

Tongass National Forest Plan Revision

Assessment - Working Version of the Table of Contents and Literature Cited for all Assessment Sections

July 2024

The Assessment is the first step in the National Forest land management plan revision process. The Assessment is not a decision, but a summary of known current conditions and trends.

The purpose of this assessment is to rapidly evaluate existing information about relevant ecological, economic, and social conditions, trends and sustainability, and document their relationship to the Tongass land management plan within the context of the broader landscape.

The Assessment objectives are:

1. Identify a solid base of available information
2. Build an understanding of relevant information with the public and other interested parties before starting plan revision
3. Develop relationship with interested parties to facilities public and government participation among government entities, Alaska Native Tribes, Alaska Native Corporations, private landowners, and other partners and interested parties.
4. Develop readiness of both the Agency and the public to focus on topics appropriate to a plan or plan revision.

We plan to release our complete draft Assessment in early 2025. We are in the process of developing the assessment sections, and they are a work in progress.

This document is a preliminary framework for our assessment sections. Included is a DRAFT Table of Contents, and the current literature and information that we have gathered, for each required Assessment topic.

This is subject to change, and we expect that some of these sections will look different at the time of the Draft Assessment release. We will continue to incorporate tribal, agency and public feedback into this document throughout the assessment phase.

The sections below are topics that are required to be Assessed, as directed by the 2012 Forest Service Planning Rule. The overall organization of the Assessment may look different than currently shown below, as we receive additional feedback during this assessment phase.

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DRAFT

Assessment Sections-Tables of Contents

Tongass National Forest Distinct Roles and Contributions

INTRODUCTION

LARGEST NATIONAL FOREST IN THE COUNTRY

KNOWN FOR GLACIERS, STEEP WALLED FJORDS, SMALL TOWNS SURROUNDED BY MOUNTAINS, LUSH FORESTS, WILDLIFE

RELATIVELY INTACT AND STABLE ECOSYSTEMS

CLIMATE CHANGE IS RE-SHAPING THE LANDSCAPE, BUT NOT YET MAJOR EFFECTS TO ECOSYSTEM SERVICES

THE TONGASS HAS MANY CHARACTERISTICS DIFFERENT THAN OTHER NATIONAL FORESTS IN THE LOWER 48, BUT WE WILL FOCUS ON THE FOUR BELOW.....

HOMELAND OF THE TLINGIT, HAIDA AND TSIMSHIAN PEOPLE.....

This section will be completed in conjunction with tribal representatives

TEMPERATE RAINFOREST ARCHIPELAGO – MOSTLY INTACT ECOSYSTEM

TEMPERATE RAINFOREST ECOSYSTEM

Extent

Basic ecosystem components.....

Functions.....

Important Ecosystem Services from this ecosystem

Tongass National Forest does not encompass this entire ecosystem, but is a large portion

Unique in the Forest Service system and in the United States.....

Other important ecosystems are within this overarching type (other than temperate rainforest)

The key ecosystem services all depend on intact ecosystems.....

SALMON

IMPORTANT ECOLOGICALLY, FOR FOOD SECURITY, CULTURALLY AND ECONOMICALLY.

Largest remaining wild salmon runs in the world

Across all of coastal Alaska, not just Tongass.....

Tongass rivers, lakes and streams produce 80% of the commercial salmon annually harvested from Southeast Alaska, 28% from all of Alaska, and 25% of the entire west coast annual harvest.

Ecological importance

Food source for people and wildlife

Nutrient pathway from ocean to land

Cultural importance.....

Essential to Alaskan way of life.....

Essential to indigenous culture

Economic importance.....

Importance to food security.....

RECREATION AND SCENERY.....

Over 2 million visitors per year

Over half arrive on cruise ships.....

72,000 residents live in close association with the Tongass National Forest.....

Primary economic contributor to the Region and State, with a trend of growing importance.....

Users come to see a wild place, with glaciers, scenery, and wildlife, as well as experience Alaska culture and history.
Outfitter/guides are important to recreation on the Tongass
Recreation is heavily water-based, relative to other National Forests

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The Tongass as an Indigenous Place

INTRODUCTION.....

THE TONGASS AS AN INDIGENOUS PLACE

Long history of use and occupation by the multiple Indigenous peoples

Tlingit History within the Tongass.....

Haida History within the Tongass.....

Tsimshian history within the Tongass

Statement of Traditional Tribal Values

How these values have guided Tlingit, Haida, Tsimshian societies and interactions with the land

Cultural values and priorities conflict with Multiple Use Mandate.....

Haa kusteeyi: our way of life

Clan's stewardship of lands, specific watersheds, fishing streams and hunting grounds

The organization of life around seasons of harvest.....

Indigenous knowledge and deep relationship lead to involvement in stewardship regimes

HISTORY OF GOVERNMENT ACTIONS, LAWS AND ACTS.....

BURNING OF SMOKEHOUSES AND FISH CAMPS

USFS Apology in 2008

PERMANENT SETTLEMENTS AND COMMUNITY CONSOLIDATION AT THE BEGINNING OF THE 20TH CENTURY

Education mandates, boarding school, etc.....

End of semi-nomadic/seasonal lifestyle, impact on cultural education and passing of skills

Impacts of these actions

Community cohesion.....

Growing dependence on a cash-based economy

RELEVANT LAWS/ACTS

Organic Act

Creation of Alexander Archipelago Reserve

Creation of Tongass NF.....

Land claims case by T&H 1930s.....

Alaska Statehood Act.....

ANCSA.....

ANILCA

Multiple use mandate of the USFS

SCOPE AND SCALE OF ASSESSMENT

PROCESS AND METHODS.....

USFS increases resources to enhance community and Tribal input.....

Outreach to all Tribes and Alaska Native Corporations for consultation and collaboration.....

Development of framing papers outlining past tribal input and policy positions.....

Presentations and work sessions with Tribal Councils, staff, ANCs and others

Sealaska Heritage Institute: Sacred Sites and data sources

Kayaani Commission: Management plan for non-timber forest products

Gathering Data and Existing Information Sources.....

Prioritizing Key Areas of Concern

Matrix assessing overlap of important resources with management/environmental concerns

SCALE

Southeast Alaska and the Tongass: Yakutat to Metlakatla.....

Marine areas and coastal ecosystems that boarder USFS jurisdiction

EXISTING INFORMATION SOURCES

Tribes’ Petition for a Traditional Homelands Conservation Rule

Past input from Tribes on recent Forest Service planning efforts

 Roadless Rule process

 SASS FM.....

 National Old Growth Amendment.....

Tribal Climate Change Adaptation Plans

 Tlingit & Haida.....

 Hoonah.....

 Sitka

Community Forest Planning Efforts & Community Project Prioritization.....

 Hoonah.....

 Kake

 Prince of Wales

 Other Community Forest Planning Efforts in Development: Ketchikan, Sitka, Yakutat

Correspondence regarding resources

 Red Cedar Documents.....

Community Strategic Plans

Tribal EPA-Tribal Environmental Plans.....

Sealaska Heritage Institute.....

 Sacred Sites

 Archives, data, reports

Ethnographic reports

Southeast Alaska Subsistence Regional Advisory Council reports, proposals, requests

Fisheries Assessments and Management Reports

CURRENT MANAGEMENT DIRECTION.....

TRIBAL INPUT INTO PREVIOUS PLAN

SACRED SITES

AREAS OF TRIBAL IMPORTANCE

SUBSISTENCE USE

CURRENT CONSULTATION PROCESS

Cooperating agency status and process.....

 Responses and activities related to Tribal advocacy for co-management.....

EFFORTS TO IMPROVE TRIBAL RELATIONS

Southeast Alaska Sustainability Strategy

Local hire and workforce

Language Revitalization.....

Co-stewardship agreements

STATUS AND TRENDS

ALASKA NATIVE TRIBES AND ANCS ASSOCIATED WITH THE TONGASS NATIONAL FOREST

EXISTING TRIBAL RIGHTS (INCLUDING THOSE INVOLVED IN HUNTING, FISHING, GATHERING, AND PROTECTING CULTURAL AND SPIRITUAL SITES).....

Longstanding efforts to pursue land claims in Southeast Alaska

 End U.S. Treaty-making with Tribal Nations

Creation of Central Council of Tlingit & Haida Indian Tribes of Alaska.....

Alaska Native Claims Settlement Act and the extinguishment of aboriginal title

Retention of subsistence rights.....

State Constitution

Alaska National Interest Lands Conservation Act

Traditional territories.....

Goldschmidt and Haas

Other sources

Native Allotments

AREAS OF KNOWN TRIBAL IMPORTANCE

The entirety of the Tongass as an ‘area of known tribal importance’

Winter villages

Smokehouses and Fish camps

Hunting, fishing, and gathering sites.....

Trading routes.....

Sacred sites

E.O. 13007

Alaska Native graves

Native American Graves Protection and Repatriation Act.....

NATURAL/CULTURAL RESOURCES

Animals.....

Salmon and other fish

Botanical Resources.....

Plant medicines.....

Plant foods.....

Plant Materials

Monument Trees

Trails.....

Use of specific ecosystems for certain activities

KEY BENEFITS TO PEOPLE

Socio-cultural benefits.....

Economic benefits

Ecological benefits

INFORMATION NEEDS

CEDAR INVENTORY.....

NON-TIMBER FOREST PRODUCTS MANAGEMENT PLAN.....

FUTURE CO-MANAGEMENT DIRECTION

KEY TAKEAWAYS

LITERATURE CITED

Terrestrial and Aquatic Ecosystems

INTRODUCTION

WHY IS THIS RESOURCE IMPORTANT?

Intact ecosystems are key to ecological and human benefits on the Tongass National Forest.....

Diverse terrestrial and aquatic ecosystems are integral to:.....

Provide people and communities with ecosystem services and multiple uses

A range of social, economic, and ecological benefits for the present and into the future.....

Habitat for fish, wildlife, and plant communities

Sustainable economic use of natural resources

Opportunities for recreational, spiritual, educational, and cultural benefits.....

OVERALL DRIVERS AND STRESSORS.....

Timber harvest.....

Roads and other human development.....

Landslides.....

Alaska yellow-cedar decline –.....

Climate Change.....

Insects.....

Disease.....

Invasive Species.....

Windthrow.....

SCOPE AND SCALE OF ASSESSMENT

WITHIN TONGASS NATIONAL FOREST ADMINISTRATIVE BOUNDARIES.....

KEY INTERACTIONS WITH OTHER RESOURCES

ECOSYSTEM CLASSIFICATION

Alpine and Subalpine.....

Alpine herb and shrub

Subalpine forest

Glacier, ice and snow

Forested.....

Well-drained forest.....

Poorly drained forest.....

Riparian.....

Forested riparian

Non-forested riparian

Wetlands.....

Tidal wetlands

Freshwater wetlands – forested.....

Freshwater wetlands – non-forested.....

Aquatic.....

Glacier, ice and snow

Streams

Rivers.....

Lakes

Estuaries.....

Other ecosystems of note (small areas).....

Mesic shrublands

Beach and mesic meadow
 Fens.....

ECOSYSTEM DESCRIPTIONS, STATUS AND TRENDS.....

ALPINE AND SUBALPINE
 General Ecosystem description
 Key Characteristics.....
 Drivers and Stressors
 Subalpine Forest
 Key Characteristics.....
 Drivers and Stressors.....
 Alpine Herb and Shrub
 Key Characteristics.....
 Drivers and Stressors.....
 Glaciers, Ice and Snow.....
 Key Characteristics.....
 Drivers and Stressors.....
 Alpine and Subalpine Natural Range of Variability
 Methods.....
 Results
 Alpine and Subalpine Ecosystem Integrity – Conditions and Trends
 Methods.....
 Results
 Assumptions, Areas of Uncertainty, and Risks
 FORESTED
 General Ecosystem Description.....
 Old Growth, National Old Growth Amendment, Mature Old Growth, and the significance to the Tongass National Forest
 Well Drained Forest
 Key Characteristics.....
 Drivers and Stressors.....
 Poorly Drained Forest
 Key Characteristics.....
 Drivers and Stressors.....
 Poorly Drained Forest
 Key Characteristics.....
 Drivers and Stressors.....
 Forested Ecosystem - Natural Range of Variability
 Methods.....
 Results
 Forested Ecosystem Integrity – Conditions and Trends.....
 Methods.....
 Results
 Assumptions, Areas of Uncertainty, and Risks
 WETLANDS
 General Ecosystem description
 General Drivers and Stressors

Tidal Wetlands.....

 Key Characteristics.....

 Drivers and Stressors.....

Freshwater Forested Wetlands.....

 Key Characteristics.....

 Drivers and Stressors.....

Freshwater Non-Forested Wetlands.....

 Key Characteristics.....

 Drivers and Stressors.....

Wetlands - Natural Range of Variability.....

 Methods.....

 Results.....

Wetlands Ecosystem Integrity – Conditions and Trends.....

 Methods.....

 Results.....

Assumptions, Areas of Uncertainty, and Risks.....

RIPARIAN.....

General Ecosystem Description.....

Riparian Forested.....

 Key Characteristics.....

 Drivers and Stressors.....

Non Forested Riparian.....

 Key Characteristics.....

 Drivers and Stressors.....

Riparian - Natural Range of Variability.....

 Methods.....

 Results.....

Riparian Ecosystem Integrity – Conditions and Trends.....

 Methods.....

 Results.....

Assumptions, Areas of Uncertainty, and Risks.....

AQUATIC.....

General Ecosystem description.....

Key Characteristics.....

Drivers and Stressors.....

Streams – headwaters to ocean/confluence.....

 Key Characteristics.....

 Drivers and Stressors.....

Rivers.....

 Key Characteristics.....

 Drivers and Stressors.....

Lakes.....

 Key Characteristics.....

 Drivers and Stressors.....

Aquatic Natural Range of Variability.....

 Methods.....

 Results.....

Aquatic Ecosystem Integrity – Conditions and Trends.....

Methods.....

Results

Assumptions, Areas of Uncertainty, and Risks

OTHER ECOSYSTEMS OF NOTE

Mesic Shrublands

 Key Characteristics.....

 Drivers and Stressors.....

 Natural Range of Variability

 Ecosystem Integrity – Conditions and Trends

 Assumptions, Areas of Uncertainty, and Risks.....

Beach and Mesic Meadows

 Key Characteristics.....

 Drivers and Stressors.....

 Natural Range of Variability

 Ecosystem Integrity – Conditions and Trends

 Assumptions, Areas of Uncertainty, and Risks.....

Fens.....

 Key Characteristics.....

 Drivers and Stressors.....

 Natural Range of Variability

 Ecosystem Integrity – Conditions and Trends

 Assumptions, Areas of Uncertainty, and Risks.....

Glaciers, Ice and Snow.....

 Key Characteristics.....

 Drivers and Stressors.....

 Natural Range of Variability

 Ecosystem Integrity – Conditions and Trends

 Assumptions, Areas of Uncertainty, and Risks.....

KEY TAKEAWAYS

LITERATURE CITED

Watershed Condition and Water Resources

INTRODUCTION

WHY IS THIS RESOURCE IMPORTANT?

 WATERSHED CONDITION AND WATER RESOURCES

BRIEF HISTORY OF THIS RESOURCE AND CURRENT MANAGEMENT DIRECTION

 BIOLOGICAL, PHYSICAL AND CHEMICAL INTEGRITY

 EXISTING LAND USE DESIGNATIONS

 EXISTING STANDARDS AND GUIDELINES

 WATERSHED ANALYSIS

SCOPE AND SCALE OF ASSESSMENT

 RELEVANT AVAILABLE INFORMATION AND BASI USED FOR THIS ASSESSMENT

Watershed Condition Framework 2021 Five-year reassessment

2022 AK Integrated Water Quality report

BMP monitoring reports

USGS Water Use reports/dataset

Water Rights and Uses Data

Climate Change Vulnerability Assessment

STATUS AND TRENDS

 WATERSHED CONDITION

2021 5-year Report

Priority Watershed Restoration Plans and Trends

Forest Plan Monitoring Reports

 WATER QUALITY

Alaska Department of Environmental Conservation Integrated WQ Report

 305(b) Results

 Trend analysis

 BMP Monitoring Results/Trends

 WATER USES/RIGHTS

Major water uses

 Climate Change Impacts

KEY TAKEAWAYS

LITERATURE CITED

Soil

INTRODUCTION

WHY IS THIS RESOURCE IMPORTANT?

BRIEF HISTORY OF THIS RESOURCE AND CURRENT MANAGEMENT DIRECTION

REGULATORY FRAMEWORK

National Environmental Policy act and National Forest Management Act

Clean Water Act

Forest Service Guidance

CURRENT MANAGEMENT DIRECTION

2016 Forest Plan Direction

Soil Survey Data and Terrestrial Ecological Unit Inventory

SCOPE AND SCALE OF ASSESSMENT

NATIONAL SOIL QUALITY STANDARDS

SPATIAL AND TEMPORAL CONTEXT

METHODOLOGY

DATA LIMITATIONS

EXISTING SOIL ENVIRONMENT

SOIL DEVELOPMENT ON THE TONGASS NATIONAL FOREST

SOIL QUALITY AND INHERENT SOIL PRODUCTIVITY

Soil Biology

Soil Hydrology

Nutrient Cycling

Soil Organic Matter – Course Woody Debris

Carbon Storage

Soil Support and Stability

Filtering and Buffering

SOIL QUALITY AND PRODUCTIVITY MONITORING

PAST MANAGEMENT IMPACTS ON SOIL QUALITY AND PRODUCTIVITY

STATUS AND TRENDS

VEGETATION MANAGEMENT

ROAD BUILDING AND LANDINGS

SOIL AND SLOPE STABILITY

CLIMATE CHANGE

OTHER DISTURBANCES

KEY TAKEAWAYS

LITERATURE CITED

Federally Recognized Threatened, Endangered, Proposed and Candidate Species

NATIVE PLANT AND WILDLIFE DIVERSITY

FEDERALLY RECOGNIZED THREATENED, ENDANGERED, PROPOSED AND CANDIDATE SPECIES

RELATIONSHIP TO TONGASS NATIONAL FOREST MANAGEMENT

Supports nearshore marine waters used as foraging habitat.....

Designated critical habitat for Stellar sea lion

Influences marine systems via Forest Service authorized and permitted activities that utilize boat or float plane transit or involve nearshore, shoreline, or marine infrastructure.

Current Forest Plan direction.....

SUMMARY.....

HABITAT CONDITION AND TREND

HUMPBACK WHALE.....

Distribution in the Tongass NF

Population status and trend.....

Population-level drivers and stressors

Entanglement in fishing gear

Vessel strikes

Vessel-based harassment.....

Underwater noise

Competition with commercial fisheries

Climate change

FIN WHALE

Distribution in the Tongass NF

Population status and trend.....

Population-level drivers and stressors

Collisions with vessels.....

Entanglement with fishing gear

Anthropogenic noise.....

Reduce prey abundance – overfishing and/or climate change

SPERM WHALE.....

Distribution in the Tongass NF

Population status and trend.....

Population drivers and stressors.....

Interactions with commercial fishing (low threat)

Whale watching (low threat)

Acoustic disturbance (low threat)

Ship strikes (low threat).....

STELLER SEA LION

Distribution in the Tongass NF

Population status and trend.....

Population-level drivers and stressors

Environmental variability in prey

Competition with fisheries

Predation by killer whales
Toxic substances.....
Climate change
Other low-level threats
Steller sea lion critical habitat.....
SUNFLOWER SEA STAR
Distribution in the Tongass NF
Population status and trend.....
Population drivers and stressors.....
Disease.....
Habitat degradation (especially nearshore).....
Climate change
LITERATURE CITED

DRAFT

Species of Conservation Concern

INTRODUCTION

THIS OUTLINE IS MAINLY AN EXPLANATION OF THE PROCESS – SCC EVALUATION HAS NOT BEEN COMPLETED.....

MANAGING ECOSYSTEMS TO MAINTAIN BIODIVERSITY

HABITAT QUANTITY, QUALITY AND DISTRIBUTION.....

Tongass National Forest has diverse, complex systems influenced by soils, aspect, elevation, climate, disturbance event and human activity.....

All species are contributors to biological diversity and ecosystem integrity.....

The purpose of identifying species of conservation concern is to aid in developing land management plan components that maintain the diversity of plant and animal communities and provide for the persistence of native species on the Tongass National Forest.....

THE 2012 PLANNING RULE REQUIRES THE IDENTIFICATION OF SPECIES OF CONSERVATION CONCERN (SCC), DEFINED AS:

Native and known to occur in the plan area.....

Substantial concern about the species' capability to persist over the long- term in the plan area

A native and known to occur species will be considered as potential SCC, and will receive review if at least one of the following is true:.....

NatureServe global ranks of G/T1, G/T2, or G/T3;.....

NatureServe state ranks of S1, S2, or S3;.....

Identified as 'rare' by the Alaska Natural Heritage Program;.....

Regional Forester Sensitive Species identified for the Tongass NF; or

Identified as species of conservation concern in the Chugach NF in Alaska (USDA 2023).

The species of conservation concern is selected by the Regional Forester.....

WHY IS THIS RESOURCE IMPORTANT?

Biodiversity is crucial for the longer-term resilience of ecosystem function and the services they provide

Species may be important for hunting, fishing and gathering.....

The land management plan must include direction to maintain the diversity of plant and animal communities and provide for the persistence of native species

BRIEF HISTORY OF THIS RESOURCE AND CURRENT MANAGEMENT DIRECTION.....

Currently Tongass National Forest does not have a list Species of Conservation Concern

Currently operating with Regional Forester sensitive species.....

Differences include:.....

Sensitive species include plant and animal species identified by a Regional Forester for which population viability is of concern.

Sensitive species included flora and vertebrate fauna only. SCC can include fungi, lichen, and invertebrate.

Sensitive species include species for which population viability is a concern and with suitable habitat within the region, regardless of whether there is substantial concern for persistence of the species in the plan area and regardless of whether the species is confirmed to occur in the plan area.....

SCC need to have sufficient scientific information to determine concern for persistence. Sensitive species determinations do not have that requirement.....

SCOPE AND SCALE OF ASSESSMENT

Limited to species that are native and known to occur in the TNF.....

Organized by taxa in the following manner:.....

Botanical species (define as inclusive of plants, bryophytes, fungi and lichen).....

Terrestrial wildlife species.....

Aquatic wildlife species

Process for identifying SCC

Best existing information.....
Includes feedback from tribes, agencies, and the public.....

STATUS AND TRENDS

Existing conditions
Common risks and stressors
Trends and drivers
Information needs.....

BOTANICAL SPECIES

List and description of potential SCC by taxa and recommendation status (TBD)
Recommended SCC information summary
Distribution (on the TNF and outside).....
Recommendation rationale.....

TERRESTRIAL WILDLIFE SPECIES

List and description of potential SCC by taxa and recommendation status (TBD)
Recommended SCC information summary
Distribution (on the TNF and outside).....
Recommendation rationale.....

AQUATIC WILDLIFE SPECIES

List and description of potential SCC by taxa and recommendation status (TBD)
Recommended SCC information summary
Distribution (on the TNF and outside).....
Recommendation rationale.....

GUILDS.....

*A group of species that exploit the same resources, or that exploit different resources in related ways.
For example, have the same habitat needs.....*
Guilds can be used to develop plan direction that applies to the entire guild.....

KEY TAKEAWAYS

LITERATURE CITED

Additional Species of Interest on the Tongass

INTRODUCTION

WHY IS THIS RESOURCE IMPORTANT?

Contribution of fish, wildlife and plants to social and economic stability.

Fish, wildlife, and plant species commonly enjoyed and used by the public for hunting, fishing, trapping, gathering, observing, or sustenance, including cultural or tribal uses.

The conditions and trends in the plan area associated with these species and their uses.

The impacts of hunting, fishing, or plant collection on ecological integrity and species diversity

The contribution of the use and enjoyment of these species to social and economic sustainability

SCOPE OF ASSESSMENT

Species, or groups of species, will be discussed in broad terms of how they are used or enjoyed by people

Fishing

Hunting

Trapping

Gathering

Nature Viewing

Biodiversity, Ecological Integrity, and Ecosystem Services

SCALE OF ASSESSMENT

Some species outside of the boundaries of the Tongass National Forest – particularly in marine or other water bodies

STATUS AND TRENDS

FISHING

Subsistence

Salmon

Trout and Dolly Varden

Hooligan/ Eulachon

Shellfish

Sport & Recreational Harvest

Salmon

Trout and Dolly Varden

Hooligan/ Eulachon

Shellfish

Pelagic fish

Commercial

Salmon

HUNTING

Subsistence

Deer

Moose

Mountain Goat

Black Bear

Brown Bear

Waterfowl

Upland Gamebirds

Resident & Non-Resident Sport

Deer.....	.....
Moose.....	.....
Mountain Goat .....	.....
Black Bear.....	.....
Brown Bear.....	.....
Wolf.....	.....
Waterfowl .....	.....
Upland Gamebirds .....	.....
TRAPPING .....	.....
<i>Subsistence</i> .....	.....
Wolf.....	.....
Wolverine.....	.....
Lynx .....	.....
Marten .....	.....
Beaver .....	.....
<i>Resident & Non-Resident Sport</i> .....	.....
Wolf.....	.....
Wolverine.....	.....
Lynx .....	.....
Marten .....	.....
Beaver .....	.....
GATHERING .....	.....
<i>Bird Eggs</i> .....	.....
<i>Berry Harvest</i>.....	.....
<i>Mushroom Harvest</i> .....	.....
<i>Traditional Medicinal Plants</i> .....	.....
<i>Seaweed and Kelp Harvest</i>.....	.....
<i>Conifers</i> .....	.....
Spruce tips.....	.....
Alaska Yellow Cedar .....	.....
Christmas trees and wreaths .....	.....
NATURE VIEWING .....	.....
<i>Marine Mammal and Glacier Tours</i>.....	.....
<i>Bear Viewing</i>.....	.....
<i>Bird Watching</i>.....	.....
<i>Wildflowers</i> .....	.....
BIODIVERSITY AND ECOLOGICAL INTEGRITY .....	.....
<i>Pollinators</i>.....	.....
Bees .....	.....
Butterflies Birds.....	.....
Flies.....	.....
Beetles .....	.....
<i>Insect Consumers</i> .....	.....
Bats .....	.....
Amphibians.....	.....
<i>Botanicals</i>.....	.....
<i>Small Mammals</i>.....	.....
LITERATURE CITED .....	.....

Carbon Stocks and Pools

INTRODUCTION

WHAT IS THIS RESOURCE AND WHY IT'S IMPORTANT

Global Carbon Budget/Climate Change

Carbon Cycling in Forested Ecosystems

Principles of Carbon Stewardship

Biogenic vs. non-biogenic emissions.....

THE ROLE THE PLAN AREA PLAYS IN SEQUESTERING AND STORING CARBON

Unit description from a carbon perspective

Overall carbon storage and density estimate(s) summary

Major pools summary.....

Total and density

Overall carbon sequestration/flux change and rates

Factors affecting carbon storage

PROCESS, METHODS, ASSUMPTIONS, AND SCALE

FOREST CARBON ESTIMATES

Data and Models Used

USFS Carbon Dashboard

D'Amore et al. 2016-NECB estimate

Landcarbon-Process-based model.....

TNC-AGB estimated from Modis integrated with disturbance model.....

Leighty et al., 2006.....

Heath et al., 2011

Methods.....

NON-FORESTED ECOSYSTEMS.....

Methods and Data

NRM macroplots

D'Amore et al. 2016-Net ecosystem carbon balance

SOILS

Methods and Data

Assumptions

UNCERTAINTY AND DATA LIMITATIONS.....

Limitations and bias in data

CURRENT MANAGEMENT DIRECTION.....

CURRENT PLAN DIRECTION.....

AGENCY GUIDANCE.....

2012 Planning Rule

Executive Orders: 14072, 13990.....

CEQ Guidance - CEQ (2016, 2020, 2021).....

Current Agency step-down direction and current carbon stewardship direction.....

GAPS IN CURRENT PLAN DIRECTION.....

2012 Planning Rule direction to include quantification estimates of carbon and likely effects from

Alternatives

Executive Orders related to climate mitigation.....

No direction in 2016 plan related to climate adaptation or mitigation

PLAN AREA DISTRIBUTION OF CARBON ACROSS LANDSCAPE.....

FORESTED LANDS

SOILS

CARBON STOCKS AND CHANGE

TOTAL CARBON STOCK AND DENSITY.....

NET ECOSYSTEM CARBON BALANCE

STOCK CHANGE.....

DRIVERS AND STRESSORS OR FACTORS INFLUENCING CARBON ON THE TONGASS NF.....

EFFECTS OF NATURAL DISTURBANCES

Wind

Insect.....

Disease.....

Wildfire

EFFECTS OF HARVEST

Pre-EuroAmerican

Direct effect on carbon: post EuroAmerican settlement

Indirect effects

Harvested Wood Products.....

EFFECTS OF FOREST AGING.....

LandCarbon projections under no management Harvest Effects and Stand Age

PROSPECTIVE CLIMATE AND ENVIRONMENTAL EFFECTS

Climate Change effects summary.....

Fertilization by CO₂.....

Projected carbon stocks under different climate change scenarios.....

ALTERNATIVE VIEWPOINTS.....

KEY TAKEAWAYS.....

GLOSSARY

LITERATURE CITED

Timber and Forest Products

INTRODUCTION

TONGASS NF HAS A LONG HISTORY OF SUPPLYING TIMBER PRODUCTS FOR LOCAL AND EXPORT

Pulp (through 1990s)

Sawlogs

Specialty Products

Cultural Uses since time immemorial

WHY IS THIS RESOURCE IMPORTANT?

KEY BENEFITS TO PEOPLE

Cultural

Redcedar and Yellow-Cedar

A basis for spiritual well-being

Food and resources for traditional harvest and a subsistence way of life

Ecosystem Services

Social

Personal use of Forest Products including nontimber forest products

Free use of green and dead trees - Alaska Free Use

Career Development and Educational Opportunities

Economic Contributions

Past Annual timber demands - Tongass Expected Timber Purchases

Jobs and local mills

Commercial use of wood and non-timber forest products

Benefits to economies outside of Alaska – interstate shipments and exports to foreign markets

BRIEF HISTORY AND CURRENT MANAGEMENT DIRECTION FOR TIMBER ON THE TONGASS

REGULATORY HISTORY

Tongass Timber Act

Alaska National Interest Lands Conservation Act

Tongass Timber Reform Act

1997 Tongass Land and Resource Management Plan

2008 Plan Amendment

2016 Plan Amendment

CURRENT MANAGEMENT DIRECTION AND OTHER INITIATIVES

2013 Memorandum 1044-009

1997 Tongass Land and Resource Management Plan, as amended in 2016

Lands Suitable for Timber Production

Sustained Yield Limit

Projected wood sale quantity (PWSQ)

Projected timber sale quantity (PTSQ)

Old Growth Conservation Strategy

Southeast Alaska Sustainability Strategy (SASS)

Drivers and Stressors

Non-timber forest products

Non-deficit timber sale requirement

Recently expanded authorities with emphasis on restoration and collaboration

Political and social changes surrounding Tongass timber harvest

Young growth availability.....

SCOPE AND SCALE OF ASSESSMENT

SCALE: ALL LANDS THAT FALL WITHIN THE ADMINISTRATIVE BOUNDARY OF THE TONGASS NF.

SCOPE:.....

Timber harvest and timber sold.....

Harvest types

Timber and forest product demand

Logging infrastructure – roads, mills, and marine access facilities.....

STATUS AND TRENDS

TIMBER HARVEST TRENDS, BY TREATMENT TYPE

MAJOR DRIVERS AND STRESSORS THAT INFLUENCE TRENDS

Policy / Political

Roadless Rule decisions and litigation

Congressional land transfers

Old growth policy.....

Economics

Sawmill Capacity and Production

Project design and factors affecting timber sale economics

Young-growth transition

Contracting Difficulties

Workforce availability and Equipment Modernization

Logging Infrastructure

Climate Change.....

Geologic Hazards: Landslides and their impacts on tree establishment and stand regeneration.....

Forest Health.....

Alaska yellow-cedar decline.....

Recent defoliator outbreaks

RISKS, AREAS OF UNCERTAINTY, ASSUMPTIONS

Resilient forests, regeneration, and desired species competition

Changing political priorities.....

Lack of established markets for young-growth sawn products

Uncertainties in long term timber supply.....

Others.....

KEY TAKEAWAYS

LITERATURE CITED

Air Quality

INTRODUCTION

WHY IS THIS RESOURCE IMPORTANT?

SOURCES OF AIR POLLUTION: NATURAL VS ANTHROPOGENIC

INFLUENCE OF AIR QUALITY ON HUMAN AND ENVIRONMENTAL HEALTH.....

BRIEF HISTORY OF THIS RESOURCE AND CURRENT MANAGEMENT DIRECTION.....

CURRENT MANAGEMENT

2016 Tongass Forest Plan Amendment

AIRSHEDS ON THE TONGASS.....

TYPES OF AIR POLLUTION

Mining.....

Fugitive dust.....

Black carbon

Wood smoke from stoves.....

Wildfire smoke.....

Vehicle emissions.....

Cruise ship emissions.....

Dirt roads

REGULATORY FRAMEWORK

Air Quality Regulations

Clean Air Act

U.S. Environmental Protection Agency (EPA) regulations

Alaska State Laws.....

ADEC Permits.....

Permits for Stationary Sources

Historic air quality monitoring by ADEC

SCOPE AND SCALE OF ASSESSMENT

STATUS AND TRENDS

AIR QUALITY ON THE TONGASS.....

Current Conditions

PARTICULATE MATTER.....

Community Level Impacts.....

Mendenhall Valley Area of Juneau.....

LICHEN AMBIENT AIR BIOMONITORING PROGRAM

How lichens monitor air quality.....

Lichen Baseline Plots on Tongass

CRUISE SHIP EMISSIONS

Forest Impacts

Tracy Arm.....

GREENS CREEK MINE

Location.....

Existing Conditions

Monitoring.....
Future Conditions.....

UNCERTAINTIES AND DATA GAPS

BLACK CARBON IMPACT

- What is Black Carbon*.....
- Potential Impacts*

ANTHROPOGENIC SOURCES

- Trans-Pacific Pollutants*

WILDFIRES.....

KEY TAKEAWAYS.....

LITERATURE CITED

DRAFT

Renewable and Non-Renewable Energy and Minerals

WHY ARE THESE RESOURCES IMPORTANT?

RENEWABLE ENERGY

Economic development

Reduced carbon emissions

Quality of life

Cultural Contributions:

MINERALS

Regulations

History

Economic Driver

BRIEF HISTORY OF THIS RESOURCE AND CURRENT MANAGEMENT DIRECTION

RENEWABLE ENERGY

Hydroelectric

MINERALS

History

Mineral Regulations

Existing Plan Direction.....

Goals

Desired Conditions

Mineral Land Use Designation

SCOPE AND SCALE OF ASSESSMENT

STATUS AND TRENDS

RENEWABLE ENERGY

Continuing interest and investment in renewable energy.....

Hydropower

Influences on energy demand

Current distribution of hydropower

Potential for increased hydropower

Wind

Solar

Biomass.....

Tidal.....

MINERALS

Withdrawn Areas

Trends.....

Locatable Minerals

Active Mines - Greens Creek Mine and Kensington Gold Mine.....

Cleanup and reclamation efforts ongoing at Ross Adams and Chichagof Mines

Leasable Minerals – Oil, Gas, Coal, Geothermal

Potential for Leasable Minerals – none currently active on the Tongass National Forest.....

Saleable Minerals (materials with lower unit price such as rock, gravel, sand, dirt).....

Crushed Rock.....

Limestone and Marble

UNCERTAINTIES AND DATA GAPS

CLIMATE CHANGE EFFECTS.....

KEY TAKEAWAYS

LITERATURE CITED

DRAFT

Social, Cultural and Economic Sustainability

INTRODUCTION

DEFINITION OF SUSTAINABILITY

SCOPE AND SCALE OF ASSESSMENT

PURPOSE

PROCESS AND METHODS.....

Forest Service Handbook 1909.12, section 13.21.....

Reference Maps.....

Forest Boundary

Boroughs

Urban Centers

Alaska Native Lands

Discussion of scale.....

Ten Boroughs

Three Urban areas

Seventeen designated Alaska native village areas and one reserve.....

Two national monuments.....

Adjacency to Glacier Bay National Park and Reserve

EXISTING INFORMATION SOURCES

Decennial Census

American Community Survey

Headwaters Economic, Explanation of Headwaters Economic

CJEST.....

EJ Screen.....

State and County Data

Forest Service monitoring and reporting (Natural Resource Manager Database)

EXISTING FOREST PLAN DIRECTION AREA OF INFLUENCE

SOCIAL, CULTURAL, AND ECONOMIC CONDITIONS IN THE AREAS OF INFLUENCE

ENVIRONMENTAL JUSTICE

COMMUNITY OVERVIEWS/DESCRIPTIONS.....

DEMOGRAPHICS

Population Dynamics.....

Southeast Alaska population dynamics

Age

Race & Ethnicity.....

Differences in Use

Environmental Justice, Race, Ethnicity.....

Disability.....

Disability and Environmental Justice.....

Forest visitation and use (ADA)

Tribal.....

Historic Legislation

Location of Alaska Native Land and Alaska Native Corporations

Native Alaska Demographic Data

Boroughs

English Proficiency.....

 Barrier for Participation.....

ECONOMY

Economic Sector

 Southeast Conference Data

 Resources (Timber, mining).....

Employment and Unemployment

 Percent unemployment analysis

 Seasonal Employment

Income

Non-Labor Income.....

LAND OWNERSHIP AND HOUSING.....

Land Ownership Patterns

Homeownership & Renters.....

COMMUNITY WELLNESS

Community Resiliency

 Wellness metrics.....

Education.....

Traditional/Cultural/Spiritual Values

 History of salmon fishing.....

Mortality Rates

 Mortality impacts on Community Well-being.....

Asthma Rates

 Environmental Wellness

Access to Transportation.....

Access to Broadband Internet and Computer Technology

Access to Healthcare.....

BENEFITS TO PEOPLE (INCLUDING MULTIPLE USES, OTHER FOREST BENEFITS, OPERATIONS AND INFRASTRUCTURE).....

 CLIMATE RESILIENCE

 OUTDOOR RECREATION AND FOREST VISITORS

Local Recreation vs. Tourism.....

Tourism.....

Types of Recreation on the Tongass National Forest.....

 FISH, WILDLIFE, AND PLANTS

The importance of fish and aquatic habitats

Importance of Wildlife:.....

Importance of Plants.....

 CLEAN WATER AND AQUATIC ECOSYSTEMS

Aquaculture

Wild and Scenic Rivers.....

 COMMERCIAL SECTORS

Timber Harvesting.....

Mineral and Energy Production

Fisheries

 AIR QUALITY.....

EDUCATION AND VOLUNTEER PROGRAMS
 Education.....
 Volunteering.....
ACCESS
 Road Access
 Permitting Access.....
 Wilderness Access
TRIBAL IMPORTANCE.....
 Current Projects
SUBSISTENCE
OLD GROWTH FORESTS
LITERATURE CITED

DRAFT

Land Ownership, Adjustments and Non-Recreation Special Uses

INTRODUCTION

WHY IS THIS RESOURCE IMPORTANT?

Access

Access through/across lands managed by the Tongass National Forest, and across other lands to access lands managed by the Tongass National Forest.

The land around many southeast Alaska communities is entirely land managed by the Tongass National Forest. ...

Uses on National Forest System land

Private infrastructure on land managed by the Tongass National Forest

Land Ownership Adjustments –the process of changing ownership or jurisdiction of lands and interests in lands. The primary objective of land adjustment is to achieve the optimum land ownership pattern in the National Forest System that provides for resource use and protection to meet public needs.

Legislated (Not a Forest Service decision)

Administrative (Forest Service decision)

Potential Future Conveyances

Special Uses (non-recreational).....

Communications Sites (cell, radio, emergency services, etc.).....

Filming and Still Photography

Hydroelectric projects

Weather stations

Water Pipelines

Mariculture, aquaculture,

Research activities

Others.....

Roads, trails, and Rights-of-Way, Adjacent land ownership and existing efforts to, and potential for, meeting joint management objectives.....

Local Government/Community and private land.....

Native Regional Corporation land

Native Village Corporations lands.....

State of Alaska land

BRIEF HISTORY OF THIS RESOURCE AND CURRENT MANAGEMENT DIRECTION.....

History of land ownership.....

History of land ownership and ongoing and pending state and native land considerations

Many land adjustments on the Tongass are determined by law, such as – Forest Plan is not the main guidance.....

History of special uses and the role of the Alaska National Interest Lands Conservation Act (ANILCA) of 1980

Privately owned cabins for traditional and customary uses

Temporary facilities for the taking of fish and wildlife (non-commercial)

Temporary facilities supporting commercial operations

Lodges

Clubs

Current Management Direction.....

Lands.....

Special Uses

SCOPE AND SCALE OF ASSESSMENT

FOCUS ON TONGASS NATIONAL FOREST EXTERIOR BOUNDARY

Include connection to other lands within that boundary.
Hydropower and other energy developments is discussed in the “Minerals and Renewable and Non-renewable Energy” section of this assessment.

STATUS AND TRENDS

ACCESS

Concerns around access

Necessary to people’s use of the public land

In some areas, the only access is on roads maintained by the Tongass National Forest

Recreation Access (see Recreation section of this assessment).....

Access trends.....

Compare road miles in 1997 versus now.....

Trends, changes or issues with boat or air travel.....

LAND OWNERSHIP ADJUSTMENTS

Total change in land managed by the Tongass National Forest from 1997 to the present

Allotments

Land Exchanges

Sales and Donations.....

Future potential land ownership adjustments.....

WITHDRAWALS

Wilderness

Alaska Native Claims Settlement Act of December 18, 1971.....

Alaska Native Allotment Act of May 17, 1906.....

The Statehood Act of July 7, 1958.....

EASEMENTS

Access across land managed by the Tongass National Forest

Number and types of easements.....

Access across other lands to allow public access to the Tongass National Forest

Easement Issues or trends

State of Alaska 4407 transportation easements

SPECIAL USES (NON-RECREATIONAL)

Changes in numbers of special uses between 1997 and 2024.....

Trends or issues for specific types of special uses.....

ADJACENT LAND OWNERSHIP AND EXISTING EFFORTS TO, AND POTENTIAL FOR, MEETING JOINT MANAGEMENT OBJECTIVES

Land stewardship programs – joint management objectives and partnerships to achieve those objectives.....

Hoonah Native Forest Partnership

Kéex’ Kwáan Community Forest Partnership

Klawock Indigenous Stewards Forest Partnership

Southeast Alaska Sustainability Strategy

Much interest and effort to increase local and indigenous stewardship.

See the Traditional Areas and Uses section of the assessment for more information about co-stewardship status, trends, and issues

KEY TAKEAWAYS

LITERATURE CITED

Roads and Other Infrastructure

INTRODUCTION

WHY IS THIS RESOURCE IMPORTANT?

Roads and Bridges

Local economies

Access to communities.....

Quality of life

Access to resources

Subsistence harvest

Recreation

Other Infrastructure – important to Tongass Forest users and for administration.....

Administrative Buildings

Recreation sites (discussed in recreation section).....

Campgrounds (discussed in recreation section).....

Trails (discussed in recreation section).....

Dams.....

BRIEF HISTORY OF THIS RESOURCE AND CURRENT MANAGEMENT DIRECTION.....

Roads

Travel Management Decisions – outside of Forest Plans.....

The plan revision process does not make site-specific travel management decisions.

Many roads built to support timber harvest – which has drastically reduced

Reduced maintenance budget

SCOPE AND SCALE OF ASSESSMENT

STATUS AND TRENDS

ROADS

Types of Roads

Miles of each road type

Road condition

Fewer miles of roads being maintained each year.....

Deferred maintenance has increased over 50% in the past 5 years.....

Maintenance Challenges.....

Decreased budgets

Decreased maintenance for logging operations.....

Increased Recreation.....

Landslides

Condition and Trends Specific to Culverts

Replacing culverts for aquatic organism passage

Condition and Trends Specific to Bridges

Subject to landslides and flooding.....

Road Decommissioning

OTHER INFRASTRUCTURE.....

Administrative Facilities

Current Conditions.....

Trends.....

Dams.....

Current Conditions

Trends.....

UNKNOWNNS AND REMAINING QUESTIONS

Effects of climate on infrastructure

Cruise ship industry expansion impacts to infrastructure

Unknown future budget allocations.....

Unknown whether young growth timber harvest will be marketable to fund road maintenance

KEY TAKEAWAYS

LITERATURE CITED

DRAFT

Sustainable Recreation and Tourism

INTRODUCTION

WHY IS THIS RESOURCE IMPORTANT?

Connection with the Natural World

Primary Economic Contributor

Recreation and tourism are primary economic contributors.....

Projected increases in outdoor recreation demand

Key Ecosystem Service.....

OVERVIEW OF RECREATION ON THE TONGASS

Types of Recreation

Use near communities.....

Road systems where available for access to the forest

Coastal access.....

Remotely-accessed areas.....

Key factors that affect recreation on the Tongass

The marine/mountain interface

Access.....

Remoteness and size.....

Economics

Seasonality

Climate.....

Deferred maintenance

Recreation Program of Work.....

Brief history of this resource and current management direction.....

Increasing focus on recreation and tourism over time.....

Increase in management focus with shift to young growth timber management

SCOPE AND SCALE OF ASSESSMENT

STATUS AND TRENDS

WHAT THE FOREST PROVIDES: RECREATION OPPORTUNITIES AND ACCESS.....

Supply of Recreation Opportunities.....

Recreation opportunity spectrum classes.....

Importance of Scenery to the recreational experiences.....

Landscape character and Scenic Integrity.....

Functionality and Beauty.....

Visual Priority Routes

Recreation Infrastructure

Scenic Beauty of Southeast Alaska

Developed and Dispersed Recreation opportunities

Types of recreation and recreation facilities

Maintenance requirements of Developed Sites

Dispersed recreation

RECREATION ACCESS

Marine access

Facilities and Use Patterns.....

Summer trails.....

 Types and quantity.....

 Patterns of Use.....

 Issues and trends

Winter trails.....

 Types and Quantity.....

 Patterns of Use.....

 Issues and trends

Roads as recreation access routes

 Types and Quantity.....

 Patterns of Use.....

Air access

 Types and Quantity.....

CURRENT USE OF THE FOREST

Overall visit characteristics

 Quantity and Location of Annual Recreation Visits

 Common recreation activities

 Origin of Recreationists.....

 Satisfaction of Recreationists.....

Resident Recreation Status and Trends.....

 Recreational Activities for Residents.....

Tourism Status and Trends

 Tourism Statistics

 Primary tourism industry activities.....

 Growth in tourism industry.....

Commercial outfitter/guide use, special uses Status and Trends

 Number and Type of Permittees

 Areas important for outfitter/guides.....

 Identified trends/desires/needs/conflicts of outfitter guides.....

Emerging or Anticipated Recreation Activity Trends.....

 Heli-skiing.....

 E-bikes.....

 Desire for water trails.....

 Recreational drone use.....

RECREATION SUSTAINABILITY.....

Ecological sustainability considerations.....

 ▪ Localized impacts when infrastructure can't accommodate demand

 ▪ Wildlife impacts

 ▪ Cruise / marine impacts on the environment

Social sustainability considerations

 ▪ Opportunities to connect people to nature

 ▪ Emerging tensions between local resident and visitor/tourism use

 ▪ Recreation work done in partnership with non-federal entities.....

 ▪ How recreation on the Tongass interfaces with existing community plans.....

Cultural sustainability considerations

 ▪ Potential for overlap between areas of tribal or traditional importance and areas used for recreation.....

 ▪ Competition for resources between recreational and subsistence use

 ▪ Recreational use can directly impact cultural and historic resources.....

 ▪ Recreation-related work in partnership with tribes

Economic sustainability considerations
▪ Fiscal sustainability of recreation infrastructure on the Tongass

STRESSORS AND DRIVERS.....

CLIMATE CHANGE
STATEWIDE TRENDS AND GROWTH IN TOURISM INDUSTRY
STATEWIDE OR NATIONAL TRENDS IN OUTDOOR RECREATION

INFORMATION GAPS

KEY TAKEAWAYS.....

LITERATURE CITED

DRAFT

Scenery

INTRODUCTION

WHY IS THIS RESOURCE IMPORTANT?

Quality of life and experience for residents and forest users

Visitor Experience (recreation)

BRIEF HISTORY OF THIS RESOURCE AND CURRENT MANAGEMENT DIRECTION

Increased emphasis on scenic values with increased recreation and visitor levels

Water ways are important to analyze as viewpoints

Current management direction

Managed under the Scenery Management System

Existing Scenic Integrity Objectives

Review of current management direction

Need to update Scenic Integrity Objective maps, considering possible changes in visual priority routes and concern levels

Need to review existing viewpoints and corridors (visual priority routes)

SCOPE AND SCALE OF ASSESSMENT

SCOPE

Complete review of components needed for the National Scenery Management System Inventory

Mapping Protocol

Scenic character description inventory

Scenic attractiveness inventory (degree of scenic variety)

Concern levels inventory (importance of scenery to those viewing it)

Landscape visibility inventory (landscape sensitivity and how and where people view scenery)

Scenic Classes Inventory (Importance of Scenery for Comparison with Other Resources)

Existing Scenic Integrity Inventory (Intactness of Scenic Character Attributes)

SCALE

Assess effects of activities occurring with the Tongass National Forest on the scenery resource

Important viewing points may be within or outside the Tongass National Forest boundary

Effects of management activities on adjacent non-Forest Service lands

STATUS AND TRENDS

ALMOST 90% VERY HIGH SCENIC INTEGRITY – UNMODIFIED WITH ONLY MINUTE DEVIATIONS

Types and locations of activities known to have affected scenic integrity since 2016

EXCEPTIONS INCLUDE EFFECTS FROM:

Recreation and Administrative Facilities

Other development

Timber Harvest

Transportation (roads and trails)

POTENTIAL CHANGES IN CONCERN LEVELS:

Identify important vantage points (or travelways)

Identify sites or corridors with high, moderate or low scenic importance.

Update for any changed conditions

Review: Sites, travel ways, special places, and communities to assign values

Communities

Alaska Marine Highway ferry route

Cruise ship routes
Existing road system
Heavily used small boat routes and anchorages
Developed recreation sites and facilities
Heavily used hiking trails

POTENTIAL CHANGES IN CONDITIONS – POSSIBLE CAUSES

Climate change

Melting glaciers

Tree or other vegetation mortality

Other

Unknowns

Timber harvest

Increased development

Changes to roads or trails

Changing methods of access and travel

KEY TAKEAWAYS

LITERATURE CITED

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Designated Areas

TYPES OF DESIGNATED AREAS

DESIGNATED WILDERNESS.....

Establishment

Wilderness Act of 1964

ANILCA

Tongass Timber Reform Act.....

Location/Acres

Range of Uses and Management.....

Section 707 of ANILCA management requirements

Wilderness Character Monitoring

Wilderness Visits - R10 NVUM 2010, 2015, 2020.....

ROS classes in Wilderness

Forest Wilderness Solitude Monitoring Plan

Forest Wilderness Recreation Site Monitoring Plan.....

Recommended Wilderness

Key Takeaways

LAND USE DESIGNATION II (LUDII).....

Establishment

Tongass Timber Reform Act, ANILCA Amendment, section 201, 11/28/1990

Sealaska Land Entitlement Finalization 12/19/2014.....

Range of Uses and Management.....

Key Takeaways

NON-WILDERNESS NATIONAL MONUMENTS.....

Establishment

Presidential Proclamations of 1978

Alaska National Interest Lands Conservation Act of 1980

Range of Uses and Management.....

Key Takeaways

RESEARCH NATURAL AREA.....

Location.....

Range of Uses and Management.....

Key Takeaways

SPECIAL INTEREST AREAS

Types of Areas

Cultural Areas

Scenic Areas

Geological areas.....

Botanical Areas

Zoological Areas

Biosphere Network

Location.....

Range of Uses and Management.....

Key Takeaways

EXPERIMENTAL FORESTS

Establishment

Range of Uses and Management.....

Key Takeaways

WILD AND SCENIC RIVERS

Establishment

 Section 1(b) and (c) of Wild and Scenic Rivers Act of 1968.....

 Types of WSRs.....

 Evaluation of rivers for inclusion

 1997 Tongass Management Plan evaluation.....

Key takeaways.....

INVENTORIED ROADLESS AREAS

Establishment

 Roadless Area Conservation Rule 36 CFR 294.14(e)

 Location.....

Range of Uses and Management.....

Status and Trends.....

Key takeaways.....

LOOKING FORWARD: CONCLUSIONS AND CONCERNS.....

LITERATURE CITED

DRAFT

Heritage Resources

INTRODUCTION

WHY IS THIS RESOURCE IMPORTANT?

SHARED CULTURAL HERITAGE AND NON-RENEWABLE RESOURCE

CULTURAL IDENTITY AND CULTURAL DIVERSITY

BRIEF HISTORY OF CULTURAL RESOURCES AND CURRENT MANAGEMENT DIRECTION.....

HISTORY OF CULTURAL RESOURCES.....

Resources documenting human presence

Archaeological and Historic Site Types.....

Archaeological and historic sites and broad-scale events

Types of archeological and historic resources

LEGAL AND REGULATORY COMPLIANCE

National Historic Preservation Act of 1966, as amended,.....

Forest Service Manual (FSM) 2360.3:12-13, FSM 2360

Forest Service Handbooks 1509 and 2309.12

Native American Graves Protection and Repatriation Act

Archeological Resources Protection Act.....

American Indian Religious Freedom Act.....

National Environmental Policy Act

National Forest Management Act.....

Executive Orders and Memorandum

1994 Government-to-Government Relations with Native American Tribal Governments

EO 13007 Accommodations of Sacred Sites.....

EO 13175 Consultation and Coordination with Tribal Governments.....

EO 13287 Preserve America

EO 12898 Environmental Justice as directed by the Forest Service Manual and Handbook.

CURRENT MANAGEMENT DIRECTION

New Rules, Regulations, Directives, and Policies Implemented After Signing of 2016 Tongass NF Plan.....

Programmatic Agreement Among the USDA Forest Service, Alaska Region, the Advisory Council on Historic

Preservation, and the Alaska State Historic Preservation Officer Regarding Heritage Program Management on

National Forests in the State of Alaska” (2017).

New Planning Rule - Indigenous Knowledge 36 CFR 219.

New Council on Environmental Quality (CEQ) NEPA regulations

SCOPE AND SCALE OF ASSESSMENT

STATUS AND TRENDS

CURRENT STATUS OF CULTURAL RESOURCES

PRIORITY HERITAGE ASSETS (PHAs).....

Definition

PHAs on Tongass

TRENDS, STRESSORS AND DRIVERS

Management Activities.....

Incomplete Inventory.....

Recreation.....

Workforce Limitations.....
Time and Weather.....
Climate Change.....

KEY TAKEAWAYS.....

LITERATURE CITED

DRAFT

Geology and Geologic Hazards

INTRODUCTION

WHY IS THIS RESOURCE IMPORTANT?

Distinct and variable geology – accreted terrains, volcanoes, earthquakes

Geology affects geologic hazards, development potential, and sometimes vegetation types

Important geologic types may require distinct management considerations.

Geologic Hazards: Risk to life, property and infrastructure.....

Ecological drivers - hazards to people, but most are natural phenomenon important to drive ecological processes

Brief history of geologic hazards and current management direction.....

Potential trends to review.....

Climate change predicted effects on landslides

Predicted effects of climate change on flooding

New science on landslide hazard and landslide prediction

30 years of data on landslide distribution

30 years of monitoring on flooding

Greater understanding of culvert and bridge effects on flooding.....

SCOPE AND SCALE OF ASSESSMENT

GEOLOGY - SPECIFIC GEOLOGIC LANDSCAPES THAT REQUIRE CONSIDERATION FOR LAND MANAGEMENT

GEOLOGIC HAZARDS - ON TONGASS NATIONAL FOREST LAND, AND EFFECTS DOWNHILL OR DOWNSTREAM

Geologic Hazards which will be discussed

Flooding.....

Landslides

Earthquakes.....

Tsunamis

Volcanic activity

Snow avalanches.....

Karst collapse/sinkholes.....

Acid rock drainage

GEOLOGICAL SETTING

General geologic setting.....

Karst and associated caves

General Description.....

Ecological Importance

Human importance.....

Management considerations.....

Glacial till and recently deglaciated areas

General Description.....

Ecological Importance

Management considerations – roads and timber harvest

Collapsible schist.....

General Description.....

Ecological Importance

Management considerations - roads and timber harvest.....

Ultramafics

General Description.....

Ecological Importance

Management considerations.....

GEOLOGIC HAZARDS - STATUS AND TRENDS

EARTHQUAKES:

Frequency and severity – recent effects to infrastructure.....

Warning systems

TSUNAMIS

Frequency and severity – recent effects to infrastructure.....

Warning systems

VOLCANIC ACTIVITY

Frequency and severity – recent effects to infrastructure.....

Warning systems

ACID ROCK DRAINAGE.....

Quarries or mines in acid-producing rock types

Risks to people and ecosystems.....

SNOW AVALANCHES AND RISKS

Risks.....

Opportunities for mitigation and adaptation

LANDSLIDES (AND OTHER MASS WASTING)

Past and recent landslides

Different types happen in different locations.....

 Debris flows

 Debris slides

 Rockfall.....

Specific slopes –.....

Specific aspects and specific landforms

Specific soil types.....

Other risk factors (Example: receding glaciers)

How they respond to management (risks and mitigations).....

 Road risks

 Vegetation removal risk.....

Specific considerations for locations near communities and infrastructure

Trends.....

 Increased risk with climate change – more extreme rainfall, glacial retreat, warming, other

Opportunities for mitigation and adaptation

FLOODING

Past and recent flooding.....

Where they happen and risk factors

Different types of floods and risk of each

How can management affect flooding?

Trends: Increased risk with climate change

Opportunities for mitigation and adaptation

KEY TAKEAWAYS

LITERATURE CITED

Benefits to People (Ecosystem Services)

INTRODUCTION

ECOSYSTEM SERVICES ARE BENEFITS PEOPLE OBTAIN FROM ECOSYSTEMS

WHY IS THIS RESOURCE IMPORTANT?

Meaning and importance of ecosystem services

Identifying the key values we hold for the Tongass National Forest

The interconnectivity of ecosystems and people

BRIEF HISTORY OF THIS RESOURCE AND CURRENT MANAGEMENT DIRECTION

No direction specifically referencing sustainability of ecosystem services in the 2016 Tongass land management plan

Subsistence direction in current land management plan mainly repeats ANILCA and Region 10 Handbook requirements

Current land management plan does contain a concrete vision of how the Tongass will emphasize and support Customary and Traditional Use of Renewable Resources/Subsistence

SCOPE AND SCALE OF ASSESSMENT

SCALE: ECOSYSTEM SERVICES ARE INNATELY LARGER THAN A FOREST BOUNDARY

The surrounding region, and even global effects will be discussed briefly

SCOPE: KEY ECOSYSTEM SERVICES

Subsistence/ food procurement / customary and traditional uses

Food – commercial, subsistence and customary and traditional uses

Timber – Commercial, personal and cultural uses

Furs and other fibers

Fresh water

Carbon storage

Clean air

Clean water

Soil stabilization

Nutrient cycling

Home of the Tlingit, Haida and Tsimshian people

Tourism

Recreation

Alaska way of life

Subsistence/Customary and Traditional Uses

INTRODUCTION

WHY IS THIS RESOURCE IMPORTANT?

Economic, nutritional, cultural, lifeway.

Well-being of people

Native Food sovereignty.

Cultural importance (Tribal Areas and Uses covered fully in that section of the assessment).....

CURRENT MANAGEMENT DIRECTION

Subsistence direction in current land management plan mainly repeats ANILCA and Region 10

Handbook requirements

Current land management plan does contain a concrete vision of how the Tongass will emphasize and support Customary and Traditional Use of Renewable Resources/Subsistence.....

SCOPE AND SCALE OF ASSESSMENT

Regulatory Description of Subsistence

Definition of Subsistence – “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; and for the customary trade, barter or sharing for personal or family consumption.” (ANILCA 1980, Title VIII, Sec. 803)

ANILCA regulations summarized – rural community members only

Forest Service Region 10 Subsistence Handbook regulations summarized

Southeast Alaska Federal Subsistence Regional Advisory Council – role and regulations

Forest Service Role and decision making ability

Broader Description of Customary and Traditional Uses.....

The customary and traditional uses of fish, wildlife and plants for food and other noncommercial purposes, and from noncommercial sources

STATUS AND TRENDS – CUSTOMARY AND TRADITIONAL USES

THEMES TO CARRY THROUGH ASSESSMENT

Local people who use wild resources are best source of information on change and ways to improve resilience. ...

Effects will change annually and over time, due to ecological and economic or social factors.

Cannot make one conclusion about impacts to subsistence activities and possible management approaches....

Rural communities have traditional use areas for different resources. These areas are not static.

Ecosystem protection in general may not be sufficient to ensure sustainability of specific subsistence resources.

Sustainability also depends on social, economic, and access issues.

INITIAL KEY FINDINGS:

The Tongass National Forest is generally able to provide for subsistence uses.....

Specific species harvested and sustainability are highly variable by year, location, resource, and community.....

Not one subsistence culture.

Concerns and some decrease over time

KEY IMPACTS TO CUSTOMARY AND TRADITIONAL USES

Ecosystem alteration through vegetation harvest or forest thinning

Deer – winter cover and understory effects

Salmon

Other land mammal effects from thinning- briefly describe (Bennetsen 2020).....

Roads impacting species negatively.....

Wood harvest

Issues around the free use program.....

Assess changing road or water access or facilities near communities.....

 Road access often needed for subsistence access

 Water access needed for subsistence harvest – status and trends.....

Recreational or other human activities displacing wildlife.....

 Wildlife viewing

 Helicopters, vehicles, or other disturbance.....

Climate change

 Changing shorelines – rising due to isostatic rebound.....

 Changing migration and distribution patterns (Shanley et al. 2015).....

 Increased algal blooms.....

Increased cost of fuel and equipment, increasing scarcity of jobs, time.....

Availability of resources

Concerns over safety of shellfish

Competition with Commercial or sport harvest.....

Regulations

UNCERTAINTIES AND DATA GAPS

This section will be informed by information that local communities, tribes, and individuals choose to share – that information is not yet incorporated into this assessment outline.....

Difficult to make one conclusion about impacts to subsistence activities and possible management approaches.....

Rural communities have traditional use areas for different resources. These areas are changing due to changing technology and environmental factors.....

KEY FINDINGS.....

LITERATURE CITED

Drivers, Stressors, and Climate Change

INTRODUCTION

DRIVERS – DOMINANT ECOLOGICAL PROCESSES AND DISTURBANCE REGIMES

STRESSORS – FACTORS THAT MAY DIRECTLY OR INDIRECTLY DEGRADE OR IMPAIR ECOLOGICAL INTEGRITY, INCLUDING CLIMATE CHANGE.....

PROCESS, METHODS, AND SCALE

DRIVERS AND STRESSORS THAT AFFECT BROAD AREAS OF THE FOREST.....

CLIMATE CHANGE VULNERABILITY ASSESSMENT (CCVA – PENDING).....

UNCERTAINTY AND DATA LIMITATIONS

CLIMATE MODELS

Magnitude estimates.....

Timing estimates

Geospatial estimates.....

RCPs – representative concentration pathways – ranges of future emissions scenarios that climate models use as inputs.

WEATHER/STOCHASTICITY

DATA LIMITATIONS.....

General.....

Southeast Alaska-specific.....

OTHER UNCERTAINTY.....

CURRENT FOREST PLAN DIRECTION

CURRENTLY NO DIRECTION IN THE 2016 PLAN DIRECTLY RELATED TO CLIMATE ADAPTATION.

General standards and guidelines forest health that encourage evaluation of impacts to resources and considering management recommendations

General standards and guidelines related to invasive species, including to use IPM approaches for priority infestations.

Agency Guidance and Policy.....

GAPS IN CURRENT PLAN DIRECTION.....

2012 Planning Rule direction to include Drivers and Stressors

EOs related to climate change

No direction in 2016 plan related to climate adaptation.....

DRIVERS -

CURRENT CLIMATE AS DRIVER OF VEGETATION DISTRIBUTION

TERRAIN

Landslide

Flooding.....

Non-climate change related isostatic rebound

Tsunami.....

Forest insect and disease.....

Wind/windthrow

INVASIVE SPECIES (PLANTS AND ANIMALS)

Few widespread invasive species – list them and what they affect

Geographic pattern, distribution

General effects on ecosystems.....

FIRE

Low fire occurrence

Climate change and insect and disease would have to be significant to change fire regime

HUMAN.....

Define geographic bounds – prehistoric/indigenous

Define modern geographic bounds

STRESSORS

CLIMATE CHANGE

Climate Change Summary.....

Temperature Effects

Precipitation Effects.....

Landslide

Flooding.....

Forest insect & disease & decline & potential invasive

Alternative Viewpoints.....

ABILITY OF PLAN AREA TO ADAPT.....

ABILITY OF ECOSYSTEMS WITHIN THE PLAN AREA TO ADAPT TO CHANGES IMPOSED BY STRESSORS WHILE RETAINING THEIR COMPOSITION, STRUCTURE, AND FUNCTION

REVERSIBILITY (SENSITIVITY OF STRESSOR TO MANAGEMENT)

KEY FINDINGS.....

SUMMARY OF DRIVERS AND ANTICIPATED IMPACTS OF CLIMATE CHANGES

SUMMARY OF ANTICIPATED CLIMATE CHANGE IMPACTS TO OTHER RESOURCES

GLOSSARY AND ACRONYMS.....

LITERATURE CITED

Monitoring

FOREST PLAN MONITORING PROGRAM

INTRODUCTION

Biennial monitoring evaluation report – 2012 to present

The purpose of forest plan monitoring is to help the responsible official determine whether a change is needed in:

Forest Plan direction including plan components or other plan content.....

On-the-ground management of resources in the Plan area to achieve Forest Plan direction

Plan monitoring program questions and/or indicators.

WHY IS FOREST PLAN MONITORING IMPORTANT?

Monitoring and evaluation are continuous learning tools that form the backbone of adaptive management.

Published plan monitoring and evaluation reports provide information to inform this assessment and need to change.

TRANSITION TO THE 2012 PLANNING RULE MONITORING REQUIREMENTS

KEY TAKEAWAYS

DRAFT

Literature Cited

Please note that this outline and literature cited are a work in progress. Tribal, agency, organization, individual information and knowledge, as well as additional scientific literature, will be incorporated throughout this process as more is researched and learned.

We are actively requesting literature or other sources of information and knowledge that you may have available, to build our supporting information.

The Tongass as an Indigenous Place

In development

Terrestrial and Aquatic Ecosystems

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