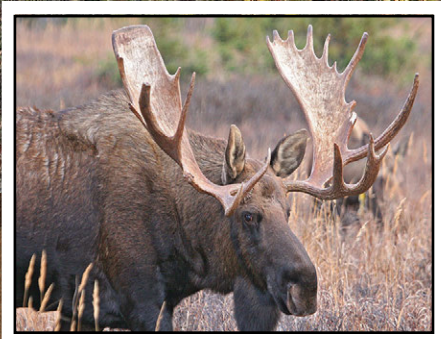




RESOURCE STEWARDSHIP STRATEGY SUMMARY

WRANGELL-ST. ELIAS NATIONAL PARK AND PRESERVE
ALASKA



CONTENTS

Introduction.....	1
Purpose of a Resource Stewardship Strategy	1
Intent of This Summary Document	2
Definition of Key Terms	3
Brief Description of Wrangell-St. Elias National Park and Preserve	4
Resource Management Priorities	7
Stewardship Goals and Activities Associated with Each Resource Management Priority	9
Resource Management Priority 1. Preserve and Better Understand the Natural Scenic Beauty and Dynamics of the Diverse Geologic, Glacial, and Riparian-Dominated Landscapes.....	9
Stewardship Goal A: Glacier Dynamics Are Quantified and This Information Is Communicated So It Is Understood by Key Audiences Such as Park Managers, Residents of Local Communities, and Visitors	9
Stewardship Goal B: Natural Hydrologic Processes and Regimes Are Supported While Risks to Human Safety and Infrastructure Are Minimized.....	10
Resource Management Priority 2. Protect the Diversity of Fish and Wildlife Populations and Their Habitats and Ensure Resilience in Response to Changing Environmental Conditions and Other Drivers of Change.	11
Stewardship Goal C: Vegetation and Sensitive Soils Are Managed to Ensure Long-Term Conservation for Present and Future Generations.....	11
Stewardship Goal D: Long-Term Conservation Is Ensured for Healthy Focal Wildlife Species to Perpetuate Their Inherent Integrity for Present and Future Generations.....	12
Stewardship Goal E: Long-Term Conservation Is Ensured for Healthy Focal Fish Species to Perpetuate Their Inherent Integrity for Present and Future Generations.....	13
Resource Management Priority 3. Protect the History of Human Experience in this Inhabited Landscape by Preserving Cultural Sites and Providing Continued Opportunities for Subsistence Use and Other Traditional Connections to the Park and Its Resources.....	14
Stewardship Goal F: Harvestable Resources and Access to Them Are Managed to Support the Resilience of Subsistence Values and Other Consumptive Use Opportunities in the Context of Rapid Social and Environmental Change	14
Stewardship Goal G: The Park’s Public Stakeholders and Their Connections to Park Resources Are Understood, and These Stakeholders Are Engaged in Developing Shared Stewardship Goals for Park Resources and Values in the Context of Rapid Social and Environmental Change.....	15
Stewardship Goal H: Current and Sufficient Archeological Data Are Maintained to Support Management Decisions in Priority Areas, and These Are Shared with Local Communities to Build Interest and Engagement with the Region’s History.....	16
Stewardship Goal I: Sufficient Documentation of Cultural Landscapes and Historic Structures Are Maintained to Support Preservation Treatments and Inform Management Decisions That May Impact These Resources ...	17
Stewardship Goal J: NPS Lands and Structures in the Kennecott Mines National Historic Landmark Are Managed to Anticipate the Most Critical Resource Needs, Balancing Preservation Values with Other Values and Adapting to Changing Social and Environmental Conditions.....	18
Stewardship Goal K: Museum Collections Are Maintained at a Scale and Scope Appropriate to the Park’s Purpose and Are Managed in Accordance with Professional Curatorial Standards and NPS Policies.....	19

Resource Management Priority 4. Protect and Preserve the Park’s Wilderness Character and Values While Ensuring Continued Access for a Wide Range of Wilderness-Based Recreational Opportunities.....	20
Stewardship Goal L: Park Managers Preserve or Improve Wilderness Character in the Wrangell-St. Elias Wilderness through Monitoring Wilderness Character Qualities and Maintaining Opportunities for Solitude ..	20
Overarching Stewardship Goals	21
Ongoing Implementation of the Resource Stewardship Strategy	25
Contact Information	26

FIGURES

Figure 1. Wrangell-St. Elias National Park and Preserve.....	5
Figure 2. RSS Implementation Process	25

INTRODUCTION

PURPOSE OF A RESOURCE STEWARDSHIP STRATEGY

A resource stewardship strategy (RSS) is a long-range dynamic planning tool for a national park unit to set specific goals and track progress in achieving its desired natural, cultural, and subsistence resource conditions. As part of the planning portfolio, the resource stewardship strategy serves as a bridge between the park unit's foundation document, other plans, and everyday management of its natural and cultural resources.

A resource stewardship strategy establishes a framework and a coordinated process for:

1. evaluating and summarizing existing information about park resources (including key issues, stressors, and threats),
2. using science and scholarship to establish stewardship goals for resources,
3. integrating natural and cultural resource management, and
4. determining the stewardship activities needed to achieve stewardship goals.

This framework provides a basis for informed strategic planning and sets the groundwork for preparing and implementing plans and activities to address resource management needs. Establishing this strategic approach increases management resiliency to staff turnover and guides the park unit to allocate funds and personnel to the most critical resource management needs.



INTENT OF THIS SUMMARY DOCUMENT

This document is intended to provide readers with a high-level summary of the resource stewardship strategy at Wrangell-St. Elias National Park and Preserve (hereafter referred to singularly as “Wrangell-St. Elias,” “WRST,” or “the park”). It does not describe all of the elements in the park’s comprehensive resource stewardship strategy, but instead focuses on delivering a high-level overview of the park’s resource management priorities and the activities that support each priority.

Implementation of the resource stewardship strategy is an ongoing process, with updates and revisions occurring as resource and management conditions change and activities are completed.

This resource stewardship strategy represents the collaborative efforts and knowledge of Wrangell-St. Elias National Park and Preserve staff and subject-matter experts from the National Park Service (NPS) Central Alaska Inventory and Monitoring Network (CAKN); NPS Southeast Alaska Inventory and Monitoring Network; NPS Alaska Regional Office and other Alaska Region park units; NPS Cultural Resources, Partnerships, and Science; NPS Natural Resource Stewardship and Science programs; NPS Climate Change Response Program; NPS Denver Service Center; and other partners.



DEFINITION OF KEY TERMS

Resource Management Priority: An overarching statement that provides direction for the park resource managers. These priorities generally draw from a park unit's enabling legislation, and remain relatively consistent over time. Multiple stewardship goals contribute to achieving resource management priorities.

Stewardship Goal: Direction for maintaining or improving the park's natural and cultural resources. Stewardship goals strive to enhance information, improve or maintain resource condition, address stressors, increase collaboration, expand interpretation of resources, or achieve other needs.

Activity: One or more initiatives that strive to achieve a stewardship goal. Activities may include documentation, maintenance, resource protection, thematic studies, cataloging, interpretation, planning, training, data management, education, inventory, monitoring, research, survey, treatment, restoration, or other types of management.



BRIEF DESCRIPTION OF WRANGELL-ST. ELIAS NATIONAL PARK AND PRESERVE

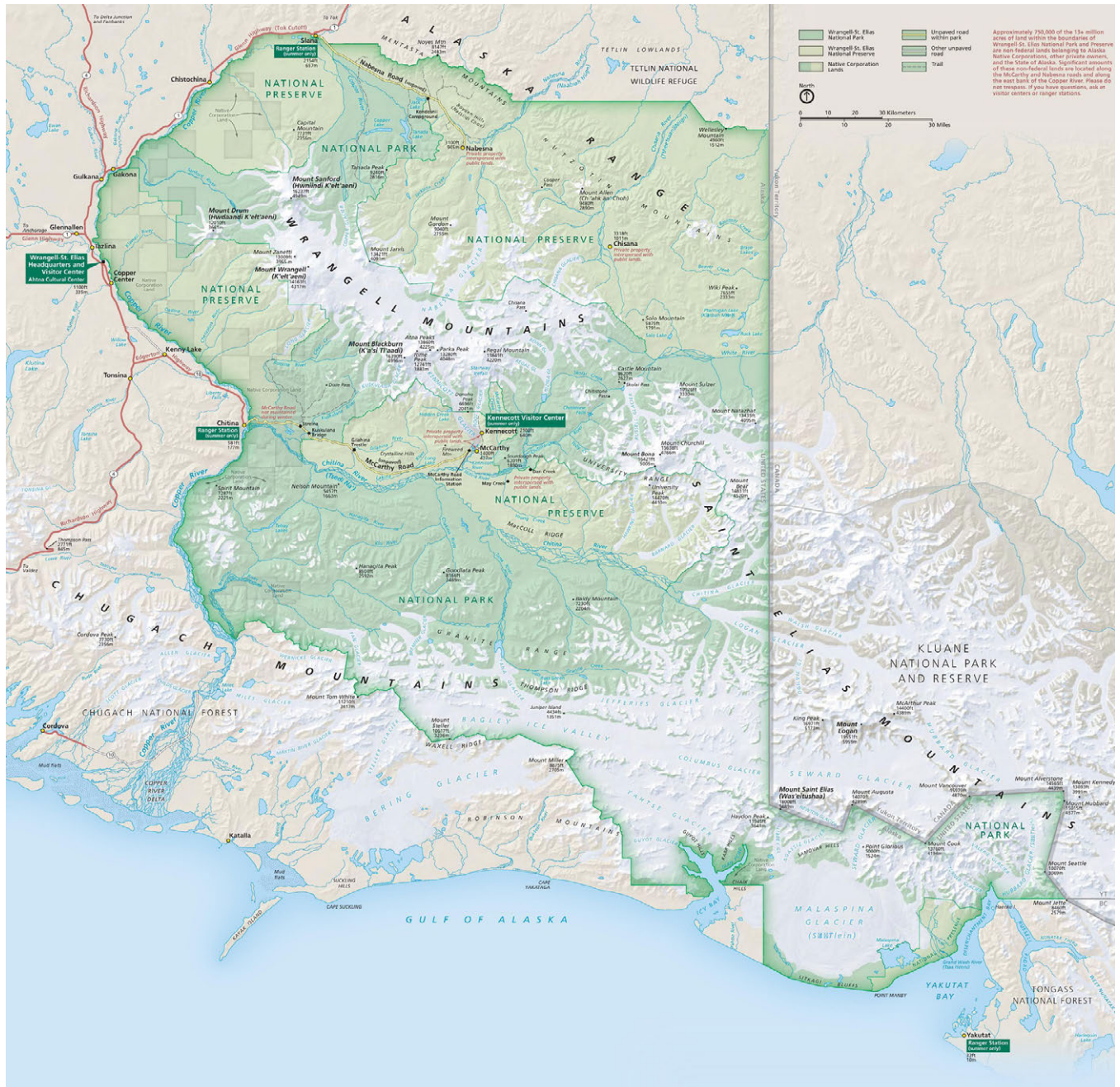
Wrangell-St. Elias was established in 1980 by the Alaska National Interest Lands Conservation Act to maintain the natural scenic beauty of the diverse geologic, glacial, and riparian-dominated landscapes; to protect the attendant wildlife populations and their habitats; to ensure continued access for a wide range of wilderness-based recreational opportunities; and to provide continued opportunities for subsistence use. The park was established on the traditional homelands of four Alaska Native peoples—the Upper Tanana, the Eyak, the Yakutat Tlingit, and the Ahtna—the traditional stewards of these lands.

It is a park of superlatives, being the largest national park in the system and the country's premier mountain wilderness, including parts of four major ranges and nine of the nation's 16 highest peaks. It contains North America's largest active shield volcano, its biggest tidewater glacier, its longest interior valley glacier, and its largest piedmont glacier — Malaspina Glacier National Natural Landmark. The Wrangell-St. Elias Wilderness is the largest unit of the National Wilderness Preservation System, encompassing nearly 10 million acres of remote and geographically diverse mountainous landscapes.

The park encompasses the nation's largest protected active glacial complex and several major river systems, with more miles (over 1,000) of scenic, free-flowing, glacial rivers in their natural state than are found in any other protected area in the United States. The park's vast undeveloped expanse contains diverse aquatic and terrestrial ecosystems, ranging from alpine to marine, and providing natural habitat for populations of Alaskan flora and fauna. Biologically unique subspecies of flora and fauna have developed in the Bremner and Chitina River Valleys. Wildlife populations include the largest population of wild mountain sheep in North America, moose, mountain goat, and a nonmigratory population of caribou. The area is the only part of Alaska where four of the five identifiable forms of bear occur, including the interior grizzly, the coastal brown bear, the black bear, and the rare blue-color phase of the black bear called the glacier bear. Along the coast of the Gulf of Alaska can be found bald eagles and a large and varied shorebird population.

The park preserves evidence of more than 10,000 years of human occupation and cultural and technological development. This long history reveals a range of human adaptations to changing climates, environments, and economic circumstances. The park remains an inhabited area where local communities and traditional human activities remain integrated with the wilderness setting. Three Alaska Native language families converge here: Tlingit, Eyak, and Athabascan. In addition, the park's cultural heritage and local communities reflect 100 years of Euro-American exploration and settlement. Mining history is evidenced by the Kennecott Mines National Historic Landmark and numerous other mining-related cultural landscapes distributed throughout the park.

Figure 1. Wrangell-St. Elias National Park and Preserve



RESOURCE MANAGEMENT PRIORITIES

The following resource management priorities—drawn from Wrangell-St. Elias National Park and Preserve’s foundation statement and enabling legislation—set the direction and management philosophy for resource stewardship at Wrangell-St. Elias.

1. PRESERVE AND BETTER UNDERSTAND THE NATURAL SCENIC BEAUTY AND DYNAMICS OF THE DIVERSE GEOLOGIC, GLACIAL, AND RIPARIAN-DOMINATED LANDSCAPES.

The park preserves three major and high-elevation mountain ranges; the nation’s largest protected active glacial complex; and over 1,000 miles of scenic, free-flowing, glacial rivers. These features and the diverse, productive, and ever-changing ecosystems they support are fundamental to the purposes of the park. They present unique opportunities to conduct scientific research and learn about the earth’s history, ongoing geologic processes, causes and consequences of glacier dynamics, and implications for park landscapes, ecosystems, and people.

2. PROTECT THE DIVERSITY OF FISH AND WILDLIFE SPECIES AND THEIR HABITATS, AND ENSURE RESILIENCE IN RESPONSE TO CHANGING ENVIRONMENTAL CONDITIONS AND OTHER DRIVERS OF CHANGE.

The park’s vast, undeveloped expanse contains diverse aquatic and terrestrial ecosystems, ranging from alpine to marine, which provide habitat for populations of Alaskan flora and fauna. Managers seek to preserve population diversity and genetic integrity in the park’s large, unfragmented habitats. Understanding and ensuring the resilience and adaptive capacity of fish and wildlife and their habitats in response to changing environmental conditions and other drivers of change are key to protecting the park’s biodiversity.





3. PROTECT THE HISTORY OF HUMAN EXPERIENCE IN THIS INHABITED LANDSCAPE BY PRESERVING CULTURAL RESOURCES AND VALUES AND ENSURING CONTINUED OPPORTUNITIES FOR SUBSISTENCE USES AND OTHER TRADITIONAL CONNECTIONS TO THE PARK AND ITS RESOURCES.

The park preserves evidence of more than 10,000 years of cultural and technological development, and it remains an inhabited landscape where local communities, Tribal governments and organizations, and traditional activities are integrated with the wilderness setting. The long history represented by material cultural remains reveals a range of human adaptations to changing climates, environments, and economic circumstances. Change continues into the future, and through partnerships, broad representation, and a collaborative approach that embraces science and tradition as coequal contributors to knowledge, the park engages in shared stewardship of park resources and supports resilience of traditional practices.

4. PROTECT AND PRESERVE THE PARK'S WILDERNESS CHARACTER AND VALUES WHILE ENSURING CONTINUED ACCESS FOR A WIDE RANGE OF WILDERNESS-BASED RECREATIONAL OPPORTUNITIES AND TRADITIONAL PRACTICES.

The Wrangell-St. Elias Wilderness is the largest unit of the National Wilderness Preservation System, encompassing nearly 10 million acres of remote and geographically diverse mountainous landscapes. Park staff and partners steward this inhabited wilderness to ensure that human activities and diverse cultural values remain integrated with natural processes, traditional practices endure, and visitors experience self-challenge and exploration.



STEWARDSHIP GOALS AND ACTIVITIES ASSOCIATED WITH EACH RESOURCE MANAGEMENT PRIORITY

Guided by resource management priorities—and based on the current status of information and condition of the park’s natural and cultural resources—the following stewardship goals and activities were identified as potential long-term priorities for Wrangell-St. Elias National Park and Preserve. Activities are described at a general level in this summary because details may change as more specific implementation plans are developed. Not all activities may be achievable in the short-term time frame and the park will seek to accomplish activities according to law and policy, management direction, and as resources allow. Many of these projects do overlap across disciplines and processes but were grouped under the most pertinent topics.

RESOURCE MANAGEMENT PRIORITY 1. PRESERVE AND BETTER UNDERSTAND THE NATURAL SCENIC BEAUTY AND DYNAMICS OF THE DIVERSE GEOLOGIC, GLACIAL, AND RIPARIAN-DOMINATED LANDSCAPES.

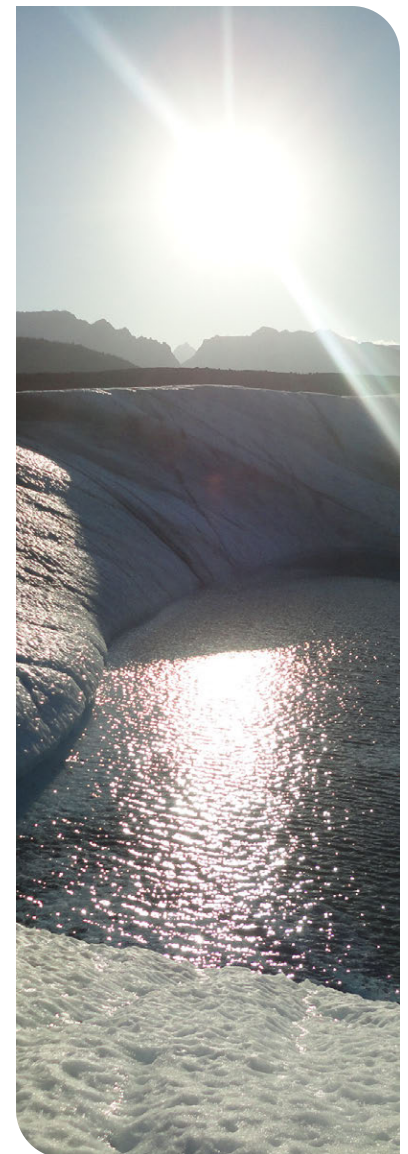
STEWARDSHIP GOAL A: Glacier Dynamics Are Quantified and This Information Is Communicated So It Is Understood by Key Audiences Such as Park Managers, Residents of Local Communities, and Visitors

Understand, communicate, and incorporate into management decisions how ongoing and projected glacier shrinkage will impact park resources, values, and infrastructure.

Wrangell-St. Elias has over 3,000 glaciers that cover 35% of the park, accounting for 60% of the glacier cover of all the US national parks combined; these glaciers are impacted profoundly by climate change. A better understanding of glacier dynamics and implications in specific landscape settings is needed for park staff to anticipate and respond appropriately to impacts of shrinking glaciers on park buildings, trails, roads, airstrips, anadromous streams, emergent geohazards, viewsheds, and other features. Relevant supporting research includes studying past glaciations, continuing to monitor Kennicott Glacier, documenting regionwide recent/ongoing glacier shrinkage, forecasting regionwide future glacier shrinkage, and identifying vulnerable park infrastructure and resources.

Continue to build and implement a world-class interpretive program related to the impacts of climate change on glacial landscapes.

Wrangell-St. Elias encompasses the most extensive vestiges of glacial landscapes in the national park system, and the numbers of visitors coming to the park (including by cruise ship) to view these vanishing glacial features is increasing. This affords important opportunities to convey to the public the latest science related to climate change and its dramatic impacts on glacial landscapes. The park should expand the scope of its Kennicott Glacier Interpretive Concept Plan (2020) to include parkwide audiences, other glacial landscapes, and themes. It should leverage data, for example from climate change scenario planning, to ensure visitors remain safe from emerging geohazards such as landslides triggered by glacier debulking. Retaining a physical scientist in the park will enhance opportunities for research collaboration and for incorporating findings into interpretation and outreach programs.





STEWARDSHIP GOAL B: Natural Hydrologic Processes and Regimes Are Supported While Risks to Human Safety and Infrastructure Are Minimized

Improve and target hydrologic monitoring efforts to directly inform park management.

The hydrologic resources of the park include glacial and nonglacial streams and rivers, wetlands, shallow lakes, groundwater, and glaciers. These resources are critical for overall ecosystem health, infrastructure stability, and park operations including visitor health and safety. Park staff should continue to improve focused monitoring programs to ensure that they have current and sufficient data to inform management decisions. This includes stream gauging and identifying areas with the best potential for mitigating the effects of a changing environment on park resources, operations, and infrastructure.

Identify management and regulatory strategies to adapt to potential changes in recreation use and visitor behavior on hydrologic resources.

The park should conduct scenario planning to identify likely changes in recreation user behavior on rivers, floodplains, developing proglacial lakes, and marine waters. These plans would inform adaptive management and regulatory strategies, especially in light of the jurisdictional implications of the 2019 *Sturgeon v. Frost* US Supreme Court decision, and would facilitate the development of “post-Sturgeon” guidelines for addressing concerns in multijurisdictional areas (e.g., coastal areas, state waters within the park legislated boundary). The park should also develop maps that project the changing glacial landscape for use in planning and should assess the adequacy of its infrastructure to support park staff in their management activities.

Ensure the park’s hydrologic infrastructure and park operations support healthy and adequate fish passage.

The park should collaborate with other entities to ensure that all culverts meet fish passage standards, working with the Alaska Department of Transportation as appropriate to clear vegetation, ice, and debris.

Increase organizational capacity for effective stewardship of water resources.

With limited staff and funding, the park should explore strategies for increasing capacity such as expanding partnerships and coalitions and leveraging fund sources internal and external to the NPS. An effective communication strategy is essential for maintaining public awareness of potential hazards, changes to access, and projected water level flows related to recreation and subsistence uses. Park staff will need to seek new mechanisms for communicating this information to stakeholders including subsistence users and other harvesters, other residents, staff, and recreational visitors. The park must stabilize funding for existing stream gauges and seek additional funds or partnerships to install more. Partnerships and other capacity-building strategies are also needed to conduct targeted research and monitoring programs such as invasive species early detection and rapid response for aquatic invasive species.

Maintain the park’s water quality within the natural range of variability.

Water quality throughout the park must be maintained within certain standards for sustaining aquatic life. The park will continue to support research, monitoring, and data management in order to detect changes in aquatic environments and better understand potential drivers of change including but not restricted to increasing glacial discharge and permafrost thaw attributable to climate warming. If possible, adverse changes in water quality should be mitigated to ensure the survival and reproductive success of aquatic species such as salmon.

RESOURCE MANAGEMENT PRIORITY 2. PROTECT THE DIVERSITY OF FISH AND WILDLIFE POPULATIONS AND THEIR HABITATS AND ENSURE RESILIENCE IN RESPONSE TO CHANGING ENVIRONMENTAL CONDITIONS AND OTHER DRIVERS OF CHANGE.

STEWARDSHIP GOAL C: Vegetation and Sensitive Soils Are Managed to Ensure Long-Term Conservation for Present and Future Generations

Improve understanding of the park's vegetation and terrestrial ecosystems and monitor changes.

The park must continue direct monitoring of terrestrial vegetation to ensure the long-term conservation of natural plant populations and communities and assess effectiveness of treatments (e.g., mechanical fuel reduction). Park staff would continue to work with CAKN to monitor vegetation and ecosystem attributes including permafrost condition, climate, snow cover, and landcover metrics to better understand effects of climate, fire, and other environmental drivers on plant community composition, distribution, and dynamics. Engaging in these activities also allows park staff opportunities to coordinate future research activities and coordinate with partners who are engaged in invasive plant control.

Improve documentation of rare and endemic plant species' locations and dynamics.

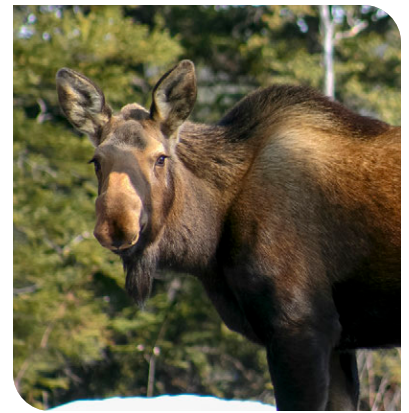
Within alpine tundra environments in particular, the park can improve its documentation of rare and endemic plant locations and lichen-rich areas used by wildlife to better understand potential implications of changing environmental conditions and plant composition in these settings. In addition, park managers would benefit from rare plant documentation to better assess the feasibility of seeding or supplementing target species after human-caused disturbances to these environments.

Understand and ensure resilience of native plant communities to changing environmental conditions and other drivers of change.

Due to the great extent and diversity of the park's terrestrial environments, managers can better understand rapid landscape changes by supporting opportunities (e.g., increased capacity or partnerships) to conduct targeted vegetation monitoring in "hotspots" of change. For example, improving knowledge of vegetation responses to receding glaciers, slope instability, wildfire, insect infestations, flooding, and thawing permafrost can inform consideration of stewardship activities that may be prompted by disturbances and climate change.

Implement early detection and rapid management responses to invasive plants.

Managers seek opportunities to build park capacity for early detection of invasive plant species and rapid management actions to prevent the spread of these harmful infestations. Conducting staff training to build knowledge of invasive plant characteristics and build capacity to eradicate infestations—and develop coalitions and collaboration among other partners—can ensure effective, coordinated efforts to minimize or prevent invasive species proliferation.





STEWARDSHIP GOAL D: Long-Term Conservation Is Ensured for Healthy Focal Wildlife Species to Perpetuate Their Inherent Integrity for Present and Future Generations

Enhance understanding of focal wildlife species to provide ecosystem services and meet consumptive needs.

Diverse species inhabit the park because it sits at a juncture where mountains, ice, and oceans meet. The park protects populations and habitats of focal wildlife species including but not limited to caribou, moose, Dall's sheep, and harbor seals. By pursuing an ecosystem approach to research and management, the park's data can help support other partners and the public in understanding the processes that influence wild populations and their habitats while also supporting consumptive needs.

Enhance understanding of focal wildlife species through monitoring to document patterns of change and assess resilience.

While focal wildlife monitoring and management activities are greatly constrained by limited staff and funding capacity, stewardship actions are prioritized to understand the condition of these species related to effects of harvest and other drivers of change. Continuing annual monitoring with CAKN and the Alaska Department of Fish and Game (ADF&G) for focal species like caribou and Dall's sheep helps the park work to ensure the long-term conservation of unimpaired natural and healthy wildlife populations. Monitoring and research also represent key activities for identifying and prioritizing active management responses to mitigate risks attributable to harvest, novel diseases, and/or other social-ecological drivers of change.

Enhance park capacity for wildlife stewardship through partnerships.

The park seeks strategic opportunities to increase organizational capacity for effective stewardship of focal wildlife resources through partnerships and coalitions, fund sources internal and external to NPS, and by recruiting and supporting research activities that can inform adaptive management strategies.

Improve understanding of other wildlife species' responses to changing environmental conditions and other drivers of change.

For other wildlife species not currently included in this RSS list of focal wildlife species, the park would continue to identify stewardship activities necessary to address emerging issues, needs for management attention, or critical information gaps. Similar to the detailed activities noted for focal wildlife species, the park would continue to leverage research and monitoring opportunities that contribute to overall stewardship goals and objectives for other wildlife species as this RSS is implemented and updated in the future.

STEWARDSHIP GOAL E: Long-Term Conservation Is Ensured for Healthy Focal Fish Species to Perpetuate Their Inherent Integrity for Present and Future Generations

Enhance understanding of focal fish species' responses to changing environmental conditions.

A host of scenario-based climate change vulnerability assessments are needed to better understand how warming temperatures change environmental conditions such as flow regimes and rearing habitat for focal fish species sockeye salmon and Chinook salmon. These assessments are necessary to understand potential climate-driven changes in abundance, run timing, migratory success, and productivity of these important species.

Enhance understanding of focal fish species through monitoring efforts and assess resilience.

Continuing to conduct long-term monitoring of sockeye salmon abundance and run timing at Tanada Creek, the park's key biocultural index salmon stock for uppermost spawning locations, remains a monitoring priority. Similar high-priority monitoring activities include tracking annual patterns in run characteristics and harvest of Copper River sockeye and Chinook salmon using NPS and ADF&G datasets related to park and regional fisheries management.

Enhance capacity for effective stewardship of fisheries through strategic partnerships.

Strengthening the park's capacity for effective fisheries stewardship involves securing sufficient funding and staff capacity for continued monitoring of sockeye salmon abundance and run timing in high-priority areas such as Tanada Creek. Other high-priority activities for park managers are bolstering existing partnerships, increasing capacity for fish stewardship through internal (NPS / Department of the Interior [DOI]) and external funding (e.g., new partnerships and coalitions), and engaging in co-stewardship arrangements with Tribes and Tribal organizations.

Improve understanding of other fish species to changing environmental conditions.

For fish species not currently included in this RSS list of focal fish species, the park would continue to identify stewardship activities necessary to address emerging issues, needs for management attention, or critical information gaps. Similar to the detailed activities noted for focal fish species, the park would continue to leverage research and monitoring opportunities that contribute to overall stewardship goals and objectives for other fish species as this RSS is implemented and updated in the future.



RESOURCE MANAGEMENT PRIORITY 3. PROTECT THE HISTORY OF HUMAN EXPERIENCE IN THIS INHABITED LANDSCAPE BY PRESERVING CULTURAL SITES AND PROVIDING CONTINUED OPPORTUNITIES FOR SUBSISTENCE USE AND OTHER TRADITIONAL CONNECTIONS TO THE PARK AND ITS RESOURCES.

STEWARDSHIP GOAL F: Harvestable Resources and Access to Them Are Managed to Support the Resilience of Subsistence Values and Other Consumptive Use Opportunities in the Context of Rapid Social and Environmental Change

Support data-driven management of harvestable resources with research and monitoring.

Subsistence is the priority consumptive use in the park. Additionally, nonsubsistence fishing and gathering are allowed in both the park and preserve, and nonsubsistence hunting is allowed in the preserve. The park must have reliable data in order to make timely and informed management decisions about harvestable resources. Current data are crucial as changes to the climate and the social environment drive changes in the availability of and access to harvestable resources. Park staff must assess and improve existing data and data-gathering methods in order to maintain awareness of population status and trends in this dynamic environment and to evaluate potential needs for regulatory changes.

Continue community and partner outreach on subsistence and other consumptive uses.

The harvest and use of wild foods and other subsistence and consumptive use activities continue to be important for residents of communities in and around the park. Through the Wrangell-St. Elias National Park Subsistence Resource Commission as well as Tribal governments and the Ahtna Intertribal Resource Commission, the park engages with federally qualified subsistence users to hear their concerns and observations about subsistence resources and uses. To understand and effectively respond to subsistence and other harvest user needs, park staff must continue to foster open communication with partners and stakeholders and maintain productive and collaborative relationships with federal and state management agencies. Crucial discussions with users about the difficult realities of climate change will be essential for ensuring continued safe access to harvestable resources in a changing landscape.

Implement regulatory authorities delegated from the Federal Subsistence Board.

The park is actively involved in the Federal Subsistence Management Program, which establishes regulations for the subsistence harvest of fish and wildlife on federal public lands in Alaska, including in the park. The Federal Subsistence Board has delegated certain regulatory authorities to the superintendent of Wrangell-St. Elias, including the ability to issue special actions. The park uses these authorities to ensure the conservation of healthy fish and wildlife populations, to support continued subsistence uses and other consumptive use opportunities, and for public safety reasons. To ensure timely and effective actions, the park should conduct scenario planning exercises based on issue assessments, develop action plans to guide in-season management decision making, and coordinate with other agencies in advance of issuing special actions.

Leverage strategic partnerships and fund sources to enhance the park's capacity for effective stewardship of harvestable resources.

Given the vast size of Wrangell-St. Elias, the large number of harvestable resources (more than 200 species), and the limited staff available to monitor and steward the resources and values within it, the park must expand existing partnerships and fund sources, both within and outside of the NPS, and find new ones. This is essential to effectively steward subsistence values and other consumptive uses. The park may, for example, seek opportunities to engage in co-stewardship with Tribes and Tribal organizations. Staff must be trained in critical capacity-building skills such as proposal writing, cooperative agreements, and partnership- and coalition-building and collaboration, among others. Success in implementing these skills may be incorporated into employee performance and appraisal plans.



STEWARDSHIP GOAL G: The Park's Public Stakeholders and Their Connections to Park Resources Are Understood, and These Stakeholders Are Engaged in Developing Shared Stewardship Goals for Park Resources and Values in the Context of Rapid Social and Environmental Change

Nurture strong relationships with traditionally associated peoples and better understand traditional uses of lands and resources within the park.

Strong relationships between the park and its traditionally associated peoples help park staff facilitate access to traditional resources, support continued connections between people and the land, and improve knowledge of resources in order to mitigate impacts from park operations and other threats. Two types of focal management efforts support this goal: documenting park resources of significance to a group's sense of purpose or way of life, and evaluating and mitigating the impacts of park activities on these resources. Continued consultation will help park staff determine whether groups are interested in collaborating to formally document traditional cultural properties and ethnographic landscapes and will help staff understand how climate change is impacting traditional resources. The park has a good base of information, but there are gaps. For example, completing ethnographic overview and assessments with the Eyak and Chickaloon would improve understanding of these groups' associations with resources within the park.

Foster reciprocal relationships with the park's public stakeholders to enhance stewardship of parkwide resources and values.

Fostering respectful, reciprocal relationships with diverse public stakeholders facilitates coproduction of knowledge and a lasting ethic of shared stewardship that together sustain parkwide resources and values in an era of unprecedented change. To further this vision, a "Center for Shared Stewardship" should be developed as a formal program that aims to catalyze structured conversations with and among diverse groups of park stakeholders. Such a center should be used as a forum for engaging institutional partners, including Alaska Native entities, nonprofit community-based organizations, environmental and resource-focused groups, and others in an ongoing series of conversational meetings about changing conditions in park-area landscapes.





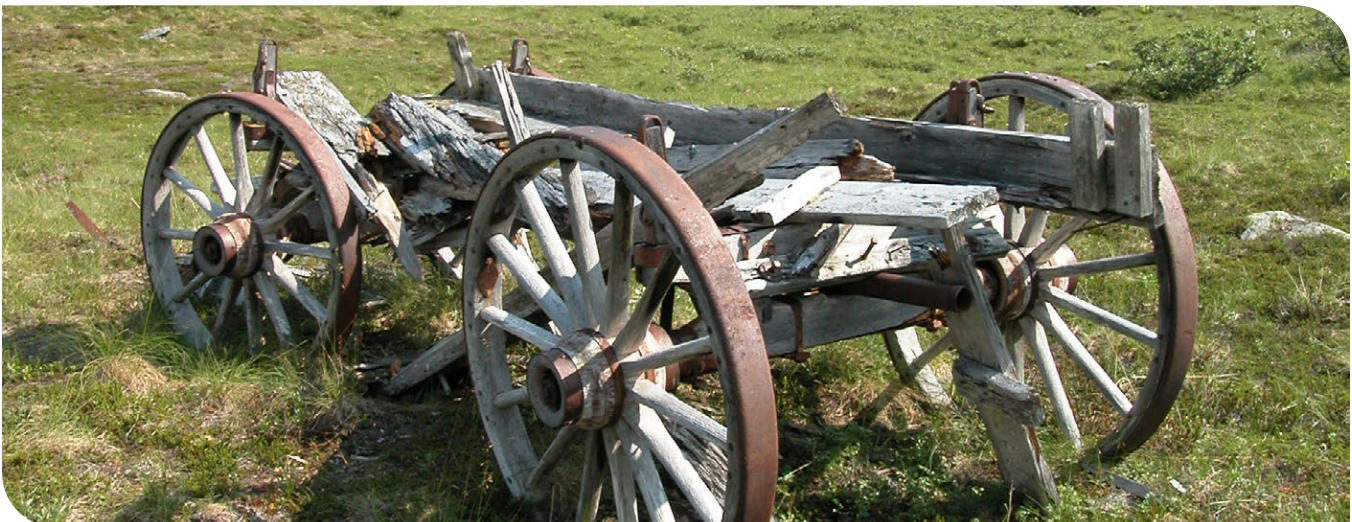
STEWARDSHIP GOAL H: Current and Sufficient Archeological Data Are Maintained to Support Management Decisions in Priority Areas, and These Are Shared with Local Communities to Build Interest and Engagement with the Region's History

Identify, document, and monitor the condition of archeological resources within the park.

Known archeological sites in WRST attest a wide array of human activity and cultural associations that span over 13,000 years. However, only 1% of the park has undergone archeological survey, and the selection of survey areas has been driven mostly by compliance requirements (National Historic Preservation Act Section 106) rather than by prioritized research questions. Research-oriented surveys are needed to help identify priority resources and inform refinement of future survey designs. An updated list of priority resources and survey areas should be compiled, with consideration given to areas of accelerated resource loss, traditional use areas, limited staff, limited funding, climate change considerations, and other threats such as potential risks to resources attributable to landscape change.

Enhance the archeology program's capacity to meet stewardship objectives.

Given the vast size of the park, stewardship of archeological resources will require capacity-enhancing strategies, both inward- and outward-looking. For example, the park should explore strategic partnerships and fund sources internal and external to NPS and DOI; opportunities to coordinate with the region and other park groups; increased communication and cooperation between park programs; and staff training in critical skills such as proposal writing, partnership / coalition building, and collaboration. Engaging local communities about the archeological research being conducted within the park, especially for sites that have strong cultural connections, could generate additional interest and support for the archeological program. The park could also conduct youth outreach to connect them with the history of the lands and cultures within the park and to nurture the next generation of archeologists and resource managers.



STEWARDSHIP GOAL I: Sufficient Documentation of Cultural Landscapes and Historic Structures Are Maintained to Support Preservation Treatments and Inform Management Decisions That May Impact These Resources

Identify and document cultural landscapes and historic structures, and maintain current and accessible database information.

There are at least 32 cultural landscapes and 264 historic structures within the park, but the park lacks in-house subject matter expertise to complete in-depth documentation including evaluative contexts. Records in the Cultural Resources Information System (CRIS) databases are generally missing or out of date (for example, condition assessments are not current), and many resources lack baseline documentation. The current inventory of cultural landscapes does not represent the broad range of cultural history within the park; consultation with Tribal partners, for example, may result in identifying ethnographic landscapes that could, with permission, be entered into CRIS and documented. Park staff must prioritize the most critical needs for initial or updated cultural landscape and historic structure documentation, condition assessments, and database updates.

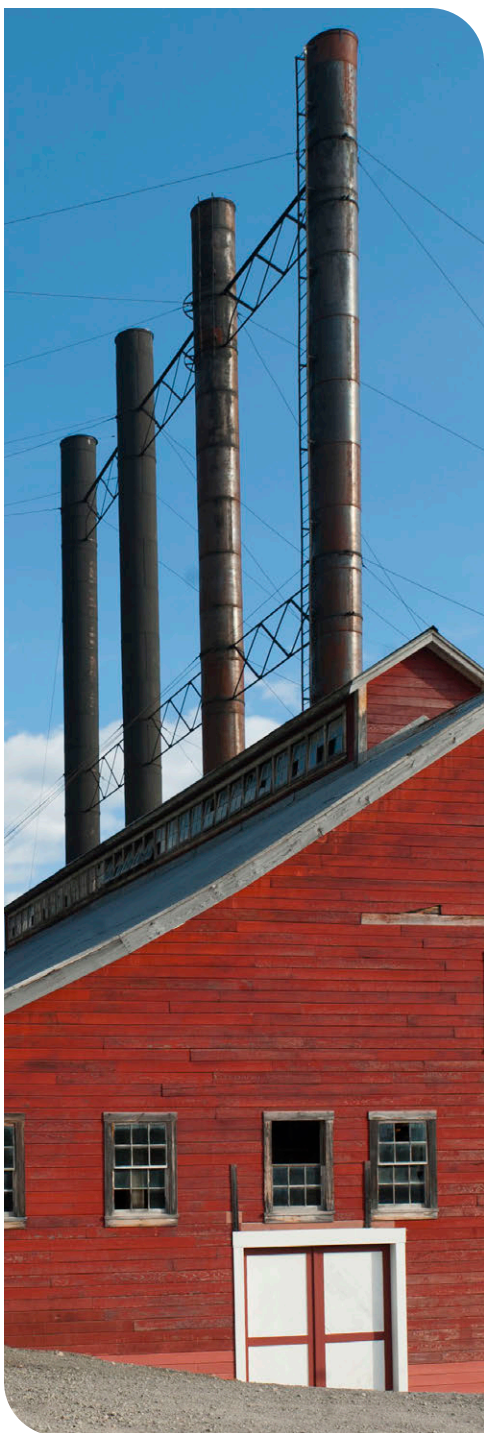
Conduct preservation treatments using current condition assessments and according to published treatment guidance.

The park's general management plan guidance on prioritizing for documentation and stabilizing cultural landscapes and historic structures is outdated. Park staff must create new management priorities based on available information and find ways to fund costly and time-consuming—but essential—treatment plans. The staff will need help; many historic structures are remote and difficult to access, adding to the challenge of maintaining current condition assessments and conducting preservation treatments. Managing some cultural landscapes is further complicated by land ownership conflicts.

Enhance the cultural landscape and historic structures programs' capacity to meet stewardship objectives.

Stewardship of cultural landscapes and historic structures requires considerable effort that is not feasibly accomplished by park staff alone. The park must expand its capacity to inventory and document resources, conduct condition assessments, and develop and fund preservation treatment projects. Potential strategies include increasing outreach to park partners and professional affiliates via Cooperative Ecosystem Studies Unit agreements, the Volunteers In Parks program, HistoriCorps, and others. Internally, the cultural resource program should engage with backcountry rangers and other park staff to assist with documentation and management activities through a programmatic compliance process for backcountry site visits or other appropriate activities. The park also should engage with permitted users (e.g., holders of commercial use authorizations, concession contractors, holders of special use permits) on this matter by developing documents that provide historical information and guidance to encourage preventive maintenance on historic structures (especially cabins).





STEWARDSHIP GOAL J: NPS Lands and Structures in the Kennecott Mines National Historic Landmark Are Managed to Anticipate the Most Critical Resource Needs, Balancing Preservation Values with Other Values and Adapting to Changing Social and Environmental Conditions

Identify and document cultural resources on NPS lands within the national historic landmark (NHL) district, and maintain current and accessible database information.

Documentation of the NHL district's significance should be updated to identify threats (or potential threats) and management needs attributable to changing social and environmental conditions. The current boundaries of the NHL district may not reflect the true extent of its historical resources based on new research. The park should work with neighboring property owners to evaluate these issues and consider potential needs for an updated NHL nomination, updated cultural landscape inventories, documentation of underground structures, and an archeological survey of the Wagon Road, among other actions.

Prioritize and conduct preservation treatments using current condition assessments and approved treatment plans.

Resources on NPS lands within the NHL district experience stress from high visitor use and threats from the natural environment. Climate change exacerbates these threats; increased snow loads are causing structural collapse in historic buildings and rapid melting of Kennecott and Root Glaciers may have multiple implications for Kennecott infrastructure and management. The NPS has not received funding to manage these resources and should develop partnerships to address critical resource needs. An updated list of priority structures and cultural landscapes should be compiled, with consideration given to these climate change considerations as well as to opportunities for adaptive reuse and partnership use. Treatment guidance documentation and preservation maintenance activities should focus on these prioritized resources. The Kennecott Operations Plan should be aligned with these priorities.

Develop and implement a monitoring program to inform management decisions that anticipate preservation needs and enable management practices that are adaptive in response to changing social and environmental conditions.

A strong monitoring program is essential for providing current information that informs adaptive management in a changing environment and for identifying threats before they become critical. Issues of concern include snow loading, subsurface thaw (ground destabilization), and changing weather patterns, as well as other climate change-related impacts. Park cultural resource staff should also collaborate with other divisions/teams to implement a better approach for quantifying visitor use patterns.



STEWARDSHIP GOAL K: Museum Collections Are Maintained at a Scale and Scope Appropriate to the Park's Purpose and Are Managed in Accordance with Professional Curatorial Standards and NPS Policies

Identify and accession museum objects, and maintain current, complete, and accurate collection documentation and database data.

The park must prioritize and complete or update core documentation in order to effectively and efficiently manage its museum collections, including finalizing the scope of collection statement with support from the regional curator. The park should complete the collection management plan that was drafted following a 2022 site visit and begin prioritizing and implementing projects based on its recommendations. The park must also mitigate its accessions backlog by accurately assessing the backlog quantity, correcting the collections management report figures as necessary, building projects in the Project Management Information System to decrease the backlog, and creating accession records with all required documentation. The park should also conduct regular archives surveys and formalize the process for transferring appropriate records to the museum program to be accessioned as archives.

Preserve museum objects in good condition, deaccession hazardous or inappropriate objects, and consolidate and improve the condition of curation facilities.

WRST currently has exhibits within six buildings at the Kennecott Mines National Historic Landmark. There are also 56 cataloged objects on the landscape at the Bremner Historic Mining District. In order to ensure that its museum collection is appropriate in scope and scale and preserved in good condition, the park should screen collection objects against the scope of collections statement, identify those in vulnerable locations, and conduct a general collection condition survey. Vulnerable or hazardous objects should be removed to appropriate curation facilities. Objects that are duplicates or otherwise inconsistent with the scope of collections statement should be deaccessioned. The Bremner District objects in particular should be reviewed for possible deaccessioning. A collection refinement project would provide much-needed support to this effort.

Improve systems that ensure collections are discoverable and available for the public, and curate objects in a manner that is respectful toward associated Tribes and other stakeholders.

All NPS museum programs strive to ensure reasonable use of and access to collections. In addition to leveraging its collections to support general education and outreach, the park receives 40–50 research requests annually. Collections must be discoverable and available to park staff, the public, and researchers. To achieve these objectives, in addition to continuing its participation in the DOI five-year museum discoverability initiative, the park should update its database and continue to take opportunities to digitize collections and provide access through web-based applications. The park should also continue to explore opportunities for partnering with associated Tribes to ensure that the storage and interpretation of culturally significant museum collection objects is appropriate and culturally sensitive.





RESOURCE MANAGEMENT PRIORITY 4. PROTECT AND PRESERVE THE PARK'S WILDERNESS CHARACTER AND VALUES WHILE ENSURING CONTINUED ACCESS FOR A WIDE RANGE OF WILDERNESS-BASED RECREATIONAL OPPORTUNITIES.

STEWARDSHIP GOAL L: Park Managers Preserve or Improve Wilderness Character in the Wrangell-St. Elias Wilderness through Monitoring Wilderness Character Qualities and Maintaining Opportunities for Solitude

Monitor wilderness character and conduct studies that inform wilderness character monitoring and preservation.

Developing a wilderness character baseline assessment and monitoring plan is essential for preserving and improving wilderness character. One component of the baseline assessment and monitoring plan could include conducting a parkwide soundscape inventory to understand how motorized transportation networks affect the natural wilderness character quality. Similarly, conducting a visitor capacity study for wilderness and backcountry areas and better understanding visitor perceptions of solitude in wilderness could assist park managers in determining the acceptability of possible management actions. Another focal area of this goal is to identify trends in measures for solitude and for other qualities of wilderness character.

Update park wilderness eligibility documentation.

Park managers need to complete procedural and regulatory actions to update the park's wilderness eligibility assessment. Implementing wilderness eligibility corrections stemming from the Nabesna Off-Road Vehicle Management Plan Environmental Impact Statement is a primary activity to link wilderness eligibility documentation with on-the-ground conditions.

Integrate wilderness stewardship with overall stewardship of park resources and values.

To minimize impacts of park operations on wilderness character, the park should prioritize consistent and rigorous minimum requirements analyses (MRAs) for projects proposed to occur in wilderness. Incorporating measurable performance metrics for wilderness stewardship in program managers' employee performance and appraisal plans could be implemented to meet this goal as well.

Engage opportunities to increase park capacity for wilderness stewardship.

One of the most impactful actions to increase park capacity to effectively steward wilderness resources is to host in-person wilderness training for park staff at least every three years. Similar efforts to build critical capacity include staff training and development in proposal writing and partnership and coalition building.

Study wilderness values of inhabitants and people with connections to the park and apply understanding of the "inhabited quality" of wilderness character to overall wilderness stewardship.

Researching local peoples' perceptions of wilderness and backcountry using ethnographic methods will help the park better understand what the "inhabited quality" of wilderness means to them. With this knowledge, staff can then explore ways to tangibly incorporate these ethnographic connections into broader wilderness stewardship and management activities. Revising the park's wilderness character narrative to be more inclusive of the perspectives of Alaska Natives and other rural residents affiliated with the park is a priority activity to understand the park and preserve's "working wilderness" as a place where humans and cultures continue to live in and make a living from the landscape.

OVERARCHING STEWARDSHIP GOALS

In addition to the stewardship goals outlined in the preceding pages, Wrangell-St. Elias National Park and Preserve will pursue the following goals, which underpin the success of the activities described throughout this document.

OVERARCHING STEWARDSHIP GOALS

Enhance Organizational Capacity

Inadequate funding and staffing in the largest park unit in the system have profound implications for stewardship of park resources and values. While capacity issues broadly impact all aspects of park operations, the park's resource stewardship functions are especially impacted, particularly those functions necessary for sustaining subsistence lifeways and resources in an era of rapid change. The park also has inadequate staff capacity to effectively steward cultural resources in accordance with cultural law and NPS cultural resource management policies and guidelines. Lack of funding and staff capacity generally result in (1) incomplete and out-of-date information about park resources and values; (2) difficulty implementing priority management actions, resulting in adverse effects to resources and values; (3) an inability to address and resolve difficult, ongoing management challenges; (4) an inability to detect, document, understand, and adapt to future environmental and societal changes; and (5) lost opportunities to leverage and utilize external sources of support for the park (regional office, Inventory & Monitoring network, universities, etc.). Throughout this document, resource management specialists have identified measures to enhance capacity for their individual programs. As of the publication of this document in early 2024, organizational capacity has been meaningfully improved in recent years through strategic internal coordination and investments in people, projects, and partnerships. There is more capacity yet to gain through such efforts, and maintenance of this growth will require the continuous support of senior leadership. It is important to note, however, the park's organizational capacity, relative to the size and scope of this 13.2-million-acre protected area, remains extremely limited without significant additional financial support to park operations.





OVERARCHING STEWARDSHIP GOALS

Manage for Resilience in the Face of Changing Climate

Climate change effects in Alaska are undeniable, and associated issues and implications pervade every aspect of resource management at the park. Above average summer temperatures have been recorded over the last two decades, and changes in the fire patterns including increased fire frequency and area burned have been documented. Impacts of climate change on park resources may include shrub intrusion to alpine habitats, reduced forage for alpine species, phenological trophic mismatches, changing migration patterns, and shifting food resources. Climate change is likely driving shifts in invertebrate species ranges, phenology, and populations, which may have consequences for closely associated taxa such as insect-pollinated plants. Changing seasonal patterns in snow cover and frozen surface conditions due to climate change will have widespread impacts on a broad range of resources and values including access to harvestable resources. Thaw and melting of glaciers, permafrost, and snow will profoundly alter the physical landscape parkwide, with cascading effects. Especially in mountainous settings, these processes will increase the likelihood of landslides and rockfalls, and therefore risks to exposed infrastructure and people. Retreat of terrestrial and tidewater glaciers already is drastically reshaping the landscape. Throughout this document, based on the outcomes of an intensive climate change scenario planning process, resource management specialists have identified measures to resist, accept, or direct the impacts of climate change as appropriate, for example by prioritizing stewardship activities for the most vulnerable resources and values. The park's senior leadership should coordinate and support these overlapping strategies across all divisions in the park.



OVERARCHING STEWARDSHIP GOALS

Address Data Gaps, Planning Gaps, and Information Management

Data and planning gaps—data and plans that are lacking, incomplete, inaccurate, or outdated—impact all resources and values. Incomplete or outdated information about park resources and values may prevent park staff from detecting and anticipating adverse impacts to resources. Data gaps hinder the development of effective management plans and, crucially, the ability to make data-driven management decisions with legal implications. Similarly, the park has issues with existing information; data and documentation from past and ongoing research are in many cases poorly organized, not discoverable, and not readily accessible for synthesis and use by park managers or the public for the purpose of understanding past and current resource dynamics and informing the development of future management strategies. To mitigate this, the park needs a central data management system for all resource groups. This is a parkwide issue that concerns existing research pertinent to park resources and values as well as NPS records management standards. This suite of issues is largely attributable to a lack of funding and staff capacity, and addressing it is a top priority for the park. Throughout this document, resource management specialists have identified measures to address data gaps and information management for their individual programs. However, the park's senior leadership should coordinate and support this effort across the entire Resource Stewardship and Science division.

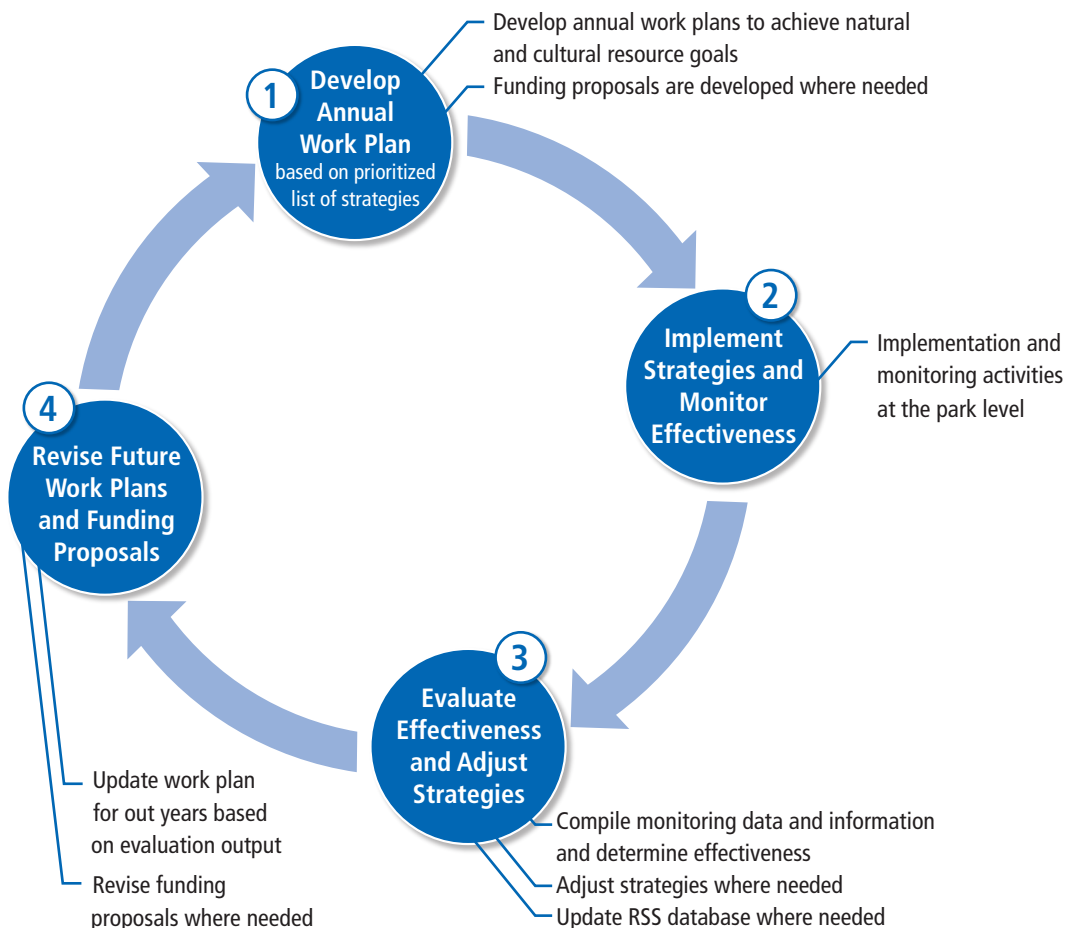


ONGOING IMPLEMENTATION OF THE RESOURCE STEWARDSHIP STRATEGY

The resource management priorities, stewardship goals, and activities outlined in the resource stewardship strategy will assist resource managers in determining what, how, when, and where resource management occurs in the park, and assist the park resource management staff in developing annual work plans. These work plans will be an important planning tool for the park staff to implement resource management activities.

Long-term implementation of the resource stewardship strategy includes managers monitoring resource information and conditions and evaluating the effectiveness of resource management activities over time. Regular monitoring of progress will provide park managers an opportunity to evaluate whether the park is making management decisions in line with resource management priorities and to consider whether adjustments are needed. See figure 1 for more information on the cyclical nature of this process.

Figure 2. RSS Implementation Process



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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under US administration.

RSS

RESOURCE STEWARDSHIP STRATEGIES



BRIDGING SCIENCE AND MANAGEMENT FOR TODAY AND TOMORROW