

Chapter 4

References and Lists

Chapter 4

Table of Contents

Glossary.....	1
List of Preparers.....	28
List of Recipients.....	30
References.....	34
Index.....	44

Glossary

Access

The opportunity to approach, enter, and make use of public lands.

Access Management

Acquiring rights and developing and maintaining facilities needed by people to get to and move through public lands (physical attributes).

Alaska National Interest Lands Conservation Act (ANILCA)

Passed by Congress in 1980, this legislation designated 14 National Forest Wilderness areas in Southeast Alaska. The Alaska National Interest Lands Conservation Act of December 2, 1980, Public Law 96-487, 96th Congress, 94 Stat. 2371-2551, Section 810 requires evaluations of subsistence impacts before changing the use of these lands.

Alaska Native Claims Settlement Act (ANCSA)

Public Law 92-203, 92nd Congress, 85 Stat. 2371-2551. Approved December 18, 1971, Alaska Native Claims Settlement Act (ANCSA) provides for the settlement of certain land claims of Alaska Natives and for other purposes.

Alluvial Fan

A cone-shaped deposit of organic and mineral material made by a stream where it runs out onto a level plain or meets a slower stream.

Alternative

One of several plans or projects proposed for decision making.

Anadromous Fish

Anadromous fish (such as salmon, steelhead, and sea-run cutthroat trout) spend part of their lives in freshwater and part of their lives in saltwater.

Annualized Job

An annualized job is a full-time job lasting one year, or its equivalent.

Background

The distant part of a landscape. The seen or viewed area located from 3 or 5 miles to infinity from the viewer. (See "Foreground" and "Middleground".)

4 References and Lists

Basal Area

Total cross-sectional area of a tree or stand of trees. This is measured in diameter at breast height (DBH) and can be expressed in either square feet per acre or square meters per hectare.

Beach Fringe

The area inland from saltwater shorelines, which is typically forested.

Best Management Practice (BMP)

Practices used for the protection of water quality. BMPs are designed to prevent or reduce the amount of pollution from nonpoint sources or other adverse water quality impacts while meeting other goals and objectives. BMPs are standards to be achieved, not detailed or site-specific prescriptions or solutions. BMPs as defined in the USDA Forest Service Soil & Water Conservation Handbook are mandated for use in Region 10 under the Tongass Timber Reform Act.

Biogeographic Province

Twenty-one ecological subdivisions of Southeast Alaska that are identified by generally distinct ecological, physiographic, and biogeographic features. Plant and animal species composition, climate, and geology within each province are generally more similar within than among adjacent provinces. Historical events (such as glaciers and uplifting) are important to the nature of the province and to the barriers that distinguish each province.

Biological Diversity (Biodiversity)

The variety of life in all its forms and at all levels. This includes the various kinds and combinations of: genes; species of plants, animals, and microorganisms; populations; communities; and ecosystems. It also includes the physical and ecological processes that allow all levels to interact and survive. The most familiar level of biological diversity is the species level, which is the number and abundance of plants, animals, and microorganisms.

Blowdown

See Windthrow.

Board Foot (BF)

A unit of wood 12" x 12" x 1". One acre of commercial timber in Southeast Alaska on the average yields 28,000-34,000 board feet per acre (ranging from 8,000-90,000 board feet per acre). One million board feet (MMBF) would be the volume of wood covering 1 acre 2 feet thick. One million board feet yields

approximately enough timber to build 120 houses or 75,555 pounds of dissolving pulp.

Buffer

An area of vegetation of varying size, shape, and character managed to mitigate effects on a particular resource.

Capability

An evaluation of a resource's inherent potential for use.

Clearcut

Harvesting method in which all trees are cleared in one cut. It prepares the area for a new, evenaged stand. The area harvested may be a patch, stand, or strip large enough to be mapped or recorded as a separate age class in planning.

Code of Federal Regulations (CFR)

A codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government.

Connectivity

A measure of the extent that forest areas between or outside reserves provide habitat for breeding, feeding, dispersal, and movement.

Corridor

Connective links of certain types of vegetation between patches of suitable habitat which are necessary for certain species to facilitate movement of individuals between patches of suitable habitat. Also refers to transportation, utility rights-of-way, or yarding.

Cover

Refers to trees, shrubs, or other landscape features that allow an animal to partly or fully conceal itself.

Cruise

Refers to the general activity of determining timber volumes and quality as opposed to a specific method.

Cubic Foot (CF)

Equivalent to a cube of wood with 1-foot sides. The cubic foot volume is a measure of the total sound wood in a tree and is a more accurate depiction of wood volume than the board foot measure.

4 References and Lists

Cultural Resources

The fragile and nonrenewable remains of human activity that are found in historic districts, sites, and buildings, and artifacts, and that are important in past and present human events.

Culturally Modified Tree

A tree that has been altered by human use as part of their traditional use of the forest, usually for the exploitation of bark and wood products.

Cumulative Effects

The impacts on the environment resulting from additional incremental impacts of past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions occurring over time.

Decommission

For NFS roads, decommissioning removes the road from the long-term forest road transportation system. Otherwise, the act of decommissioning is the same for all roads. Action on the ground for decommissioning ranges from blocking the entrance and removing drainage structures to obliterating the road, returning the natural contours, and replanting vegetation. The end result is the stabilization and restoration of unneeded roads to a more natural state (36 CFR 212.1). See also Road Decommissioning.

Degradation

The general lowering of the surface of the land by erosive processes, especially by the removal of material through erosion and transportation by flowing water.

Detrimental Soil Disturbance

The condition where established threshold values of soil properties are exceeded and result in significant change or impairment to long-term soil productivity. (Also see the definitions for significant change and significant impairment.)

Developed Recreation

Recreation that requires facilities that, in turn, result in concentrated use of an area. Facilities in these areas might include roads, parking lots, picnic tables, toilets, drinking water, and buildings.

Diameter Breast Height (DBH)

The diameter of a tree measured 4 feet 6 inches from the ground.

Direct Employment

The jobs that are immediately associated with the timber sale, including, for example, logging, sawmills, and pulp mills.

Direct Income

Direct income is calculated from total payments an individual receives from his or her employment in a particular job category, over a defined time period.

Draft Environmental Impact Statement (Draft EIS)

A statement of environmental effects for a major Federal action which is released to the public and other agencies for comment and review prior to a final management decision. Required by Section 102 of the National Environmental Policy Act (NEPA).

Ecosystem

A community of organisms and its physical setting. An ecosystem, whether a fallen log or an entire watershed, includes resident organisms, non-living components such as soil nutrients, inputs such as rainfall, and outputs such as organisms that disperse to other ecosystems.

Effects

Effects, impacts, and consequences as used in this environmental impact statement are synonymous. Effects may be ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historical, cultural, economic, or social, and may be direct, indirect, or cumulative.

Direct Effects- Results of an action occurring when and where the action takes place.

Indirect Effects- Results of an action occurring at a location other than where the action takes place and/or later in time, but in the reasonably foreseeable future.

Cumulative Effects- See Cumulative Effects (above).

Endangered Species

Any species of animal or plant that is in danger of extinction throughout all or a significant portion of its range. Plant or animal species identified by the Secretary of the Interior as Endangered in accordance with the 1973 Endangered Species Act. See also Threatened Species, Sensitive Species.

4 References and Lists

Erosion

The wearing away of the land surface by running water, wind, ice, gravity, or other geological activities.

Estimated Mill Capacity

An estimate of the processing capability of the mill based on the amount of net sawlog volume that could be utilized by the mill, as currently configured, during a standard 250-day year, two shifts per day, annual operating schedule, not limited by the availability of employment, raw materials or market.

Estuary

For the purpose of this EIS process, estuary refers to the relatively flat, intertidal, and upland areas generally found at the heads of bays and mouths of streams. They are predominately mud and grass flats and are unforested except for scattered spruce or cottonwood.

Even-aged Management

The application of a combination of actions that result in the creation of stands in which trees of essentially the same age grow together. The difference in age between trees forming the main canopy level of a stand usually does not exceed 20 percent of that age of the stand at harvest rotation age. Clearcut, shelterwood, or seed tree cutting methods produce even-aged stands.

Executive Order

An order or regulation issued by the President or some administrative authority under his or her direction.

Existing Scenic Integrity (ESI)

Current state of the landscape, considering previous human alterations. ESI levels are as follows:

Very High- Landscapes where the landscape character is intact with only minute, if any, deviations. The existing landscape character and sense of place is expressed at the highest possible level.

High- Landscapes where the landscape character “appears” intact. Deviations may be present but repeat form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident.

Moderate- Landscapes where the landscape character “appears slightly altered.” Noticeable deviations remain visually subordinate to the landscape being viewed.

Low- Landscapes where the landscape character “appears moderately altered.” Deviations begin to dominate the landscape character being viewed, but borrow attributes such as size, shape, edge effect, and pattern of natural openings, vegetative type changes, or architectural styles outside the landscape being viewed.

Very Low- Landscapes where the landscape character “appears heavily altered.” Deviations may strongly dominate the landscape character. They do not borrow from attributes such as size, shape, edge effect, and pattern of natural openings, vegetative type changes, or architectural styles within or outside the landscape being viewed.

Unacceptable Low- Landscapes where the landscape character being viewed appears extremely altered. Deviations are extremely dominant and borrow little, if any, form, line, color, texture, pattern, or scale from the landscape character.

Floodplain

That portion of a river valley, adjacent to the river channel, which is covered with water when the river overflows its banks at flood stages.

Foreground

The stand of trees immediately adjacent to a scenic area, recreation facility, or forest highway; area located less than 1/4 mile from the viewer. See also Background and Middleground.

Forest and Rangeland Renewable Resources Planning Act of 1976 (RPA)

Amended in 1976 by the National Forest Management Act. See RPA Assessment and Program.

Forest or Forested Land

Land at least 10 percent occupied by forest trees of any size or formerly having had such tree cover and not currently developed for non-forest use.

Forested Wetland

A wetland whose vegetation is characterized by an overstory of trees that are 20 feet or taller.

Forest Plan

Source of management direction for an individual forest, specifying activity and output levels for a period of 10 to 15 years. Management direction in the Forest Plan is based on the issues identified at the time of the plan’s development.

4 References and Lists

Forest Transportation Atlas

A display of the system of roads, trails, and airfields of an administrative unit.

Forest Transportation Facility

A forest road or trail or an airfield that is displayed in a forest transportation atlas, including bridges, culverts, parking lots, marine access facilities, safety devices, and other improvements appurtenant to the forest transportation system.

Forest Transportation System

The system of National Forest System roads, National Forest System trails, and airfields on National Forest System lands.

Geographic Information System (GIS)

An information processing technology to input, store, manipulate, analyze, and display spatial and attribute data to support the decision-making process. It is a system of computer maps with corresponding site-specific information that can be electronically combined to provide reports and maps.

Geomorphology

The study of the forms of the land surface and the processes producing them. Also the study of the underlying rocks or parent materials and the landforms present which were formed in geological time.

Guideline

A preferred or advisable course of action or level of attainment designed to promote achievement of goals and objectives.

Habitat

The sum total of environmental conditions of a specific place occupied by an organism, population, or community of plants and animals.

Habitat Capability

The number of healthy animals that a habitat can sustain. Could be used in wildlife models to calculate rough population estimates for management indicator species.

Heritage Resources

See Cultural Resources.

Historic Property

Any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion on the National

Register, including artifacts, records, and material remains related to such a property or resource.

Hydric Soils

Soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

Indirect Employment

The jobs in service industries that are associated with the timber sale including, for example, suppliers of logging and milling equipment.

Invasive Species

A species that is non-native (or alien) to the habitat under consideration, and whose purposeful or accidental introduction causes, or is likely to cause, economic or environmental harm or harm to human health.

Inventoried Roadless Area (IRA)

See Roadless Area.

Interdisciplinary Team (IDT)

A group of people with different backgrounds assembled to research, analyze, and write a project Environmental Impact Statement. The team is assembled out of recognition that no one scientific discipline is sufficiently broad enough to adequately analyze a proposed action and its alternatives.

Issue

A point, matter, or section of public discussion or interest to be addressed or decided.

Karst

A type of topography that develops in areas underlain by soluble rocks, primarily limestone. Dissolution of the subsurface strata results in areas of well-developed, surface drainage that are sinkholes, collapsed channels, or caves.

Land Allocation

The decision to use land for various resource management objectives to best satisfy the issues, concerns and opportunities and meet assigned Forest output targets.

Land Classification

Forested land is classified under each of the land management alternatives according to how it relates to be management of the

4 References and Lists

timber resource. The following are definitions of timber classifications used for this purpose.

Land Use Designation (LUD)

In the Forest Plan Amendment, a defined area of land specific to which management direction is applied.

Landslides

The moderately rapid to rapid downslope movement of soil and rock materials that may or may not be water-saturated.

Large Woody Debris (LWD)

A term used to describe logs, tree boles, rootwads, and limbs that are in or near the stream channel. Current usage of the term defines LWD as wood material equal to or greater than 0.1 meter in diameter and equal to or greater than 1 meter in length.

Logging Systems

Ground Based- A system of log transportation in which logs are pulled from the woods to a landing by means of a crawler tractor, skidder, or similar ground-based equipment.

High Lead- A system of cable logging in which the working lines are elevated at the landing area by a rigged wooden tree of portable steel spar.

Skyline- A system of cable logging in which all or part of the weight of the logs is supported during yarding by a suspended cable.

Helicopter- A system of transporting logs from the woods to a landing as an external load on a helicopter.

Log Transfer Facility

The site and structures which are used for moving logs and timber products from land-based transportation forms to water-based transportation forms.

MBF

A thousand board feet net sawlog and utility volume.

MMBF

A million board feet net sawlog and utility volume.

Management Indicator Species (MIS)

Species selected in a planning process that are used to monitor the effects of planned management activities on viable populations of

wildlife and fish, including those that are socially or economically important.

Management Prescriptions

Management practices and intensity selected and scheduled for application on a specific area (e.g., a land use designation) to attain multiple use and other goals and objectives.

Management Requirement

Standards for resource protection, vegetation manipulation, silvicultural practices, even-aged management, riparian areas, and soil and water and diversity, to be met in accomplishing National Forest System goals and objectives (36 CFR 219.17).

Maritime Climate

Weather conditions controlled by an oceanic environment characterized by small annual temperature ranges and high precipitation.

Microsale

A microsale is a timber sale consisting of dead or down timber, which has been proposed by a prospective purchaser, and the District ranger agrees to offer for bidding using an informal advertisement, and short Bid Form.

Middleground

The visible terrain beyond the foreground where individual trees are still visible but do not stand out distinctly from the landscape; area located 1/4 to 5 miles from the viewer. See also “Foreground” and “Background”.

Mineral Soils

Soils consisting predominately of, and having its properties determined by, mineral material.

Mitigation

Measures designed to counteract environmental impacts or to make impacts less severe. These may include: avoiding an impact by not taking a certain action or part of an action; minimizing an impact by limiting the degree or magnitude of an action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or compensating for the impact by replacing or providing substitute resources or environments.

4 References and Lists

Mixed Conifer

In Southeast Alaska, mixed conifer stands usually consist of western hemlock, mountain hemlock, Alaska yellow-cedar, Western redcedar, and Sitka spruce species. Shore pine may occasionally be present depending on individual sites.

Model

A representation of reality used to describe, analyze, or understand a particular concept. A model may be a relatively simple qualitative description of a system or organization, or a highly abstract set of mathematical equations. A model has limits to its effectiveness, and is used as one of several tools to analyze a problem.

Monitoring

A process of collecting information to evaluate whether or not objectives of a project and its mitigation plan are being realized. Monitoring can occur at different levels: to confirm whether mitigation measures were carried out in the manner called for, to determine whether the mitigation measures were effective, or to validate whether overall goals and objectives were appropriate. Different levels call for different methods of monitoring.

Motor Vehicle

Any vehicle which is self-propelled, other than:

- (1) A vehicle operated on rails; and
- (2) Any wheelchair or mobility device, including one that is battery-powered, that is designed solely for use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area.

Multiple Use

The management of all the various renewable surface resources of the National Forest System so that they are used in the combination that will best meet the needs of the American people; harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources.

Muskeg

In Southeast Alaska, a type of bog that has developed over thousands of years in depressions or flat areas on gentle to steep slopes. Also called peatlands.

National Environmental Policy Act (NEPA) of 1969

An Act to declare a national policy which will encourage productive and enjoyable harmony between humankind and the environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humanity, to enrich the understanding of the ecological systems and natural resources important to the Nation, and to establish a Council on Environmental Quality (The Principal Laws Relating to Forest Service Activities, Agricultural Handbook 453. USDA Forest Service, 359 pp.).

National Forest Management Act (NFMA)

A law passed in 1976 as an amendment to the Forest and Rangeland Renewable Resources Planning Act requiring the preparation of Regional Guides and Forest Plans and the preparation of regulations to guide that development.

National Forest System Trail

A forest trail other than a trail which has been authorized by a legally documented right-of-way held by a State, county, or other local public road authority.

Native Selection

Application by Alaska Native corporations and individuals to a portion of the USDI Bureau of Land Management for conveyance of lands withdrawn in fulfillment of Native entitlements established under Alaska Native Claims Settlement Act (ANCSA).

Net Sawlog Volume

Tree or log volume suitable in size and quality to be processed into lumber.

No-action Alternative

The most likely condition expected to exist in the future if current management direction were to continue unchanged.

Non-forest Land

See Timber Classification

Notice of Intent (NOI)

A notice printed in the Federal Register announcing that an environmental impact statement will be prepared. The NOI must describe the proposed action and possible alternatives, describe the agency's proposed scoping process, and provide a contact person for further information.

4 References and Lists

Off-highway Vehicle

Any motor vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain.

Old Growth Forest

Ecosystems distinguished by old trees and related structural attributes. Old growth encompasses the later stages of forest stand development that typically differ from earlier stages in a variety of characteristics which may include larger tree size, higher composition, and different ecosystem function. The structure and function of an old-growth ecosystem will be influenced by its stand size and landscape position and context.

Organic Soils

Soils that contain a high percentage (generally greater than 20 to 30 percent) of organic matter throughout the soil depth.

Parent Material

The unconsolidated and partially weathered material from which upper layers of soil developed.

Peak Flow

The highest discharge of water recorded over a specified period of time at a given stream location. Often thought of in terms of spring snowmelt, summer, fall, or winter rainy season flows. Also called maximum flow.

Precommercial Thinning

The practice of removing some of the trees of less than marketable size from a stand in order to achieve various management objectives. See also Thinning.

Process Group

A combination of similar stream channel types based on major differences in landform, gradient, and channel shapes.

Productive Old Growth (POG)

Old-growth forest capable of producing at least 20 cubic feet of wood fiber per acre per year, or having greater than 8,000 board feet per acre.

Project Record

A system that records decisions and activities that result from the process of developing a forest plan, revision, or significant amendment.

Pruning

The removal, close to the branch collar or flush with the stem, of side branches (live or dead) and multiple leaders from a standing tree.

Public Participation

Meetings, conferences, seminars, workshops, tours, written comments, responses to survey questionnaires, and similar activities designed and held to obtain comments from the public about Forest Service activities.

Rare Plants

Rare plants are defined as those plants included on the Alaska Natural Heritage Program (ANHP) Vascular Plant Tracking List (ANHP, 2006) with a ranking of S1 or S2.

Record of Decision

A document separate from but associated with an environmental impact statement which states the decision, identifies all alternatives, specifying which were environmentally preferable, and states whether all practicable means to avoid environmental harm from the alternative have been adopted, and if not, why not.

Recreation Opportunity Spectrum (ROS)

A system for planning and managing recreation resources that categorizes recreation opportunities into six classes. Each class is defined in terms of the degree to which it satisfies certain recreation experience needs based on the extent to which the natural environment has been modified, the type of facilities provided, the degree of outdoor skills needed to enjoy the area and the relative density of recreation use. The Central Kupreanof project area contains five of the seven categories.

Primitive- An unmodified environment generally greater than 5,000 acres in size and located generally at least 3 miles from all roads and other motorized travel routes. A very low interaction between users (generally less than 3 group encounter per day) results in a very high probability of experiencing solitude, freedom, closeness to nature, tranquility, self-reliance, challenge, and risk. Evidence of other users is low. Restrictions and controls are not evident after entering the land unit. Motorized use is rare.

Semi-primitive Non-motorized – A natural or natural-appearing environment generally greater than 2,500 acres in size and generally located at least 0.5 mile (greater or less depending on terrain and vegetation, but no less than 0.25 mile) but not further than 3 miles from all roads and other motorized travel routes.

4 References and Lists

Concentration of users is low (generally less than 10 group encounter per day), but there is often evidence of other users. There is a high probability of experiencing solitude, freedom, closeness of nature, tranquility, self-reliance, challenge, and risk. There is a minimum of subtle on-site controls. No roads are present in the area.

Semi-primitive Motorized – A natural or natural-appearing environment generally greater than 2,500 acres in size and generally located within 0.5 mile of primitive roads and other motorized travel routes used by motor vehicles; but not closer than 0.5 mile (greater or less depending on terrain and vegetation, but no less than 0.25 miles) from better-than-primitive roads and other motored travel routes. Concentration of users is low (generally less than 10 group encounters per day), but there is often evidence of other users. There is a moderated probability of experiencing solitude, closeness to nature, and tranquility along with a high degree of self-reliance, challenge, and risk in using motorized equipment. Local roads may be present, or along saltwater shorelines there may be extensive boat traffic.

Roaded Modified – Vegetative and landform alterations typically dominate the landscape. There is little on-site control of users except for gated roads. There is moderate evidence of other users on roads (generally less than 20 group encounters per day), and little evidence of others or interactions at campsites. There is opportunity to get away from others but with easy access. Some self-feeling of independence and freedom exists with little challenge and risk. Recreation users will likely encounter timber management activities.

Roaded Natural- Resource modification and utilization are evident, in a predominantly naturally-appearing environment generally occurring within 0.5 mile (great or less depending on terrain and vegetation, but no less than 0.25 mile) from better-than-primitive roads and other motorized travel routes. Interactions between users may be moderate to high (generally less than 20 group encounters per day), with evidence of their users prevalent. There is an opportunity to affiliate with other users in developed sites but with some chance for privacy. Self-reliance on outdoor skills is only of moderate importance with little opportunity for challenge and risk. Motorized use is allowed.

Reforestation

The natural or artificial restocking of an area with trees.

Regeneration

The process of establishing a new crop of trees on previously harvested land.

Reserve Trees

Merchantable or submerchantable trees and snags that are left within the harvest unit to provide biological habitat components over the rotation.

Resident Fish

Fish that are not anadromous and that reside in freshwater on a permanent basis. Resident fish include non-anadromous Dolly Varden char and cutthroat trout.

Responsible Official

The Forest Service employee who has the delegated authority to make a specific decision.

Restoration

The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. The concept of ecological restoration is forward-looking. Restoration focuses on reestablishing composition, structure and ecological processes to maintain or increase resilience of terrestrial and aquatic ecosystems in a dynamic, continually evolving world (ecology definition).

Revegetation

The re-establishment and development of a plant cover. This may take place naturally through the reproductive processes of the existing flora or artificially through the direct action of reforestation or reseedling.

Riparian Area

Area with distinctive resource values and characteristics that contain elements of aquatic and riparian ecosystems, which can be geographically delineated.

Riparian Management Area (RMA)

The area including water, land and plants adjacent to perennial streams, lakes, and other bodies of water that is managed for the inherent qualities of the riparian ecosystem.

Road

A motor vehicle route over 50 inches wide, unless identified and managed as a trail. Designated Road, Trail, or Area: A National Forest System road, a National Forest System trail, or an area on

4 References and Lists

National Forest System lands that is designated for motor vehicle use pursuant to Sec. 212.51 on a motor vehicle use map.

National Forest System Road- A forest road other than a road which has been authorized by a legally documented right-of-way held by a State, county, or other local public road authority.

Temporary Road- A road necessary for emergency operations or authorized by contract, permit, lease, or other written authorization that is not a forest road that is not included in a forest transportation atlas. For National Forest System timber sales, temporary roads are constructed to harvest timber on a one-time basis, and are decommissioned after harvest operations are complete.

Unauthorized Road or Trail- A road or trail that is not a forest road or trail or a temporary road or trail and that is not included in a forest transportation atlas. Non-system roads include roads that have been decommissioned as well as roads now called unauthorized roads. Thus, unauthorized roads in this EIS include some decommissioned roads.

Road Closure

See Road Storage.

Road Construction

Supervising, inspecting, actual building, and incurrence of all costs incidental to the construction of a road.

Road Decommissioning

Activities that result in the stabilization and restoration of unneeded roads to a more natural state. The term generally refers to temporary roads constructed for timber harvests that have had stream courses restored, culverts removed, waterbars added where needed, and cut and fill slopes revegetated.

Road Maintenance

Periodic repairs to an existing road surface, brushing, and cleaning and repairing drainage features. These tasks are performed to keep the roads in the safe and useful condition for which they were designed. Repairs may be done as annual maintenance.

Road Maintenance Levels

Maintenance Level numbers 1 through 5 indicate the level of service and required maintenance for specific NFS roads, consistent with road management objectives and maintenance criteria, as shown in FSH 7709.58, Section 12.3 – Transportation System Maintenance Handbook. For instance, Maintenance Level

1 is assigned to intermittent service roads and indicates basic custodial maintenance while the roads are closed to vehicular traffic. Maintenance Level 2 is assigned to roads for use by high-clearance vehicles such as log haul trucks and or administrative use, but not appropriate for passenger car traffic. These maintenance levels apply to Central Kupreanof Timber Harvest. Maintenance Levels 3, 4, and 5 indicate higher service level roads, surfaced or paved to accommodate passenger cars.

Road Storage

Storage is a term used only for NFS roads. The physical on-the-ground changes are similar to a decommissioned road; however, roads in storage are considered part of the long-term forest road transportation system and may be opened to vehicular traffic in the future. The process/action of storage involves closing a road to vehicle traffic and placing it in a condition that requires minimum maintenance to protect the environment and preserve the facility for future use. Drainage structures in live drains are completely removed to restore natural drainage patterns. Ditch relief culverts may be left in place and supplemented with deep water bars in order to minimize the cost of reusing the roads in the future.

Roadless Area

An area of undeveloped public land within which there are no improved roads maintained for travel by means of motorized vehicles intended for highway use. Inventoried roadless areas (IRAs) are undeveloped areas typically exceeding 5,000 acres that meet the minimum criteria for wilderness consideration under the Wilderness Act.

Rotation

The planned number of years (100-200 years in Alaska) between the time that a forest stand is regenerated and its next cutting at a specified stage of maturity.

Sacred Site

Any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site.

4 References and Lists

Sawlog

That portion of a tree that is suitable in size and quality for the production of dimension lumber collectively known as sawtimber.

Scenic Integrity Objective (SIO)

A desired level of scenic quality and diversity of natural features based on physical and sociological characteristics of an area. Refers to the degree of acceptable alterations of the characteristic landscape. The adopted SIO is the SIO to be achieved as a result of management direction identified in the approved Forest Plan. SIOs are described below:

Very High- Landscapes where the landscape character is intact with only minute, if any, deviations. The existing landscape character and sense of place is expressed at the highest possible level.

High- Landscapes where the landscape character “appears” intact. Deviations may be present but repeat form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident.

Moderate- Landscapes where the landscape character “appears slightly altered.” Noticeable deviations remain visually subordinate to the landscape being viewed.

Low- Landscapes where the landscape character “appears moderately altered.” Deviations begin to dominate the landscape character being viewed, but borrow attributes such as size, shape, edge effect, and pattern of natural openings, vegetative type changes, or architectural styles outside the landscape being viewed. They should not only appear as valued character outside the landscape being viewed but compatible or complimentary to the character within.

Very Low- Landscapes where the landscape character “appears heavily altered.” Deviations may strongly dominate the landscape character. They may not borrow from attributes such as size, shape, edge effect, and pattern of natural openings, vegetative type changes, or architectural styles within or outside the landscape being viewed. However, deviations must be shaped and blended with the natural terrain so that elements such as unnatural edges, roads, landings, and structures do not dominate the composition.

Scheduled Lands

Land suitable and scheduled for timber production and which are in the land base for the calculation of the allowable sale quantity and long-term sustained yield timber capacity.

Scoping Process

Early and open activities used to determine the scope and significance of a proposed action, what level of analysis is required, what data is needed, and what level of public participation is appropriate. Scoping focuses on the issues surrounding the proposed action, and the range of actions, alternatives, and impacts to be considered in an EA or an EIS.

Sediment

Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface.

Sensitive Species

Plant and animal species which are susceptible or vulnerable to activity impacts or habitat alterations. Those species that have appeared in the Federal Register as proposed for classification or are under consideration for official listing as endangered or threatened species, that are on a non-official State list, or that are recognized by the Regional Forester as needing special management to prevent placement on Federal or State lists.

Silviculture

The science of controlling the establishment, composition, and growth of forests.

Soil Productivity

The capacity of a soil, in its normal environment, to produce a specific plant or sequence of plants under a specific system of management.

Sortyard

A location used to sort grades, types, and size of logs.

Spawning Area

The available area in a streamcourse which is suitable for the deposition and incubation of salmon or trout eggs.

Stand (Tree Stand)

An aggregation of trees occupying a specific area and sufficiently uniform in composition, age arrangement, and condition as to be distinguishable from the forest in adjoining areas.

Standard

A course of action or level of attainment required by the 2008 Forest Plan to promote achievement of goals and objectives.

4 References and Lists

State Historic Preservation Officer (SHPO)

State-appointed official who administers Federal and State programs for cultural resources.

Stocking

The degree of occupancy of land by trees as measured by basal area or number of trees and as compared to a stocking standard; that is, the basal area or number of trees required to fully use the growth potential of the land.

Stream Classes

Class I- Streams and lakes with anadromous (migrating from the ocean) or adfluvial (migrating from lakes) fish or fish habitat; or, high quality resident fish waters, or habitat above fish migration barriers known to provide reasonable enhancement opportunities for anadromous fish.

Class II- Streams and lakes with resident fish or fish habitat and generally steep (6 to 25 percent or higher) gradients where no anadromous fish occur, and otherwise not meeting class I criteria.

Class III- Streams are perennial and intermittent streams that have no fish populations or fish habitat, but have sufficient flow or sediment and debris transport to directly influence downstream water quality or fish habitat capability.

Class IV- Other intermittent, ephemeral, and small perennial channels with insufficient flow or sediment transport capabilities to directly influence downstream water quality or fish habitat capability. Class IV streams are too small to be mapped on aerial photographs, thus they appear only where field mapping has taken place.

Stream Order

First-order streams are the smallest unbranched tributaries; second-order streams are initiated by the point where two first-order streams meet; third-order streams are initiated by the point where two second-order streams meet, and so on.

Structural Diversity

The diversity of forest structure, both vertically and horizontally, which provides for a variety of forest habitats such as logs and multi-layered forest canopy for plants and animals.

Stumpage

The value of timber as it stands uncut in terms of dollar value per thousand board feet.

Subsistence

Section 803 of the Alaska National Interest Lands Conservation Act defines subsistence use as "the customary and traditional uses by rural Alaska residents of wild renewable resources for direct, personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of nonedible by-products of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade."

Subsistence Use Area

Important subsistence use areas include the "most reliable" and "most often hunted" categories from the Tongass Resource Use Cooperative Survey (TRUCS) and from subsistence survey data from ADF&G, the University of Alaska, and the Forest Service, Region 10. Important use areas include both intensive and extensive use areas for subsistence harvest of deer, furbearers, and salmon.

Substrate

The type of material in the bed (bottom) of rivers and streams.

Succession

The ecological progression of community change over time, characterized by displacements of species leading towards a stable climax community.

Suitable

Commercial forest land identified as having both the biological capability and availability to produce industrial wood products.

Suspended Sediment

The very fine soil particles which remain in suspension in water for a considerable period of time without contact with the stream or river channel bottom.

Sustained Yield

The amount of renewable resources that can be produced continuously at a given intensity of management.

Thinning

The practice of removing some of the trees in a stand so that the remaining trees will grow faster due to reduced competition for nutrients, water, and sunlight. Thinning may also be done to change the characteristics of a stand for wildlife or other purposes. Thinning may be done at two different stages – Precommercial Thinning or Commercial Thinning (see definitions in this section).

4 References and Lists

Threatened Species

Plant or animal species which is likely to become endangered throughout all or a significant portion of its range within the foreseeable future, as defined in the Endangered Species Act of 1973, and which has been designated in the Federal Register by the Secretary of the Interior as a Threatened Species. See also Endangered Species, Sensitive Species.

Threshold

The point or level of activity beyond which an undesirable set of responses begins to take place within a given resource system.

Tiering

Eliminating repetitive discussions of the same issue by incorporating by reference. The general discussion in an environmental impact statement of broader scope; e.g., this document is tiered to the Tongass Land and Resource Management Plan FEIS.

Timber Appraisal

Establishing the fair market value of timber by taking the selling value minus manufacturing costs, the cost of getting logs from the stump to the manufacturer, and an allowance for profit and risk.

Commercial Forest: Forest land tentatively suitable for the production of continuous crops of timber and that has not been withdrawn.

Nonforest: Land that has never supported forests and land formerly forested where use for timber production is precluded by development or other uses.

Forest: Land at least 10 percent stocked (based on crown cover) by forest trees of any size, or formerly having had such tree cover and not currently developed for nonforest use.

Suitable or Suitable Available: Land to be managed for timber production on a regulated basis.

Unsuitable: Forest land withdrawn from timber utilization by statute or administrative regulation (for example, wilderness), or identified as inappropriate for timber production in the Forest planning process.

Timber Harvest Unit

A timber harvest unit (or simply, "unit") is a portion of a timber sale within which Forest Service specifies for harvest all or part of the timber to meet the requirements of a timber sale contract.

Tongass Timber Reform Act (TTRA)

This Act (1990) requires annual appropriations for timber management on the Tongass National Forest, with a provision providing for the multiple use and sustained yield of all renewable forest resources.

Trail

A route 50 inches or less in width or a route over 50 inches wide that is identified and managed as a trail.

Turbidity

An expression of the optical quality that causes light to be scattered and absorbed rather than transmitted in a straight line through the water sample. Turbidity is caused by the presence of suspended sediment.

Two-aged Management

A silvicultural method in which the majority of the trees in a harvest unit are cut in one entry, and the rest are left as residual tree, either singly or in patches. The residual trees remain unharvested to provide structural diversity and older-aged trees within the second-growth stand.

Understory

The trees and shrubs in a forest growing under the canopy or overstory.

Uneven-aged Management

Forest management techniques which simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of diameter or age classes. Cutting is usually regulated by specifying the number or proportion of trees of particular sizes to retain within each area, thereby maintaining a planned distribution of size classes. Single tree selection and group selection harvest methods create or maintain uneven-aged stands. See also "Partial Cut".

Unsuitable

See Timber Classification.

Utility Logs

Those logs that do not meet sawlog grade but are suitable for production of firm usable pulp chips.

4 References and Lists

Value Comparison Unit (VCU)

Areas which generally encompass a drainage basin containing one or more large stream systems; boundaries usually follow easily recognizable watershed divides. Established to provide a common set of areas where resource inventories could be conducted and resource interpretations made.

Viable Population

The number of individuals of a species required to ensure the long-term existence of the species in natural, self-sustaining populations adequately distributed throughout their region.

Viewshed

An expansive landscape or panoramic vista seen from a road, marine waterway, or specific viewpoint.

V-Notches

A deeply incised valley along some waterways that would look like a "V" from a cross-section. These abrupt changes in terrain features are often used as harvest unit or yarding boundaries.

Volume

Stand volume based on standing net board feet per acre by Scribner Rule.

Volume Strata

Categories of timber volume derived from the timber type data layer (TIMTYP) and the common land unit data layer (CLU). Three volume strata (low, medium, and high) are recognized in the Forest Plan.

Watershed

The area that contributes water to a drainage or stream. Portion of the forest in which all surface water drains to a common point. Watersheds can range from a few tens of acres that drain a single small intermittent stream to many thousands of acres for a stream that drains hundreds of connected intermittent and perennial streams.

Wetlands

Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Wildlife Analysis Area (WAA)

A division of land used by the Alaska Department of Fish and Game for wildlife analysis.

Windfirm

Trees that have been exposed to the wind throughout their life and have developed a strong root system or trees that are protected from the wind by terrain features.

Windthrow

The act of trees being uprooted by the wind. In Southeast Alaska, Sitka spruce and hemlock trees are shallow rooted and susceptible to windthrow. There are generally three types of windthrow:

Endemic: where individual trees are blown over;

Catastrophic: where a major windstorm can blow down hundreds of acres; and

Management Related: where the clearing of trees in an area make the adjacent standing trees vulnerable to windthrow.

Yarding

The process of conveying logs from the stump to a landing location.

List of Preparers

Tiffany Benna

Position: Interdisciplinary Planning Team Leader (from April 2007)

Experience: 8½ years with the Forest Service

Education: BA English/Creative Writing and Poetry

Ben Case

Position: Forester (May 2007)

Experience: 15 years with the Forest Service

Education: BS Forest Management

Carey Case

Position: Writer/Editor (May 2007)

Experience: 10 years with the Forest Service

Education: BA Political Science

Mary Clemens

Position: Recreation Planner

Experience: 25 years with the Forest Service

Education: BS Forest Management

Gina Esposito

Position: Archaeologist

Experience: 10 years with the Forest Service

Education: BA Anthropology

Crystal Harlan

Position: Fish Biologist

Experience: 5½ years with the Forest Service

Education: BS Biology with a Concentration in Marine Science

Alan Murph

Position: Transportation Planner

Experience: 28 years professional experience (9 years with the Forest Service)

Education: BS Civil Engineering

Madonna Parks

Position:Geographic Information Systems Technician

Experience:17 years with the Forest Service

R.D. Parks

Position:Silviculturist

Experience:27 years professional experience, 18 years with the Forest Service

Education:BS Forestry

Charles Parsley

Position: Wildlife Biologist

Experience: 20 years with the Forest Service

Education: BS Wildlife Science, MS Fisheries

Gene Primaky

Position:Geographic Information Systems Technician

Experience:16 years with the Forest Service

Education:Certificate of Forestry, AV Tech

Jane Smith

Position:Archaeologist

Experience:23 years professional experience (16 years with the Forest Service)

Education:BS Anthropology

Jim Steward

Position:Landscape Architect

Experience:24 years with the Forest Service

Heath Whitacre

Position:Hydrologist (Dec 2006 - present)

Experience:7 years with the Forest Service

Education:BA Environmental Biology, MS Watershed Science

Marina Whitacre

Position:Writer/Editor (April 2007 - present)

Experience:4 years with the Forest Service

Education:BA Biology, MS Range Science

List of DEIS Recipients

The following agencies, organizations, and individuals were provided with a copy of the Central Kupreanof Timber Harvest Draft Environmental Impact Statement.

Agencies

Alaska Department of Fish and Game, Division of Wildlife Conservation	Hoonah Ranger District, Tongass National Forest
Alaska Department of Natural Resources	Juneau Ranger District, Tongass National Forest
Alaska Department of Fish and Game	Ketchikan-Misty Ranger District, Tongass National Forest
Alaska Department of Fish and Game, Area Wildlife Biologist	National Marine Fisheries Service (USDOC), Protected Resources Management Division
Admiralty National Monument	National Park Service (USDI)
Alaska Department of Fish and Game, Division of Subsistence	Thorne Bay Ranger District, Tongass National Forest
Alaska Division of Forestry, Regional Forester	National Marine Fisheries Service
Bureau of Land Management (USDI)	NOAA Office of Policy and Strategic Planning
Chugach National Forest	Office of the Secretary, Senior Advisor
Craig Ranger District, Tongass National Forest	Petersburg Ranger District, Tongass National Forest
Division of Coastal and Ocean Management (DCOM)	Sitka Ranger District, Tongass National Forest
Environmental Protection Agency, Region 10, EIS Review Coordinator	State of Alaska Department of Natural Resources, Office of Habitat Management and Permitting
Federal Aviation Administration (USDOT), Alaska Region Headquarters	State of Alaska, Department of Environmental Conservation
Federal Highway Administration (USDOT)	University of Alaska Land Management

US Advisory Council on
Historic Preservation

US Army Corps of Engineers,
Juneau Regulatory Field Office

US Army Engineer District,
Regulatory Branch, E Section

US Army Engineers, Pacific
Ocean Division (CEPOD)

US Coast Guard,
Environmental Management

US Department of Energy

US Environmental Protection
Agency

US Environmental Protection
Agency, Alaska Operations
Office

US Fish and Wildlife Service

US House of Representatives

US Navy

USDA APHIS PPD/EAD

USDA Forest Service, Director
of Ecosystem Management
Coordinator

USDA Natural Resources
Conservation Service

USDA Forest Service, Alaska
Region

USDA Forest Service, Alaska
Region, Ecosystem Planning

USDA Forest Service,
Environmental Coordinator

USDA Forest Service,
Ketchikan Supervisor's Office

USDA Forest Service,
Petersburg Supervisor's Office

USDA Forest Service,
Publications and Printing
Program Manager

USDA Forest Service,
Regional Forester

USDI Office of Environmental
Policy and Compliance

Wrangell Ranger District,
Tongass National Forest

Tribes and Tribal Corporations

Kake Tribal Corporation

Organized Village of Kake

Petersburg Indian Association

Sealaska Corporation

Tlingit/Haida Central Council

Wrangell Cooperative
Association

Libraries

Craig Public Library

Haines Public Library

Hollis Public Library

Hyder Public Library

Kake Public Library

Kasaan Community Library

Ketchikan Public Library

Kattleson Memorial Library

Pelican Public Library

Petersburg Public Library

Quinney Library

Tenakee Springs Public Library

Thorne Bay Community
Library

4 References and Lists

University of Minnesota
Forestry Library

USDA National Agricultural
Library

Wrangell Public Library

Organizations and Businesses

Alaska Forest Association

Bluewater Adventures, Ltd.

Cascadia Wildlands Project

Earthjustice Legal Defense

Forest Dwellers

Forest Industry Consulting

Glacier Guides, Inc.

Green Peace

Juneau Group of the Sierra
Club

Narrows Conservation
Coalition

Paden Timber Services

Parker Guide Service, Inc.

SEACC

Sitka Conservation Society

Thuja Plicata Lumber
Company

Tongass Kayak Adventures

The Wilderness Society

Public Officials and Offices

City of Kupreanof

City of Petersburg

City of Port Alexander

United States Senator Lisa
Murkowski

United States Senator Don
Young

Individuals

Dick Artley

Dave Beebe

Anissa Berry

Mary Ellen Clark

Dick Coose

Nicholas Davis

Lou Anna Denison

Ken Dorman

Susan Erickson

Barney Freedman

John Geddie

Eric Grundberg

Eric Hanson

Kim Hastings

Karen R. Hegyi

Molly Hogan

R.W. Holsinger

Deb Hurley

David Kensinger

Becky Knight

Dan LaCrosse

Jay and Carolyn Pritchett

Sigurd Mathisen

Harold Medalen

Gerry Merrigan

Karin McCullough

Tim Moore

Jean Norheim

Dave Ohmer
Craig Olson
Helmer Olson
Brian Paust
William B. Privett
Steve Seley

Ronald Simpson
Martha Smith
Allen Smith
Mike Stainbrook
John R. Swanson
John Wigren

References

- Alaska Department of Commerce, Community and Economic Development, State of Alaska (ADCCED). 2004. ADCCED Community Profile website.
www.dced.state.ak.us/oed/toubus/home.cfm (accessed 11/20/2008)
- Alaska Community Database, DCCED 2007, Community Information Summaries (CIS),
<http://www.commerce.state.ak.us/dca/commdb/CIS.cfm>
- Alaska Natural Heritage Program 2008. Rare Vascular Plant Tracking List.
http://aknhp.uaa.alaska.edu/botany/Botany_tracking_page.htm
(Accessed June 2008)
- Alexander, Susan J. 2006. *Employment Coefficients and Indirect Effects for NEAT-R. USDA Forest Service, Alaska Region.* 2p. Unpublished document.
- Beers, Russell. 2006. *Central Kupreanof Timber Sale Special Uses, Lands, and Minerals Resource Report.* Peterburg Ranger District, Tongass National Forest. December 2006.
- Benda, L., N.L. Poff, D. Miller, T. Dunne, G. Reeves, G. Pess, and M. Pollock. 2004. *The Network Dynamics Hypothesis: How channel Networks Structure Riverine Habitats.* Bioscience 54(5): 413-427.
- Beschta, R.L., Pyles, M.R., Skaugset, A.E., Surfleet, C.G. 2000. *Peakflow Responses to Forest Practices in the Western Cascades of Oregon, USA.* Journal of Hydrology. 233: 102-120.
- Brackley, A.M.; Parrent, D.J.; Rojas, R.W.; 2006. *Estimating Sawmill Processing Capacity for Tongass Timber: 2003 and 2004 Update.* USDA Forest Service Research Note PNW-RN-553.
- Brackley, A.M.; T.D.; Haynes, R.W. 2008. *An Addendum: Timber Products Output and Timber Harvests in Alaska: Projections for 2005-25.* USDA Forest Service General Technical Report PNW-GTR-677.

- Brainard, J. T. 2008. *Deer Population Fluctuations in SE Alaska*. United States Department of Agriculture, Forest Service, Petersburg Alaska.
- Brardinoni, F., M.A. Hassan and H.O. Slaymaker. 2002. *Complex Mass Wasting Response of Drainage Basins to Forest Management in Coastal British Columbia*. *Geomorphology* 49: 109-124.
- Bryant, M.D., Caouette, J.P., and B.E. Wright 2004. *Evaluating Stream Habitat Survey Data and Statistical Power Using an Example From Southeast Alaska*. *North American Journal of Fishery Management*. 24: 1353-1362.
- Bschor, Dennis, E. Regional Forester Memo. March 14, 2007. *Limited Interstate Shipments of Unprocessed Sitka spruce and Western Hemlock Timber*. U.S. Department of Agriculture Forest Service, Alaska Region.
- Cederholm, C.J., Reid, L.M., and E.O. Salo. 1980. *Cumulative Effects of Logging Road Sediment on Salmonid Populations in the Clearwater River, Jefferson County, Washington*. *Conference Proceedings: Salmon-Spawning Gravel: A Renewable Resource in the Pacific Northwest?* Seattle, Washington. October 6-7, 1980.
- Clemens, M. 2008a. *Biological Evaluation for Plants for the Central Kupreanof Timber Sale*. Petersburg Ranger District, Tongass National Forest. Sept. 2008.
- Clemens, M. 2008b. *Risk Assessment for Invasive Plants for the Central Kupreanof Timber Sale EIS*. Petersburg Ranger District, Tongass National Forest. Sept. 2008.
- Clemens, M. 2008c. *The Botany Resource Report for the Central Kupreanof Timber Harvest EIS*. Petersburg Ranger District, Tongass National Forest. Sept 2008.
- Cole, F. 2005. *Timber Harvest Project Environmental Analysis*. File Code: 1920/2430. May 25, 2005, 5pp.
- Cook, J. et al. 2001. *A Phylogeographic perspective on Endemism in the Alexander Archipelago of Southeast Alaska*. *Biological Conservation* 97(2001) 215-227.

4 References and Lists

- Cook, J. Dawson, N. Macdonald, S. 2006. Conservation of Highly Fragmented Systems: The North Temperate Alexander Archipelago. *Biological Conservation* Volume 133, Issue 1, (November 2006) 1-15.
- Cowardin, L. M., V. Carter, F. Golet, and E. T. LaRoe. 1979 (Reprinted 1992). *Classification of Wetlands and Deepwater Habitats of the United States*. U. S. Fish and Wildlife Services FWS/OBS-79-31.
- Croke, J., S. Mockler, P. Fogarty and I. Takken, 2005. *Sediment Concentration Changes In Runoff Pathways From A Forest Road Network And The Resultant Spatial Pattern of Catchment Connectivity*. *Geomorphology* 68: 257-268.
- Esposito, G. S. 2006. *Cultural Resource Survey of the Central Kupreanof Timber Sale, Kupreanof Island, Alaska. Project No. R2006100521024*. Manuscript on file, USDA Forest Service, Tongass National Forest, Petersburg Ranger District, Petersburg, Alaska.
- Glaser, P.H. 2000. *Impact of Forestry Roads on Peatlands within the Tongass National Forest, Southeast Alaska*. Unpublished report. USDA Forest Service, Juneau, Alaska.
- Grant, G.E., Lewis, S.L., Swanson, F.J., Cissel, J.H. and McDonnell, J.J. 2008. *Effects of Forest Practices on Peak Flows and Consequent Channel Response: A State-of-Science Report for Western Oregon and Washington*. USDA Forest Service, Pacific Northwest Research Station. PNW-GTR-760: 76pp.
- Hanley, T. A., C. T. Robbins and D. E. Spalinger. 1989. *Forest Habitats and the Nutritional Ecology of Sitka Black-tailed Deer: A Research Synthesis with Implications for Forest Management*. USDA Forest Service. Gen. Tech. Rep. PNW-RN-459. 11 pp.
- Harris A.S. 1989. *Wind in the Forests of Southeast Alaska and Guides for Reducing Damage*. PNW GTR-244. 68pp.
- Hennon, P. and Shaw III, C. 1997. *What is Killing These Long-Lived, Defensive Trees?* *Journal of Forestry* Volume 95, Number 12, pages 4-10
- Hicks, B.J., Beschta, R.L., Harr, D.R. 1991. *Long-term Changes in Streamflow following Logging in Western Oregon and Associated Fisheries Implication*. *Water Resources Bulletin*. 27(2): 217-226.

- Housley, Robert., Alexander, Susan J., Vaughn Ken. May 29, 2007. *Impact on Indicated Advertised Value of Limited Interstate Shipments of Unprocessed Sitka Spruce and Western Hemlock Timber*. USDA Forest Service, Alaska Region. 3pp. Unpublished document
- Johnson, J., E. Weiss, and S. Maclean. 2004. *2004 Catalog of Waters Important for Spawning, Rearing, or Migration of Anadromous Fishes – Southern Region, Effective January 15, 2005*. ADF&G, November 2004, 465pp.
- Jones, J.A. 2000. *Hydrologic Processes and Peak Discharge Response to Forest Removal, Regrowth, and Roads in 10 Small Experimental Basins, Western Cascades, Oregon*. Water Resources Research. 36(9): 2621-2642.
- Jones, J.A., and G.E. Grant. 1996. *Peak Flow Responses to Clear-cutting and Roads in Small and Large Basins, Western Cascades, Oregon*. Water Resources Research. 32(4): 559-974.
- Kahklen K. and W. Hartsog. 1999. *Results of Erosion Studies on the Tongass National Forest*. USDA Forest Service, Juneau Forestry Sciences Lab. 48 pp.
- Kilborn, Kenneth A.; Parrent, Daniel J.; Housley, Robert D. 2004. *Estimating Sawmill Processing Capacity for Tongass Timber*. Res. Note PNW-RN-545. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 12 p.
- Kilborn, K.A.; 2002. *Lumber Recovery Studies of Alaska Sawmills, 1997 to 1999*. USDA Forest Service General Technical Report PNW-GTR 544.
- Krosse, P. C. 1993. *Preliminary Soil Resource Inventory Report. Stikine Area*. Tongass National Forest. USDA Forest Service. Alaska Region. Draft.
- Kruse, J. and R. Frazier. 1988. *Report to the Community of Kake: Tongass Resource Use Cooperative Suervey (TRUCS). A report series prepared for 31 communities in southeast Alaska*. Institute of Social and Economic research, University of Alaska in Anchorage in cooperation with the USDA Forest Service and the Alaska Department of Fish and Game Division of Subsistence, Juneau, Alaska.

4 References and Lists

- Landwehr, D. J. and G. Nowacki. 1999. *Statistical Review of Soil Disturbance Transect Data Collected on the Ketchikan Area, Tongass National Forest*. February. Unpublished Report.
- Lowell, R. 2008. Personal Communication. Petersburg, Alaska. Alaska Department of Fish and Game. August 28, 2008.
- MacDonald, S.O., Cook, J. 2000. *The Mammal Fauna of Southeast Alaska*. University of Alaska Museum.
- May, C., 2007. *Sediment and Wood Routing in Steep Headwater Streams: An Overview of Geomorphic Processes and Their Topographic Signatures*. *Forest Science* (53)2: 119-130.
- McGee, K. E. 2000. *Effects of Forest Roads on Surface and Subsurface Flow in Southeast Alaska*. Masters Thesis. Oregon State University.
- Moore, R. Dan and S.M. Wondzell. 2005. *Physical Hydrology and the Effects of Forest Harvesting in the Pacific Northwest: A Review*. *Journal of the American Water Resources Association*. 41(4):763-784
- Pawuk, W.H. and E.J. Kissinger 1989.
- North Pacific Fisheries Management Council. 2008. Fishery Management Plan for Groundfish of the Gulf of Alaska. <http://www.fakr.noaa.gov/npfmc/fmp/goa/goa.htm>.
- Nowacki, G., M. Shephard, P. Krosse, W. Pawuk, G. Fischer, J. Baichtal, D. Brew, E. Kissinger & T. Brock. 2001. *Ecological Subsections of Southeast Alaska and Neighboring Areas of Canada*. USDA Forest Service, Alaska Region. Technical Publication No. R10-TP-75.
- Parrent, D.J.; 2006. *Letter with enclosed Mill Capacity and Utilization Study, CY 2005*. JEDC Wood Products Development Service.
- Parrent, D.J.; 2007. *Tongass Sawmill Capacity and Production Report for Cy2006. Final Report October 11, 2007*. JEDC Wood Products Development Service.
- Person, D.K.; M. Kirchhoff, V. Van Ballenberghe, G.C. Iverson and E. Grossman. 1996. *The Alexander Archipelago Wolf: A Conservation Assessment*. USDA Forest Service, Pacific Northwest Research Station, General Technical Report PNW-GTR-384. November 1996, 42 pp.

- Person, D.; M. Kirchhoff; V. Van Ballenberghe and R. T. Bowyer. 1997. A letter to Beth Pendleton Leader of the Tongass Land Management Planning Team concerning the basic population ecology relevant to the wolf conservation assessment.
- Pawuk, W. Kissinger, E.J. September 19, 1997. Preliminary Forest Plant Associations of the Stikine Area, Tongass National Forest. R10-TP-72U.S.D.A. Forest Service Alaska Region 2008. Forest Health.
- Reid, L.M. and T. Dunne. 1984. *Sediment Production From Forest Road Surfaces*. Water Resources Research. 20 (11): 1753-1761.
- Rib, H. T. and Ta Liang. 1978. Chapter 3 of *Recognition and Identification: Terrain Evaluation for Landslide Investigations* referenced from *Landslides Analysis and Control Special Report 176*. Transportation Research Board National Academy of Sciences. Washington, DC. Pgs. 34-80.
- Robertson, Guy C. 2003. *A Test of the Economic Base Hypothesis in the Small Forest Communities of Southeast Alaska*. Gen. Tech. Rep. PNW-GTR-592. Portland, OR: U.S. Department of Agriculture Forest Service, Pacific Northwest Research Station. 101 pp.
- State of Alaska. 2004. *State of Alaska Transportation and Public Facilities- Southeast Alaska Transportation Plan*. 195pp.
- Still, J. C., P. E. Bittenbender, K. W. Bean, and E. G. Gensler. 2002. *Mineral Assessment of the Stikine Area, Central Southeast Alaska*. BLM-Alaska Technical Report 51. May 2002.
- Suring, L.H., R.W. Flynn and E.J. DeGayner. 1992. *Habitat Capability Model for Marten in Southeast Alaska: Winter Habitat*. USDA Forest Service, Alaska Region, Juneau, AK. 18 pp.
- Suring, L.H., E.J. DeGayner, R.W. Flynn, M.D. Kirchhoff, J.W. Schoen, and L.C. Shea. 1992b. *Habitat Capability Model for Sitka Black-tailed Deer in Southeast Alaska: Winter habitat, Version 6.5*. USDA Forest Service. 85 pp.

4 References and Lists

- Suring, L.H., D.C. Crocker-Bedford, R.W. Flynn, C.S. Hale, G.C. Iverson, M.D. Kirchhoff, T.E. Schenck, L.C. Shea, and K. Titus. 1993. *A Proposed Strategy for Maintaining Well-distributed, Viable Populations of Wildlife associated with Old Growth Forests in Southeast Alaska. Report of an Interagency Committee.* Review Draft, May 1993. Juneau, AK. 281 pp.
- Swanston, Douglas N. 1969. *Mass Wasting in Coastal Alaska. Research Paper.* PNW-83. Juneau, Alaska: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station, USDA Institute of Northern Forestry.
- Swanston D. N. 1995. *Overview of Controlling Stability Characteristics of Steep Terrain in Southeast Alaska with Discussion of Needed Standardization for Mass Movement Hazard Indexing on the Tongass National Forest.* Unpublished paper.
- Swanston, D. N. and D. A. Marion. 1991. *Landslide Response to Timber Harvest in Southeast Alaska.* Proceedings of the Fifth Federal Interagency Sedimentation Conference.
- Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule Executive Order 11644/11989 Use of Off Road Vehicles on the Public Land 36 CFR Sections 212, 251, 261 and 295.
- USDA Forest Service. 2008. *Land and Resource Management Plan. Tongass National Forest.* R10-MB-603b. U.S. Department of Agriculture, Forest Service, Alaska Region, Juneau.
- USDA Forest Service. 2008b. *Final Environmental Impact Statement Plan Amendment. Tongass National Forest.* R10-MB-603c. U.S. Department of Agriculture, Forest Service, Alaska Region, Juneau.
- USDA Forest Service. 2008. *Tongass National Forest Land and Resource Management Plan. Tongass National Forest.* R10-MB-603f. Juneau, AK: Alaska Region.
- USDA Forest Service. NRCS 2008. The PLANTS database (<http://plants.usda.gov/>) National Plant Data Center, Baton Rouge, LA 70874-4490 USA. (Accessed June 2008)

USDA Forest Service Alaska Region. 2007. 2006 Annual Monitoring & Evaluation Report.

http://fsweb.stikine.r10.fs.fed.us/tongass/planning/2006_Monitoring_Report_Separations/2006_fish.doc (September 2, 2008.)

USDA Forest Service. 2006. *District Court Decision in California v. USDA and Wilderness Society v. USFS*, C05-04038 (Sept. 22, 2006).

USDA Forest Service. 2006. *Soil and Water Conservation Handbook. US Forest Service Alaska Region 10: R10-2509.22-2006-2*. Chapter 10, Section 14.26. Juneau, Alaska. 117 pp.

USDA Forest Service. 2005. *Landscape Character Types of the Tongass National Forest*. Alaska Region.

USDA Forest Service. 2005. On the Right Trail! A Forest Service Program OHV Access. www.fs.fed.us/recreation/programs/ohv. (Accessed 11/19/2008)

USDA Forest Service. 2004a. *Review of Stikine Area Outfitter and Guide EA Findings Letter*. Tongass National Forest Supervisor's Office, Ketchikan, Alaska. April 2004.

USDA Forest Service. 2004b. *Supplemental Information for the Review of the Stikine Area Outfitter and Guide EA Findings*. Petersburg Ranger District, Tongass National Forest. April 2004.

USDA Forest Service. 2003. *Tongass Land Management Plan Revision, Final Supplemental Environmental Impact statement, Roadless Area Evaluation for Wilderness Recommendations Record of Decision*. Juneau, Alaska: US Department of Agriculture, Forest Service, Alaska Region, Tongass National Forest. R10-MB-481g. February 2003.

USDA Forest Service. 2003. *Special Areas; Roadless Area Conservation; Applicability to the Tongass National Forest, Alaska*. Washington, DC: Federal Register. 68(249): 75136-75146.

USDA Forest Service. 2003. *Tongass Land management Plan Revision, Final Supplemental Environmental Impact statement, Roadless Area Evaluation for Wilderness Recommendations*. Juneau, Alaska: US Department of Agriculture, Forest Service,

4 References and Lists

Alaska Region, Tongass National Forest. R10-MB-481b.
February 2003.

USDA Forest Service. 2002 *Programmatic Agreement among the USDA Forest Service, Alaska Region, the Advisory Council on Historic Preservation, and the Alaska State Historic Preservation Officer regarding the Heritage Resource Management of National Forests in the State of Alaska*. Agreement # 02MU-111001-076. Manuscript on file, USDA Forest Service, Tongass National Forest, Petersburg Supervisor's Office, Petersburg, Alaska.

USDA Forest Service. 2001. Forest Insect & Disease Leaflet 135
“*Hemlock Dwarf Mistletoe*”.

USDA Forest Service. 2001b. *Aquatic Habitat Management Handbook*. U.S. Forest Service. Alaska Region: FSH 2090.21.

USDA Forest Service, 2000. *Kupreanof Island Analysis. Tongass National Forest. R10-MB-418*. U.S. Department of Agriculture, Forest Service, Alaska Region, Juneau.

USDA Forest Service. 1997. *Land and Resource Management Plan. Tongass National Forest. R10-MB-338dd*. U.S. Department of Agriculture, Forest Service, Alaska Region, Juneau

USDA Forest Service. 1997b. *Land and Management Plan Revision Part 2. Tongass National Forest. R10-MB-338b*. U.S. Department of Agriculture, Forest Service, Alaska Region, Juneau. Assessment. Tongass National Forest. R10-MB-346, Juneau, AK. August 1997.

USDA Forest Service. 1995. *Landscape Aesthetics, A Handbook for Scenery Management*. Agriculture Handbook Number 701. U.S. Forest Service, Washington, D.C.

USDA Forest Service. 1992. *Channel Type User Guide, Tongass National Forest, Southeast Alaska*. U.S. Forest Service, Alaska Region, R10-TP-26, Juneau, Alaska. 179 pp.

USDA Forest Service. 1990. ROS Users Guide.

USDA Forest Service. 2008. Departmental Regulations 9500-004
<http://www.ocio.usda.gov/directives/doc/DR9500-004.pdf>
(Accessed 11/19/2008)

- USDA Forest Service. 1979. *Water Resources Atlas*. Alaska Region. Juneau, Alaska.
- USDA Forest Service. 1978 National Forest Management Act. <http://www.fs.fed.us/emc/nfma/includes/NFMA1976.pdf> (Accessed 11/19/2008)
- USDA Forest Service. Forest Service Handbooks.
FSH 2409.18 Timber Sale Preparation Handbook
FSH 2609.25 Subsistence Management and Use Handbook (1985)
FSH 2090.21 Aquatic Habitat Management Handbook
- Welsch, D. J., D. L. Smart, J. N. Boyer, P. Minkin, H. C. Smith and T. L. McCandless. 1995. *Forested Wetlands: Functions, Benefits, and the use of Best Management Practices*. NA-PR-01-95.
- Wemple, B.C. and J.A. Jones 2003. *Runoff Production On Forest Roads In A Steep, Mountain Catchment*. Water Resources Research 39 doi:10.10029/2002WR001744.
- Wemple, B.C., J.A. Jones and G.E. Grant 1996. *Channel Network Extension by Logging Roads in Two Basins, Western Cascades, Oregon*. Journal of the American Water Resources Association 32 (6): 1195
- Woodsmith, R.D., Noel, J.R., and M.L. Dilger. 2005. *An Approach to Effectiveness Monitoring of Floodplain Channel Aquatic Habitat: Channel Condition Assessment*. *Landscape and Urban Planning* 72: 177-204.
- Ziemer R. R. 1981. *The Role of Vegetation in the Stability of Forested Slopes*. USDA Forest Service, Pacific Southwest Forest and Range Experiment Station. Division I. XVII International Union of Forest Research Organizations World Congress Proceedings-Referate-Exposés. Japan.

Index

Chapter 1

A

Alaska Department of Fish and Game (ADF&G) · 14
Alaska Department of Natural Resources · 14, 22
Alaska National Interest Lands Conservation Act (ANILCA) · 20
Army Corps of Engineers (ACOE) · 14, 19

B

Bald and Golden Eagle Protection Act · 20

C

Clean Air Act · 20
Clean Water Act · 19, 20
clearcutting · 13
Coastal Zone Management Act (CZMA) · 20, 21
coho · 6
Council on Environmental Quality (CEQ) · 13
cultural resources · 20
cumulative effects · 13, 18

D

deer · 18
desired condition · 2, 3, 6, 7
diversity · 2, 16

E

economics · 15, 16
employment · 16
Environmental Protection Agency (EPA) · 1, 14, 21

F

Forest Plan · 1, 2, 3, 6, 7, 8, 9, 10, 13, 15, 16, 17, 18, 19, 22

H

helicopter · 20
hunting · 20

hydrology · 4, 18

I

income · 16

J

job · 16

K

karst · 10

L

Land Use Designation (LUD) · 7, 8, 9, 11, 17, 18
 log transfer facility (LTF) · 22
 logging camp · 22
 logging system · 16

M

Marine Mammal Protection Act · 21
 market demand · 2, 16
 mitigation measure · 1, 3, 15
 Modified Landscape · 7, 9
 monitoring · 3, 15
 multiple use · 6

N

National Environmental Policy Act (NEPA) · 1, 17, 19, 21, 22
 National Forest Management Act (NFMA) · 21
 National Historic Preservation Act (NHPA) · 21
 Notice of Intent (NOI) · 13

O

old-growth · 7, 9, 10, 18
 overstory removal · 19

P

permit · 9, 19
 precommercial thinning · 19
 proposed action · 1, 2, 3, 13, 15, 18
 public involvement · 13
 purpose and need · 1, 2

4 References and Lists

R

Record of Decision (ROD) · 2, 6
regeneration · 19
Rivers and Harbors Act · 21
road construction · 3, 6, 9, 13, 17
Road Management Objective (RMO) · 3, 17
roads · 3, 10, 16, 17, 19, 22

S

salmon · 6
sawtimber · 2
scoping · 13, 15, 17
selection · 19
sensitive species · 19
silviculture · 19
small timber sale · 6
Special Interest Area · 7, 8, 9, 10
species composition · 19
standards and guidelines · 7
steelhead trout · 4
stewardship · 4, 14
structure · 1, 4, 22
subsistence · 3, 13, 17, 19
suitable land · 2, 9, 10
sustained yield · 2

T

thinning · 4, 19
timber harvest · 2, 3, 4, 6, 9, 10, 13, 14, 15, 16, 17, 18, 19, 21
timber production · 9
Timber Production · 7, 9, 18
timber sales · 6, 10, 15, 16, 17, 22
timber supply · 2, 16
Tlingit · 14
Tongass Land and Resource Management Plan (TLRMP) (see *Forest Plan*) · 1, 2, 16
Tongass National Forest · 1, 2, 4, 7, 21
Tongass Timber Reform Act (TTRA) · 21, 22
transportation · 21
tribal government · 13, 14
trout · 4

U

U.S. Fish and Wildlife Service (USFWS) · 10, 14

W

water quality · 17
wetlands · 19, 20
wilderness · 7, 8, 9, 16

Chapter 2

A

Alaska National Interest Lands Conservation Act (ANILCA) · 7

B

Best Management Practices (BMP) · 2, 5, 6, 7, 12
biological diversity · 5

C

cabin · 8
Clean Water Act · 7
clearcutting · 3, 17
Council on Environmental Quality (CEQ) · 3

D

deer · 2, 3, 9, 10

E

economics · 3, 4, 10, 12, 15
erosion · 6
estuary · 5

F

fish habitat · 6
floating camp · 7
Forest Plan · 1, 2, 3, 4, 5, 6, 7, 11, 12, 14

G

goshawk · 7

H

helicopter · 3, 7, 12, 15
heritage resource · 5
hydrology · 8, 17

4 References and Lists

I

income · 12, 13

K

karst · 6

L

log transfer facility (LTF) · 5, 7

M

market demand · 4
mitigation measure · 8, 11
monitoring · 2, 1, 9, 11

N

National Environmental Policy Act (NEPA) · 14
National Forest Management Act (NFMA) · 1, 11

O

old-growth · 2, 5, 7
old-growth habitat · 7

P

permit · 5
precommercial thinning · 9
preferred alternative · 2, 4
productive old growth (POG) · 16, 17
Projects Common to all Action Alternatives · 2, 8, 27
proposed action · 2, 10
public involvement · 2
purpose and need · 10, 14

R

riparian · 5
riparian area · 5
road construction · 3, 4, 7, 11, 12, 13, 14
Road Management Objective (RMO) · 8, 11, 14
roadless · 13
roads · 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15

S

scoping · 1, 2
selection · 17
 silviculture · 9, 17
soil · 17
 standards and guidelines · 2, 3, 7, 12
 State Historic Preservation Officer (SHPO) · 5
 stewardship · 8, 9
 stream buffer · 7
 structure · 8
 subsistence · 7, 9, 14, 18

T

thinning · 9
 timber harvest · 1, 3, 4, 5, 6, 11, 12, 13, 14
 timber management · 10
 timber sales · 12
 timber supply · 10
 Tongass Land and Resource Management Plan (TLRMP) (see *Forest Plan*) · 4
 Tongass National Forest · 6, 11, 13
 trails · 8
 transportation · 1, 9, 12, 13, 14, 15

U

uneven-aged management · 3

V

vegetation · 7, 17
 viewshed · 6, 17

W

water quality · 5
 wetlands · 6, 17
 wilderness · 13
 winter range · 10

Chapter 3

A

Alaska Department of Fish and Game (ADF&G) · 2, 66, 87, 88, 102, 110
 Alaska Department of Labor · 11
 Alaska Department of Natural Resources · 188
 Alaska Marine Highway · 39, 170
 Alaska National Interest Lands Conservation Act (ANILCA) · 8, 11, 92, 186

4 References and Lists

Alaska Water Quality Standards · 186
anadromous fish · 102, 117

B

bald eagle · 68, 69
beach fringe · 70, 73, 89, 97
Best Management Practices (BMP) · 3, 43, 44, 45, 49, 51, 52, 62, 64, 105, 106, 109, 120, 138, 142, 146, 147, 153, 155, 186, 187, 188, 189
Biogeographic province · 75
biological diversity · 4, 24, 80, 128
brown bear · 69
brown creeper · 68, 69
Bureau of Land Management · 137

C

cabin · 18, 53, 157, 166, 170, 172, 173, 174, 176, 177, 179, 180
chinook · 117, 120
Clean Air Act · 187
Clean Water Act · 51, 147, 155, 186
clearcutting · 4, 9, 12, 13, 14, 28, 30, 83, 84, 106, 112, 113, 114, 115, 116, 126, 129, 130, 131, 132, 133, 163, 164
Coastal Zone Management Act (CZMA) · 8, 187
coho · **103**, 107, 119, 120
commercial fishing · 6, 11, 19, 20
competition · 56, 79, 91, 92, 132, 186
Council on Environmental Quality (CEQ) · 3, 7
crab · 103, 117
cultural resources · 4, 183, 184, 185, 189
cumulative effects · 1, 3, **33**, **34**, 42, 43, 46, 50, 54, 57, 59, 63, 69, 83, 84, 89, 94, 108, 111, 113, 115, 117, 119, 141, 144, 152, 154, 155, 160, 162, 166, 167, 178, 179, 183

D

deer · 67, 68, 69, 71, 72, 73, 74, 75, 81, 87, 88, 89, 90, 92, 93, 132, 170, 173, 186
desired condition · 41, 160, 162, 168, 184
distance zone · 158, 165
diversity · 10, 23, 26, 28, 79, 80, 130, 148
Dolly Varden · **103**, 117, 119

E

economics · 1, 4, 9, 10, 12, 13, 16, 17, 18, 20, 22, 45, 81, 87, 128, 129, 130
employment · 6, 9, 10, 11, 12, 17, 18, 19, 20
endangered species · 185, 190
Environmental Protection Agency (EPA) · 3, 186
erosion · 37, 52, 62, 64, 100, 111, 138, 139, 141, 142, 146, 155, 183
estuary · 27, 69, 123, 150
even-aged management · 13, 128, 133, 134
existing visual condition · 160

F

Federal Cave Resource Protection Act · 185
 finfish · 88, 89
 firewood · 43, 90
 fish habitat · 37, 46, 47, 93, 102, 103, 105, 117, 138, 139
 fishing · 6, 7, 11, 19, 20, 87, 158, 170, 171, 172, 173, 189
 floating camp · 41, 165
 forest health · 133, 134
 Forest Plan · 1, 2, 3, 4, 7, 12, 13, 18, 19, 20, 22, 23, 24, 25, 27, **33, 34, 37**, 41, 43, 44, 46, 50, 51, 66, 67, 69, 72, 73, 74, 79, 80, 81, 83, 86, 87, 89, 92, 93, 104, 105, 106, 119, 120, 123, 128, 137, 139, 142, 146, 149, 152, 157, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 171, 185, 186, 188, 189, 190
 Forest Practices Act · 8, 92

G

Game Management Unit (GMU) · 66, 87, 88
 geology · 1, 2, 23, 51, 79, 137, 155
 goshawk · 40, 68

H

habitat capability · 79, 89
hairy woodpecker · 68, 69
 helicopter · 4, 9, 12, 13, 14, **15**, 20, 21, 22, 27, 28, 29, 30, 112, 113, 130, 138, 143, 144, 163, 164
 heritage resource · 181, 182, 183, 184
 heritage site · 184
 humpback whale · 68
 hunting · 70, 73, 87, 89, 90, 93, 158, 170, 171, 172, 173, 174, 177, 183
 hydrology · 1, 46, 53, 56, 59, 94, 99, 107, 108, 109, 111, 116, 119, 146, 153, 155, 180

I

income · 6, 10, 17, 18, 19, 20, 21, 189
 independent timber sale · 127
 intertidal · 147

J

job · 19, 20
 Juneau · 11

K

karst · 26, 137, 138, 185

L

Land Use Designation (LUD) · 2, 24, 25, 44, 64, 93, 123, 133, 160, 161, 163, 164, 165, 167,

4 References and Lists

169

landslide · 37, 98, 99, 106, 109, 138, 140, 143, 145, 146
log transfer facility (LTF) · 12, 14, 17, **32**, 39, 40, 46, 47, 48, 101, 104, 107, 114, 116, 119,
120, 165, 183, 187, 188
logging camp · 41, 187
logging system · 10, 12, 17, 18, 20, 44, 62, 113, 129, 130, 142
long-term productivity · 4, 137

M

Management Indicator Species (MIS) · 67, 68
marine resource · 88, 189
market demand · 24, 133, 185
marten · 68, 69, 70, 71, 74, 88
mass wasting · 122, 138
microsale · 18, 46
minerals · 4, 51, 137
mining · 11, 51, 137, 182
mitigation measure · 3, 42, 52, 60, 65, 104, 106, 109, 166, 184
Modified Landscape · 161, 163, 167
monitoring · 3, 7, 52, 64, 125, 141, 184, 186
multiple use · 93
muskeg · 25, 75, 123, 148, 149, 150, 151, 152, 169

N

National Environmental Policy Act (NEPA) · 3, 7, 10, **33**, 41, 45, 46, 50, 63, 66, 91, 108, 117,
118, 127, 146,
155, 184
National Forest Management Act (NFMA) · 4, 92, 129, 185
National Historic Preservation Act (NHPA) · 181, 185, 188
National Register of Historic Places (NRHP) · 181, 184

O

old-growth · 30, 31, 40, 66, 69, 70, 71, 72, 73, 74, 75, 79, 82, 84, 85, 89, 93, 126, 131, 133,
134, 135, 161, 173
old-growth habitat · 40, 69, 93
Old-Growth Reserves (OGR) · 50, 69, 70, 71, 72, 73, 74
otter · 69, 74, 148
outfitters and guides · 19

P

past timber harvest · 166
patch · 71
peregrine falcon · 68, 69
permit · 38, 41, 70, 120, 174
precommercial thinning · 126, 136
preferred alternative · 147, 151
productive forest · 75, 122, 123
productive old growth (POG) · 4, 66, 69, 70, 72, 73, 75, 79, 80, 81, 82, 83, 84, 85, 86, 89
Projects Common to all Action Alternatives · 18, **34**, 46, 62, 64, 91, 136, 146, 155, 166, 183,
188
proposed action · 1, 7, 43, 67, 73, 104, 106, 118, 119, 144, 183, 189

public involvement · 1

R

Record of Decision (ROD) · 12, 24, **33**, 41, 185

Recreation Opportunity Spectrum (ROS) · 170, 171, 172, 174, 175, 177

red-breasted sapsucker · 68, 69

reforestation · 131

regeneration · 43, 90, 126, 128, 129, 130, 131, 132, 133, 136, 149

renewable resource · 4

riparian · 57, 61, 69, 70, 93, 97, 99, 105, 120, 123, 125, 185, 188, 189

riparian area · 61, 71, 188, 189

riparian management area (RMA) · 105

road construction · 4, 7, 9, 13, **16**, 17, 21, 23, 24, 27, 28, 29, 30, 31, **33**, 37, 38, 40, 42, 43, 45, 46, 47, 48, 51, 52, 56, 62, 63, 64, 65, 91, 112, 114, 116, 121, 127, 138, 140, 141, 142, 144, 145, 147, 150, 151, 152, 153, 154, 165, 169, 176, 177, 178, 181, 183, 188, 189

Road Management Objective (RMO) · 41, 44, 45, 46, 50, 91, 93, 180

roadless · **31, 32**

roads · 3, 4, 9, 12, 14, 17, 18, 21, 23, 26, 27, 28, 29, 30, 31, **32, 33, 34, 37**, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 53, 54, 59, 60, 61, 63, 65, 75, 81, 89, 90, 91, 93, 94, 97, 98, 99, 100, 101, 104, 105, 106, 107, 108, 111, 112, 114, 116, 119, 135, 140, 141, 142, 144, 145, 146, 150, 151, 152, 153, 154, 155, 162, 166, 169, 170, 171, 174, 176, 177, 178, 179, 180, 183, 187, 188, 190

S

salmon · 6, 70, 71, 88, 89, **103**, 107, 117, 118, 119, 120, 148, 172

scenic quality · 130, 157, 161, 162, 164, 165

scoping · 9, 67

second-growth · 54, 74, 82, 84, 85, 131, 133, 135, 153, 173, 180

sediment · 98, 99, 100, 104, 105, 106, 107, 108, 111, 114, 119, 121, 147, 148

selection · 7, 13, 14, 29, 30, 72, 94, 106, 111, 126, 130, 131, 162, 163, 164, 171

sensitive species · 23, 29, 55, 57, 59, 67, 190

shellfish · 87, 103

significant restriction · 89, 92, 186

silviculture · 13, 18, 54, 55, 119, 122, 126, 129, 131, 136, 146, 156, 180, 187

Sitka · **15**, 19, 68, 71, 72, 74, 75, 89, 123, 148

sockeye salmon · 117, 119

soil · 4, 28, 52, 56, 61, 62, 64, 75, 80, 99, 100, 122, 125, 129, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 148, 149, 152, 153, 154, 155, 186, 187

Special Interest Area · 161

species composition · 2, **15**, 126, 128, 131

standards and guidelines · 13, 18, 43, 51, 67, 69, 73, 86, 93, 188, 190

State Historic Preservation Officer (SHPO) · 181, 185

stewardship · 18, 53, 54, 64, **103**, 119, 136, 184

strata · 16, 79, 81, 82, 125, 127, 128

stream · 101

stream buffer · 40, 125

stream class · 96, 101, 105

stream crossing · 47, 48, 53, 81, 91, 99, 107, 108, 111, 112, 114, 116, 146

stream habitat · 103

structure · 47, 48, 69, 79, 80, 100, 101, 125, 126, 127, 128, 129, 130, 131, 133, 187

subsistence · 1, 5, 8, 11, 23, **37**, 46, 57, 59, 84, 87, 88, 89, 91, 92, 93, 158, 183, 186, 189

suitable land · 24

4 References and Lists

T

temporary road · 31, 32

tentatively suitable · 139

thinning · 54, 89, 107, 109, 111, 119, 125, 126, 128, 129, 132, 135, 136, 146, 156, 166, 167, 180

timber

harvest · 11

harvest volume · 17

timber harvest · 4, 9, 11, 12, 14, 18, 21, 23, 24, 28, 29, 30, 31, **32, 33, 34, 37**, 38, 41, 44, 46, 47, 48, 56, 57, 59, 60, 62, 64, 70, 71, 74, 79, 88, 90, 91, 93, 94, 97, 98, 105, 106, 107, 108, 109, 111, 112, 113, 114, 115, 116, 117, 119, 123, 125, 126, 127, 129, 131, 132, 133, 135, 138, 139, 140, 141, 142, 143, 144, 145, 146, 152, 153, 155, 161, 162, 163, 164, 165, 166, 167, 168, 169, 171, 176, 177, 178, 179, 181, 182, 183, 185, 187, 188, 189

timber management · 9, 12, 27, 66, 123

timber production · 4, 44, 92, 122, 123, 132, 149, 157, 161

Timber Production · 160, 161, 163, 164, 165, 167, 168, 169

timber sales · 3, 9, 83, 85, 127, 182, 188

timber supply · 11, 12, 17, 135

Tlingit · 5, 7, 182, 183

Tongass Land and Resource Management Plan (TLRMP) (see *Forest Plan*) · 80, 92, 147, 148, 152, 184, 187

Tongass National Forest · 2, 4, 7, 9, 10, 11, 12, 20, 24, **33**, 54, 57, 58, 59, 66, 69, 80, 92, 93, 99, 101, 125, 128, 171, 187

Tongass Timber Reform Act (TTRA) · 92, 185

tourism · 5, 6, 7, 11, 19, 20, 24

trails · 53, 81, 91, 146, 155, 158, 166, 170, 176, 177, 179, 180

transportation · 13, 20, 21, **37**, 38, 39, 41, 42, 44, 46, 51, 52, 54, 89, 105, 107, 108, 112, 122, 146, 152, 156, 180, 190

tribal government · 86

trout · 117, 119, 172

turbidity · 107

U

uneven-aged management · 128, 130, 135

V

Value Comparison Unit (VCU) · 2, 162, 167

vegetation · 1, 13, 39, 42, 44, 55, 70, 71, 74, 75, 79, 80, 81, 91, 97, 99, 105, 107, 108, 111, 122, 127, 131, 132, 133, 136, 137, 138, 139, 141, 142, 143, 145, 147, 148, 152, 153, 154, 158, 163, 164, 165, 167, 169

viable population · 73

viewshed · 162, 167

volume class · 80, 125, 127

volume strata · 16, 79, 81, 127

W

water quality · 4, **37**, 97, 104, 107, 109, 111, 120

waterfowl · 71, 87, 148, 172

western hemlock · 19, 75, 123, 125, 148

wetlands · 1, 4, 23, 45, 51, 55, 118, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 187, 188, 189

whales · 67, 68

wilderness · 2, 23, 24, 28, 30, 31, **33**, 75, 161, 169
wildlife habitat · 66, 79, 80, 82, 83, 84, 85, 86, 88, 107, 109, 111, 126, 128, 129, 130, 148
wind disturbance · 125, 126
winter habitat · 70, 72
winter range · 72

Y

yellow-cedar (Alaska yellow-cedar) · 19, 75, 123, 125, 133, 183