. Consistent with the purposes for which National Forest System lands in Alaska were established, sound management principles, and the conservation of healthy populations of fish and wildlife, the utilization of the National Forest System lands in Alaska is to cause the least adverse impact possible on rural residents who depend upon subsistence.
 2. Provide for the continuation of the opportunity for subsistence uses by rural Alaskan residents, including both Natives and non-Natives.
 3. Non-wasteful subsistence uses of fish and wildlife shall be the priority consumptive uses of such resources on National Forest System lands in Alaska when it is necessary to restrict the taking of such resources.
 4. Cooperate with adjacent landowners and land managers in managing subsistence activities and in maintaining the continued viability of all wild renewable resources on National Forest System lands.
- B. Consult the Southeast Alaska Federal Subsistence Regional Advisory Council for opinions and recommendations on current and proposed management actions, pursuant to [ANILCA](#), Title VIII, Section 805.
- C. Locate and manage Forest management activities considering impacts upon rural residents who depend upon [subsistence](#) uses of the resources of National Forest System lands. In compliance with [ANILCA](#), Title VIII, Section 810, and the Region 10 Subsistence Handbook, the Forest Service shall:
 1. In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of National Forest System lands, evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy, or disposition of National Forest System lands needed for subsistence purposes. No such withdrawal, reservation, lease, permit or other use, occupancy, or disposition of such lands which may significantly restrict subsistence uses shall be effected until the following actions are accomplished:
 - a) Notice is given to the appropriate Federal and State agencies, local committees, recognized Tribal Governments, and the Southeast Federal Subsistence Regional Advisory Council established pursuant to Section 805 of ANILCA;
 - b) Notice of a hearing is given and a hearing is held in the vicinity of the area involved;
 - c) A determination is made that: 1) such a significant possibility of a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands; 2) the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and 3) reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions.
 2. If required to prepare an environmental impact statement pursuant to the [National Environmental Policy Act](#), the notice and hearing and findings required in 1 above shall be a part of such environmental impact statement.
 3. Regardless of whether or not an EIS is required, in all project [scoping](#), include initial and on-going contact with the appropriate Federal and State agencies, local committees, recognized Tribal Governments, and the Southeast Federal Subsistence Regional Advisory Council.
 4. After compliance with the procedural requirements of Section 810 of ANILCA and other applicable law, the responsible Forest Service official may manage or dispose of public lands

Standards & Guidelines

under their primary jurisdiction for any of those uses or purposes authorized by [ANILCA](#) or other law. Management to accommodate identified [subsistence](#) uses could include:

- a) Implement planned project;
 - b) Canceling all or part of the planned project;
 - c) Substituting another site for the project and prepare another environmental analysis if the change is significant;
 - d) Implementing appropriate mitigation measures.
- D. Evaluate changes in subsistence use patterns and activities in cooperation with appropriate state and Federal agencies by conducting periodic surveys of wildlife populations and subsistence harvest and consulting with subsistent user groups (note: see Appendix B, listing of priority research items).
 - E. Make recommendations for subsistence regulations to the Southeast Alaska Federal Subsistence Regional Advisory Council and the Federal Subsistence Board and provide technical support to these two bodies for analyzing the effects of proposed regulations on Federal Public Lands under Forest Service Jurisdiction.
 - F. Provide for enforcement of subsistence use regulations promulgated by the Federal Subsistence Board.
 - G. Provide public information concerning subsistence management on National Forest System lands.
 - H. In cooperation with appropriate state and Federal agencies, and recognized Tribal Governments, maintain a subsistence research program and data base.
 - I. Maintain reasonable access to subsistence resources as required by ANILCA, Section 811. Address subsistence concerns when developing [road management objectives](#) (RMO's) for forest roads. (See Transportation Forest-wide Standards & Guidelines.)
 - J. Seek to maintain abundance and distribution of [subsistence](#) resources necessary to meet subsistence user needs.
 - K. Consider subsistence users' needs in the scheduling, locating, and designing of fish and wildlife habitat improvement projects.
 - L. In the development of access and facilities, seek opportunities to provide for subsistence users (for example, anchorages and shelters). Such access and facility opportunities should be identified and planned with local subsistence users.

THREATENED, ENDANGERED, and SENSITIVE SPECIES

Forest-wide Standards & Guidelines

Threatened, Endangered and **Sensitive species**: TE&S

I. *Threatened or Endangered Species*

- A. Meet the requirements of the Endangered Species Act, as amended.
1. Ensure that projects funded, authorized, or permitted by the Forest Service do not jeopardize the continued existence of threatened or endangered species. Use informal and formal consultation (for listed species) procedures, and conference (for formally proposed species) procedures (whichever is appropriate) with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service for all major construction activities and other forest management activities which may have an effect on federally-listed threatened, endangered, or proposed species population, or **critical habitat**. Prepare biological assessments or **evaluations**, as required, for species that may be affected by management activities (Consult FSM 2670).
 2. Identify, manage, and protect essential and critical habitats to meet legal requirements and recovery objectives for species that are federally-listed as threatened or endangered. Implement national and regional Forest Service policy and direction for management of threatened, endangered, and proposed species (Consult FSM 2670.)
 3. Support monitoring, research, and inventory work for threatened, endangered, and proposed species. Coordinate with appropriate Federal and state agencies. Use "challenge cost share," Sikes Act agreements, "Section 6 Grants" (under authority of the Endangered Species Act), and other partnerships.
 4. Conserve habitats for species tending toward federal listing to preclude the need for listing and additional protection under the Endangered Species Act. Meet this objective by implementing the following interagency memorandums of understanding:
 - a) National **Memorandum of Understanding** between the U.S. Department of Agriculture Forest Service, U.S. Department of Interior Fish and Wildlife Service, Bureau of Land Management, and National Park Service and the U.S. Department of Commerce National Marine Fisheries Service, and International Association of Fish and Wildlife Agencies (January 25, 1994, 94-SMU-058 as amended). The purpose of the MOU is to establish a framework for the conservation of species that are tending toward federal listing.
 - b) Regional Memorandum of Understanding that is tiered to the National MOU (a. above) entered into between the Forest Service, Alaska Region, Fish and Wildlife Service, Alaska Region, and Alaska Department of Fish and Game (December 20, 1994 as amended).
 - (1) The objective of this MOU is to promote interagency cooperation in the conservation of species tending toward listing under the Federal or State Endangered Species Acts.
 - (2) Cooperators shall meet at least annually to assess implementation of the MOU and success in meeting MOU objectives.
- B. Steller Sea Lion
1. Protect Steller sea lion habitats.
 2. Ensure that Forest Service funded, permitted or authorized activities are conducted in a manner consistent with the requirements, consultations, or advice received from the appropriate regulatory agencies for the Marine Mammal Protection Act (MMPA), the Endangered Species Act, and National Marine Fisheries Service guidelines for approaching seals and sea lions. "Taking" of sea lions is prohibited; "taking" includes harassing or pursuing or attempting any such activity.

Standards & Guidelines

3. Locate facilities, camps, [Log Transfer Facilities](#), campgrounds and other developments 1 mile from known haulouts, and, farther away, if the development is large.
 4. Cooperate with state and other federal agencies to develop sites and opportunities for the safe viewing and observation of sea lions by the public. Maintain a public education program explaining forest management activities related to sea lions in cooperation with state and other federal agencies.
- C. Humpback Whale
1. Provide for the protection and maintenance of whale habitats.
 2. Ensure that Forest Service permitted or approved activities are conducted in a manner consistent with the Marine Mammal Protection Act, the Endangered Species Act, and National Marine Fisheries Service regulations for approaching whales, dolphins, and porpoise. "Taking" of whales is prohibited; "taking" includes harassing or pursuing or attempting any such activity.
- D. American peregrine falcon
1. Provide for the protection and maintenance of habitats for migrating American peregrine falcons.
 2. Obtain increased understanding and knowledge about the migration of American peregrine falcons through southeast Alaska (for example the timing of migrations, the length of stay in southeast Alaska, important foraging areas, important prey items, etc.).
 3. Protect seabird rookeries and waterfowl concentration areas that provide important prey foraging habitat (see Wildlife Forest-wide Standards & Guidelines).
- II. [Sensitive species](#)
- A. Implement national and regional Forest Service policy and direction for the conservation and management of sensitive species and [subspecies](#) of animals and plants (including identified and unique fish stocks and plant varieties). Sensitive species are those taxa identified by the Regional Forester for which a viability concern has been identified due to a predicted or documented downward trend in species populations or habitat and where continued downward trends in population or [habitat capability](#) may lead to local or forest-wide extirpation, federal listing under the ESA, or both.
- B. Maintain habitat to support well-distributed [viable populations](#) of sensitive species throughout the recent range of the species by avoiding or minimizing impacts to species whose viability has been identified as a concern.
1. Where desirable, implement habitat improvement projects to increase habitat capabilities and expand species distributions.
 2. Where necessary to achieve species conservation objectives, protect important habitats.
- C. Identify research and information needs for known or suspected sensitive plants and animals.
- D. Identify and consider the conservation of representative rare [plant communities](#) (e.g., communities that only exist on only one or limited areas of the Forest) during project planning.
- E. Support monitoring, research, and inventory work for [sensitive species](#). Coordinate with appropriate Federal and state agencies. Use "challenge cost share," Sikes Act agreements, "Section 6 Grants" (under authority of the Endangered Species Act), and other partnerships.
- F. [Sensitive species](#) lists shall be reviewed periodically to consider new information to reflect the best available information regarding viability concerns.
- G. Prepare a biological [evaluation](#) as part of the NEPA process for each project authorized, funded, or conducted on National Forest System lands to evaluate and disclose the potential impacts of proposed activities on sensitive species.
1. Consult FSM 2670 and R10 protocols for comprehensive elements and standards for the preparation of biological evaluations. The biological [evaluation](#) shall be of sufficient detail to determine how a proposed action may affect sensitive species.
 2. The need for and extent of field surveys to develop a biological [evaluation](#) should be considered in relation to the possible risks associated with the project, the species involved, and the level of knowledge already on hand. The intensity and scope of inventories should be commensurate with the potential risk of a proposed project on sensitive species.

3. Survey sensitive plants according to the following guidelines as determined by the potential risks of proposed actions:
 - a) Survey intensity level guidelines for sensitive plant inventories:
 - (1) LEVEL 1. Field Check: Survey the area with a quick 'once-over' but do not walk completely through the project area. The entire project area is not examined.
 - (2) LEVEL 2. cursory: Survey the area with a 'once-over' by walking through the project area. The entire project area is not examined.
 - (3) LEVEL 3. Limited Focus: Survey to closely examine one or more habitat-specific locations within the project area, but do not look at the rest of the area.
 - (4) LEVEL 4. General: Survey with more intensity by walking through the project area and walking around the perimeter of the area or by walking more than once through the area. Most of the project area is examined.
 - (5) LEVEL 5. Intuitive Controlled: Survey by conducting a complete examination of specific areas of the project after walking through the project area and perimeter or by walking more than once through the area.
 - (6) LEVEL 6. Complete: Survey throughout the area until nearly all of the area has been examined.
 - b) Conduct plant surveys using the "timed meander" technique at a time of the year when sensitive plants are identifiable.
 - c) Plant surveys should be conducted by individuals able to make positive field identification of sensitive plant species.
 4. The biological [evaluation](#) will disclose the potential impacts of proposed activities on [sensitive species](#). Consider the direct, indirect and [cumulative effects](#) of the proposed action on the population and the likelihood that adverse effects will occur.
 5. If a biological evaluation concludes that a project may have an adverse effect on a sensitive species or its habitat, consult with appropriate state and federal agencies to consider mitigation measures to reduce possible effects. These measures include avoiding cumulative impacts that would contribute to further population or habitat declines and the possible need for federal listing.
 6. Document the determinations from the biological evaluation in the NEPA decision documentation. Where NEPA documentation is not prepared, document the determination in the project files.
- H. Exchange records and information with appropriate organizations and state and Federal agencies on the status of populations and habitat.
- I. [Sensitive species](#) habitat conservation. The following site specific habitat management standards provide guidance for management of locally important habitats for sensitive species but independently do not necessarily represent a comprehensive management strategy to meet conservation objectives. At the project level, monitor habitat management activities to:
1. Ensure standards are implemented as prescribed.
 2. Evaluate whether habitat management standards are achieving conservation objectives.
- J. Northern Goshawk (including the Queen Charlotte goshawk [subspecies](#)).
1. Preserve nesting habitat around all confirmed and probable goshawk nests whether or not they are currently occupied.
 - a) Consider the following evidence for determining confirmed or probable nest sites:
 - (1) a goshawk observed on or near a nest;
 - (2) nestlings or branchers (young not able to fly) observed on or near a nest;
 - (3) goshawk feathers or eggs obtained from the nest
 - (4) one or more nest structures indicative of goshawk were found with goshawk prey remains, but without positive identified goshawk on the nest and without positive identified feathers from nest;
 - (5) aggressive, territorial breeding season adults vocalizing or attacking an observer (with or without locating a nest);
 - (6) adults observed during the breeding season in a territory and recently fledged young were observed (with or without locating a nest).
 - b) Nesting Habitat: Maintain an area of not less than 100 acres of productive [old-growth](#) forest (if it exists) generally centered over the nest tree or probable nest site. Attempt to

Standards & Guidelines

include prey handling areas, perches, roosts, inactive nest stands, hiding cover and foraging opportunities for young goshawks. Vegetative structure should include a multi-layered, closed (over 60%) forest canopy, a relatively open understory, with large trees (usually 20+ inches DBH) and low ground vegetation. These conditions generally equate to the high timber [volume strata](#) used in preparation of this Plan.

- c) Management: No commercial timber harvest is permitted. Existing roads may be maintained. New road construction is permitted if no other reasonable roading alternatives outside the mapped nesting habitat exist. Permit no continuous [disturbance](#) likely to result in nest abandonment within the surrounding 600 feet from March 15 to August 15. Activity restrictions are removed for active nests that become inactive or unsuccessful. Other management activities which maintain the integrity of the forest stand structure are consistent with the objectives for this area. Activities such as cabin, trail, or campground construction should be consistent if designed with minimal vegetative manipulation.
 2. Cooperate and coordinate with state and other Federal agencies to understand the life history requirements and distribution of the northern goshawk.
 3. Conduct inventories to determine the presence of nesting goshawks for proposed projects. Use the most current inventory protocols developed in cooperation with the appropriate state and Federal agencies.
 4. The objective is to manage goshawk foraging habitat (productive old-growth forest) to retain important features of forest stand structure in areas of timber harvest in Value Comparison Units (VCU's) on Prince of Wales Island where over 33 percent (as of the date of this Forest Plan's approval) of the productive old-growth forest has been converted to young conifer stands (e.g., harvested since 1954).
 - a) Timber harvest units over 2 acres in size should meet the following forest stand structural characteristics after harvest:
 - (1) An average of over 30 percent canopy closure throughout the timber harvest unit.
 - (2) An average of at least 8 large trees/acre (20-30" DBH or greater). Where not available substitute the next largest trees.
 - (3) An average of at least 3 large decadent (dead or dying) trees/acre (20-30" diameter at the large end). Where not available substitute the next largest decadent trees.
 - (4) Remaining trees should be uniformly distributed throughout the stand, but trees may be clumped for operational concerns or ecological opportunities.
 - (5) Retained trees should have a reasonable assurance of windfirmness.
 - b) For timber harvest units less than 2 acres in size, allow full canopy removal but limit the number of openings to an equivalent of 25 percent of the stand removed every 50 years (e.g., 12-13, 2-acre openings; 25, 1-acre openings, etc. within a 100-acre stand).
 - c) Local information from Southeast Alaska may be used to accomplish the goshawk habitat objectives by employing different specific methods than those listed in sections a) (1-5) above. Document the analysis to use other specific methods through the NEPA process. Such local information could consist of some or all of the following:
 - (1) Habitat relationships information on the structure of forest stands used and selected by goshawks for various life functions.
 - (2) The amount and distribution of old-growth foraging habitat that will be protected through land allocations or standards and guidelines (e.g., habitat reserves, riparian buffers, beach fringe corridors, etc.) that maintain the integrity of the old-growth forest and the known or inferred goshawk population response of that combination of protected habitats.
 - (3) The response of goshawk populations to the configuration of habitat at the landscape scale.
- K. Peale's Peregrine Falcon
1. Provide for the protection and maintenance of Peale's peregrine falcon habitat.
 2. Maintain nest site location data in cooperation with the U.S. Fish and Wildlife Service.
 3. Plan project activities to avoid adverse impacts to the falcons and their habitats. Evaluate the effects of proposed projects within two miles of known falcon nests considering such items as: a) human activities (aircraft, ground and water transportation, high noise levels, and

- permanent facilities) which could cause [disturbance](#) to nesting pairs and young during the nesting period April 15 - August 31; b) activities or habitat alterations which could adversely affect prey availability. Coordinate all project activities that may affect known or potential nesting habitat with the U.S. Fish and Wildlife Service.
4. Within 15 miles of all known or historical nest sites, prohibit all use of herbicides and pesticides.
- L. Trumpeter Swan
1. Provide for the protection and maintenance of trumpeter swan habitats.
 2. Avoid disturbance of trumpeter swans, particularly during nesting, brood-rearing, and wintering periods, to prevent abandonment of their nests, brood-rearing areas, and winter habitats. As a general guideline, limit developments within 0.5 miles (2640 feet) of [wetlands](#) used by nesting, brood-rearing, and wintering trumpeter swans. The District Ranger will take feasible measures to minimize disturbance.
 3. Avoid placement of overhead wires, fences, or other structures which could interfere with the flight paths of swans and cause injury or mortality.
 4. Cooperate with state, Federal, and local agencies, partner organizations, and individuals to develop sites and opportunities for the safe viewing of trumpeter swans by the public and maintain a public education program explaining Forest management activities related to trumpeter swans.
- M. Osprey
1. Maintain and improve osprey populations and habitat.
 2. Establish a minimum 330-foot radius habitat management zone around each existing osprey nest tree. Determine the exact boundary based on local topography, timber type, a reasonable assurance of windfirmness, and other factors.
 3. Within the osprey nest zones, prohibit all land use activity which would likely disturb nesting osprey. Infringement may be acceptable depending on the nature of the project and timing of the activity.
 4. Maintain the osprey nest zone even though the nest or nest tree becomes inactive.
 5. Provide trees suitable for use by osprey for nesting, feeding and perching. Consider the following:
 - a) [Reserve trees](#) and live trees that dominate or co-dominate a shoreline.
 - b) Reserve trees with broken tops and live trees with branches large enough to support birds.
 6. New nests will receive the same level of management protection as existing nests, however, osprey which select new nests in close proximity to existing human activities will not cause those human activities to be modified.
- N. Island King Salmon
1. Provide for the protection and maintenance of runs of king salmon that naturally occur on islands including the runs in King Salmon and Wheeler creeks on Admiralty Island.
 2. Coordinate with the Alaska Department of Fish and Game and National Marine Fisheries Service on commercial, sport and [subsistence](#) fish use, hatchery egg take programs, and other activities affecting the viability of king salmon runs in order to conserve these unique populations.
 3. Avoid the placement of facilities or issuing permits for activities near these streams that would increase harvest pressure on these king salmon runs.
 4. Coordinate with other groups or Federal and state agencies to develop a program of study to understand the life history and genetic characteristics of these unique runs of king salmon.
- O. Northern Pike
1. Provide for the protection and maintenance of northern pike found in the Pike Lakes on the Yakutat Forelands. This population of northern pike is unique to Southeast Alaska.
 2. Avoid the placement of facilities near the Pike Lakes which would increase harvest pressure to the point where the viability of these species is affected.
 3. Coordinate with the Alaska Department of Fish and Game on any activities that would affect the viability of the northern pike.

Standards & Guidelines

4. Coordinate with other groups or Federal and state agencies to develop a program of study to understand the life history and genetic characteristics of this unique population of northern pike.
- P. Fish Creek Chum Salmon
1. Provide for the protection and maintenance of chum salmon in Fish Creek near Hyder. This population of chum salmon is characterized by their extraordinary large size.
 2. Coordinate with the Alaska Department of Fish and Game and the National Marine Fisheries Service on commercial, sport and [subsistence](#) fish use, hatchery egg take programs, and other activities affecting the viability of the chum salmon runs in Fish Creek in order to preserve these populations.
 3. Coordinate with other groups or Federal and state agencies to develop a program of study to understand the life history and genetic characteristics of this run of chum salmon.
 4. Provide for habitat improvement and maintenance to maintain the viability of this run of salmon, as necessary.
- Q. Sensitive Plants
1. Provide for the conservation of habitats that support populations of sensitive plant species to maintain representative populations across all islands or all terrestrial landscapes throughout their range.
 2. Permits may be issued to collect sensitive plants or plant parts or plant parts for legitimate scientific or educational purposes. Such collections must not adversely affect the continued existence or vigor of a plant population. Sensitive plants shall not be collected for commercial use.
 3. No herbicide may be applied from the air within 600 feet, nor ground-applied within 60 feet, of any identified population of a sensitive plant species.

III. Candidate Species

- A. Candidate species are defined as those species for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threats to support proposals for listing as threatened or endangered under the Endangered Species Act.
- B. Implement national and regional Forest Service policy and direction for the habitat management of candidate species.
- C. Coordinate with the U.S. Fish and Wildlife Service in the conservation and management of candidate species consistent with the objectives of the Interagency [Memorandum of Understanding](#) to prevent the need for Federal listing and protection under the Endangered Species Act.
- D. Contact the U.S. Fish and Wildlife Service for the most recent list of Candidate species and Species of Concern during initial phases of project development.

TIMBER

Forest-wide Standards & Guidelines

Allowable Sale Quantity

I. Decade Allowable Sale Quantity

- A. The amount of chargeable timber volume that can be sold from the Tongass National Forest, for a decade, cannot exceed the established Allowable Sale Quantity. The yearly quantity may exceed or be less than the decadal average. The Allowable Sale Quantity is a ceiling; it is not a future sale level projection or target and does not reflect all of the factors that may influence future sale levels.

Integrated Resource Inventory - Existing Vegetation: TIM111-1

I. Inventory

- A. Coordinate vegetative inventories with other data collection efforts to minimize duplication and to maximize the use of the resulting information. Emphasize multiple-resource or integrated resource inventories.
- B. Reinventory vegetation on a 10 to 15 year cycle.

Silvicultural Examination and Prescription: TIM111-2

I. Stage II Intensive Inventory

- A. Manage vegetation according to a silvicultural prescription certified by a certified silviculturist; this applies to any vegetative manipulation activity.
- B. Conduct silvicultural examinations and develop silvicultural prescriptions for proposed resource management activities where vegetative manipulation of the forest is involved. (Consult Region 10 Silvicultural Examination and Prescription Handbook - 2409.26d).
- C. Conduct silvicultural examinations as part of timber sale analysis. Silvicultural examination is the process of gathering vegetative data to provide a basis for silvicultural and other management decisions.
- D. Develop silvicultural prescriptions as part of project planning. Complete all prescriptions before project implementation where implementation is defined as either the Final ROD, Environmental Assessment Decision Notice or Decision Memo. Base silvicultural prescriptions on silvicultural examinations; include a written description of the current stand conditions, the anticipated future condition based on management activities, and a statement on land management and resource objectives. The prescription should also include silvicultural practices, cutting methods, or other management actions that will be applied sequentially to achieve the desired stand condition and structural attributes. A silvicultural analysis for project planning should address both stand and landscape conditions.
- E. Facilitate development of appropriate [silvicultural system](#) prescriptions by describing desired conditions in terms of structural attributes.
- F. Include an appropriate species mix for [regeneration](#) in the silvicultural prescription prepared during the environmental analysis. The "appropriate species" is based on the potential of the site as indicated by [plant associations](#) and adjacent stand conditions.
- G. Evaluate the natural reproduction potential and existing reproduction as part of the silvicultural analysis and prescription. Where possible, harvest prescriptions should consider leaving advance regeneration to meet [reforestation](#) needs and stand objectives.
- H. Consider regenerating and maintaining minor species, where appropriate for the site, as viable components of future stands and for vegetative diversity. Minor species include, but are not limited to, Alaska yellow-cedar, western redcedar, and Pacific yew.
- I. Select a silvicultural system that meets the resource and vegetation management objectives of the area, including objectives for [biological diversity](#), long-term [site productivity](#), visual objectives, and [forest health](#).
- J. Even-aged, two-aged, and uneven-aged systems shall be available for use.
- K. Select rotations that produce sawtimber products, unless otherwise provided for in the [Land Use Designation](#).

Standards & Guidelines

- L. Even-aged timber stands shall not be scheduled for final harvest before stand growth has reached or surpassed 95% of the [Culmination of Mean Annual Increment](#) in cubic feet. Exceptions may be made where special resource considerations require earlier harvest. Exceptions also may be made where small inclusions of young stands in harvest units that otherwise meet this requirement will result in more logical management units allowing greater efficiency or less resource impacts.
- M. Even-aged stands may be regenerated without having reached Culmination of Mean Annual Increment where salvage is prescribed after [windthrow](#), where stands are in imminent danger from insect or disease attack or cutting for experimental and research purposes.

Timber Resource Planning: TIM112

I. Information Gathering and Maintenance

- A. Provide timber resource information necessary to prepare timber harvest projects. This includes maintenance of inventories, analysis of data, and input for environmental analysis.
- B. The [Allowable Sale Quantity](#) is partitioned into two [non-interchangeable components](#) (NIC's) (see glossary). Do not exceed limits on the sale of chargeable timber volume associated with each NIC during the [plan period](#).
 - 1. Determine [operability](#) based on site-specific project conditions; classify the suitable lands using the NIC definitions in the glossary.
 - 2. Track and report project volume separately for each NIC component; use the Sales Tracking and Reporting System (STARS). Base volume estimates on available project data.

II. Pacific Yew (*Pacific Yew Act, January 3, 1992, 16 U.S.C 4804*)

- A. Inventory and maintain existing populations of Pacific yew.
 - 1. Locate and document the location of any existing plants during Forest Service project activities.
 - 2. If found, implement site-specific silvicultural prescriptions to maintain Pacific yew's [regeneration](#) capabilities and presence on the site.
 - 3. Retain Pacific yew during [Timber Stand Improvement](#) activities such as precommercial thinning where ever [feasible](#).

Timber Resource Sale Schedule: TIM112-3

I. Timber Sale Schedule

- A. Update or adjust annually the ten-year timber sale schedule to reflect specific project viability, budgetary actions, availability of personnel, and other operational constraints.
- B. Publish a 12-month sale schedule that is updated every 6-months.
- C. Timber sale schedules are not a commitment to sell timber. NEPA analysis is not required for timber sale scheduling.

Timber Resource Coordination: TIM113

I. Timber Program

- A. Consider the management emphasis of the project area in project design and environmental analysis for timber activities.
- B. The project NEPA process, which forms the basis for the Sale Area Improvement Knutson-Vandenburg (K-V) Plan, identifies resource improvement opportunities within the sale area. Schedule essential [reforestation](#) prioritized by mitigation or enhancement.
- C. Coordinate activities which affect the Coastal Zone with the State of Alaska Office of Management and Budget, Division of Governmental Coordination, to ensure consistency, to the maximum extent [practicable](#), with the enforceable policies of the Alaska Coastal Management Program.

Timber Sale Preparation: TIM114

I. Scenery Management

- A. Apply [Visual Quality Objectives](#) (VQO's) to timber sale areas based on the [Land Use Designation](#) assigned to the area. Design all vegetative management activities to meet VQO's as defined in the Visual Management System Handbook(s).

- B. Size, shape, orientation to viewer, color, texture, etc. are critical elements in determining whether or not an activity meets the assigned VQO. Consideration for the visual resource is essential early on in the planning process, particularly in areas seen from a Visual Priority Route or Use Area (see Appendix F). However, each landscape setting is different and should be evaluated on a case-by-case basis. There may be instances where the VQO can be met while the proposed activity is greater than the guideline, or there also may be cases where the activity must be reduced to meet the intent of the VQO.
- C. Tree limbs, root wads, and excessively high tree stumps are considered [logging slash](#). To meet Retention and Partial Retention VQO's adjacent to road corridors, it may be necessary for the contractor to do additional clean-up as part of the timber sale.
- D. Integrate the protection of aesthetic values with all timber resource planning
- E. Assure compliance or guidance of adopted VQO's in timber resource management. At the project implementation stage, the VQO should be refined to the project scale.
- F. Plan, design, and locate vegetation manipulation in a scale that retains the color and texture of the characteristic landscape, borrowing directional emphasis of form and line from natural features.

II. [Regeneration Methods](#)

- A. Regeneration methods refer to the manner in which a new stand is created. There are three categories of regeneration systems, even-aged, two-aged, and uneven-aged [silvicultural systems](#). Even-aged systems include clearcutting, [seed tree](#), and shelterwood. Two-aged systems include clearcutting with reserves, seed tree with reserves and shelterwood with reserves. Uneven-aged systems include [single-tree selection](#), [group selection](#) and group selection with reserves.
 - 1. Ensure that [silvicultural systems](#) other than clearcutting are considered through an appropriate project level prescription process and that documentation of this process and results are provided in project NEPA documents. As part of the project NEPA process, analyze current scientific information related to the applicability of alternative timber harvest methods. Document the predictable effects associated with alternatively using other regeneration methods.
- B. Test alternative [regeneration](#) harvest methods and monitor results in cooperation with timber purchasers and other interested parties.

III. [Even-aged Systems](#)

- A. Apply even-aged silvicultural methods in such a way that isolated stands of timber will not be created. Avoid locating harvest units where future harvest activities will destroy [regeneration](#) under earlier regeneration harvest activities.
- B. Clearcutting is an even-aged regeneration method. There are a number of supportive reasons for the use of this method in Alaska's western hemlock-Sitka spruce forests. These include: excellent regeneration of desired species, effective dwarf mistletoe control, viable harvest economics, and compatibility with the use of standard [logging systems](#). Other silvicultural techniques have been used to a limited degree and are still experimental in nature (see information needs section).
 - 1. Use clearcutting only where such a practice is determined to be the best system to meet the objectives and requirements of [Land Use Designations](#).
 - 2. Generally apply clearcutting where trees are cut to achieve [timber production](#) objectives, where there is risk of dwarf-mistletoe infection and disease control is desired, or where there is a high risk of [windthrow](#).
 - 3. The Chief's directive (June 4, 1992) on [ecosystem management](#) limits "clearcutting" to areas where it is essential to meet Forest Plan objectives and involve one or more of the following circumstances:
 - a) To establish, enhance or maintain habitat for Endangered, Threatened and [Sensitive species](#).
 - b) To enhance wildlife habitat or water yields, or to provide for recreation, scenic vistas, utility lines, road corridors, facility sites, reservoirs or similar development.
 - c) To rehabilitate lands adversely impacted by events, such as fires, windstorms or insect or disease infestations.
 - d) To preclude or minimize the occurrence of potentially adverse impacts from insect or disease infestations, windthrow, logging damage or other factors affecting [Forest health](#).

Standards & Guidelines

- e) To provide for the establishment and growth of desired trees or other vegetative species that are shade intolerant.
- f) To rehabilitate poorly stocked stands due to past [management practices](#) or natural events.
- g) To meet research needs.

IV. *Size of Clearcuts*

- A. NFMA regulations provide that 100 acres is the maximum size of [created openings](#) allowed for the western hemlock-Sitka spruce forest type of coastal Alaska, unless excepted under specific conditions. Cedar and hardwoods are usually considered to be a component of the western hemlock-Sitka spruce ecotype in Southeast Alaska and, therefore, the 100-acre limit will also apply to these types of stands.
- B. Recognizing that harvest units must be designed to accomplish management goals, created openings may be increased in size where larger units will produce a more desirable contribution of benefits.
 - 1. Use the following factors when proposing units that would exceed 100 acres:
 - a) Natural and biological hazards to the survival of residual trees and surrounding stands
 - b) Topography
 - c) Relationship of units to other natural or artificial openings and the proximity of units
 - d) Coordination and consistency with adjacent [Land Use Designations](#)
 - e) Effects on water quality and quantity
 - f) [Visual Absorption Capability](#) (VAC)
 - g) Effect on wildlife and fish habitat, based on the most recent research
 - h) [Regeneration](#) requirements for desirable tree species
 - i) Transportation and regeneration method requirements
 - j) Relative total costs of preparation, logging, and administration of harvest
- C. Where it is determined by an environmental analysis that exceptions to the size limit are warranted, the actual size of openings may be up to 200 acres, if required due to natural biological hazards to the survival of residual trees and surrounding stands, and up to 150 acres for the remaining factors, with the approval of the Forest Supervisor.
- D. The Forest Supervisor will identify the particular conditions under which the larger size is warranted by considering the benefits to be gained.
 - 1. Exceptions to the 150-acre size limit (200 acres for natural biological hazards) are permitted on an individual timber sale basis after 60 days public notice, and review and approval by the Regional Forester.
- E. The established limits and exceptions do not apply to the size of areas harvested as a result of natural catastrophic conditions, such as insect and disease infestation or [windthrow](#).
- F. [Created openings](#) will be adequately stocked with desirable tree species, which are approximately 5 feet in height, before the area will no longer be considered an opening for the purposes of determining limitations on the scheduling, locating, and calculating the size, of additional created openings.

V. *Two-aged System*

- A. Two-aged [silvicultural systems](#) are designed to maintain and regenerate a stand with two age classes. The resulting stand may be two-aged or trend towards the uneven-aged condition as a consequence of both an extended period of [regeneration](#) establishment and the retention of [reserve trees](#) that may represent one or more age classes. The reserve trees provide structural diversity and a biological legacy. [Two-aged management](#) regimes can produce stands of greater structural diversity than [even-aged management](#). This method may be used where [windthrow](#) or dwarf mistletoe are not major threats or can be tolerated .
 - 1. Emphasize green-tree and snag retention in landscape management. The actual number and attributes of the trees retained is dependent on Forest Plan and site-specific silvicultural objectives. To the extent feasible, residual patches and single trees should include large, old trees and snags.
 - 2. Retained patches or residual trees should not be scheduled for removal. The retained patches and residual trees will provide support for those organisms that require old forests.

3. Address safety issues by utilizing the guidelines in Reserve Tree Selection Guidelines, R10-MB-215, March 1993.

VI. *Uneven-aged Systems*

- A. Uneven-aged **silvicultural systems** are methods of regenerating a forest stand, and maintaining an multi-aged/multi-layered structure, by removing some trees in all age groups and stratum either singly, in small groups, or in strips. **Overstory** density is regulated to avoid the suppression of understory trees and to maintain understory vigor. There is very little experience and research in using uneven-age methods in southeast Alaska's western hemlock-Sitka spruce forest type.
- B. All timber types on the Tongass National Forest may be harvested using uneven-aged silvicultural methods.
 1. Using **adaptive management**, test **uneven-aged management** where the interdisciplinary process determines the system is appropriate to meet the objectives and requirements of the **Land Use Designation** including the protection of excessively steep or unstable soils, visual resources, wildlife and fish, recreation, and for use of noncommercial wood products (fuelwood). Monitor results.
 2. Limit uneven-aged management systems to areas where yarding equipment suited to selective logging can be used.

VII. *Intermediate Treatment Methods*

- A. These activities include those treatments that improve the composition, health, value and growth of a timber stand. Continue development and application of the Alaska Region Second-Growth Forest Management Program.
- B. Assess areas that have received precommercial thinning, release and weeding or pruning treatments to insure management objectives have been met.
 1. Certify that the treatment met the prescription objectives. In the case of thinning, it normally means certifying that the stocking of desired residual trees meets prescribed standards.

VIII. *Salvage harvest*

- A. Salvage cutting is the removal of dead trees or trees being damaged or dying due to injurious agents other than competition and is used to recover value that would otherwise be lost.
- B. Sale and utilization of dead, blown-down and other deteriorating timber will receive high priority in **Land Use Designations** where the harvest of timber is compatible with the area's management objectives. Salvage may include trees damaged by road construction.
- C. Trees salvaged in a Land Use Designation excluded from scheduled timber harvest (unsuitable forest land) will not be included as chargeable volume to the **Allowable Sale Quantity**. For catastrophic events which occur on unsuitable timber lands, not withdrawn from harvest, consider an appropriate range of management alternatives to meet varying levels of resource protection and commodity outputs. These lands will not be substituted for **suitable forest land**.
- D. Beach log salvage often involves both state and National Forest System lands. A **Memorandum of Understanding** between the State of Alaska and the Forest Service on coordination of beach log salvage dated April 23, 1980 provides direction.
 1. The state and Forest Service will prepare combined beach log salvage sales. The party with the larger share of material will sell and administer the sale.
 2. Beach logs may be exported.
 3. Beach logs that are not merchantable will be designated for **personal use** whenever possible.
 4. Beach log salvage material is not chargeable to the annual **Allowable Sale Quantity**.
- E. Where **catastrophic events** cause extremely heavy tree losses on the suitable timber base, commercial timber harvest will be given high priority to maximize utilization.
- F. Refer to the Riparian Forest-wide Standards & Guidelines for salvage in **riparian areas**.

IX. *Utilization standards*

- A. **Industrial wood** products on the Tongass National Forest will be managed for quality sawtimber material.
 1. Require utilization and optimum **feasible** use of wood material. Promote the use of wood for its highest value product commensurate with present and anticipated supply and demand.

Standards & Guidelines

2. Improvements in utilization will be made through sale preparation, appraisals, contract administration, and dissemination of research information.
3. Consult current Regional direction for precise standards.

X. *Requirement for Proportionality*

- A. Consult [Tongass Timber Reform Act](#), Section 301 and FSH 2409.18.

XI. *Competitive Bidding and Small Business*

- A. Private enterprise shall be encouraged to use National Forest timber resources.
 1. The Forest Service will plan sale offerings to encourage competitive bidding in a range of total sale volume and species that provides opportunities for purchasers.
 2. Consult annually on the amount of volume to be offered with the Small Business Administration.

XII. *Unit Cards*

- A. Unit cards should document mitigation and protection measures displayed and documented in NEPA documents.

XIII. *Windthrow*

- A. Special consideration will be required in the design of harvest units adjacent to [Land Use Designations](#) or other areas which limit or prohibit timber harvest activities. Where the chance of windthrow in adjacent stands is increased by timber harvest, measures will be taken to contain the windthrow within the Land Use Designation where timber harvest is allowed.

Commercial Sale Administration: TIM122

I. *Contract Administration*

- A. Administer timber sale contract provisions, post-sale measurement, and financial oversight of all sales.
 1. Frequency of timber sale inspection will be determined by the complexity of the timber sale and operator performance, with the objective being to ensure full contract compliance.
 2. Sale administrators will work with the other specialist(s) to ensure that the project goals are obtained.
 3. Consult with designated District and Area staff to determine BMP measurement and reporting requirements.

Other Forest Products: TIM130

I. *Free-use Program*

- A. Make fuelwood available in areas accessible to the public consistent with LUD management objectives.
- B. Make Special Forest Products available, such as berries, mushrooms, Sphagnum moss, cones, bark, Christmas trees, boughs, trolling poles, spruce roots, cedar bark, and transplants consistent with LUD management objectives. Integrate the use and availability of these forest products with historically used forest products.
- C. Address requests for green saw-timber as soon as [feasible](#).
- D. Designate the timber planned for harvest.

II. *Commercial Program*

- A. Allow harvest of Special Forest Products (SFP's) (see above TIM130, I, B for a description of products) in ways that assure the continued integrity of the forest stand.
- B. Permits shall be required for commercial collection of any SFP.
- C. Commercial harvest shall occur only where adequate quantities of the resource are available on harvestable sites.
- D. Selling units (bushels, pounds, sacks, etc.) for specific SFP's shall be consistent across the forest to make record-keeping, reporting, and monitoring more accurate and efficient.

- E. Collection of SFP's adjacent to trails and roads shall be avoided where scenic quality would be impaired. Collection should be no closer than 20-50 feet from the trail or road. Site-specific prescriptions will vary by class of trail or road.

Pesticide Use and Vegetation Management: TIM140

I. Pesticide Use

- A. Pesticide use is not prescribed in the Forest Plan, but may be considered on a case-by-case basis. Biological, environmental, and economic costs and benefits of pesticide use are to be identified and weighed prior to Forest Service use of pesticides on the Forest.
- B. Pesticides will be employed only after such use has been evaluated in an environmental analysis, recommended for approval by the Integrated Pest Management Working Group, and approved by the Forest Service officer with delegated authority.
- C. When pesticide use is judged necessary, selection and application will be based on the following guidelines:
 - 1. Those application methods and formulations will be used that are most effective in suppressing the pest, most specific to the target organisms, and least harmful to non-target components of the environment.
 - 2. In operational pest management programs, only those pesticides that are registered in accordance with the Federal Insecticide, Fungicide and Rodenticide Act, as amended, will be used, except as otherwise provided in regulations issued by the Environmental Protection Agency or the Department of Agriculture.
 - 3. Application will be restricted to the minimal effective dosage that, when precisely applied to the target area at optimum times, will accomplish the resource management objectives.

Reforestation: TIM24

I. Site preparation, Planting, Stocking

- A. This activity comprises all treatments and activities aiding the re-establishment of desirable tree cover following timber harvest.
 - 1. Prescribed burning may be used for preparing sites for planting, seeding, and for other resource needs; it may also be used for fuels management, when the wood residue cannot feasibly be used for other purposes.
 - 2. Examine all forest lands treated.
 - a) No first year surveys are required if the silvicultural prescription anticipates natural regeneration.
 - b) Examine artificial seeding or planting treatments one and three years after treatment.
 - c) Stands will be certified as stocked, if the third-year survey indicates that the area meets stocking standards. Permanent openings are allowed, and do not need certification, where created for wildlife habitat improvement, vistas, recreation uses and similar practices.
 - d) Prescribe artificial regeneration if the third-year survey indicates that natural regeneration is highly unlikely.
 - e) Schedule another survey no later than five growing seasons after harvest if the third-year survey indicates the area is very likely to be stocked, but more time is required to make this determination.
 - f) Certify that every unit which receives a final harvest meets or surpasses the stocking guidelines and certification standards (Consult Silvicultural Practices Handbook - FSH 2409.17) within the 5-year regeneration period established by law. A unit may be certified as adequately stocked at any time during this 5-year period. (Also see the Monitoring Plan in Chapter 6.)
 - g) Certify that a planted or seeded area has attained a stocking level above a defined minimum in terms of number and distribution of acceptable species, whether planted, seeded, or natural.

TRAILS

Forest-wide Standards & Guidelines

Trail Activities: TRAI1

I. Opportunities

- A. Provide for a diversity of outdoor recreation trail and waterway opportunities that are appropriate for the [Recreation Opportunity Spectrum](#) (ROS) class and [Land Use Designation](#). Include such activities as hiking, mountaineering, spelunking, cross-country skiing, snowmobiling, OHV use, motorized trail bike riding, mountain bike riding, motorboating, canoeing, and kayaking.
- B. Emphasize opportunities in all ROS classes, as applicable, for activities which are in harmony with the natural environment and consistent with the recreation role of the National Forest System lands in a given area.
- C. Locate, design, and operate trails to make the best use of available recreation opportunities. Establish trail objectives and associated management actions by examination of the interaction of all resource activities, opportunities inherently present, and the objectives of the Land Use Designation.
- D. Coordinate trail planning, location, design and operation with the recreation management goals and objectives of other national, state, local agencies, and private operations. Make an effort to provide loop trail opportunities through the integration of systems regardless of jurisdiction.
- E. Provide access to high quality [recreation places](#) with trail systems that will enhance the total experience of the user.
- F. Emphasize trail systems that offer the following opportunities as may be appropriate and [feasible](#) in a given area:
 1. Connected, multi-day trip opportunities for both land trails and water trails.
 2. Link trails with existing (or emerging) road systems.
 3. Alpine trail systems with quick access from saltwater anchorages, cabins, local communities, and resorts.
 4. OHV trail systems utilizing connections with existing road systems to form loop trips and access to recreation attractions.
 5. Loop trail systems in connection with recreation cabins.
 6. Access from local communities to snowline where snow trails are feasible.
 7. Heli-hiking trails within a reasonable distance (based on cost) from local communities and service centers.

Trail Administration: TRAI2

I. Inventory, Construction and Maintenance

- A. Maintain an inventory of existing trail systems which will assist in determining the desirability of retaining trails in their current locations, their contribution in meeting overall recreation objectives, and actions needed to bring the system up to desired standards and to maintain those standards. (Consult Forest Service Trails Management Handbook and Alaska Region Trail Construction and Maintenance Guide.)
- B. Construct, reconstruct and maintain trails and waterway facilities as part of the Forest transportation system.
 1. Prioritize and schedule trail construction and maintenance to meet public needs as follows:
 - a) Existing trails which are causing resource damage or to protect investments.
 - b) Existing trails and waterways serving local community needs and tourist centers.
 - c) Existing trails and waterways providing access to recreation cabins.
 - d) Existing trails and waterways in Wildernesses.
 - e) New trails and waterways which will serve local communities, tourist centers and resorts.
 - f) New trails in Wilderness which will disperse use and are needed to help protect wilderness resources from [degradation](#).
 2. Provide trailheads in locations to allow access to the greatest number and types of trails [practicable](#) within an area. Consider use for both snow and snow-free trail access (during

- different seasons) from the same trailhead when practicable. Match the capacity of the trailhead with the desired capacity of the area being served.
3. Construct and maintain trails to the standard appropriate for the type and amount of use desired in a given area. If the trail is to be used by multiple types of users, design and construct it to adequately and safely accommodate the most demanding or impacting type of use. (Consult FSH 2309.18.)
 4. Design and construct bridges to support the maximum expected snow and ice load, construction or maintenance equipment, and anticipated user equipment. Bridges must be appropriate for the prescribed ROS class and meet the adopted [Visual Quality Objective](#) for the area.
 5. Plan and provide trails for a variety of accessibility challenge levels, appropriate to the ROS setting.
 6. Use volunteer, human resource, and cooperative programs to augment trail construction and maintenance budgets and to provide land use education opportunities for the public. Integrate these resources into the total trail management system. Encourage local organizations to "adopt a trail" to provide needed maintenance on a continuing basis. Crews must be under the supervision of a qualified trail supervisor. Help develop qualified supervisors in volunteer organizations and other cooperative programs. (Consult FS Trails Management Handbook.)
- C. Trails and associated waterways within [Land Use Designations](#) and [recreation places](#) often become the principal tools for achieving management objectives. Construct and maintain trails and related facilities so that they contribute to desired conditions and appear to be an appropriate part of the forest setting and not an intrusion upon it. (Consult FS Trails Management Handbook.) Use [Best Management Practices](#) (Chapter 10 of the Soil and Water Management Handbook, FSH 2509.22 and Appendix C of this Plan) to reduce the effects of trail activities on the beneficial uses of water.
1. Develop and incorporate in project plans an erosion control and [stabilization](#) plan for stabilizing all human-caused soil disturbances.
 2. Locate trail crossings at right angles to streams and at suitable bridge locations. Design and maintain trail treads to protect riparian values and minimize soil erosion.
 3. Locate stream crossings only in stable reaches. Design crossings of V-notched drainages to prevent debris jamming. Drainage structure gradients should follow natural gradient for non-fish streams where needed to prevent downstream erosion. Require brow logs for dirt and rock-surfaced log stringer bridges and turnpike sections to contain materials and prevent entry of [sediment](#) into the stream. For further location and design guidance consult the Trails Handbook and Drainage Structures Handbook.
 4. Permit construction of trails parallel to and crossing fish streams only where objectives for the management of fish habitat can be met. Where trails are located near fish streams, minimize the introduction of sediment during clearing, construction, and operation activities. Sidecasting and waste materials must not encroach upon the stream course and as much undisturbed groundcover as [practicable](#) shall be left between the trail and the stream. Complete endhaul of waste material will be required where trails are located near fish streams when there is the probability of downhill movement of the material into the stream. Fill will be allowed in fish streams only when considered through the IDT process to be the best alternative.
 5. Meet [fish passage](#) direction at all locations where trails cross fish streams. Contracts will specify permissible uses of motorized equipment and the timing of trail construction activities based on agreement with the Alaska Department of Fish and Game and as determined by environmental analysis and appropriate line officer approval.

TRANSPORTATION

Forest-wide Standards & Guidelines

Transportation System Inventory: TRAN111

I. Inventory Updating and Maintenance

- A. Maintain an inventory of all forest development transportation facilities, including roads, bridges and [major culverts](#) (including those which require [fish passage](#)), [Log Transfer Facilities](#), and airfields. (Consult FSM 7710.)
 - 1. Use the Transportation Management System (TMS), or subsequently developed and approved system, as the data management system for the forest road, bridge, and major culvert inventory.
 - 2. Update changes on transportation maps annually. Map all roads, as an historical record, regardless of administrative classification.

Road and Bridge Administration: TRAN122

I. Road Management

- A. Manage Forest Development Roads and bridges based on [Road management objectives](#) using the criteria listed below:
 - 1. Keep Forest Development Roads open to public motorized use unless:
 - a) Use conflicts with [Land Use Designation](#) objectives, such as the need to protect fish or wildlife habitat or to retain a non-motorized recreation experience.
 - b) Financing is not available to maintain the road or manage the associated use of adjacent lands.
 - c) Use causes unacceptable damage to roadway or adjacent soil and water resources.
 - d) Use results in unsafe conditions.
 - e) There is little or no public need.
 - 2. Manage road use by seasonal closure if any of the following conditions are anticipated:
 - a) Seasonal conflicts with Land Use Designation objectives, such as the need to provide security for wildlife during critical times of the year.
 - b) Traffic hazards or unacceptable damage to roadway or adjacent soil and water resources due to weather or seasonal conditions.
 - 3. Restrict public use by temporary closure if:
 - a) Concurrent use between commercial and other traffic is unsafe.
 - b) The potential for damage to equipment from vandalism is high.
 - 4. Allow administrative use of closed or restricted roads when needed for emergency use or uses otherwise deemed appropriate by the Forest Service officer with delegated authority.
- B. Consider the opportunities to manage road use cooperatively with applicable state and other Federal agencies to meet fish and wildlife management objectives.
- C. Manage roads to be consistent, to the maximum extent [practicable](#), with the enforceable policies of the Alaska Coastal Management Program.
- D. Communicate road closures to the public in a positive manner, stressing the reason for closure rather than denial of access.

II. Permitting

- A. Authorize, by issuing a road use permit, appropriate commercial use of Forest Development Roads not otherwise authorized by a Forest Service contract, [easement](#), [Special Use Authorization](#), operating plan, or other similar agreement. Include investment sharing and maintenance requirements and rules of use as terms of the permit. (Consult FSM 7730 R-10 supplement).
- B. Obtain needed permits for the construction of bridges across navigable waters, and for [Log Transfer Facilities](#).

III. *Cost Share Management*

- A. Administer cost-shared roads in accordance with the terms of the agreement between the Forest Service and the cooperators.
 - 1. Collect data about traffic volume and types of users on Forest Development Roads as needed to determine investment sharing and commensurate maintenance responsibilities.

Transportation Improvement Planning: TRAN212

I. *Planning*

- A. Plan transportation facilities that will efficiently integrate and achieve Forest Plan direction, including consideration of landscape-scale ecological objectives. Take advantage of resource opportunities recognized during project [scoping](#), such as providing access to a recreation attractor or mineral deposit.
- B. Direct the orderly development and management of the transportation system and ensure the documentation of decisions affecting the system.
- C. Coordinate transportation [corridor](#) development with the applicable Canadian, Federal, state, and local government agencies and private landowners. Consider opportunities to enhance the overall transportation system by locating roads coincident with the TUS corridors identified in this Plan. Make no road connections between communities or emerging communities without the participation and collaboration of state and local governments, communities, and affected individuals.
- D. During project planning, identify resource concerns and site specific mitigation measures. Clearly document these mitigation measures to facilitate project implementation and monitoring.

II. *Access and Travel management Planning and Road management objectives*

- A. Undertake access and [travel management](#) planning based on Forest Plan goals, objectives, and desired conditions. As part of the planning process, update [road management objectives](#) for all Forest Development roads (see Appendix L). (Consult FSM 7710 and FSH 7709.55.) Road management objectives include access objectives, design criteria, environmental and resource considerations, operation and maintenance criteria, and other road attributes.
 - 1. Road management objectives should be updated as a part of the planning process for all projects that affect road access.

Road and Bridge Preconstruction: TRAN214

I. *Road Standards*

- A. Perform route or site selection, location, geotechnical investigations, survey, and design to a technical level sufficient to meet the intended use and commensurate with both ecological objectives and the investment to be incurred. Ensure consistency with Forest-wide standards and guidelines and [Best Management Practices](#). (Consult FSH 2509.22.)
 - 1. Consider each of the following factors when determining standards for the intended uses:
 - a) cost of transportation (including operation and maintenance)
 - b) safety
 - c) intended purpose and ecological objectives
 - d) impacts on land and resources on both local and landscape points of view.
- B. Construct roads in the most cost-effective manner consistent with [Land Use Designations](#), ecological objectives, and intended purposes. Use the Forest Highway Program (consult FSM 7740) and joint financing with other state and Federal agencies to construct roads to a higher standard, when determined appropriate to meet [road management objectives](#).
- C. Evaluate each proposed road construction or [reconstruction](#) project to determine the least cost road (considering cost of construction, maintenance, and hauling) which meets the intended purpose. Compare the road construction standard required for the immediate harvest and removal of timber with that needed to meet long-term road management objectives. When a higher standard facility is required to meet multiple-use objectives or for future management, include supplemental funding (Forest Service funds) to construct the higher standard. The purchaser of National Forest timber shall not bear that part of the cost necessary to meet the higher standard. (Consult FSM 2430.)

Standards & Guidelines

- D. Cooperate with the Alaska Department of Transportation and Public Facilities and the Federal Highway Administration in the administration of the Forest Highway Program. Provide nominations of routes to be upgraded and encourage their transfer to state jurisdiction, in order to provide safe facilities and adequate maintenance between communities linked by the Forest Development Transportation System. (Consult FSM 7700.)
- E. Build and manage roads primarily to meet public needs. Include considerations for a full range of access forms such as cars, trucks, bicycles, [Off-Highway Vehicles](#), and foot travel. Where roads will provide potential access to private or State of Alaska lands, recognition of the route as a potential state route should influence location and alignment standards to avoid future duplication of construction. Such consideration must not, however, be considered justification for a higher cost road than is necessary for Forest Service resource management.
- F. Consider conservation of petroleum energy supplies in the location, design, and operation of the transportation system.

II. Location and Design

- A. Locate and design Forest Development Roads in a manner which will utilize both local and landscape scale ecological objectives, as well as [Best Management Practices](#). Seek to minimize effects on wildlife and fish habitat, riparian habitat, and [wetlands](#). (Consult the Forest Service Road Preconstruction and Drainage Structures Handbooks, and the Region 10 Soil and Water Conservation Handbook for detailed location and design guidance.)
 - 1. Incorporate erosion control and [stabilization](#) measures in project plans for stabilizing all human-caused soil disturbances. Assure Best Management Practices can be implemented in construction, operation, and maintenance of the road.
 - 2. Avoid construction on highly unstable uplifted marine [sediment](#) as identified in the [Soil Resource Inventory](#) (SRI) or use geotechnical engineering designs to maintain stability. Obtain line officer approval after on-site consideration and stability analysis.
 - 3. Rooding on slopes in excess of the soil's internal angle of friction, as identified in SRI's, requires geotechnical investigation and appropriate designs. Obtain line officer approval after site-specific investigation has been conducted to determine degree of risk and the potential effects from mass wasting. Conduct stability analysis to determine the most effective and lowest cost method of reducing the risk of roadway failure. Consider constructing full bench roads and end-hauling excess excavation. End-hauled excess excavation shall be deposited at appropriate locations that prevent the excess material from entering streams. Stabilize and revegetate end-hauled materials in accordance with prescribed erosion control measures specified in the project plan.
 - 4. Locate stream crossings in stable reaches, unless mitigation measures are taken. Design crossings of V-notched drainages to prevent debris jamming. Design and install culverts to prevent downstream erosion. When embankment material is used for surfacing native log bridges, install side logs, wood chinking, and a geotextile fabric blanket prior to embankment placement to contain surfacing materials and prevent entry of [sediment](#) into the stream.
 - 5. Avoid locations of roads near fish-bearing streams. Seek locations which avoid fish streams, crossing streams when other locations are not feasible and fish habitat can be protected. Where roads are located near fish streams, avoid the introduction of sediment during clearing, construction, and operation activities. Excess excavation material must not encroach upon the stream course. Leave as much undisturbed ground cover between the road and the stream as feasible. Require complete endhaul of excess excavation where there is the probability of downhill movement of that material into the stream. Place fill into fish streams only when it is considered by the environmental analysis process to be the best alternative, and following consultation with the Alaska Department of Fish and Game.
 - 6. Meet [fish passage](#) direction at locations where roads cross fish streams. (Consult Forest-wide Standards & Guidelines for Fish Habitat Planning, FISH112.) Specify permissible uses of heavy machinery and the timing of road construction activities in contracts based on consultation with the Alaska Department of Fish and Game and as determined by interdisciplinary analysis and on approval by the appropriate line officer.

7. In areas where erosion due to heavy rains on disturbed soil is a resource protection concern, provide special project specifications that prescribe the maximum distance beyond the end of embankment placement that pioneering operations (preliminary clearing of the road [Right-of-Way](#)) may occur.
 8. Slope drainage ditches along the roadbed to the nearest relief culvert. Discharge from road ditches should be cross drained to filter on natural forest floor, rather than flowing directly into streams.
 9. Design bridge abutments to minimize disturbances to streambanks.
 10. Promptly rehabilitate [temporary roads](#) in accordance with erosion control and [stabilization](#) measures prescribed in the project plan. Establish vegetation on roadbeds of temporary roads within 10 years following termination of use.
 11. Design roads to conform to the [Memorandum of Understanding](#) with the U.S. Fish and Wildlife Service on eagles, or obtain variances.
 12. Avoid ditching across [wetlands](#) if surface water control is not required for safety or protection of the running surface.
- B. Design and construct roads to conform to the Adopted [Visual Quality Objectives](#).
1. For guidance, consult National Forest Landscape Management Handbook, Volume 2, Chapter 4: Roads.
 2. Consider the following practices during road design on, or seen from, *Visual Priority Travel Routes and Use Areas* (see Appendix F):
 - a) Vegetating slopes seen from the road.
 - b) Providing "planting pockets" or terraces on slopes, where needed.
 - c) Minimizing [landform](#) modifications through road location and design.
 - d) Considering vegetative treatment of clearing edges such as feathering or free-flowing, undulating edge to break up the straight line.
 - e) Cleaning-up roadsides after construction on all roads receiving general public use or expected to have such use.
- C. Plan, design, and construct roads to minimize conflicts or mitigate conflicts with existing facilities such as trails, pipelines, utilities, and cabins.

III. [Wetlands](#), [Flood plains](#), [Estuaries](#), [Tidal Meadows](#)

- A. Locate and design Forest Development Roads to minimize impact to soils, water, and associated resources in accordance with [Executive Orders](#) 11988 and 11990 (Floodplain Management and Protection of Wetlands). Avoid development activities, to the extent feasible, in areas of important wetland value identified during project [Interdisciplinary Team](#) analysis.
1. Do not construct roads across alluvial [flood plains](#), mass wastage areas, or braided stream bottom lands unless an Interdisciplinary Team investigation indicates that individual site-specific mitigation can be applied to assure protection for the soils, water and associated resources.
 2. For roads or other facilities approved for location near estuaries, fills and excess excavation materials must not encroach upon such areas unless recommended after project Interdisciplinary Team analysis.
 3. Use the following criteria for siting water-dependent transportation facilities, other than [Log Transfer Facilities](#), such as docks, landings, floats, and boat ramps:
 - a) Locate far enough from known [anadromous fish](#) streams to avoid significant interference (generally a minimum of 300 feet away).
 - b) Locate far enough from tideflats or subtidal beds of aquatic vegetation to avoid [significant impairment](#) (generally a minimum of 300 feet away).
 - c) Restrict the filling of intertidal and subtidal areas to those sites having the least value as habitat for marine organisms and vegetation, unless Interdisciplinary Team and interagency (FWS, NMFS, and ADF&G) joint analysis determines that for other resource reasons it is desirable to fill the more productive site.
 - d) Avoid areas with established uses, such as areas used for commercial and sport fishing, hunting, and anchorages for commercial and recreational vessels, unless interdisciplinary review determines that location of sites may be accomplished in a manner that is compatible with such uses.

Standards & Guidelines

- e) Assure that all needed permits, leases, and accesses are acquired. Work cooperatively with other agencies such as National Marine Fisheries Service, U.S. Fish and Wildlife Service, Department of the Army Corps of Engineers, Alaska Department of Fish and Game, and Alaska Department of Natural Resources on these efforts.

IV. Quarry and Borrow Sites

- A. Locate and design quarry (shot rock pit) and borrow (gravel pit) sites and time their use to minimize the impacts upon other [resource values](#), existing facilities, and to meet [Land Use Designation](#) objectives. During the design phase, consider the potential for use of the pit to improve fish habitat and [dispersed recreation](#) opportunities.
 1. Plan rock quarries and borrow pits through the [Interdisciplinary Team](#) process. On potentially landslide-prone areas, blasting will be avoided during or within 72 hours following a 2-year 24-hour storm (total amount of expected rainfall from a storm event that would statistically occur once every two years; in Southeast Alaska, this would probably equate to about 4 inches of rain in one day), or until determined that the soil [groundwater](#) level does not constitute a high-risk situation. Where other sources are available, do not locate borrow pits on landslide-prone areas. Where no other [feasible](#) alternative exists, strip quarries of their overburden and haul excavated material to a stable location. [Stabilization](#) of the overburden material will conform to the erosion control and stabilization measures developed during the planning of the quarry or borrow pit.
 2. Design quarry and borrow pits to minimize the possibility of [sediment](#) being carried into watercourses by run-off. Quarry and borrow pits will be located away from watercourses, unless project Interdisciplinary Team analysis determines that site-specific mitigation measures can be applied to assure protection of the soils, water and associated resources. Whenever locations near streamcourses or other water bodies are recommended, erosion control measures must provide for drainage from materials sites to run-off through a filter strip, buffer, or sediment basin prior to entering a water body, unless the quarry or borrow pit is to be used for fish habitat management.
 3. Limit blasting that adversely effects fish spawning beds to times when eggs and alevins are not vulnerable. Safe times and distances will be determined on a site-by-site basis after consultation with agencies such as:
 - a) Alaska Department of Fish and Game
 - b) National Marine Fisheries Service
 - c) U.S. Fish and Wildlife Service
 4. Do not allow the use of intertidal gravel as a source of borrow.
 5. Drain borrow pits and quarries no longer needed, unless developed for fish or waterfowl habitat, and revegetate mineral soil.
 6. Consider screening borrow pits, quarries and access roads along [sensitive travel routes](#).

V. [Log Transfer Facilities Siting, Construction, Operation, and Monitoring](#)

- A. Site Log Transfer Facilities in locations which will best avoid or minimize potential impacts on water quality, aquatic habitat, and other resources. During site analysis, cooperate with state and Federal agencies to assemble required data and evaluate alternatives. When considering alternative siting, construction, and operation of Log Transfer Facilities, use both regulatory guidelines established by the Clean Water Act (40 [CFR](#) Part 230), and the Alaska Timber Task Force Log Transfer Facility Guidelines (See Appendix G). All Log Transfer Facilities are evaluated by regulatory agencies using these two sets of guidelines (items 1 and 2 below).
 1. *The Log Transfer Facility Siting, Construction, Operation and Monitoring/Reporting Guidelines (1985)*, developed by the Alaska Timber Task Force (ATTF) Log Transfer Facility Guidelines Technical Subcommittee, are used by the regulatory agencies in evaluating applications for meeting requirements of the Clean Water Act. These guidelines are to be used when evaluating proposals for log transfer and associated facilities. The introduction to the guidelines say "The objective is to consider all the guidelines and develop the "best mix" which allows the activities to proceed while meeting all applicable statutory and regulatory requirements". The ATTF Guidelines may be found in Appendix G of this document.

2. Alternatives for siting, construction, and operation must also be evaluated using the 404(b)(1) process of the Clean Water Act and the requirements of 40 CFR 230.12(a)(3) to determine if:
 - a) There is a **feasible** alternative to the proposed discharge that would have less adverse effect on the **aquatic ecosystem**, so long as such alternative does not have other significant adverse environmental consequences; or
 - b) The proposed discharge will result in significant **degradation** of the aquatic ecosystem; or
 - c) The proposed discharge does not include all appropriate and feasible measures to minimize potential harm to the aquatic ecosystem; or
 - d) There does not exist sufficient information to make a reasoned judgment as to whether the proposed discharge will comply with these Guidelines.
 - e) The "proposed discharge" refers to the discharge of logs, bark, any other dredged or fill material, and storm water into the aquatic systems.
- B. Use the additional following guidelines, consistent with the 404(b)(1) *process and Log Transfer Facility Siting, Construction, Operation and Monitoring/Reporting Guidelines (1985)* as described in Part A above, when evaluating alternatives for log transfer. The guidelines described in Part A take precedence over these guidelines.
 1. Minimize the number of Log Transfer Facilities and storage areas by selecting locations that will accommodate future logging without requiring additional transfer or storage sites.
 2. Give preference to locating Log Transfer Facilities along straits or channels when feasible. When located in bays, large bays are preferred to small bays, deep bays preferred to shallow bays. Sites near the mouths of bays are preferred to sites near the heads of bays. Give preference to sites where marine vegetation is sparse or absent over sites with vegetation.
 3. Avoid siting log transfer, rafting, and storage facilities in areas with established commercial, **subsistence**, and sport fishing activity, high levels of recreation use, areas of high scenic quality, or documented concentrations of species commonly pursued by commercial, subsistence, and sport fishers.
 4. When an existing Log Transfer Facility in a less than optimal location is considered for **reconstruction**, perform environmental analysis to determine whether adverse impacts of relocating the facility exceed those resulting from continued use at the existing site.
 5. Site locations that have foundation materials, determined by appropriate subsurface investigation, that can economically and effectively support the structure through the duration of its design life.
 6. Consider the visual impact of a proposed structure in the selection of alternative designs. In areas of high visual sensitivity emphasize designs which would be less likely to dominate the landscape (such as a low-angled slide rather than a bulkhead design).

Road and Bridge Construction/**Reconstruction**: TRAN22

I. *Construction*

- A. Construct Forest Development Roads and bridges that provide the stability and durability appropriate for their intended use as documented in the **road management objectives**.

II. *Reconstruction*

- A. Reconstruct roads and bridges in accordance with the following limitations.
 1. Limit reconstruction activities to:
 - a) Correction of unsafe conditions that cannot be corrected by traffic restriction.
 - b) Repair of situations where use will cause environmental impacts inconsistent with Forest Plan direction.
 - c) Upgrading of a facility that was not originally constructed to accommodate current or anticipated use.
 - d) Repair of surfacing, bridges, and **Log Transfer Facilities**, where analysis clearly shows an economic advantage to protect the investment.
 - e) Removal of vegetation, repair of surfacing, repair or replacement of culverts and bridges where necessary to bring roads up to timber haul standards.
- B. Reconstruct roads and bridges using **Best Management Practices**. Consult the Alaska Department of Fish and Game on reconstruction activities affecting fish-bearing streams.

Standards & Guidelines

Road Maintenance: TRAN23

I. Maintenance Levels, Conditions, and Inspections

- A. Operate and maintain Forest Development Roads in a manner which meets the [road management objectives](#) and ecological objectives for the landscape where the road is located. Use road closures, maintenance and other measures to keep road surface and road site erosion at low or near background levels. Maintain roads to meet [Best Management Practices](#) (BMP's) regardless of the methods used to obtain the maintenance work. Manage roads to provide cost-effective support to [Land Use Designation](#) objectives and safe travel to users of the system, while protecting the environment, adjacent resources, and the public investment. (Consult the Transportation System Maintenance Handbook.)
1. Consider protection needs of adjacent resources when planning and conducting road maintenance activities. Where consistent with road management objectives, consider incorporating design features which will protect water quality by minimizing long term maintenance needs (e.g. driveable dips adjacent to culverts, oversized culverts, outsloping roads).
 - a) Maintain road running surfaces and bridge decks to minimize the amount of road surface [sediment](#) entering adjacent streams and lakes.
 - b) Maintain ditches and culverts to keep water effectively flowing, and minimize sediment entering streamcourses.
 - c) Provide for the disposal of materials collected during road maintenance (soil, rock, and debris) in a manner that minimizes sediment entering streams and lakes and meets Land Use Designation objectives (particularly those regarding visual quality).
 - d) During snow plowing operations, do not use bodies of fresh water as disposal sites for snow (and accompanying road surface sediments).
 2. Perform Condition Surveys in accordance with criteria set forth in the Soil and Water Conservation Handbook. The intensity of survey will be commensurate with the risks and potential effects of structure failure. Itemize deficiencies needing correction and present recommendations for corrective action.
 3. Inspect bridges at frequency and standards specified in FSM 7730.
 4. Implement requirements of the Forest Service Highway Safety Program (consult FSM 7730), which include recording the location of all known accidents and identifying locations, design, and operating features that are potential high hazards. Prioritize hazards for correction based on traffic volume, traffic mix, and degree of hazard. Program the elimination of identified hazards on a systematic basis, and as funding permits.
 5. Use of traffic control devices will be in accordance with the guidelines contained in the Manual on Uniform Traffic Control Devices (U.S. Department of Transportation, Federal Highway Administration, Publication Number FHWA - SA-89-006; HTO-21/2-89 (15M)P.)

WETLANDS

Forest-wide Standards & Guidelines

Wetlands: WET

I. Objectives

- A. Avoid alteration of, or new construction on wetlands, wherever there is a [practicable](#), environmentally-preferred alternative, considering the functions and values of wetlands as well as other non-wetland ecosystems in the project area. Practicable alternatives take into consideration costs, existing technology, and logistics in light of overall project purposes. 40 [CFR](#) 230.3(q).
- B. Minimize the loss of higher value wetlands (especially fens) and the adverse impacts of land management activities on wetlands. Consult [Executive Order](#) 11990 and BMP 12.5 for guidance on wetland protection.
- C. Seek to maintain the natural and beneficial functions and values of wetlands.

II. Inventory and Evaluation

- A. Use the most current technical criteria for wetland identification and delineation. Consult the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*, 1987 (or its revision), as appropriate.
- B. Develop data on wetlands values and functions as needed for [watershed analysis](#) and project planning.
- C. Evaluate the hydrologic, water quality, and habitat functions of wetlands and determine their biological significance and scarcity at the appropriate landscape scale.

III. Land Use Activities

- A. The discharge of dredged or fill material onto wetlands is regulated under Section 404 of the Clean Water Act which is administered by the Corps of Engineers (COE) and the Environmental Protection Agency (EPA). Certain categories of activities are exempt from regulation while others may be permitted (refer to 33 [CFR](#) 323.4 Part 330 Appendix A 325). Consult with COE early in the planning process to determine whether a 404 permit is required.
- B. Consistent with the Clean Water Act, as amended, use [Best Management Practices \(BMP's\)](#) (FSH 2509.22) in all management activities which could affect water quality of [wetlands](#). BMP's are intended to assure that flow and circulation patterns, and chemical and biological characteristics of water are not impaired. (BMP's are summarized in Appendix C.)
- C. Before issuing authorizations, leases, easements, rights-of-way or exchanging lands containing wetlands, identify uses that are restricted under identified Federal, state or local wetlands regulations. Incorporate appropriate restrictions, where necessary, to protect or minimize wetland impacts, or withhold such properties from exchange.
- D. Cooperate with state and Federal agencies having overlapping resource management responsibilities for wetlands, including the Alaska Department of Fish and Game, Alaska Department of Environmental Conservation, Alaska Division of Governmental Coordination, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, National Marine Fisheries Service, and the U.S. Fish and Wildlife Service.

WILDLIFE

Forest-wide Standards & Guidelines

Wildlife Habitat Planning: WILD112

- I. *Coordination/cooperation with other Agencies, Institutions and Partners*
 - A. Coordinate with the Alaska Department of Fish and Game, other state agencies, the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, tribal governments, and other cooperators and partners during the planning of activities that may affect wildlife.
 1. Each administrative area should meet at least annually with state and Federal wildlife agencies to review resource activities, present progress reports on implementation of past cooperative work or agreements, and-schedule cooperative work.
 2. Seek to maintain memoranda of understanding with appropriate state, Federal, and local agencies and associations.
 - B. Emphasize management for indigenous wildlife species and natural habitat except in cases where the Forest Service, in cooperation with the Alaska Department of Fish and Game and U.S. Fish and Wildlife Service, find desirable alternatives. Special consideration should be given to the possible adverse impacts on habitat of sensitive, threatened, and [endangered species](#).
 - C. Coordinate wildlife habitat surveys, studies, plans and improvement projects with the Alaska Department of Fish and Game, U.S. Fish and Wildlife Service, and other appropriate state, Federal, tribal, local and private agencies. Use the Sikes Act authorities for cooperative work with the state. Use agreements and other partnerships to cooperate with other partners.
 - D. Coordinate with the Alaska Department of Fish and Game in development of state strategic plans and population goals and objectives for wildlife species and attempt to incorporate wildlife goals and objectives into forest management.
 - E. Provide habitat information to the Alaska Department of Fish and Game to assist in correlating hunting seasons, permits, and bag limits to on-the-ground habitat conditions so that population and habitat objectives can be achieved.
- II. *General Habitat Planning/Coordination*
 - A. Recognize as wildlife habitat, areas of land and water which can contribute to achieving wildlife objectives for consumptive and non-consumptive uses.
 - B. Provide the abundance and distribution of habitat necessary to maintain viable populations of existing native and desirable introduced species well-distributed in the planning area. (Consult 36 [CFR](#) 219.19 and 36 [CFR](#) 219.27.)
 - C. Cooperate with the State and, as appropriate, the U.S. Fish and Wildlife Service in managing vehicle, boat, and other human use (e.g. hunting and fishing seasons and bag limits) as necessary to achieve wildlife objectives, recognizing the access provisions of [ANILCA](#). Emphasize management to reduce human [disturbance](#) in high value habitat areas and during critical periods of wildlife use.
 - D. Maintain an Area program schedule which includes anticipated wildlife habitat and population inventory needs, monitoring requirements and proposed habitat improvement and maintenance projects.
 - E. Use forest plan management indicators to evaluate the potential effects of proposed management activities affecting wildlife habitat. (Consult Forest Service Manual 2620.)
 - F. Develop interagency [habitat capability](#) models for any or all of the management indicators to systematically assess the impacts of proposed projects during project level analysis. Periodically review and update models to reflect the most current habitat relationships and habitat modeling technology.
 - G. Cooperate with the Alaska Department of Fish and Game to seek to prevent existing populations of non-indigenous species from dispersing into Wilderness areas. Address issues regarding management, introduction, and re-introduction of wildlife species consistent with National and Regional Policy.
 - H. When population or habitat declines for a plant or animal species or [subspecies](#) indicates that long-term persistence is at risk, evaluate the particular species for designation as a Regional

[Sensitive Species](#) by the Regional Forester. (See Threatened, Endangered & Sensitive Species Forest-wide Standards & Guidelines.)

III. *Habitat Improvement Planning*

- A. Identify habitat improvement projects to meet wildlife habitat and population objectives.
 - 1. Consider the following factors to assess habitat improvement project opportunities and priorities:
 - a) To meet state wildlife population objectives.
 - b) To meet [subsistence](#) use needs.
 - c) Existing habitat in poor condition compared to its potential.
 - d) Habitat with a history of receiving high levels of use.
 - e) Treatments with a favorable benefit/cost ratio.
 - 2. Use silvicultural practices, where applicable, to accomplish wildlife habitat objectives.

IV. *Sitka Black-tailed Deer Habitat*

- A. Identify important deer [winter range](#) before or as part of project analysis.
- B. Assure interdisciplinary involvement and consideration of deer winter range in project planning and in the environmental analysis process.

V. *Bald Eagle Habitat*

- A. *The Bald Eagle Protection Act* provides for special management for the bald eagle. Manage bald eagle habitat in accordance with the Interagency Agreement established with the U.S. Fish and Wildlife Service to maintain habitat to support the long-term nesting, perching, and winter roosting [habitat capability](#) for bald eagles. Coordinate with the U.S. Fish and Wildlife Service for bald eagle habitat management.

VI. *Bear Habitat Management*

- A. Continue to implement strategies, in cooperation with the Alaska Department of Environmental Conservation, Alaska Department of Fish and Game, cities, and boroughs, which prevent habituation of bears to human foods/garbage and reduce chances of human/bear incidents. Strategies that can be used to reduce human/bear incidents include:
 - 1. Phasing out and rehabilitating any remaining open garbage sites on National Forest land. Establish timetables for phase out and [rehabilitation](#) in cooperation with appropriate state agencies (also see Lands Forest-wide Standards & Guidelines on sanitary landfills).
 - 2. Requiring incinerators and/or other bearproof garbage disposal methods at work camps, recreation sites, administrative and research facilities, and [Special Use Authorizations](#) in bear habitats.
 - 3. Where feasible, locating seasonal and permanent work camps, recreation facilities, [mineral exploration](#) and operational facilities, [Log Transfer Facilities](#), where allowed by the [Land Use Designation](#), more than 1 mile from sites of important seasonal bear concentrations to reduce chances of bear-human confrontations.
 - 4. On Forest Service approved projects and Special Use Authorizations in brown bear habitat, minimizing adverse impacts to the habitat and seeking to reduce bear-human conflicts. Specific plans could include seasonal restrictions on activities and other measures determined on a case-by-case basis.
 - 5. Maintaining an aggressive public education program on bear behavior to reduce the number of human/bear incidents.
 - 6. Requiring storage of human food in ways to make it unavailable to bears to reduce habituation of bears and reduce human/bear incidents,
- B. During project planning, evaluate the need for additional protection of important brown bear foraging sites (e.g., waterfalls used as fishing sites) in addition to the buffers already provided by the Riparian and Beach & Estuary Fringe Forest-wide Standards & Guidelines, and the Old-growth Habitat and other natural setting Land Use Designations. Establish forested buffers, where available, of approximately 500 feet from the stream at sites where, based upon the evaluation, additional protective measures are needed to provide cover among brown bears while feeding, or

Standards & Guidelines

between brown bears and humans. This may be especially important on Class I anadromous fish streams within the Moderate Gradient/Mixed Control and Flood Plain process groups (see Appendix D) where a large amount of bear feeding activity on salmon occurs. Consider the combination of bear foraging behavior, stream channel types, and adjacent landform to help identify probable important feeding sites. Consult the Alaska Department of Fish and Game in identifying and managing important brown bear foraging sites.

- C. Manage human/bear interactions to limit brown bear mortality from both illegal kills and defense of life and property. Work with the Alaska Department of Fish and Game to develop and implement a brown bear management program which considers both access management and season and bag limits to manage brown bear mortality rates within sustainable levels.
- D. Manage road use where concentrations of brown bear occur to minimize human/bear interactions and to help ensure the long-term productivity of brown bears. To meet this direction, develop and implement [road management objectives](#) through an interdisciplinary process (see Transportation Forest-wide Standards & Guidelines).
- E. Cooperate with the State to develop sites for safe public brown bear viewing opportunities.

VII. Marine Mammal Habitats

- A. Provide for the protection and maintenance of harbor seal, Steller sea lion and sea otter habitats.
 - 1. Ensure that Forest Service permitted or approved activities are conducted in a manner consistent with the Marine Mammal Protection Act (MMPA), the Endangered Species Act, and National Marine Fisheries Services guidelines for approaching seals and sea lions. Consult with the appropriate agency for identification of critical timing events, such as molting, parturition, etc., and recommended distances to avoid disturbances. "Taking" of marine mammals is prohibited; "taking" includes harassment (adverse [disturbance](#)), pursuit, or attempting any such activity.
 - 2. Locate Forest Service authorized and approved facilities and concentrated human activities as far from known marine mammal [haul outs](#), rookeries and known concentration areas as [feasible](#) to meet the Alaska Coastal Management Program (ACMP) consistency requirements and MMPA. The following distances are provided as general guidelines for maintaining habitats and reducing human disturbance:
 - a) Locate camps, [Log Transfer Facilities](#), campgrounds and other developments (where allowed by the Land Use Designation) 1 mile from known haul outs, and farther if the development is large.
 - b) Forest Service permitted or approved activities will not intentionally approach within 100 yards, or otherwise intentionally disturb or displace any hauled-out marine mammal.
 - c) Dispose of waste oil and fuels off-site as regulated by the Alaska Department of Environmental Conservation.
 - 3. Cooperate with the State and other Federal agencies to develop sites and opportunities for the safe viewing and observation of marine mammals by the public. Maintain a public education program explaining forest management activities related to marine mammals in cooperation with state and other Federal agencies.

VIII. Seabird Rookeries

- A. Provide for the protection and maintenance of seabird (marine bird) rookeries.
 - 1. Locate facilities and concentrated human activities requiring Forest Service approval as far from known seabird colonies as feasible consistent with the Migratory Bird Treaty Act. The following distances are provided as general guidelines for maintaining habitats and reducing human [disturbance](#):
 - a) For aircraft flights on Forest Service permitted or approved activities, when weather ceilings permit, maintain a constant flight direction and airspeed and a minimum flight elevation of 1,500 feet (458 meters) for helicopters and fixed-winged aircraft. If at all possible, avoid flying over seabird colonies.
 - b) Regulate human use to maintain a 250 meter no-disturbance distance from seabird colonies on [upland](#) habitats.
 - 2. The availability of garbage to gulls should be eliminated by requiring [Special Use Permittees](#) to collect and dispose of garbage from their [Special Use Authorizations](#).

3. Cooperate with state and other Federal agencies to develop sites and opportunities for the safe public viewing of these species. Maintain a public education program explaining forest management activities related to these species in cooperation with state and other Federal agencies.

IX. *Waterfowl and Shorebird Habitats*

- A. Maintain or enhance wetland habitats which receive significant use by waterfowl and shorebirds. (The Tongass National Forest is a "Priority Forest" in the national TAKING WING Strategic Plan.) "Significant" is relative, but generally relates to use of a specific area by tens or hundreds of individuals of one or more species.
 1. Support the international significance of wetland habitats on the Tongass National Forest by participating in partnerships such as the North American Waterfowl Management Plan and the Western Hemisphere Shorebird Reserve Network.
 2. Identify during project analysis, in cooperation with the Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service, [wetlands](#) which receive significant waterfowl or shorebird use during fall/winter/spring concentrations or nesting, brood rearing or molting habitats.
 3. Locate facilities and concentrated human activities requiring Forest Service approval as far from known waterfowl or shorebird concentration and nesting areas as feasible. Minimize disturbance of waterfowl by restricting, when feasible, development activities to periods when waterfowl are absent from the area.
 4. During project analysis, consider the need to rehabilitate waterfowl habitat following development activities if there is no feasible alternative to the habitat disturbance. (Also see the Wetlands Forest-wide Standards & Guidelines.)
 5. Maintain [habitat capability](#) in coastal wetlands and intertidal areas that are important migratory staging areas and fall/winter/spring concentration areas, and wetlands that are important nesting and brood-rearing habitats, by avoiding, where feasible, all development activities which could fill wetlands, drain wetlands, or alter water levels resulting in loss of desirable vegetation, or direct loss of habitat. (Consult the Migratory Bird Treaty Act.)
 6. Minimize human disturbance of habitats during important periods of the year (nesting and brood-rearing, molting, and winter) by managing human use (such as trails, [Off-Highway Vehicle](#) use) in significant wetland areas. The following distances are provided as guidelines for reducing human disturbance:
 - a) Provide a minimum distance of 330 feet (100 meters) between human activities on the ground and significant areas being used by other waterfowl.
 7. Develop waterfowl habitat improvement projects in cooperation with appropriate state, Federal and local agencies, partner organizations, and individuals .
 8. For Special Use Administration (non-recreational), issue only authorizations which meet the objectives of [Executive Order 11990](#) (Protection of Wetlands). Issue permits which serve to preserve, enhance, or aid in the management of the natural and beneficial values of [wetlands](#).
 9. Perform integrated logging system and transportation analysis to determine if other feasible routes avoiding high use waterfowl areas exist.
 10. If the need to restrict road access is identified during project interdisciplinary review, roads will be closed either seasonally or yearlong to minimize adverse effects on waterfowl.
 11. Cooperate with state and other Federal agencies to develop sites for safe-public viewing opportunities that do not adversely disturb wildlife. Maintain a public education program explaining forest management activities related to these species in cooperation with state and other Federal agencies.
- B. Conduct activities to avoid or minimize disturbance to habitats within the forest, riparian, and estuarine areas which are important nesting, brooding, rearing, and molting areas, for Vancouver Canada geese, sandhill cranes, or trumpeter swans.

Standards & Guidelines

X. *Heron and Raptor Nest Protection*

- A. Provide for the protection of raptor (hawk and owl) nesting habitat and great blue heron rookeries.
 - 1. Conduct project level inventories to identify heron rookeries and raptor nesting habitat using the most recent inventory protocols.
 - 2. Protect active rookeries and raptor nesting habitat. Active nests will be protected with a forested 600-foot [windfirm](#) buffer, where available. Road construction through the buffer is discouraged. Prevent disturbance during the active nesting season (generally March 1 to July 31).
 - 3. Conduct annual monitoring for not less than 2 years after discovery of active nests. If the previously active nests remain inactive for 2 consecutive years, protection measures for the site may be removed.
 - 4. Bald eagle nest protection standards are outlined in Section V.
 - 5. Northern goshawk and osprey nest protection standards are included under the Threatened, Endangered, and [Sensitive species](#) Forest-wide Standards & Guidelines.

XI. *Alexander Archipelago Wolf*

- A. Implement a Forest-wide program, in cooperation with the Alaska Department of Fish and Game and U.S. Fish and Wildlife Service, to assist in maintaining long-term sustainable wolf populations.
 - 1. Where wolf mortality concerns have been identified, develop and implement a Wolf Habitat Management Program. To assist in managing wolf mortality rates to within sustainable levels, integrate the Wolf Habitat Management Program (including road access management) with season and harvest limit proposals submitted to Federal and State Boards..
 - a) Participate in interagency monitoring of wolf populations on the forest.
 - b) Where wolf population data suggest that mortality exceeds sustainable levels, work with the Alaska Dept. of Fish and Game and the U.S. Fish and Wildlife Service to identify probable sources of mortality. Examine the relationship among wolf mortality, human access, and hunter/trapper harvest. Conduct analyses for smaller islands (e.g., Mitkof Island), portions of larger islands, or among multiple WAA's.
 - c) Where road access has been determined, through the analysis, to significantly contribute to wolf mortality, implement effective road closures to reduce mortality. Open road densities of 0.7 to 1.0 miles per square mile of landscape or less may be necessary to reduce mortality to sustainable levels. Effective road closure prohibits motorized traffic (e.g., removing culverts or bridges versus only signing). Off-Highway Vehicle travel restrictions may also be necessary.
 - 2. Through the interdisciplinary process, integrate Wolf Habitat Management Program recommendations in the development of [Road management objectives](#). (See Transportation Forest-wide Standards & Guidelines and Appendix L.)
 - 3. Provide sufficient deer [habitat capability](#) to first maintain sustainable wolf populations, and then to consider meeting estimated human deer harvest demands. This is generally considered 13 deer/square mile in [biogeographic provinces](#) where deer are the primary prey of wolves. Use the most recent version of the interagency deer [habitat capability](#) model and field validation of local deer populations to estimate deer habitat capability.
 - 4. Design management activities to avoid abandonment of wolf dens.
 - a) Maintain a 1,200-foot forested buffer, where available, around known active wolf dens. Road construction within the buffer is discouraged and alternative routes should be identified where feasible. No road construction is permitted within 600 feet of a den unless site-specific analysis indicates that local landform or other factors will alleviate potential adverse disturbance.
 - b) If a den is monitored for two consecutive years and found to be inactive, buffers described in a), above, are no longer required. However, in the spring-time, prior to implementing on-the-ground management activities (timber harvest or road construction), check each known inactive den site to see if it has become active.

XII. Mountain Goat

- A. Provide for the long-term productivity of mountain goat habitat and viability of mountain goat populations, both native and introduced.
 - 1. Locate facilities and concentrated human activities as far from important wintering and kidding habitat as feasible.
 - a) Where feasible, locate facilities, camps, LTF's, campgrounds, and other developments 1 mile or more from important wintering and kidding habitat.
 - b) If the 1 mile or more distance cannot be achieved, mitigate possible adverse impacts by seasonally restricting or regulating human use, and other-site specific mitigation measures.
 - 2. Forest Service and State of Alaska permitted or approved aircraft flights (fixed wing and helicopter), including helicopter yarding of timber, should maintain a 1,500 foot vertical or horizontal clearance from traditional summer and kidding habitat and animals whenever feasible. Where feasible, flight paths should avoid known mountain goat kidding areas from May 15 through June 15. Pilots will not compromise safety.
 - 3. Where feasible, maintain mountain goat important winter [habitat capability](#). During project planning, use the most recent version of the interagency mountain goat habitat capability model which shows the most important habitat to generally be productive [old-growth](#) forest within 1,300 feet of escape terrain (>50% slope or cliff). Travel corridors used by mountain goats between important seasonal sites should be identified and maintained, especially when they occur in forested areas.

XIII. Marbled Murrelet

- A. Cooperate and coordinate with state and other Federal agencies to better understand the life history requirements and distribution of the marbled murrelet. Nesting habitat relationships are poorly understood.
- B. Maintain a 600 foot, generally circular, radius of undisturbed forest habitat surrounding identified murrelet nests, where available. Minimize [disturbance](#) activities within this buffer during the nesting season (May 1 - August 15). Maintain the buffer zone and monitor the site for nesting activity for not less than two nesting seasons after nest discovery. Maintain the buffer if the nest site is active during the monitoring period. Buffer protection may be removed if the site remains inactive for two or more nesting seasons.

XIV. Reserve Tree/Cavity-Nesting Habitat

- A. Provide habitat for cavity-nesting wildlife species.
 - 1. Retain [reserve trees](#) within all Land Use Designations. Consider the following:
 - a) Retain reserve trees (which may be soft or hard snags) with a reasonable assurance of windfirmness, while meeting management objectives, considering safety needs for people and equipment.
 - b) Reserve trees do not need to be evenly distributed; clumped distributions are preferred.
 - c) Favor saving reserve trees away from roads to reduce loss from firewood gathering activity.
 - d) After timber harvest in an area, remaining reserve trees may be designated as wildlife trees and marked to make them illegal for cutting.
 - e) Consider retaining live trees for future reserve tree recruitment.

XV. Moose Habitat

- A. Develop habitat [management direction](#) for moose habitats. Coordinate planning with the Alaska Dept. of Fish and Game.
 - 1. During project planning, inventory vegetative conditions in moose habitat areas to help identify short and long-term changes in habitat conditions, and to assess the effects of various management activities.
 - 2. Plan habitat improvement projects utilizing a variety of techniques such as silvicultural treatments, young-growth management activities, prescribed burning, planting, and other vegetative manipulation techniques as appropriate.

Standards & Guidelines

3. Coordinate other resource management activities to maintain or improve habitat conditions for moose. Manage roads to minimize adverse effects of human access on moose populations.

XVI. American Marten

- A. Implement a Forest-wide program, in cooperation with the Alaska Department of Fish and Game, to provide and conserve habitat to assist in maintaining long-term sustainable marten populations.
 1. Where marten mortality concerns have been identified, cooperate with the Alaska Department of Fish and Game to assist in managing marten mortality rates to within sustainable levels. Consider both access management on National Forest lands and hunter/trapper harvest regulations administered by the Alaska Department of Fish and Game.
 - a) Participate in interagency monitoring of marten populations on the forest.
 - b) Where marten data suggest that mortality exceeds sustainable levels, work with the Alaska Department of Fish and Game to identify probable sources of mortality. In an interagency analysis, examine the relationship between hunter/trapper marten harvest and human access.
 - c) Where road access has been determined, through the analysis, to significantly contribute to unsustainable marten mortality, implement effective road closures to reduce mortality. Effective road closure prohibits motorized traffic (e.g., may include removing culverts or bridges versus only signing). [Off-Highway Vehicle](#) travel restrictions may also be necessary. To meet this direction, develop and implement [road management objectives](#) through an interdisciplinary process (see [Transportation Forest-wide Standards & Guidelines](#)).
 2. The objective is to manage high value marten habitats in areas of timber harvest in higher risk biogeographic provinces to retain features of forest stand structure important to marten habitat use. Higher risk biogeographic provinces include regions where significant amounts of past timber harvest has established a large component of forest stand structure in young conifer stands (e.g., harvested since 1954) with little or no residual forest structure within the stands. These provinces are East Chichagof, Mitkof/Kupreanof, North and Central Prince of Wales, Etolin Island and Vicinity (excluding Zarembo Island where marten are absent), and Revillagegado Island and Vicinity. High value marten habitat includes stands below 1,500' elevation in high volume productive old-growth timber strata as identified in the latest version of the Interagency Marten Habitat Capability Model. High value habitat may be verified by project level review of model projections considering on-site specific information and stand characteristics.
 - a) Implement the following standards and guidelines in 2. b) and 2. c) for high value marten habitat, unless local information from Southeast Alaska indicates that the marten habitat objective may be accomplished by employing different methods. Document the analysis to use other methods through the NEPA process. Examples of such local information include: 1) habitat relationships information on the structure of forest stands used and selected by marten for various life functions; 2) the response of marten populations to the configuration of habitat at the landscape scale; 3) the amounts and dynamics of coarse woody debris in various habitat types of forest stands and the relationship to marten habitat use; and 4) the amount and distribution of high value marten habitat that will be protected through land allocations or standards and guidelines (e.g., habitat reserves, riparian buffers, beach fringe corridors, etc.) that maintain the integrity of the old-growth forest and the known or inferred marten population response to that combination of protected habitat.
 - b) In VCU's in the higher risk biogeographic provinces where over 33 percent of the productive old growth forest has been converted to young conifer stands (e.g., harvested since 1954) or will exceed this amount after a proposed project activity, vegetation management that creates openings over 2 acres should use silvicultural methods to meet the following forest stand structural characteristics after harvest:
 - (1) Maintain an average of over 30 percent canopy closure throughout the harvest unit. Remaining trees should be uniformly distributed throughout the stand, but trees may

be clumped for operational concerns or ecological opportunities. Remaining features should include:

- (a) An average of at least 8 large trees/acre (20-30" DBH or greater) for future snag recruitment. Where not available substitute the next largest trees.
 - (b) An average of at least 3 large decadent (standing dead or dying) trees/acre (20-30" DBH or greater). Where not available substitute the next largest trees.
 - (c) An average of at least 3 pieces/acre of down material (logs 20-30" or greater in diameter at the large end and 10' long), generally distributed throughout the harvest unit.
 - (d) Consider adding smaller or younger trees for future structure recruitment and to improve windfirmness.
 - (e) Retained trees should have a reasonable assurance of windfirmness.
- c) In VCU's within higher risk biogeographic provinces and where less than 33 percent of the original productive old-growth forest has been harvested, vegetation management applied to high value marten habitats that creates openings over 2 acres should use silvicultural methods to meet the marten objective, above. Within the harvest unit, meet the following forest stand structural characteristics after harvest:
- (1) Retain approximately 10-20 percent of the original stand structure.
 - (2) An average of at least 4 large trees/acre (20-30" DBH or greater) for future snag recruitment. Where not available substitute the next largest trees.
 - (3) An average of at least 3 large decadent (dead or dying) trees/acre (20-30" DBH or greater). Where not available substitute the next largest decadent trees.
 - (4) An average of at least 3 pieces/acre down material (logs 20-30" or greater in diameter at the large end and 10' long), generally distributed throughout the harvest unit.
 - (5) Retained trees should have a reasonable assurance of windfirmness.
 - (6) Consider adding smaller or younger trees for future structure recruitment and to improve windfirmness.
- d) For timber harvest units less than or equal to 2 acres in size, in high value marten habitat, allow full canopy removal but limit the number of openings to an equivalent of 25 percent of the stand removed every 50 years (e.g., 12-13, 2-acre openings; 25, 1-acre openings, etc. within a 100-acre stand).

XVII. *Endemic Terrestrial Mammals*

- A. The objective is to maintain habitat to support viable populations and improve knowledge of habitat relationships of rare or endemic terrestrial mammals that may represent unique populations with restricted ranges.
1. Conduct surveys for endemic mammals prior to any project that proposes to substantially alter vegetative cover (e.g. road construction, timber harvest, etc.).
 - a) Survey islands smaller than 50,000 acres in total size (e.g., Hecata Island and smaller) that have productive old-growth forest suitable for timber harvest. Conduct surveys on larger islands if there is a high likelihood that endemic taxa are present that may be affected by the proposed project.
 - b) The extent and rigor of surveys will be commensurate with the degree of existing and proposed forest fragmentation, and potential risk to endemic mammals that may be present.
 - c) Surveys should emphasize small (voles, mice, and shrews) and medium sized (ermine and squirrels) endemic mammals with limited dispersal capabilities that may exist within the project area.
 - d) Design and test survey protocols in cooperation with the PNW Research Station.
 2. Assess the impacts of the proposed project relative to the distinctiveness of the taxa, population status, degree of isolation, island size, and habitat associations relative to the proposed management activity.
 3. Where distinct taxa are located, design projects to provide for their long-term persistence on the island.

Standards & Guidelines

XVIII. Landscape Connectivity

- A. Design projects to maintain landscape connectivity.
 1. The objective is to provide corridors of old-growth forest among large and medium old-growth habitat reserves (Appendix K) and other natural setting Land Use Designations (LUD's) at the landscape scale.
 2. During the environmental analysis for projects proposing to harvest timber, construct roads, or otherwise significantly alter vegetative cover, conduct an analysis at the landscape scale to identify blocks of contiguous old-growth forest habitat within large and medium reserves and other natural setting LUD's and then determine whether forest connectivity exists among old-growth blocks in large and medium reserves and natural setting LUD's. Consider existing features of the old-growth strategy such as the beach fringe, riparian buffers or other lands unsuitable for development as contributing to maintaining connectivity among large and medium old growth habitat reserves and natural setting LUD's. Where these features do not provide sufficient productive old-growth forest connectivity to meet the objective in 1. above, provide stands, where they exist, of productive old-growth forest or relocate mapped small old-growth habitat reserves (See Appendix K) during project planning. Designed corridors should be of sufficient width to minimize edge effect and provide interior forest conditions.

Wildlife Habitat Improvement: WILD22

I. Improvement Projects

- A. Continue a young-growth management program to maintain, prolong, and/or improve understory forage production and to increase future **old growth** characteristics in young-growth timber stands for wildlife (deer, moose, black bear, and other species).
 1. Consider stands for young-growth management which meet the following conditions:
 - a) Historical deer **winter range** with high deer use.
 - b) Historical or potential moose winter range.
 - c) Areas with important and accessible consumptive and non-consumptive human uses of wildlife benefited by second-growth management.
 - d) Second-growth timber stands which have a relatively high tree stocking density which would result in early loss of understory forage. **Plant associations** containing hemlock or spruce and *Vaccinium* or skunk cabbage on high site potential should be considered for treatment.
 - e) Along the beach fringe where thinning **second growth** stands will accelerate development of potential bald eagle nest trees.
 2. Use the following general guidelines for precommercial thinning:
 - a) **Timing:** Time precommercial thinning before desirable forage species are shaded out by trees, although trees should fully occupy the site. The smaller trees in the stand should be at least one foot high so they can be seen and thinned or removed. Generally, highly productive sites will need to be thinned at a younger age (10-15 years) than moderate or low productive sites (15-25 years). Use site-specific conditions to determine the timing of precommercial thinning.
 - b) **Spacing:** Vary tree spacings from 12 feet by 12 feet to 20 feet by 20 feet. Site-specific objectives and analysis should identify spacings to be used. Consider variable spacings and leaving some unthinned thickets to create future structural diversity.
 - c) **Slash Disposal:** Generally, slash disposal treatments will not be necessary. In some site-specific areas, slash treatments may be needed to facilitate animal movements or increase forage production and availability. Consider slash treatments when slash depths exceed 1.6 ft. (50 cm.), as a general guideline. Slash treatments may include girdling trees, falling trees away from high forage areas, piling trees, or lopping and scattering of slash.
 3. Use the following general guidelines for **canopy gaps**:
 - a) **Timing:** Same as precommercial thinning. It is generally recommended that canopy gaps be created at the same time as precommercial thinning activity.
 - b) **Slash Disposal:** Generally, slash disposal treatments will not be necessary. In some site-specific areas, slash treatments may be needed to facilitate animal movements or

- increase forage production and availability. Consider slash treatments when slash depths exceed 1.6 ft. (50 cm.), as a general guideline. Slash treatments may include girdling trees, falling trees away from high forage areas, piling trees, or lopping and scattering of slash.
- c) **Sizes:** Size recommendations for canopy gaps range from 0.1 acres to 2.0 acres. Site-specific objectives and analysis should identify the gap sizes.
 - d) **Amount of Area:** Depending upon site-specific objectives, recommendations for the amount of area to be managed for canopy gaps range from 5 to 50 percent of the harvest unit.
 - e) **Maintenance:** Where possible, maintain canopy gaps to prevent loss of understory forage whenever possible from tree canopy closure or tree [regeneration](#). Generally, 10 to 25 year intervals will occur between treatments.
4. Use the following general guidelines for commercial thinning:
- a) **Spacing:** Vary tree spacing and maintain canopy gaps and openings to allow for some "side lighting" to occur.
 - b) **Timing:** Timing will vary depending on site-specific conditions.
 - c) **Method:** Encourage vertical diversity and windfirmness. Do not remove more than 25 to 30 percent of the stand basal area (rule of thumb to prevent [blowdown](#)).
 - d) **Snow Interception:** Leave 10 to 20 of the largest trees on each acre for snow interception.
- B. Coordinate habitat improvement projects with the Alaska Department of Fish and Game, the U.S. Fish and Wildlife Service and other appropriate agencies.

Standards & Guidelines

Wildlife Habitat Maintenance: WILD23

I. *Maintenance*

- A. Provide for the maintenance of wildlife habitat improvements.
 - 1. Fund maintenance of existing structures prior to the construction of new structures.
 - 2. Include funding for maintenance in planning and budgeting all structures.
 - 3. Maintain structures to assure objectives of the original project are met.
 - 4. If the improvement becomes inefficient to operate or maintain, redesign or stop maintenance of that improvement.
 - 5. If a structure becomes inoperable, consider removal or [reconstruction](#), as appropriate.
- B. Develop a written agreement with project cooperators on maintenance responsibilities prior to project construction.