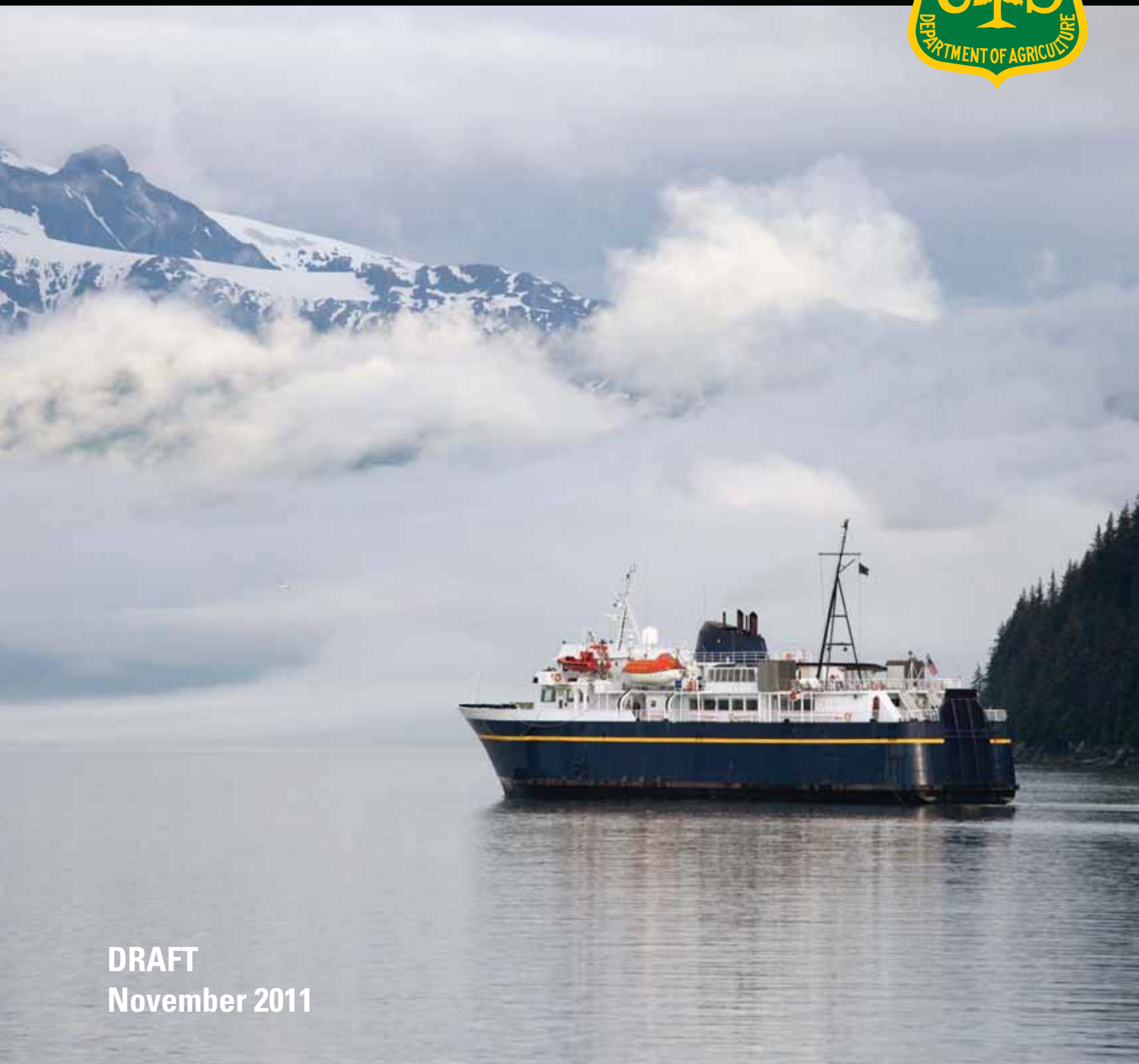
U.S. Forest Service

Alaska Region Long Range Transportation Plan

A Drop-Down Plan to the Alaska Federal Lands Long Range Transportation Plan



DRAFT
November 2011

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U.S. Forest Service

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How to Comment on this Plan

Preferred Method: Electronically, through www.parkplanning.nps.gov

Secondary Method: Written, to: Steve Hoover
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List of Acronyms and Abbreviations

ADOT&PF	Alaska Department of Transportation and Public Facilities
ANILCA	Alaska National Interest Lands Conservation Act
ATM Plan	Access and Travel Management Plan
CFR	Code of Federal Regulations
Chugach	Chugach National Forest
CIP	Capital Improvement Program
EIS	Environmental impact statement
FHWA	Federal Highway Administration (U.S. Department of Transportation)
FLH	Federal Lands Highway (U.S. Department of Transportation)
FLMA	Federal Land Management Agency
FS	Forest Service (U.S. Department of Agriculture)
FSM	Forest Service Manual
FTA	Federal Transit Administration
GIS	Geographic Information Systems
Infra	Forest Service infrastructure database
IRR	Indian Reservation Road
LRTP	Long range Transportation Plan
MVUM	Motor Vehicle Use Map
NEPA	National Environmental Policy Act of 1969
NFS	National Forest System
STIP	Statewide Transportation Improvement Program
TIP	Transportation Improvement Program
Tongass	Tongass National Forest
TRACS	Trail Condition and Assessment Surveys
U.S.C.	United States Code
WFL	Western Federal Lands (Highway Division)

Executive Summary

This U.S. Department of Agriculture, Alaska Region of the U.S. Forest Service (FS) Long Range Transportation Plan (LRTP) complements and strengthens this agency's transportation decision-making at a regional scale. The plan ensures that transportation priorities and funding decisions are guided by FS long range goals and objectives and that projects which are the most effective in achieving desired future conditions are supported. The LRTP goals and objectives presented in this document are intended to provide a long range perspective to the evaluation and selection of FS transportation improvement projects in Alaska. The statements are based on national-level vision and goals for the agency, but also incorporate values of importance to the Alaska Region. These statements shaped the development, conclusions, and recommendations of this LRTP.

The purpose of this plan is to ensure that transportation priorities and funding decisions are guided by long range goals and objectives so that projects that are most beneficial to the overarching vision and goals of the FS are supported and implemented. This plan accomplishes this by:

- Establishing long range goals and actionable objectives that reflect the overarching FS mission and vision.
- Illustrating the means by which to communicate needs and gaps to decision-makers.
- Setting condition goals for Forest Highways.
- Describing the desired future conditions of the FS transportation system.
- Recommending that annual transportation funding decisions factor long range goals and objectives into the Capital Improvement Program (CIP) development process.
- Using performance measures that embody LRTP goals and objectives to rate success over time.

The LRTP complements the FS' transportation regulatory framework while not adding redundancy. The LRTP integrates with existing transportation related regulations and planning processes by emphasizing projects and other efforts that support long range goals and objectives.

Alaska Region at a Glance

22.5 million acres
5.5 in Chugach and 17 in Tongass

3,777 road miles
84 in Chugach and 3,693 in Tongass

1,165 trail miles
510 in Chugach and 655 in Tongass

500 road bridges
6 in Chugach and 494 in Tongass

399 trail bridges
141 in Chugach and 258 in Tongass

206 marine access facilities
in Tongass

114 seaplane docks / floats / moorings
in Tongass

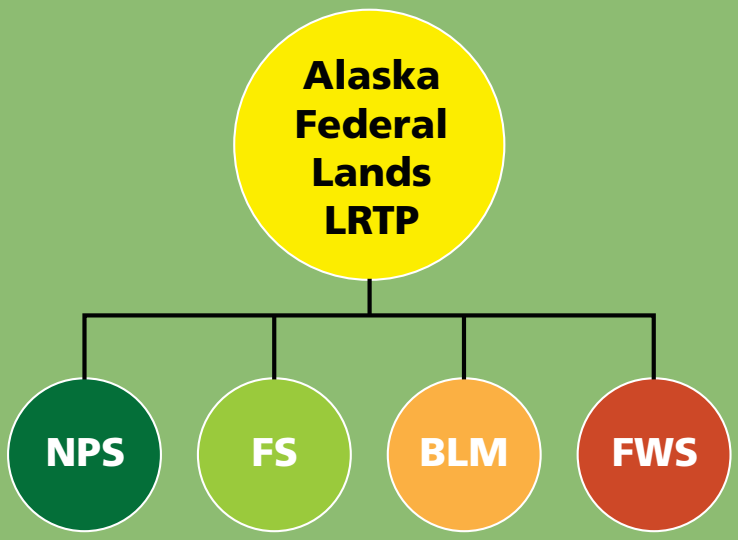
29 administrative and permitted helipad / helispots

6 tunnel/railroad entrances
in Chugach

2 railroad whistle-stop
in Chugach

Alaska Federal Lands LRTP

In addition to being a LRTP for the FS Alaska Region, this plan is a "drop-down plan" to the *Alaska Federal Lands LRTP*. As a drop-down plan, this document elaborates upon topics discussed in the *Alaska Federal Lands LRTP* with FS-specific details including baseline conditions, transportation needs and gap, project selection processes, funding opportunities, and performance measures. This information allows the FS and Alaska Federal land management agency (FLMA) partners to identify gaps in the statewide transportation system serving Federal lands, to develop better interagency coordination, and to leverage funds to address high-level priorities of mutual interest. Like the *FS Alaska Region LRTP*, the *Federal Lands LRTP* is also a first-of-a-kind effort.



Plan Audience

This LRTP is written for several audiences including forest supervisors, regional leaders, national-level decision-makers, and potential local and regional partners from governmental or non-governmental organizations. Forest supervisors use this plan to determine which projects are supportive of long range FS priorities throughout the region. This plan may also be used as a springboard for forest supervisors to partner with outside agencies and discuss project needs of mutual interest. Regional level audiences use this plan to find alternative funding from Federal sources that are administered by the State of Alaska and others. Regional FS coordinators use this plan to factor long range goals and objectives into their funding decisions. The LRTP informs national leaders of the steps being taken by the Alaska Region to further national FS vision, missions, and goals. The plan is also a tool for communicating unmet mission-critical transportation needs; the unique aspects of travel, access, and other transportation issues faced in Alaska; and the Alaska Region's foresight, need, and commitment to mission-critical goals. Potential partners may use this LRTP to identify projects of mutual interest.

Priority Transportation System

This *FS Alaska Region LRTP* establishes a set of defining criteria, based on the mission, goals, and objectives described in Section 1.6. These criteria are intended to help guide the selection, prioritization, and funding allocation for the transportation system. They are intended to be applied to the current transportation system as recorded in the FS transportation atlas at the time of consideration.

This LRTP applies to a subset of transportation facilities including National Forest System (NFS) roads, NFS trails, and marine access facilities that are of greatest concern to the Alaska Region. Through the LRTP planning process, it was determined that projects involving these assets would have the greatest potential for achieving LRTP goals and objectives.

Needs and Gaps

Differences in funding need and the availability of funding create gaps in the FS' ability to maintain and support its Alaska Region transportation system. Gaps are therefore present when transportation needs exceed the availability of funding. Limiting the impact of these gaps is therefore a paramount concern for the FS and the long-term sustainability of the Alaska Region transportation system. In such an environment, it is essential to make optimal use of internal FS and Forest Highway appropriations in addition to finding other transportation funding streams (such as funds that apply to all FLMAs) and less common non-FS competitive funding and partnership funding opportunities. This LRTP provides strategies to limit the impact of funding gaps as well as identify potential funding sources.

This LRTP identifies two primary transportation gaps: deferred maintenance and operational logistics. For Alaska Region FS roads and bridges, deferred maintenance based on national cost averages is estimated at $31 million and $13 million, respectively. With continued declines in road and bridge funding, deferred maintenance continues to increase. The impacts of this are especially significant in the Alaska Region because embedded and other nearby communities use the FS transportation system for everyday travel. This is the case because in many areas there are no county or state highway connections and the FS bears the responsibility of keeping roads serviceable. Furthermore, subsistence users also rely upon FS roads for access to hunting, fishing, and other subsistence activities.

Gaps are also present due to the geographic extent of Alaska Region lands. Due to the considerable size of the Alaska forests, operational movement within the forests is difficult, for example the Tongass National Forest spans an area larger than the state of Florida. This issue is compounded by the forests' relatively few road assets. Furthermore, half of the Alaska Region is designated roadless. Because of the size and the limited road system, travel in most of Alaska for maintenance and reconstruction activities requires expensive air or water transport.


FS

1. Introduction

This U.S. Department of Agriculture, FS Alaska Region LRTP complements and strengthens the agency's processes for transportation decision-making in Alaska. The plan ensures that transportation priorities and funding decisions are guided by FS long range goals and objectives and that projects that are the most effective in achieving desired future conditions are supported. The *FS Alaska Region LRTP* is also a companion document, or "drop-down" plan, to the multi-agency *Alaska Federal Lands LRTP*. As a drop-down plan, this document provides FS-specific details to the *Alaska Federal Lands LRTP* regarding baseline conditions, identified deficiencies, system needs, project selection processes, and summary of possible funding sources. This information allows the other agencies participating in the *Alaska Federal Lands LRTP* to identify gaps in the statewide transportation system that serves Federal Lands and to develop better interagency coordination in leveraging project funds and addressing high-level priorities.

1.1 Purpose and Need

The purpose of this plan is to complement and strengthen transportation coordination and decisions by ensuring that transportation priorities and funding decisions are guided by long range goals and objectives in addition to identified needs to achieve desired future conditions. This plan accomplishes this by:

- Establishing long range goals and actionable objectives that reflect the overarching FS mission and vision
- Illustrating the means by which to communicate need to decision-makers
- Setting condition goals for Forest Highways
- Describing the process and outcome of determining desired future conditions
- Recommending that annual transportation funding decisions factor long range goals and objectives into the Capital Improvement Program (CIP) development process.
- Using performance measures that embody LRTP goals and objectives to rate success over time

1.2 Audience

This LRTP is written for several audiences including forest supervisors, regional leaders, national-level decision-makers, and potential local and regional partners from governmental or non-governmental organizations. This LRTP is designed to support these different audiences in several ways, as described in the following subsections.

1.2.1 Forest Supervisors

Forest supervisors use the LRTP to determine which projects are supportive of long range FS priorities throughout the region. The LRTP also serves as a springboard for forest supervisors to partner with outside agencies and discuss project needs of mutual interest, such as sharing resources or addressing safety concerns with the public and regional entities.

1.2.2 Regional Level

The LRTP enables regional FS coordinators to factor long range goals and objectives into their funding decisions. The LRTP also enables regional leaders to find alternative funding from Federal sources that are administered by the State of Alaska and others.

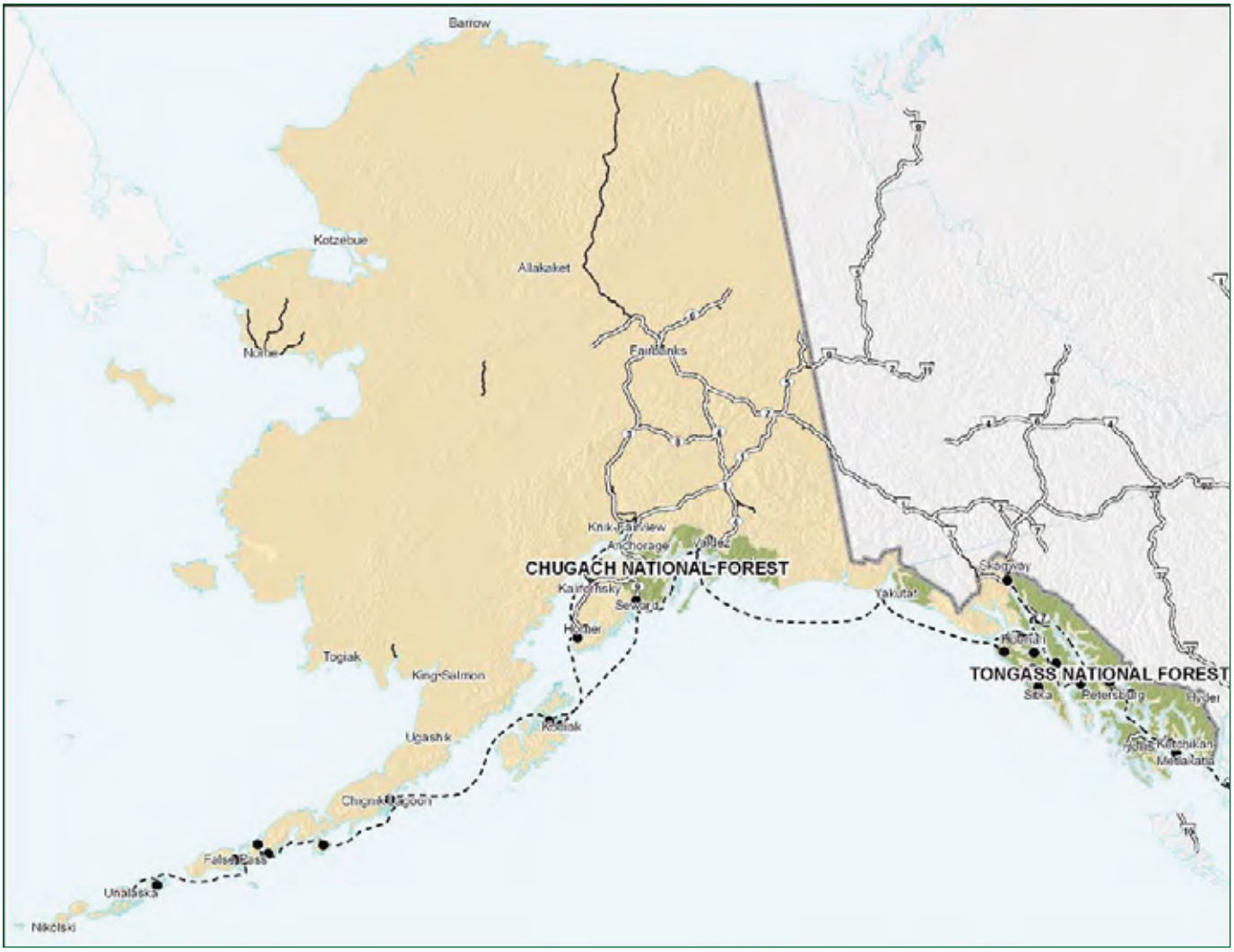
1.2.3 National Level

The LRTP informs the development of national-level plans and programs by outlining long range transportation goals, objectives, and suggested actions in Alaska, while also documenting the steps being taken by the Alaska Region to further national FS vision, missions, and goals. This and other national-level planning efforts help communicate unmet mission-critical transportation needs to congressional leaders. The LRTP also helps communicate the unique aspects of travel, access, and other transportation issues being faced in the Alaska Region. The LRTP helps to illustrate FS foresight, need, and commitment to mission-critical goals, especially when projects are being pursued jointly with other agencies or organizations.

1.2.4 Potential Partners

Potential partners may use this LRTP to identify projects of mutual interest. The FS recognizes the value of cooperative transportation partnerships, and seeks to leverage FS funds with other Federal, State, and local agencies as well as Congress and user groups. The objective is to achieve the greatest benefit to the largest number of agencies, organizations, and goals as possible through shared projects.

Figure 1
Forest Service Alaska Region



1.3 Background

The FS mission is to sustain the health, diversity, and productivity of the nation's national forests and grasslands to meet the needs of present and future generations. The FS motto is "caring for the land and serving people." As set forth by law, the FS mission is to achieve quality land management under the sustainable multiple-use management concept to meet the diverse needs of people.

The Alaska Region of the FS manages two national forests: Chugach National Forest (Chugach) and Tongass National Forest (Tongass). Together, the forests cover more than 22 million acres and are the nation's largest national forests. The expansive nature of these forests creates accessibility challenges for both the public and the FS. Unlike most other national forests, the transportation system in the vicinity of the Alaska forests is without county roads. This absence creates a unique situation where FS routes serve the role traditionally performed by county roads and provide access to and from communities. Further, relatively few FS routes are available compared to the extensive land areas of the Chugach and Tongass. As illustrated in Figure 1 and Figure 2 (and as summarized in Chapter 1), FS roads are very limited in remote areas.

Trails are of particular importance to the FS transportation network. Trails serve traditional purposes such as recreation; however, in Alaska, they also support subsistence activities and are necessary for true non-recreational, origin-destination transportation. Travel often occurs by boat, aircraft, or other means to access or pass through remote FS land. Travel to and through Alaska FS lands is accessible through a unique multimodal transportation system. The FS transportation system, State highways, airports, docks, and the Alaska Marine Highway are therefore the backbone of forest access.

Figure 2
Alaska Region National Forests

Table 1
Chugach National Forest Geographic Areas

Land Area	Percent of Alaska Region	Geographic Landscape	Communities
Prince William Sound	48%	Forested islands, intricate coastlines, and tidewater glaciers	Whittier, Valdez
Copper River Delta	31%	Vast wetland habitats, mountains, and glaciers	Cordova
Kenai Peninsula	21%	Mountains, rivers, most accessible of the three areas	Seward, Girdwood, Hope, Cooper Landing

1.3.1 Chugach National Forest

Chugach is 50 miles south of Anchorage, Alaska's most populous city. The forest stretches 200 miles from the Kenai Peninsula to the Bering Glacier east of Cordova. The forest has three distinct geographic areas: Prince William Sound, Copper River Delta, and the Kenai Peninsula, as summarized in Table 1. As summarized in Section 3.1, Chugach has a limited road network. Nevertheless, all roads are considered important (maintenance level three or higher) and, unlike forest roads elsewhere in the United States, timber activities have not been a major use factor.

1.3.2 Tongass National Forest

Tongass is located in southeast Alaska and features the world's largest temperate rainforest. Almost half of Tongass is covered by ice, water, wetlands, and rock. The forest includes 11,000 miles of shoreline, numerous mountains, and is largely an undeveloped and isolated landscape. The Tongass boundary spans 500 miles, covering about 80 percent of the Alaska Panhandle. The forest is unique in that cities and towns such as Juneau, Sitka, Ketchikan, Petersburg, and more than 25 other communities are embedded, or nearly surrounded, by the forest's boundary. Because there are no county roads and only limited State highway connections, communities rely upon the FS transportation system for travel and access to hunting, fishing, and subsistence activities.

1.4 Forest Highways

An important aspect of the FS transportation system is the distinction between Forest Highways and all other FS roads. The term "Forest Highway" refers to a road under the jurisdiction of, and maintained by, a public authority and open to public travel. A public authority other than the Federal Highway Administration (FHWA) Federal Lands Highway (FLH) Division, such as the Alaska Department of Transportation and Public Facilities (ADOT&PF), FS, or a local government, typically has jurisdiction over a Forest Highway. A Forest Highway may be comprised of several segments, each managed by a different authority. Generally, a Forest Highway must be in or adjacent to the national forest land; must be necessary to provide public access to and through the national forest; must be necessary for access to protect, administer, use, and develop national forest resources; must be open to public travel; and must provide a connection to other transportation systems (such as public roads or the Alaska Marine Highway system). Based on FLH Division data, 919 miles of Alaska roadway were designated as Forest Highways in 2010. This list of designated Forest Highways is not fixed, and routes can be added or removed. The Western FLH Division, Division Engineer, with concurrence from the FS and ADOT&PF designates Forest Highway routes. This trio of partners is called the Tri-Agency.

Forest Highways range from FS roads in rural areas to State roads that receive more intense use from nearby communities and urban areas. Forest Highways are intended to provide safe and adequate transportation for national forest visitors, subsistence users, recreationists, resource users, and others. Forest Highways also support rural, community, and regional economic development and facilitate tourism and travel. Forest Highways are particularly important in Alaska because national forests dominate the landscape in the southeastern portion of the State.

1.5 Alaska Federal Lands Long Range Transportation Plan

The *Alaska Federal Lands LRTP* was established because of Alaska's reliance on a unique multimodal transportation system. This plan, unlike other regional or State LRTPs developed for Federal lands in the lower 48 States, focuses on the connectivity of public access to and through Federal lands using the various transportation modes to provide a unique and seamless experience across multiple land jurisdictions for local residents, out-of-state visitors, administrative, commercial, and subsistence uses.

The *Alaska Federal Lands LRTP* was also prepared to help foster partnerships among Alaska's Federal land management agencies (FLMA) and others. As funding has become scarce and demand for the transportation system continues to grow, it has become increasingly important for the FS and other FLMAs to work together to assess needs, set priorities, and implement projects that provide public benefits while meeting fundamental program goals of the multiple agencies. This LRTP describes the process and provides guidance for coordinated planning and decision-making among FLMAs including the FS, National Park Service, U.S. Fish and Wildlife Service, Bureau of Land Management, ADOT&PF, FHWA, Western Federal Lands (WFL) Division, and Alaska Federal Aid Division Offices. The LRTP is intended to help these partners make mutually beneficial investment decisions for planning, safety management, preservation, construction, and other improvements related to the transportation system.

1.6 Plan Mission, Goals, Objectives, and Strategies

The *FS Alaska Region LRTP* mission, goals, and objectives presented in this document are intended to provide a long range perspective to the evaluation and selection of FS transportation improvement projects in Alaska. Through a collaborative effort involving multiple levels of FS staff, the FS developed these mission, goals, and objectives statements specifically for this LRTP. The statements are based on national-level vision and goals for the agency, but they also incorporate values of importance to the Alaska Region. These statements shaped the development, conclusions, and recommendations of this LRTP.

LRTP Mission

The mission of this LRTP is to create a highly relevant and effective transportation system to and through Alaska's national forests in balance with the values of the FS and the transportation needs of the State and communities. Accessing National Forest lands for resource management, subsistence, recreation, and enjoyment is an integral part of the Alaskan heritage, culture, and economy.

LRTP Goals and Objectives

The goals of this plan encompass five categories: preservation and sustainability; partnerships; safety; access; and environmental, national, and cultural resources. Each goal includes distinct objectives and strategies that serve to further illustrate the intent of the goal.

Goal 1: Preservation/Sustainability: Provide a sustainable transportation program to satisfy current and future land management needs in the face of changing climate.

Objective: Asset Management: Use asset management objectives, condition information, and priorities as a guide when considering transportation investments.

Strategy: Based on available funding and annual priorities, conduct Road Condition Surveys and update the corresponding annual and deferred maintenance data in the Infra Roads database. Continue to conduct Trail Condition and Assessment Surveys (TRACS) on a 5-year recurring cycle and record the corresponding inventory, prescription, and maintenance data in Infra trails database.

Strategy: Periodically, conduct and update asset life cycle cost estimates to support planning and programming asset renewal.

Objective: Asset Investment Planning: Consider sustainability of out-year operation and maintenance of new assets during the planning process.

Objective: Hazard Avoidance: Recognize, mitigate, and avoid or minimize conditions that jeopardize transportation assets.

Goal 2: Partnerships: Leverage resources to enhance benefits to transportation system users.

Objective: Partners: Accomplish annual coordination by setting priorities for needs, exchanging data, and discussing mutual policies to facilitate shared execution and potential economic savings for projects of mutual interest and benefit.

Strategy: Conduct project coordination meetings with Alaska FLMA, Tri-Agency Forest Highway Program, tribes, corporations, State, and user groups.

Strategy: Collaborate with other agencies and partners to share information and associated training opportunities for effective transportation planning and management.

Goal 3: Safety: Provide safe and agency-appropriate access to and through National Forest System lands.

Objective: Safety: Transportation infrastructure will provide safe access for the public to and within the National Forest System.

Strategy: Establish a safety management system which may include, but is not limited to: air, road, trail, and marine safety audits; motorized mixed-use analysis; review of accident information; emergency operations and bridge inspections.

Strategy: Incorporate applicable safety standards in the design and construction of airstrips, docks, ferry systems, roads, trails, and bridges.

Goal 4: Access: Proactively enhance the Alaskan multimodal transportation system experience, community connectivity, and access to and through National Forest System Lands.

Objective: Improve access to forests and connectivity through the forest between communities.

Objective: Coordinated Planning: Strive for seamless multimodal connections to and through the National Forest System.

Objective: Economic Development: Enhance economic development at the local, regional, and national level.

Objective: Alternative Transportation Systems: Develop and promote alternative transportation systems where appropriate.

Strategy: Incorporate air, road, trail, marine, rail, bus, biking, and pedestrian facilities where appropriate.

Objective: Visitor/User Information: Provide communication and outreach about transportation to and through the National Forest System.

Strategy: Provide current and effective visitor use maps, kiosks, and webpage maps.

Goal 5: Environment/Natural and Cultural Resources: Protect and enhance natural and cultural resources through comprehensive transportation planning and management.

Objective: Planning at an Appropriate Ecosystem Scale: Consider effects of transportation systems on ecosystems.

Strategy: Improve fish crossing.

Objective: Physical Environment-Water Quality: Ensure protection of open water, wetlands, and aquifers across National Forest System. Air Quality: Maintain and improve air quality. Soils: Avoid or minimize impacts on karst and at-risk soil systems.

Objective: Habitat: Avoid, minimize, or mitigate transportation-related impacts.

Objective: Cultural Resources Preservation: Avoid or minimize impacts to culturally significant or historic sites and landscapes.

1.7 Long Range Transportation Plan Organization

This LRTP is presented in eight chapters, including this introduction. The LRTP is organized as follows:

Chapter 2, Regulatory Framework and Planning, references the regulatory framework related to the Alaska FS transportation system.

Chapter 3, Existing Transportation System, summarizes the existing transportation network and the current state of FS transportation assets.

Chapter 4, Priority Transportation System, describes the long range goals for FS transportation assets and investments. The chapter also illustrates how FS transportation assets were selected for inclusion in the LRTP.

Chapter 5, Funding, summarizes the recent investment history for FS transportation projects in Alaska and discusses the funding gap between available funds and needed improvements to the FS transportation system. The chapter also identifies additional opportunities for funding through partnerships with other agencies.

Chapter 6, Needs and Gaps, described where transportation needs exceed the availability of funding.

Chapter 7, Performance Measures, describes the use of transportation-related performance measures established in the FS strategic plan to gauge achievements in meeting long range transportation planning goals and objectives over time.

Chapter 8, Conclusion, summarizes the challenges, needs, and gaps facing the FS transportation system. The chapter also reiterates the value of addressing long range goals in transportation related decisions.

2. Regulatory and Planning Framework

Regulations are instrumental in defining the FS transportation system and providing the basis for transportation planning. The regulatory framework related to FS transportation planning is available in the *Summary of FS Transportation Regulatory and Planning Framework* report in Appendix A. The regulations, acts, and strategic plans described in the appendix shape the high-level definitions and purpose of the FS transportation system. As illustrated in Figure 3 for example, regulations influence the classification of roads and trails as documented in Forest Plans and/or Access and Travel Management Plans (ATM plans). The resulting road and trail management objectives (which range from prohibiting use to encouraging use) and maintenance classifications (which define vehicle use types, among others) outline the purpose, role, and use for the FS transportation system within each Forest. These transportation assets compete for funds based on these classification attributes and the measures of eligibility and need described in Chapter 5. This LRTP serves to link long-term transportation goals and objectives into the various FS project selection processes.

2.1 Alaska Planning Framework

The regulations and concepts described in Figure 3 are detailed in Appendix A. The appendix describes the following regulations and planning processes as they pertain to the Alaska Region FS transportation system:

- Regulatory Framework
- Forest Service Transportation System
- National Forest System Roads
- National Forest System Trails
- National Trails System Act
- Travel Management Rule
- Prohibitions
- Alaska National Interest Lands Conservation Act
- Roads to Resources
- Planning Process
- Forest Service Strategic Plan
- Forest Management Plans
- Transportation Planning Related Activities
- Access and Travel Management Plans
- State of Alaska Transportation Plans

2.2 Other Influences

In addition to specific regulations, the Alaska Region planning framework is influenced by other factors such as tribal government, public involvement, climate change, and the planning activities of others such as ADOT&PF.

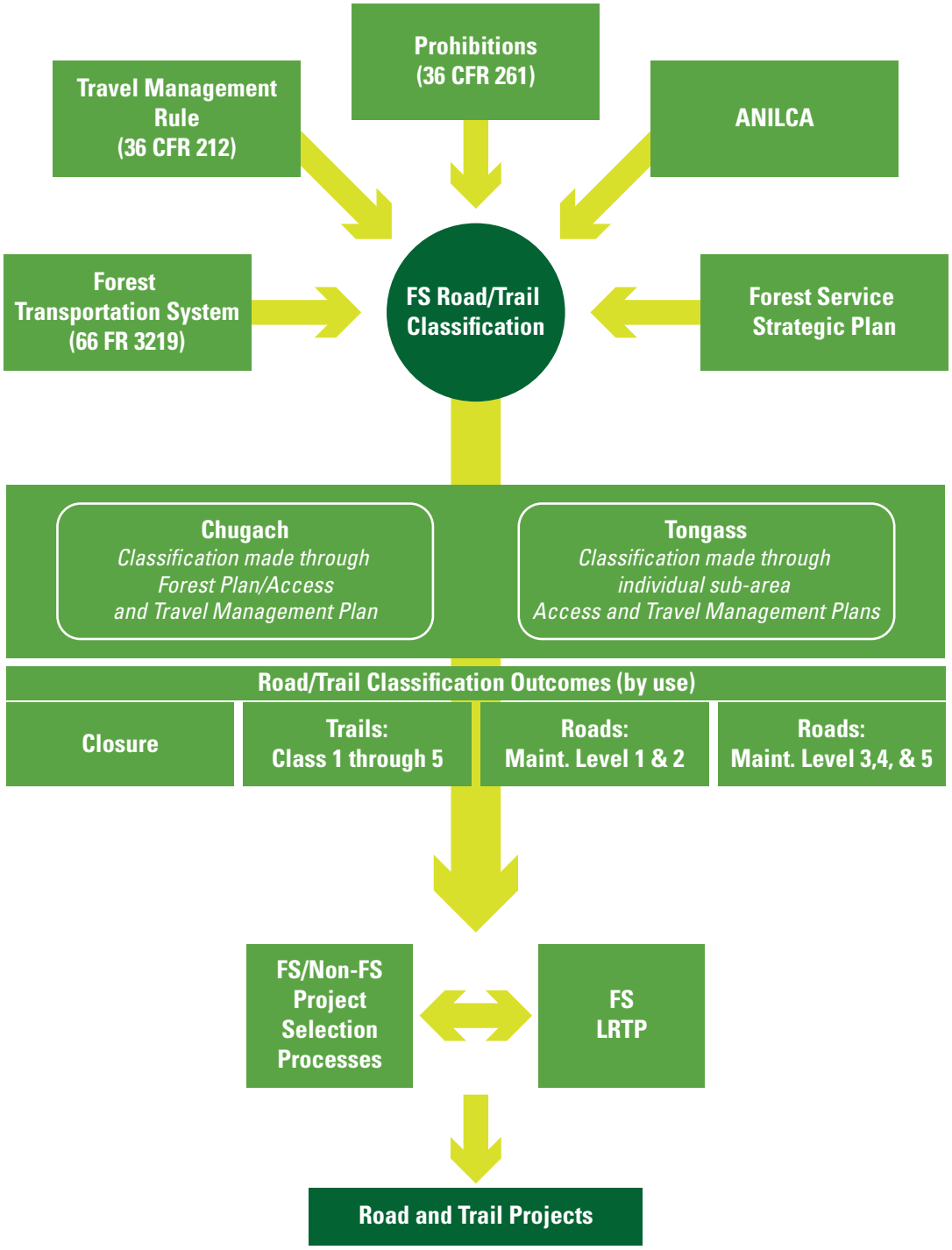
2.2.1 Tribal Government

Chapter 1663 of the Forest Service Manual (FSM) outlines the FS policy on consulting with tribal governments prior to taking actions or formulating policies that may affect Federally recognized tribes, trust assets, treaty rights, services, or programs including FS transportation programs. The FSM objectives are:

- Develop and maintain effective working relationships with American Indian and Alaska Native Tribes taking into account the cultural concerns and interests of tribes.
- Ensure that FS officials, programs, and activities respect tribal self-government and sovereignty and honor tribal rights and interests.

- Ensure consultation with tribes when undertaking the formulation and implementation of policies that may have tribal implications, as defined in Executive Order 13175, Consultation and Coordination with Indian Tribes.
- Establish and ensure effective government-to-government working relationships with tribes to achieve the common goal of promoting and protecting ecosystem health.

Figure 3
National Forest System Road and Trail Planning and Regulatory Framework



Issued in May 2002, the Alaska Region Tribal Consultation Policy Statement recognized that many tribes have maintained strong legal and cultural ties to aboriginal lands now managed as FS lands and thereby have an interest in various FS programs such as transportation. Through this policy statement, the Alaska Region of the FS reconfirmed its commitment to develop strong partnerships with tribes to help fulfill its mission and responsibilities. To work toward achieving these ends, the region employs tribal relations staff to assist line officers and other employees in building positive working relationships with tribes through consultation, collaborative natural resource management, and partnership activity. Forests may collectively consult with up to 63 tribal entities consisting of both Federally recognized tribes and Alaska Native corporations.

The Alaska Tribal Leaders Committee consists of the Regional Forester's executive team, four elected tribal delegates, and a Pacific Northwest Research Station representative. The Committee regularly engages in dialogue on matters of mutual importance, strengthening relationships and improving consultations. The Committee meets informally through a monthly conference call, and formally at an annual in-person meeting. Tribal delegates are invited to attend Forest Leadership Team meetings when they are held in a tribal delegate's home community.

The region created the Tribal Consultation Database to enhance the documentation of consultations and the continuity of discussions for transportation planning and projects. Following meetings with tribal leaders, FS staff enter records containing meeting notes and follow-up action items. Transparency is enhanced with a feature that generates email summaries, including a list of follow-up action items that may be sent to meeting participants. The email summaries help the meeting participants, FS staff, and tribal leaders move forward in a common direction.

2.2.2 Public Involvement

Public involvement conducted during transportation planning is perhaps best explained by distinguishing "policy-level," "plan-level," and "project-level" public involvement. Policy-level public involvement occurs during the development of forest plans, ATM plans, and LRTPs. Long-range policy plans provide guidance and direction for a transportation program in a big picture sense. Public involvement at this level is designed to capture public attitudes to help shape policy-level decisions. Because forest plans are considered a major Federal actions significantly affecting the environment, they require an EIS as required by NEPA and 36 CFR 219. As such, public involvement conducted on behalf of these plans is consistent with the requirements of NEPA. ATM plans require additional NEPA-level public involvement through an EIS if it is determined that the plan would cause significant impacts. For example, the Chugach ATM road analysis used an extensive public involvement process to understand public desires in the development of alternatives. The public involvement process used newsletters, public interdisciplinary team meetings, a website, telephone recordings, and collaborative learning workshops. Approximately 3,000 comments were received during the public involvement program.

Million Dollar Bridge and Childs Glacier, FS

Plan-level public involvement occurs during development of shorter-term plans such as the FS 5 year CIP, Statewide Transportation Improvement Plan (STIP), metropolitan planning organization Transportation Improvement Programs (TIP), and the FLH Division TIP. Project level public involvement occurs when specific projects are being developed through NEPA. Project-level public involvement is typically the most intensive in terms of interface with the public; whereas plan-level involvement typically balances public and agency input, and policy-level involvement focuses more on agencies.

Public involvement conducted specifically for this plan was performed in parallel with the efforts of the *Alaska Federal Lands LRTP*. Numerous outreach tools were used during the development of the *Alaska Federal Lands LRTP*. Outreach tools ranged from passive informational resources such as newsletters and a website, to more formal briefings and presentations. Participation in the *Alaska Federal Lands LRTP* is documented in that plan.

Because this *FS Alaska Region LRTP* reflects and builds upon the results of existing adopted plans, public involvement used in this LRTP was mainly gathered through the efforts of previous planning efforts described in the *Summary of FS Transportation Regulatory and Planning Framework* report in Appendix A. These plans adhere to both the National Forest Management Act of 1976, which requires public participation in land management planning as well as NEPA public participation requirements. LRTP-specific outreach was conducted in parallel with the *Alaska Federal Lands LRTP* planning effort.

2.2.3 Climate Change

Climate change threatens forest and grassland benefits such as provisioning services including water, wood, and wild foods; regulating services such as erosion, flood, and climate control; and cultural services such as outdoor recreation, spiritual renewal, and aesthetic enjoyment. The FS approach to climate change focuses on adaptation (actions that reduce the vulnerability of species and ecosystems to the effects of a changing climate) and mitigation (activities that directly reduce or offset the greenhouse gas emissions that lead to climate change). FS climate change information can be found on in the agency's website (www.fs.fed.us/climatechange/) as well as in the *Climate Change Technical Report* that accompanies the *Alaska Federal Lands LRTP*. This technical report identifies efforts underway and planned by each FLMA including the FS. The report also identifies areas of potential threat to Alaska FLMA transportation assets from erosion and changes in permafrost.

2.2.4 Southeast Alaska Transportation Plan Addendum

The *ADOT&PF 2004 Southeast Alaska Transportation Plan* includes a historic partnership between the ADOT&PF and the FS. In the plan, the FS reserves 34 essential transportation and utility corridors throughout the Tongass for ADOT&PF transportation and utility purposes. A subset of the miles from the ADOT&PF were selected to be included in reciprocal rights-of-way and easements enacted into law 109-59 on August 10, 2005 in Section 4407 of the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users*. An excerpt from the ADOT&PF plan is included in Appendix B. The selected content relates management prescriptions for transportation and utility systems as well as standards and guidelines for transportation.

3. Existing Transportation System

This chapter summarizes the current state of FS transportation assets and provides a brief overview of the FS transportation system. As a baseline condition, this information can be cited in future studies to measure progress in achieving long range transportation goals and objectives. Maps of the Alaska Region transportation system are available in Appendix C.

3.1 Roads

A prerequisite for describing the FS transportation road system is understanding of the various FS road classifications. As detailed in the FS *Transportation Regulatory and Planning Framework Summary* in Appendix A, ATM plans are critical components of FS transportation planning, and among many other functions, designate which roads are open to public motor vehicle use. ATM plans prescribe road uses by classifications, seasonal allowances, and distance allowances, and provide information on associated travel rules and regulations. ATM plans also categorize roads in terms of their maintenance level and trails in terms of their Trail Class or development scale, as well as characterize the intended intensity of use (from prohibit to encourage use). Definitions of the road maintenance levels detailed in Appendix A, in Section 2.4. In general, the road maintenance levels are:

- Maintenance Level One: Roads closed to vehicular traffic.
- Maintenance Level Two: Roads maintained for use by high clearance vehicles.
- Maintenance Level Three, Four, and Five: Roads open and maintained for standard passenger vehicles.

The official inventory of NFS road and NFS trail and associated management objectives is documented in the Forest Transportation Atlas, as recorded in the agency's Infra database and corresponding GIS transportation dataset. The atlas is updated as needed to reflect changes in inventory, status, and management objectives. Table 2 summarizes the most recent Alaska Region Infra data on road miles by maintenance level.

The Tongass' road network is more expansive than that of the Chugach. As summarized in Table 2, there are 2,359 miles of open roads (1,334 miles of closed roads) in the Tongass. Based on 2010 FLH Division data, 430 miles of NFS roads are designated as Tongass Forest Highways while 296 miles of State roads are designated as Tongass Forest Highways. Because the forest is located in an island archipelago, the network is dispersed. Due

Motor Vehicle Use Maps

These designated roads, trails, and areas for motor vehicle use are documented in motor vehicle use maps (MVUM). The MVUM displays official NFS roads and trails or areas designated as open to motorized travel. The MVUM also displays allowed uses by vehicle class (for example, highway-legal vehicles, vehicles less than 50 inches wide, and motorcycles), seasonal allowances, and distance allowances, and provides information on other travel rules and regulations. Routes not shown on the MVUM are not open to public motor vehicle travel. Routes designated for motorized use may not always be signed, but they will be identified on the MVUM. It is the public's responsibility to reference the MVUM to stay on designated routes for motor vehicle use. The MVUM is updated annually to correct mapping errors or discrepancies and to update travel decisions.

Trail Types

As detailed in the FS transportation regulatory and planning framework summary in Appendix A, the term "Trail Types" describe trail categories that reflect predominant trail surface and general modes of travel accommodated by a trail. Trail Types include:

Standard Terra Trail. A trail that has a surface consisting predominantly of the ground and that is designed and managed to accommodate use on that surface.

Snow Trail. A trail that has a surface consisting predominantly of snow or ice and that is designed and managed to accommodate use on that surface.

Water Trail. A trail that has a surface consisting predominantly of water (but may include land-based portages) and that is designed and managed to accommodate use on that surface.

Chugach NF, C. Lindemuth, FS

to the forest's unique physical geography and extensive coastline, intermodal transportation provides access to and from water and land for Southeast Alaska communities. This intermodal access is relied upon by both local populations for work, subsistence, recreation, and safety as well as access for thousands of out of state visitors.

State and Forest Highways are the backbone of the Chugach road system. There are 100 miles of State highways and 84 miles of NFS roads on the Chugach. Of the total 184 miles of State and NFS roads, 135 miles are designated as Forest Highways. Most NFS roads are concentrated in valley floors. These roads generally access developed sites such as campgrounds, trailheads, boat ramps, administrative sites, roads built under special use permit, and roads developed for resource activities such as timber sales. Some of these roads are currently closed to vehicle travel but are available for non-motorized use. Most roads are gravel surfaced, receiving minimal annual maintenance beyond grading. Roads under special use permit are maintained by the permittee. Additionally, a 30 mile road easement has been granted to ADOT&PF to construct the Carbon Mountain Road on the Copper River Delta. The Alaska Railroad line also runs through the Chugach for approximately 90 miles between Girdwood and Seward.

3.2 Trails

As discussed in Chapter 1, trails are of particular importance to the FS transportation network because they serve recreational, subsistence, and mineral or hydrological exploration purposes. Trails are therefore more than recreational transportation assets; they provide for non-recreational origin-destination travel.

Within each Alaska Region forest, trails have different characteristics. Due to the limited extent of the road system, NFS trails in the Chugach play a vital role in providing access to and through the Forest. As summarized in Table 3, the Chugach has 510 miles of trail, including more than 100 miles of Snow Trails, accessed by 30 trailheads along the road system and 1 via the Alaska Railroad. Trails and winter routes are often used for mining access and subsistence purposes, as well as recreation. Several trails provide intermodal opportunities to and between the road system, as well as recreation sites and facilities. These include, but are not limited to the Iditarod National Historic Trail, the Resurrection Pass National Recreation Trail, Resurrection River Trail, Crescent Creek Trail, and Russian Lakes Trail. Nearly all of the cabins on the Kenai Peninsula are accessed by these trails. Other shorter trails access cabins in Prince William Sound and the Copper River Delta area. Motorized vehicles are generally not permitted on these trails in the summer, while some are also snow trails used by

snow machines in the winter. Five miles of trail have also been constructed as part of the Whistle Stop Project, which will eventually include up to 30 miles of trail accessed primarily by the Alaska Railroad between Portage and Moose Pass.

The Tongass contains 655 miles of trail, including 92 miles in Wilderness Areas and 34 miles of Snow Trails. The Forest currently designates 165 miles of these trails as motorized; however, this number could be 403 miles depending on updates to the MVUMs currently in progress. Due to the complex island system of the archipelago, many trails have trailheads at tidewater beaches, while others originate in communities or from the road systems. Some trails provide public access from road systems to tidewater. Further, many Tongass recreational facilities such as cabins and shelters are accessible only from roads or boat then via trails. Short trails accessed from beaches in remote areas of the Tongass are important access routes for cruise ship visitors.

The level of Tongass trail development ranges from the minimally developed (Class 1) in designated wilderness and the more primitive areas, to fully developed (Class 5) at visitor centers. As is also the case in the Chugach, trails are used for commercial access to, or subsistence purposes, as well as for recreation.

3.3 Recreation Facilities

Recreation facilities throughout the Alaska Region are important transportation destinations. Access to and from recreation sites is therefore of particular interest when making transportation decisions (discussed in Chapter 4). Accordingly, 135 designated recreation facilities are in the Alaska Region forests. These locations are illustrated in Appendix C and Appendix D maps and are summarized in Table 4.

Table 2
National Forest System Road

Unit	Acres (million)	National Forest System Roads (Miles)			
		Miles for Passenger Vehicles Maintenance Level 3-5	Miles for High Clearance Vehicles Maintenance Level 2	Miles Closed or in Storage Maintenance Level 1	Total Miles of Road
Chugach	5.5	57	20	7	84
Tongass	17.0	439	1,920	1,334	3,693
Region	22.5	496	1,940	1,341	3,777

Source: Infra, September 2010.

Table 3
National Forest Service Trails by Type and Class

Unit	Total (miles)	Wilderness (miles)	Trail Type (miles)			Trail Class* (miles)				
			Standard Terra Trail	Snow Trail	Water Trail	TC1	TC2	TC3	TC4	TC5
Chugach	510	0	397	113	0	67	197	230	11	5
Tongass	655	92	621	34	0	46	179	400	27	3
Region	1,165	92	1,018	147	0	113	376	630	38	8

Source Data: FS fiscal year 2010 Trail Data Summery (Infra Trails 9/30/2010).

** Trail classes are detailed in Appendix A. In general Trail Class 1: Minimally Developed; Trail Class 2: Moderately Developed; Trail Class 3: Developed; Trail Class 4: Highly Developed; Trail Class 5: Fully Developed.*

Table 4
Recreation and Related Facilities

Recreation Facility	Chugach Number of Facilities	Tongass Number of Facilities
Campgrounds	14	16
Cabins	41	151
Survival Shelters	–	41
Picnic Areas	38	35
FS Facilities	17	–
Ranger District Offices	4	10
Trailheads	35	104
Boat Launches/Ramps	15	11
Mooring Buoys	–	42
Developed Hot Springs	–	3
Roadside Parks	4	–
Airstrips	–	6
Forest/Region Headquarter Offices	1	3

3.4 Other Transportation-Related Assets

Transportation assets may also include assets that are supportive of transportation, even if they are not directly used for transportation. For example, bridges are instrumental in supporting the function of roads. These assets are found throughout the Alaska Region and are summarized in Table 5. It should be noted that although Table 5 shows 114 seaplane bases, forests are generally inaccessible to seaplanes and boats due to a lack of infrastructure such as floats, boat ramps, and docks.

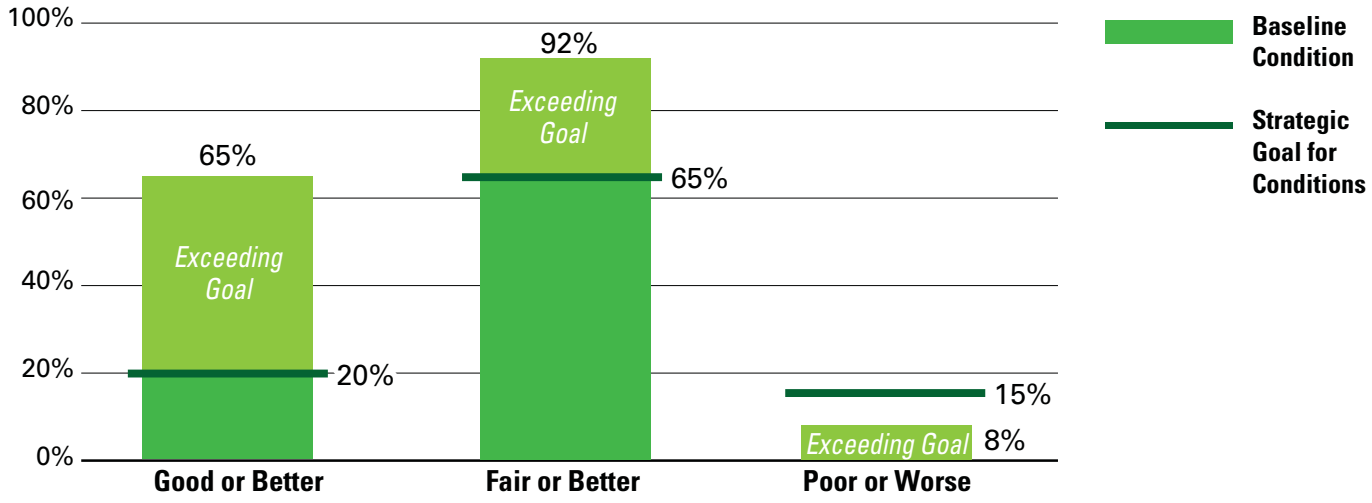
Table 5
Other Transportation-Related Asset

Transportation Related Asset	Chugach Number of Assets	Tongass Number of Assets
Marine Access Facility	–	206
Road Bridges	6	494
Trail Bridges	141	258
Seaplane Docks/Floats/Moorings	–	114
Administrative and Permitted Helipad/ Helispots	4	25
Railroad Whistlestop	2	–
Tunnel/Railroad Entrances	6	–

3.5 Forest Highways

Figure 4 illustrates the condition of Alaska's paved Forest Highways illustrated in Figure 5 and Figure 6. Paved Forest Highways in Alaska meet the pavement condition goals that the FLH Division has established. Based on 2004 FLH Division Forest Highway Road Inventory data, 112 of 393 miles of Alaska Forest Highway are paved. Sixty-two percent of those miles are in good condition, which exceeds the 2004 FLH Division Strategic Plan goal of greater than 20 percent in good condition; 92 percent are in good or fair condition, which exceeds the goal of greater than 65 percent in fair or better condition; and 8 percent are in poor condition, which meets the goal of 15 percent or less in poor condition.

Figure 4
Forest Highway Conditions



Source: Federal Lands Highway Roadway Inventory, 2004.

Tongass gravel highway, Larry Dunham

Figure 5
Chugach Forest Highways

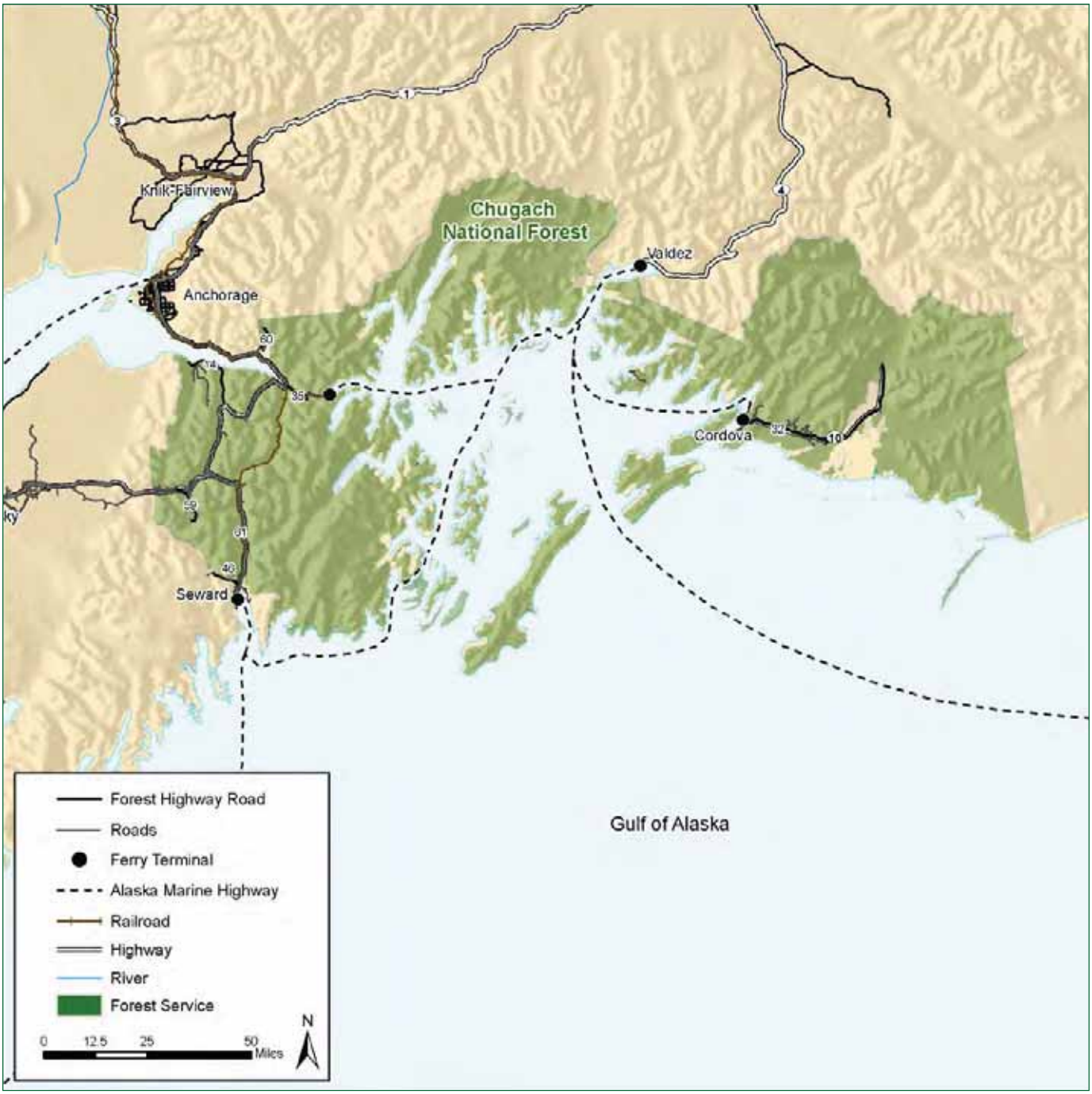
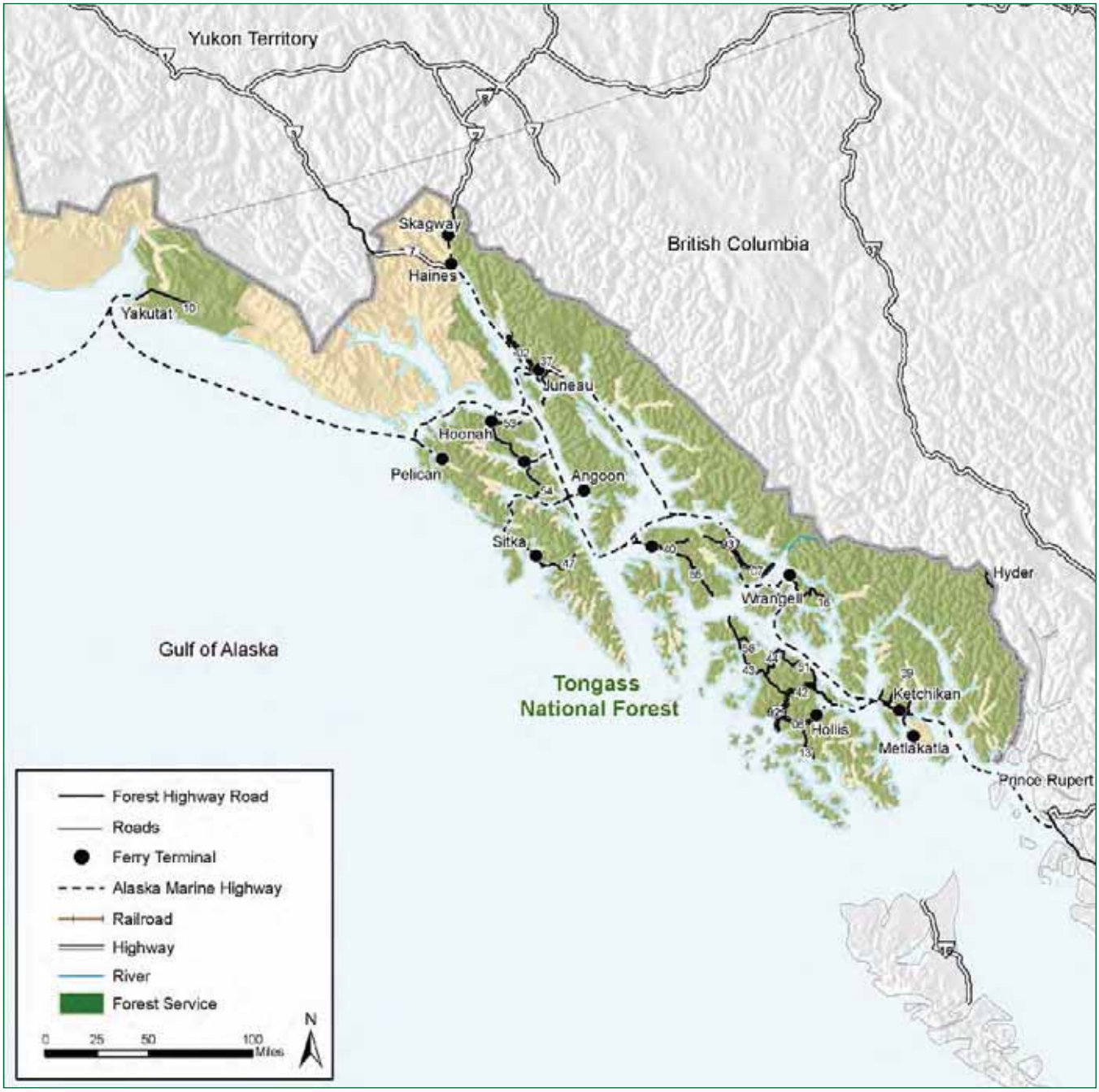


Figure 6
Tongass Forest Highways



Tongass NF, Larry Dunham

4. Priority Transportation System

This *Forest Service Alaska Region LRTP* establishes a set of defining criteria, based on the mission, goals, and objectives described in Section 1.6. These criteria are intended to help guide the selection, prioritization, and funding allocation for the transportation system. They are intended to be applied to the current transportation system as recorded in the FS transportation atlas at the time of consideration.

This LRTP applies to a subset of transportation facilities including the NFS roads, NFS trails, and marine access facilities that are of greatest concern to the Alaska Region. Through the LRTP planning process, it was determined that projects involving these assets would have the greatest potential for achieving LRTP goals and objectives.

The defining criteria for the assets included in this LRTP are:

- The Forest Highway system and FS maintenance levels three, four, and five NFS roads. These maintenance levels frequently access recreation areas, occasionally form loops popular for recreation, connect communities, or serve as the primary roads that provide access between communities and the national forest.
- Maintenance level two NFS roads that access cities, towns, and communities. The maintenance level two segments included in the plan either begin at marine access facilities or are associated with maintenance level three roads.
- Maintenance level two NFS roads that access key recreation sites and subsistence areas. These roads are often short and are frequently maintained due to the amount of use they receive.
- Marine access facilities that serve as links between islands, communities, and transportation systems; they are also primary access points for developed/undeveloped popular remote use areas. These multimodal facilities link air, marine, and surface transportation modes ranging from foot traffic to major commercial transportation of goods and services. These facilities are of critical importance in island environments such as those in the Alaska Region.
- NFS trails that provide access to key recreation destinations, areas or facilities; provide popular through-access; or connect communities or adjacent lands with the national forest. Generally, this includes all Trail Class 4 and 5 trails, most Trail Class 3 trails, and some Trail Class 2 trails.
- NFS trails that link communities through intermodal connectivity (i.e., Iditarod National Historic Trail, Resurrection Pass National Recreation Trail, Russian Lakes Trail, Resurrection River Trail, and Whistle Stop Glacier Discovery Trail)
- NFS trails that are accessible or that are intended to become accessible per FS Accessibility Guidelines.
- NFS trails that are essential for mining, subsistence access, commercial use, and/or heavily used by the public.

Maps of the routes and facilities that meet these criteria at the time of publication of this LRTP are in Appendix D. Throughout the life of this LRTP, recognizing that the FS transportation system and corresponding management prescriptions are not static, it will be necessary to apply these criteria to the current Forest Transportation Atlas for NFS roads and NFS trails, as recorded in the agency's Infra database and corresponding GIS transportation data.

Tongass NF, Mary Miller

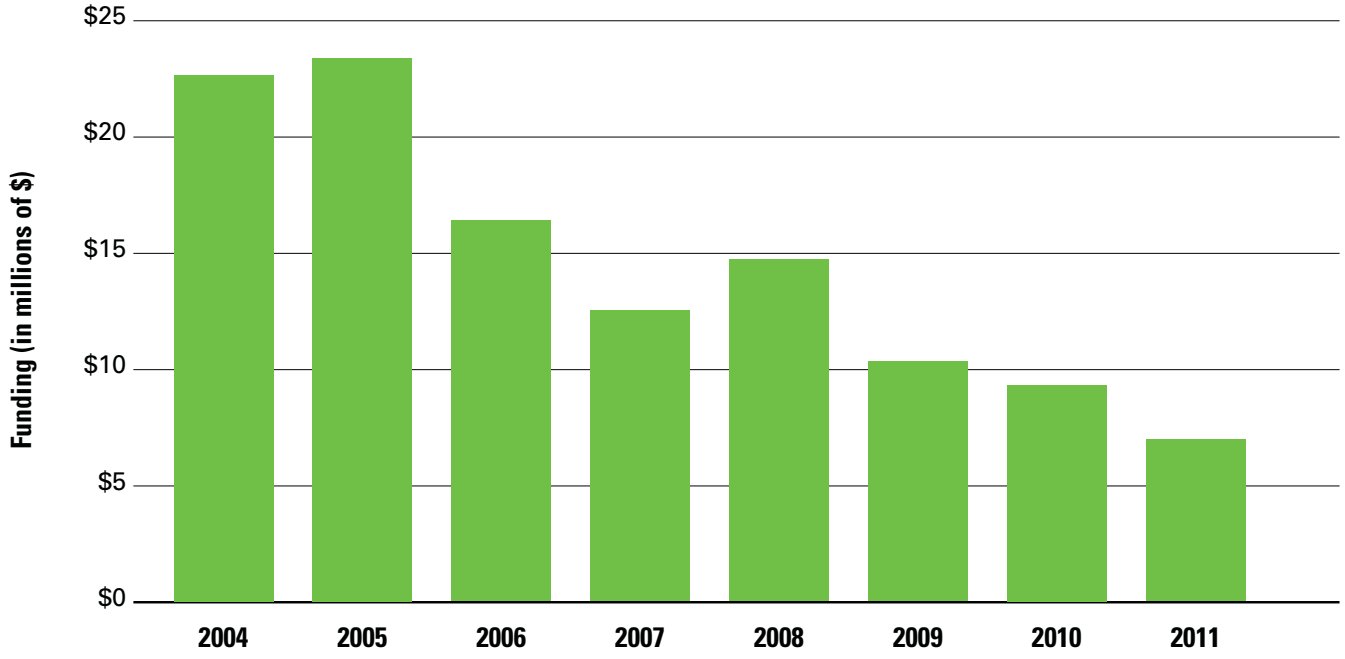
5. Funding

Transportation investment decisions are heavily influenced by funding availability and regulatory requirements. Differences in funding availability and needs create gaps in the performance and continued maintenance of the FS transportation system. Limiting these gaps is therefore a paramount concern for the FS and the long-term sustainability of the Alaska Region transportation system. In such an environment, it is essential to make optimal use of internal FS and Forest Highway appropriations in addition to seeking other transportation funding streams (funds that apply to all FLMAs) and less common non-FS competitive funding and partnership funding opportunities. Chapter 5 summarizes these funding sources and documents the downward trend of funding.

5.1 Historic Forest Service Construction and Maintenance Funding

The FS internal Capital Improvement and Maintenance for Roads funding is distributed nationally based on an allocation formula. A new version of the formula was implemented in 2005, and since then, road funding has decreased by more than 50 percent. As shown in Figure 7, funding exceeded $20 million in 2005, but dropped to less than $7 million in 2011. If continuously implemented, the current allocation model will eventually yield $3 million for the Alaska Region. This level of funding is inadequate to support a basic annual road maintenance program and does not provide funds to address larger maintenance or construction projects. As a result, the Alaska Region has had to reduce capital improvement projects and focus on the annual routine maintenance of roads and bridges on a minimum road system.

Figure 7
Internal Road Construction and Maintenance Funding Levels



Due to these funding gaps, and in an effort to reduce overall road system operational costs, roads were identified through the public ATM planning process described in Appendix A as high priority and needed for long-term access to national forest lands. Roads not needed for access were identified for storage or decommissioning as a cost-saving measure. In 2008, the Capital Improvement and Maintenance for Legacy Roads and Trails funding was made available for road storage and decommissioning projects.

The region receives Capital Improvement and Maintenance for Trails funding, which covers planning, design, and maintenance. Nevertheless, the bulk of trail capital improvement comes from other appropriated sources.

Maintenance funding for FS infrastructure (roads, trails, and facilities) is not in pace with maintenance needs. Further, funds used for maintenance are also used for decommissioning, emergency repairs, spill cleanups, energy conservation measures, and construction improvements. As a result, a significant amount of annual maintenance has been deferred over time. The Alaska Region therefore focuses available funding on critical deferred maintenance projects that relate to protecting health and safety, sensitive natural resources, and similar high-priority projects while continuing to defer other annual maintenance.

Roads and bridge-deferred maintenance based on National Cost Averages is estimated at $31 million and $13 million, respectively. In 2009, the Alaska Region identified the minimum road system, as described in Appendix A. This minimum system is determined to be a base system to meet resource and other management objectives at a level that is statutory and regulatory acceptable and that meets long-term funding expectations.

The region also uses the CIP, Recreation Site Improvement Program, American Recovery & Reinvestment Act, and Federal Highway Funding to address projects that have priority needs and to address deferred maintenance. Deferred maintenance reduction is especially challenging for Alaska because construction costs are high, and the locations of many sites are remote and increase mobilization costs.

Figure 8
Transportation Appropriations

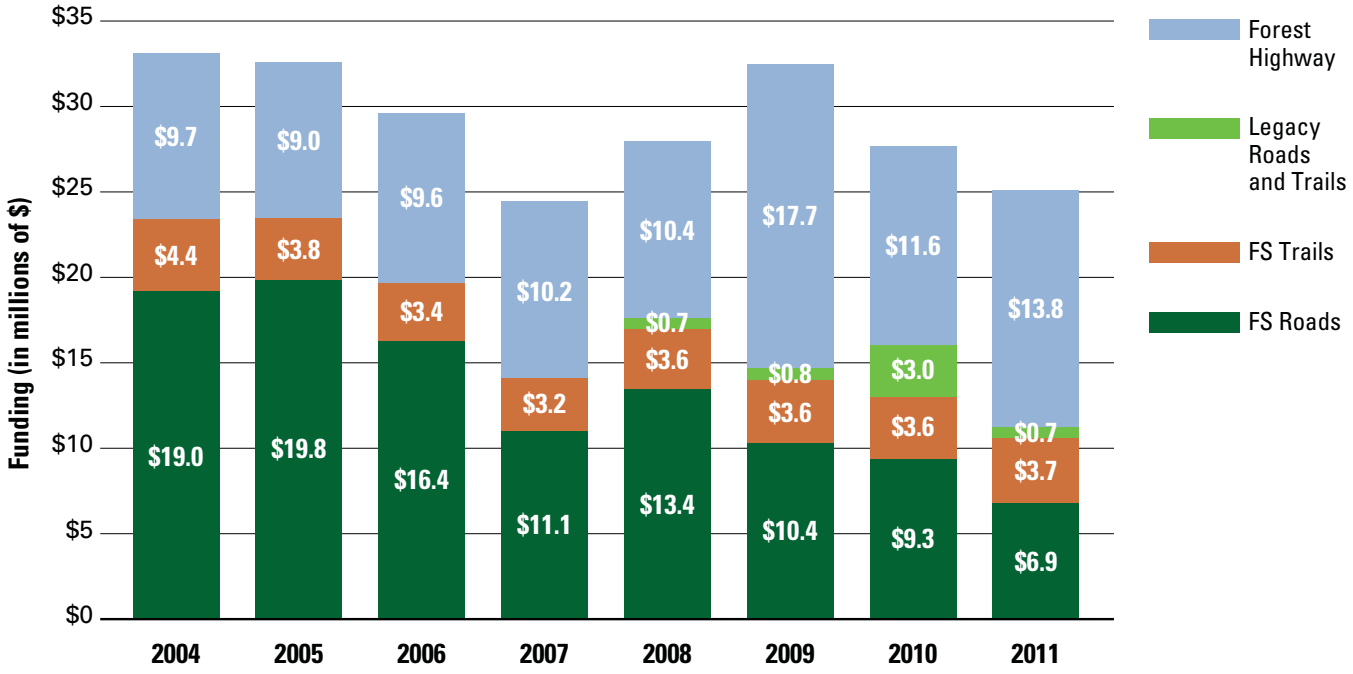


Figure 8 illustrates streams of appropriated transportation funding available to the FS from 2004 to 2011. The FS Road funding amounts vary by year because the FS occasionally receives specially appropriated funds. The Forest Highway funds shown were used on state-, city-, FS-owned roads.

5.2 Funding Opportunities

The FS has several internal and external sources available for funding transportation projects. This section describes these sources as well as the types of projects that are eligible for funding. For some funding sources, project selection processes are also described.

5.2.1 Forest Service Internal Funding

For internal funding sources, the Alaska Region, Regional Office of Engineering and Recreation develops a 5-year plan of work to identify and program funds for transportation (and other facility) projects. To the extent possible, projects are scheduled for funding and implementation in the rank order shown on the CIP project priority list. The region has established agreements outlining the processes and procedures to guide road and trail projects through the development, evaluation, and project ranking. It should be noted that although numerous funding sources are available nationally, the Alaska Region does not traditionally fare well in nationally competitive funding due to its relatively undeveloped transportation system.

Several FS-specific funding programs are available to FS transportation projects. These funding programs and their applicability (listed in Table 6) are described in detail in the following subsections.

Table 6
Forest Service Internal Transportation

Funding Programs	Project Type							
	Roads	Parking	Bridge	Drainage/Slope Stabilization	Trails	Marine	Wildlife Crossing	Interpretation
Capital Improvement and Maintenance – Roads	X	X	X	X	X	X	X	X
Capital Improvement and Maintenance – Trails			X	X	X	X	X	
Capital Improvement and Maintenance – Legacy Roads and Trails	X	X	X	X	X	X	X	
National Forest Recreation, Heritage, and Wilderness								X
Road Aquatic Species Passage			X	X		X		
Federal Highway Public Roads Transportation Planning Program	X	X	X	X	X	X	X	X
Maintenance and Infrastructure Improvement	X	X	X	X	X	X	X	X

Capital Improvement and Maintenance – Roads

Traditionally, road funds were authorized for construction improvements including new roads. Recent declines in the availability of road funds, however, require that all road funds be allocated toward maintaining the existing road system. Also, in fiscal year 2011 the initial FS Washington Office direction at the request of the Office of Management and Budget specified that, "no funding was requested in the fiscal year 2011 President's Budget for the capital improvement of roads. All new road improvement work must be deferred pending an appropriation, at which time further guidance will be given."

Capital Improvement and Maintenance – Trails

Regions are encouraged to use these limited funds to increase opportunities with trail partners in the maintenance and improvement of trails. The trails program in fiscal year 2011 was used for administration, maintenance, and improvement of NFS trails.

Capital Improvement and Maintenance – Legacy Roads and Trails

These funds are used to meet critical deferred maintenance, decommissioning, and repair needs on system roads and trails. Projects selected for these funds are focused on roads and trails that contribute to water quality problems. Based on a formula, the region received about $1 million from this program in fiscal year 2011. Most of the funds are focused toward implementing ATM plans and storing and decommissioning roads. These funds may be combined with other program budgets in fiscal year 2012.

Road Aquatic Species Passage

This program, authorized under 23 U.S.C. 204, is specifically provided for passage of aquatic species beneath roads that are designated as Forest Highways or forest roads with a maintenance level of three or higher. Final project selection is performed at the FS Washington Office in consultation with the FLH Division.

Federal Highway Public Roads Transportation Planning Program

Funding through this program is authorized under 23 U.S.C. 204(i)(2) for roads open to passenger vehicles for planning activities, traffic counts, and safety, bridge, and pavement management systems.

Deferred Maintenance and Infrastructure Improvement

Deferred Maintenance and Infrastructure Improvement funds are used for the maintenance of roads, trails, trail bridges, and facilities as well as capital improvements that construct new transportation infrastructure, alter existing infrastructure to change its function, and expand upon existing infrastructure to increase capacity. Projects funded under this program are evaluated on a national scale and prioritized for funding using criteria that ensure the most critical health and safety infrastructure needs will be met, particularly in areas that are heavily used by the public and FS. The Alaska Region does not typically succeed in competition for these funds.

Prioritizing Internal Funding

The Alaska Region manages a prioritized 5-year CIP plan to identify, prioritize, and program funds for transportation and other facility projects. To the extent possible, projects are scheduled for funding and implementation in the ranked order identified on the regional CIP project priority list. The region develops and establishes processes to guide road and trail projects through the development, evaluation, and ranking of CIP projects. The process, which is currently undergoing review and update generally includes the following steps:

If new projects are needed, the Alaska Region prepares a call letter to District Rangers requesting the submittal of new or updated project applications that address identified evaluation factors and provide a supporting statement for each applicable factor. The five factors currently used are summarized below.

- **Human Health, Safety, and Legal.** Identification of risk factors associated with a site/facility, description of the consequences or resulting change in risk exposure if the proposal is not implemented, and identification of unmet standards and/or legal requirements.
- **Deferred Maintenance.** Description of deferred maintenance work that will reduce or eliminate deferred maintenance needs associated with an existing route or facility as reported in the Infra database, and identification of the amount of deferred maintenance retirement that will result from implementation of the proposed project.
- **Watershed, Riparian, Biologic, and Ecosystem Impacts.** Documentation and quantification of how a project would address the Natural Resource Agenda for healthy watersheds, ecosystems, and associated resources such as plants, fish, and wildlife (e.g., acres of disturbed soils or re-vegetation, miles of trail rerouted, tons of sediment reduced, acres of wetland restored, and miles of fish habitat reconnected, etc.).
- **Strategic Focus.** This evaluation factor can be used to address current regional leadership concerns. This LRTP's goals are included in the strategic focus for road projects. Other strategic focus items may change annually. For the 2009 CIP submittals, emphasis was placed on four areas, one of which was related to ATM plans, including decommissioning roads.
- **Other Considerations.** Identification of project elements not included under other evaluation factors.

Units then submit transportation and facility CIP proposals, which include itemized cost estimates; a project map; and a narrative description describing utilization, administrative considerations, resource opportunities, anticipated management or resource problems, design elements, historic eligibility, mission dependency, and annual operation and maintenance costs.

A regionally representative team then ranks CIP proposals using a structured decision-making process. The Regional Office Engineering and Recreation units determine the mix of funding eligibility for each project. The region submits the top ranking Road Aquatic Species Passage and Deferred Maintenance and Infrastructure Improvement projects to the Washington office for national competition. Because the legacy roads and trails funding has additional project selection and program priorities, Regional Office staff from the transportation, trails, and fisheries and watershed groups rank the eligible legacy roads and trails projects.

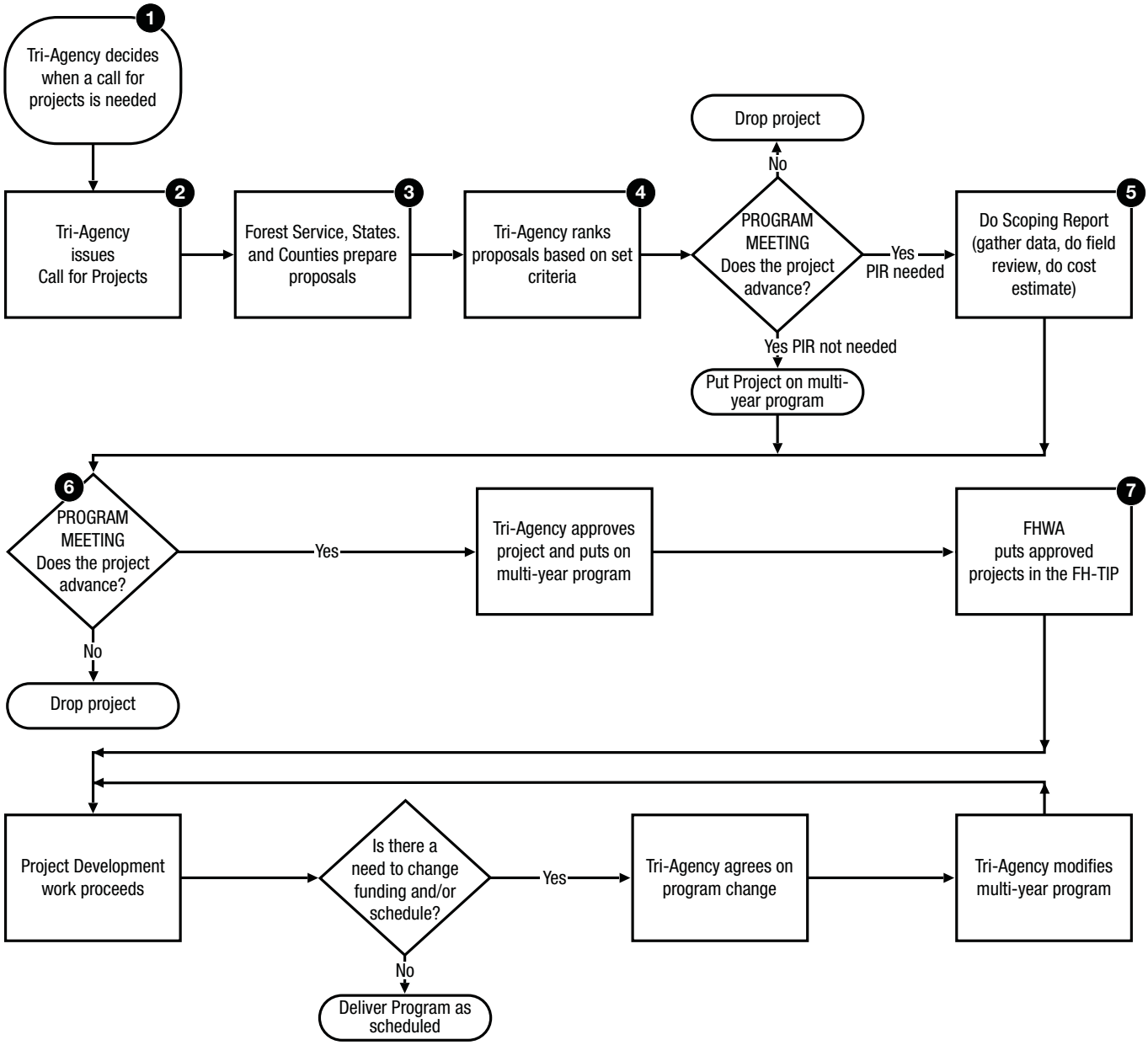
5.2.2 External Forest Highway Program

The Forest Highway Program (described in Section 1.4) is an important component of the FS transportation system. Most roadway construction funding in the Alaska Region comes from the Forest Highway Program, which is managed by the Tri-Agency.

Since 1993, the Forest Highway Program has funded about $154 million of transportation projects improving approximately 109 miles of Alaska's Forest Highways. Through the Federal tax on gasoline, the Alaska Forest Highway Program provides approximately $9.6 million of Federal transportation funding to Alaska each year (in addition to the approximately $325 million annually of Federal-aid funds to the ADOT&PF).

The process for identifying and selecting projects that will receive Forest Highway Program funding involves a partnership among the Tri-Agency. The Forest Highway Program project development process is shown in Figure 9, and consists of the following steps:

Figure 9
Forest Highway Program Development Process



- Tri-Agency decides when a call for projects is needed.
- ADOT&PF issues the call for projects.
- Project proposals are prepared and submitted by the FS, municipal, borough, tribal governments, ADOT&PF, and individuals. Project proposals are submitted on specific forms to the Tri-Agency and must have a public agency sponsor guaranteeing maintenance.
- The Tri-Agency ranks project proposals using established criteria; low-ranking projects may be dropped at this point, depending on available funding.
- If needed, a project identification report is prepared to scope the project and its potential impacts, issues, and cost. Projects that have limited impacts or very basic scopes of work may not need a project identification report. The scoping report is also used to help define the purpose and preliminary scope, schedule, and budget of and need for the project information report project.
- Based on the scoping reports, the Tri-Agency drops or adds projects to the Forest Highway Program in priority order.
- WFL Division puts the Tri-Agency-approved projects on its TIP, and ADOT&PF includes the program in the STIP.

The Tri-Agency estimates the amount of funding available to the program and evaluates how well the Forest Highway Program is achieving its performance targets to determine when to request a call for projects. The Forest Highway Program development process shown in Figure 9 uses a Tri-Agency-approved selection criteria that incorporates criteria from 23 CFR 660 when selecting the projects. The selection criteria are:

- The development, use, protection, and administration of the national forest transportation system and its resources
- The enhancement of economic development at the local, regional, and national level, including tourism and recreational travel
- The continuity of the transportation system serving the national forest transportation system and its dependent communities
- The mobility of the users of the transportation system and the goods and services provided
- The improvement of the transportation system for economy of operation and maintenance and the safety of its users
- The protection and enhancement of the rural environment associated with the national forest transportation system and its resources
- The inventory results for Forest Highways from the pavement, bridge, and safety management systems
- Region-specific emphases (such as Alaska's emphasis on partnership)

The Alaska Tri-Agency has latitude to emphasize and expound upon one or more of these FHWA criteria. The Alaska Forest Highway Program therefore uses a funding and investment strategy that emphasizes the "best" of proposed projects—best of safety, best of asset management, best of economic development, best of mobility, and best of environmental quality. For example, a proposed safety project will compete evenly with a proposed economic development project, and a proposed asset management project will compete with a proposed mobility project. Project proposals that demonstrate how the project will address several of the investment guidelines will generally rank higher than other proposals. The Alaska Tri-Agency defines the "best" projects as ones that:

- Address a documented condition requiring relief (i.e., meets the stated purpose and need)

- Are consistent with transportation planning for that corridor (e.g., forest plan, LRTP, borough transportation system plan)
- Truly balance the objectives of transportation and land management
- Provide an opportunity for Alaska Forest Highway Program funds to be used where other funding is less available or other funding has not yet addressed the condition

5.2.3 Forest Service External Funding

Because this document is a companion piece to the *Alaska Federal Lands LRTP*, funding sources identified in that plan are relevant to the FS as supplemental funding sources to be pursued when projects meet funding program requirements. Chapter 4 of that LRTP should be referred to for identifying possible funding sources for eligible FS projects.

5.3 Planning Horizons

This LRTP recognizes that the Alaska Region FS has existing short- and long-term planning goals. The sections below summarize general transportation goals already considered in planning horizons.

5.3.1 Region

The following short- and long-term goals identify highest priorities for the Alaska Region as a whole:

- Develop a cohesive interagency transportation system management plan to maximize collaborative efforts to increase efficiency and reduce operational costs.
- Implement transportation system cost sharing in management of connected transportation systems to improve efficiencies, upgrade services and increase cost effectiveness.
- Manage transportation systems to meet society's needs for a variety of goods, services, and amenities while enhancing the health and productivity of national forests.
- Base transportation management decisions and actions on ecological principles, sound practices, and the best available scientific information.
- Promote strong community involvement in FS transportation decisions with full communication and assist communities in designing and implementing transportation projects that benefit their residents where possible.
- Increase accessibility of a full range of transportation infrastructure and services to a wide spectrum of people including underserved and low-income populations.

5.3.2 Chugach

In addition to the Alaska Region planning priorities, the Chugach identifies three additional items:

- Implement ATM plans to provide motorized and non-motorized access to and through the forest.
- Support developed and dispersed recreation facilities, wildlife and fish viewing sites, and trails with associated transportation systems that are appropriate to the recreation settings, to meet demand for a diverse array of recreational opportunities.
- Foster and build positive working relationships with Alaska Natives and their involvement in FS transportation programs and decision-making.

5.3.3 Tongass

In addition to the Alaska Region planning priorities, the following Tongass-specific goals identify needs over a 20-year horizon that will complete transportation links between communities, access to the national forest, and maximize intermodal access. These items include:

- Establish and maintain external collaborative transportation partnerships.
- Work to create a future where the FS works more closely with communities, particularly those that are historically forest-dependent and adjacent to the forest, to help them achieve community transportation goals, manage change, and improve their quality of life. All such actions are consistent with the responsibility to sustain the long-term health of the land.
- Assist communities to design and implement transportation projects that benefit their residents.
- Continue to develop the transportation infrastructure necessary to support industries that will improve unemployment rates and per capita wage and salary income in south-central and southeast Alaska for natural resource-based industries.
- Help rural communities, tribal governments, and private landowners increase their ability to adapt to economic, environmental, and social change related to natural resource management through transportation access.
- Support developed and dispersed recreation facilities, wildlife and fish viewing sites, and trails with the associated transportation systems appropriate to the recreation settings, to meet the demand for a diverse array of quality recreational opportunities.
- Foster and build positive working relationships with Alaska Natives and their involvement in FS transportation programs and decision-making.
- Increase the number of transportation-related memoranda of understanding, agreements, protocols, interactive meetings in tribal villages, common ground conferences, forums, and workshops initiated and developed, and results from these.

The sections below identify the highest priority goals for the Tongass over the next 10 years by topic area:

Safety Management

- Improve safety.
- Develop and implement a management system that is proactive and data-driven.
- Take a risk management approach to safety by using road safety audits.
- Assess the causes of accidents before rather than after they occur; this will be a critical step in their ultimate prevention.

Planning

- Develop, update, and implement ATM plans. Coordinate with other Federal agency and State area transportation planning efforts.

Public Access

- Reduce deferred maintenance on community connection road systems by 50 percent within the next 10 years.
- Convert ownership of multimodal floats and docks associated with State of Alaska Land Selection Subdivisions to ADOT&PF ownership.
- Eliminate deferred maintenance on existing multimodal transportation access points (marine access facilities) over 10 years.
- Upgrade over a 10-year timeframe all currently operational (85 sites) marine access facilities in the national forest that provide intermodal access from developed communities to remote locations to ensure site capacity is adequate to meet projected needs.
- Upgrade all maintenance level three community-connected roads in Tongass to meet American Association of State Highway and Transportation Officials very low volume road standards for public safety.

6. Needs and Gaps

Gaps in the Alaska Region FS transportation system are present when transportation needs exceed the availability of funding. Two primary transportation gaps are identified in this plan: deferred maintenance and operational logistics.

6.1 Deferred Maintenance Gap

The leading gap in the FS transportation system is the accumulation of deferred maintenance. Due to the reductions in transportation funding discussed in Section 5.1, not all maintenance activities are performed when needed. When maintenance activities are postponed, deferred maintenance accumulates and transportation systems deteriorate.

The Alaska Region has a multiple-year list of capital improvement projects to reduce the deferred maintenance backlog. In response to the Office of Management and Budget objective of reducing the deferred maintenance backlog by 25 percent, the Alaska Region focuses funds toward targeting deferred maintenance.

Several areas are particularly affected by deferred maintenance, namely access to telecommunication towers, roads, bridges, and marine access facilities. Telecommunications mainly consist of field communications, which in Alaska are critical to the FS mission accomplishment, employee safety, and oftentimes public safety in extremely remote areas with no other communications systems in place. Without these systems, field work in the extreme field conditions of southeast and south central Alaska cannot be accomplished. Many of these mountain top facilities have had little to no maintenance since originally constructed. Currently there is more than $1 million in deferred maintenance associated with these facilities, which range from minor items to new shelters and associated helipads for transportation access to the sites.

For State of Alaska FS roads and bridges, the deferred maintenance based on National Cost Averages is estimated at $31 million and $13 million, respectively. With the declining internal road and bridge funding discussed in Chapter 5, funding is focused on annual maintenance, while deferred maintenance continues to increase. The issue is compounded because embedded communities lack county road departments, and in some cases no State highway connections, therefore the FS bears the burden of keeping roads serviceable most of the year. Residents in southeast Alaska who live a subsistence lifestyle rely upon NFS roads for access to hunting, fishing, and subsistence activities.

As discussed in Section 3.4, one of the primary components of the Tongass transportation system is its Marine Access Facilities. The forest contains 206 of these sites, which provide primary access from the water to land in an island archipelago. Use of these sites for safe boat anchorage and road access for recreation and subsistence activities continues to increase. Some float structures designed for boats have up to 20 boats rafted to them during inclement weather and seasonal use periods. These types of facilities are not tracked in FS national programs; nevertheless, the Tongass provides funding to accomplish the maintenance and reconstruction needed to ensure these key transportation links are safe and operational. Site repairs and reconstruction have been supplemented by timber sales in the past, but with the decline of the timber industry in Southeast Alaska, the FS is relied upon for maintenance and reconstruction of these sites.

6.2 Operational Logistics Gap

Because the Tongass is a massive forest–spanning an area larger than Florida–operational movement within the forest is difficult. This issue is compounded by the forest's relatively few road assets (in comparison to its size). Further, half of the Alaska Region is in Inventoried Roadless Areas. Because of the size and the limited road system, travel in most of Alaska Region for maintenance and reconstruction activities requires air or water transport. Charter aircraft can cost as much as $600 per hour, resulting in site visits costing in the thousands of dollars due to the remoteness of projects. Remote camps, required at many locations, are project supported, further increasing operational costs. Safety issues from inclement weather can increase stays and cause additional expenses for project support. Travel for national meetings, annual training, and even within Alaska can cost up to $3,000 per week per employee.

Mobilization to remote locations for construction activities requires barges, landing craft, and cranes to transport and offload equipment and materials. Shipping to remote locations further increases field repair costs. Fuel must be barged and stored on site with detailed fuel transfer and storage measures to protect the marine environment. If diesel is available in nearby communities, it is typically expensive. The Transportation Security Administration requires that blasting agents be shipped separately from equipment and fuels, requiring multiple barges for most construction projects. As a result, construction bonding cost increases further exacerbate construction costs.

Mendenhall Glacier, Tongass, James Metcalf/iStockPhoto

7. Performance Measures

This LRTP uses transportation-related performance measures established in the FS strategic plan, as discussed in chapter 2. These measures describe desired or target performance against documented performance in regularly updated FS datasets. These performance measures relate to long range goals one, two, and four as documented in Chapter 1 of this plan. Table 7 indicates *USDA Forest Service Strategic Plan: Fiscal Year 2007-2012* performance measures, target performance, and a baseline performance.

To meet these performance measures, FS regions are assigned targets for the following:

- Miles of passenger car system roads receiving maintenance.
- Miles of high clearance system roads receiving maintenance.
- Miles of road decommissioned.
- Miles of passenger car system roads improved.
- Miles of high clearance system road improved.
- Miles of system trail maintained.
- Miles of system trail improved.

In addition, the FS has performance measures that do not contribute to the targets, but the accomplishments are still recorded, and performance is monitored for the following:

- Bridges constructed or reconstructed.
- Percentage of bridges maintained in a safe condition for public use.
- Percentage of roads intended for passenger car vehicles that are operated for passenger car vehicles.
- Number of stream crossings constructed or reconstructed to provide for aquatic organism passage.
- Rights-of-way acquired to provide public access.
- Miles of system trail meeting standard.

Table 7
Performance Measures

Performance Measure	Baseline (2006)	Target (2012)
Percentage of road system intended for passenger-car use that is suitable for passenger-car use	29%	75%
Percentage of trails that meet national quality standards	60%	60%

Cruise ship at Tracy Arm, Teresa Haugh

8. Conclusion

There are gaps between the needs of the Alaska Region transportation system and the funding available to address those needs. Regardless, the FS continues to manage transportation systems and access to forest resources including tourism, recreation, and subsistence. FS transportation decision-makers strive to prioritize and focus funds on projects that provide the greatest benefit to both the FS and the users of the NFS transportation system. In addition to using existing funds wisely, transportation decision-makers are beginning to look to leverage scarce transportation funds by developing partnership projects where feasible. This LRTP is designed to assist managers with the information required to achieve the greatest benefit to the largest number of goals and objectives held by FS. This LRTP's connection to the *Alaska Federal Lands LRTP* provides additional assistance in finding partnerships that not only leverage funds to implement projects of common interest, but also to achieve goals and objectives that benefit multiple FLMAs.

U.S. Forest Service

Alaska Region Long Range Transportation Plan