

35. Wilderness

Goal: Manage all designated wilderness to maintain the enduring resource of wilderness as directed by the Wilderness Act of 1964, subject to the special provisions and exceptions in the Alaska National Interest Lands Conservation Act of 1980 (ANILCA) and the Tongass Timber Reform Act of 1990 (TTRA).

Objectives: Apply a multi-disciplinary focus to wilderness management; consider stewardship of wilderness in the annual program of work by all resources.

Background: The Tongass National Forest contains almost 5.8 million acres within 19 congressionally designated wilderness areas. Each wilderness area is managed as a separate system as the character and resources for each wilderness are unique.

The Wilderness Act of 1964 specifies that the Agency has a responsibility to protect the wilderness resources and wilderness character. Efforts have been made over the last several years by the district rangers, who are responsible for the management of these resources, to identify the character for each wilderness and how to protect these components. Much of this effort was facilitated through Washington Office direction, called the Wilderness Stewardship Challenge, which was intended to have a wilderness identified as being maintained to a minimum stewardship level by the 50th anniversary of the Wilderness Act in 2014. At the end of 2014, the Tongass reported all 19 wilderness areas meeting a minimum stewardship level. The long-term maintenance of the wilderness character is one of the ten elements measured for wilderness stewardship.

Tongass National Forest wilderness is managed under both the Wilderness Act of 1964 and the Alaska National Interest Lands Conservation Act of 1980 (ANILCA). The Wilderness Act mandates that each agency administering designated wilderness shall be responsible for preserving the wilderness character of the area¹. Wilderness management policy identifies the baseline time frame for preserving wilderness character at the time of wilderness designation.

ANILCA Section 707 states, “except as otherwise expressly provided for in ANILCA, wilderness shall be administered in accordance with applicable provisions of the Wilderness Act...” ANILCA provides specific exceptions to some of the prohibitions of the Wilderness Act to accommodate subsistence lifestyles and unique situations in Alaska. The challenge for managers of ANILCA wilderness is to preserve wilderness character, as it was at time of designation, while also managing for uses allowed under ANILCA. Monitoring for changes in wilderness character is critical to determine if wilderness character is being preserved with this complex management situation.

Wilderness Question: *Is the wilderness character being maintained?*

In September 2012, the Tongass Forest Supervisor signed the Wilderness Character Monitoring Plan for the Tongass National Forest. This plan provides direction for monitoring and evaluating changes in wilderness character for the 19 wilderness areas on the Tongass. The plan also identifies a pathway for action to prevent or halt degradation of wilderness resources and qualities. To monitor wilderness character, managers will identify trends in the four qualities of wilderness character: untrammeled, natural, undeveloped, and solitude or primitive/unconfined recreation.

Understanding the maintenance of the wilderness character requires measurements, both annually and

¹ The Wilderness Act, Statement of Policy, section 2(a), states that wilderness areas “shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment of wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character.” Section 4 (b) of the Act, Use of Wilderness Areas, states that “...each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area...”

every five years, to identify changes or trends. This work also requires interdisciplinary participation for the inventory and monitoring of the specific components that collectively make up the wilderness character for the separate wildernesses. Since the standards were established in 2012, the answer as to whether or not the wilderness character is being maintained for each of the 19 wilderness areas may not be known until after 2017.

Evaluation Criteria

The four qualities of wilderness character are: untrammeled, undeveloped, natural, and outstanding opportunities for solitude or a primitive and unconfined type of recreation. These are derived from the definition of Wilderness in the Wilderness Act, Section 2(c). Keeping it Wild (Landres et al. 2008) describes in detail the use of these four qualities in wilderness character monitoring. A fifth quality is being considered as a potential addition to these qualities. This fifth quality would focus on unique/other features - such as cultural, ecological, geological, or other features of scientific, educational, scenic, or historical value.

Following is a description of the qualities of the wilderness character and indicators that will be measured over the next 5 years (from the Tongass Wilderness Character Monitoring Plan). The “objective” and “question” for each quality provide focus on the desired state of the wilderness and the purpose of the monitoring. The “indicators” are from the national framework. They were selected for their relevance, reliability, and cost-effectiveness.

The monitoring measures identified in this plan are “core measures” applicable to all wilderness areas on the Tongass National Forest. District rangers have discretion to add other measures important for tracking changes in individual Wilderness areas.

For each of the four qualities of wilderness character, there are indicators, measures, monitoring frequency, data source, responsibility and protocol. (Appendix A-G of the Tongass Wilderness Character Monitoring Plan) Some of the measures have “monitoring flags” that serve as a potential indicator of degrading trends. Additional monitoring flags may be developed as experience is gained with the monitoring. Monitoring flags may be replaced by “standards” – established levels of acceptable change – as these are developed with the Forest Plan or other planning decisions.

Sampling/Reporting Period

The sampling period is annually, and the reporting and evaluation period every 5 years. Much of the sampling is done annually as required by the Washington Office to report whether or not a wilderness is being maintained at a minimum stewardship level. Some sampling will be captured to reflect trends over a 5-year period.

Monitoring Results

The Tongass Wilderness Character Monitoring Plan was signed by the Forest Supervisor in September 2012. While components of the monitoring have been identified, the sampling methods will be refined and tested. Until trends are identified through additional monitoring, there can be no conclusions regarding the success or the maintenance of the wilderness character on the Tongass.

Wilderness Table 1. Qualities of wilderness character

<p>NATURAL</p> <p>Wilderness "...is protected and managed so as to preserve its natural conditions." Wilderness ecological systems are substantially free from the effects of modern civilization.</p> <p>Indicators are:</p> <ul style="list-style-type: none"> Plant and animal species and communities Physical resources Biophysical processes <p>Measures could include:</p> <ul style="list-style-type: none"> Abundance/distribution for species of concern Non-native species Grazing allotments Visibility, ozone, chemical deposition Departure from natural fire regimes Loss of connectivity Measures related to climate change 	<p>UNTRAMMELED</p> <p>Wilderness is "...an area where the earth and its community of life are untrammled by man..." and "...generally appears to have been affected primarily by the forces of nature."</p> <p><i>Wilderness is essentially unhindered and free from the actions of modern human control or manipulation.</i></p> <p>Indicators are:</p> <ul style="list-style-type: none"> Actions authorized by the federal land manager that manipulate the biophysical environment Actions not authorized by the federal manager that manipulate the biophysical environment <p>Measures could include:</p> <ul style="list-style-type: none"> Spraying weeds Suppressing or lighting fire Introducing non-native species Unauthorized actions such as predator control
<p>UNDEVELOPED</p> <p>Wilderness is "...an area of undeveloped Federal land...without permanent improvement or human habitation" and "...where man himself is a visitor who does not remain."</p> <p><i>Wilderness retains its primeval character and influence, and is essentially without permanent improvement or modern human occupation.</i></p> <p>Indicators are:</p> <ul style="list-style-type: none"> Non-recreational structures, installations, developments Inholdings Use of motor vehicles, motorized equipment, or mechanical transport <p>Measures could include:</p> <ul style="list-style-type: none"> Authorized installations and developments such as scientific equipment, radio repeaters, fish barriers Unauthorized installations and developments Inholdings Administrative and emergency uses of motor vehicles, motorized equipment or mechanical transport Unauthorized uses of motor vehicles, motorized equipment or mechanical transport 	<p>SOLITUDE OR PRIMITIVE AND UNCONFINED RECREATION</p> <p>Wilderness "...has outstanding opportunities for solitude or a primitive and unconfined type of recreation."</p> <p>Wilderness provides outstanding opportunities for solitude or primitive and unconfined recreation.</p> <p>Indicators are:</p> <ul style="list-style-type: none"> Remoteness from sights and sounds of people inside the wilderness Remoteness from occupied and modified areas outside the wilderness Facilities that decrease self-reliant recreation Management restrictions on visitor behavior <p>Measures could include:</p> <ul style="list-style-type: none"> Visitor use Area affected by travel routes Night sky visibility Impacts to soundscape Authorized recreation facilities such as trails, toilets, bridges, shelters Unauthorized recreation facilities such as user-created campsites, illegal motorcycle/ATV trails Visitor management restrictions

Progress in 2014 in establishing the baseline needed to respond to the ongoing wilderness character monitoring question was facilitated by grant funds totalling \$95,100 provided by the Washington Office and through integrated projects and the increased participation of regional non-profit organizations interested in wilderness stewardship. These grants and integrated projects improved the work in wilderness stewardship across the Tongass and specifically funded:

- Wilderness Character Monitoring
- Tongass Wilderness Education Program
- Inventory and monitoring of solitude, campsites, invasive plants, air quality and climate change in the South Prince of Wales, Coronation and Karta River Wilderness Areas
- Inventory and monitoring of solitude, campsites, cultural resources and outfitter/guide permits; and removal of invasive plants at several sites in the Kuiu, Tebenkof Bay and Petersburg Creek-Duncan Salt Chuck Wilderness Areas. The south end of Kuiu Island, Kuiu Wilderness, is a remote portion of the Petersburg Ranger District that is difficult to reach. A multi-disciplinary team traveled to the area and completed work including monitoring of multiple outfitter/guide permit sites, monitoring and inventory of heritage resource sites, monitoring of dispersed recreation sites, wilderness solitude monitoring, campsite monitoring, and inventorying bird species (including an unusually high numbers of 14 and 32 Black Oystercatchers in Port Beauclerc and Totem Bay, respectively)
- Improved Wilderness Character Monitoring reporting format for all districts
- Updated campsite inventory forms and campsite information, expanded solitude monitoring protocol to west shore, treated high priority invasive weeds in Gambier Bay and Seymour Canal within the Kootznoowoo Wilderness
- Updated Endicott River Wilderness campsite inventory, monitored solitude for over 300 hours and outfitter/guide group areas in the Chuck River, Endicott and Tracy Arm-Fords Terror Wilderness Areas, treated invasive weeds in the Chuck River Wilderness
- Funded a Sitka Conservation Society (SCS) intern to conduct monitoring trips for invasive plants, encounters, campsites, and outfitter-guide contacts in the South Baranof and West Chichagof-Yakobi Wilderness Areas
- Monitored campsites, amphibians and glacial retreat in the Stikine-LeConte and South Etolin Wilderness Areas
- Monitored six lichen air bio-monitoring plots within the Coronation Island, South Etolin and Kootznowoo Wilderness Areas
- Wilderness Monitoring of Outfitter and Guide Camps in the Stikine and South Etolin Wilderness Areas were accomplished by Petersburg zone archaeologists. They made two monitoring trips, a day trip to the Stikine Wilderness and a three day trip to the South Etolin Wilderness. They monitored 14 use sites and 10 Alaska Heritage Resource Survey sites.

Specific improvements in wilderness stewardship elements included work in elements 5, 7, 8 and 9.

Element 5 - Solitude and Primitive Recreation Monitoring: The Tongass completed a forest-wide protocol for monitoring areas of outstanding opportunities for solitude. The plan outlines a strategy to identify and preserve areas in Tongass wilderness that provide the most outstanding opportunities for solitude and are considered at risk of losing those opportunities. A goal is to focus the limited resources available to monitoring to observe trends for these outstanding opportunity areas at risk. Another goal is to set up a pathway for action when it is needed to preserve these outstanding areas. Through these efforts, 11 of 19 wilderness areas improved their management goals in 2014.

Element 7 – Outfitter and Guide Operations: A Washington Office grant in 2013 provided extra funds to improve the management and oversight of outfitter and guide operations in 6 wilderness areas. At this time, all nineteen wilderness areas are reporting that outfitter and guide operations have language in their annual operating plans that identify their responsibility to preserve and protect the wilderness resource.

Element 8 – Adequate Standards to Prevent Degradation: As mentioned, the Tongass completed a monitoring plan for maintaining wilderness character. Elements of this plan will continue to be refined as the aspects of the plan are tested for their effectiveness. Work on this plan allowed 10 of 19 wilderness areas improve their management scores.

Element 9 – Wilderness Information Needs: To evaluate changes to resources over time requires a baseline inventory for each wilderness, 18 of 19 wilderness areas now have an information needs assessment in place. Work in 2014 on completing information needs plans and basic inventories improved our understanding of the wilderness resources in several wilderness areas.

In addition, many specific accomplishments resulted from partnerships between the Tongass National Forest and the Sitka Conservation Society (SCS), Southeast Alaska Conservation Society (SEACC), and Student Conservation Association (SCA) allowing for cooperation on stewardship projects:

- SCS partnered with the Ketchikan Misty Fiords Ranger District for an 18-day invasive species inventory and social encounter monitoring trip up the Portland Canal. They produced a report with locations, size, and identification of invasives found in the Portland Canal along with recommendations for treatment.
- Two SCA interns assisted the Ketchikan Misty Fiords Ranger District with wilderness lake monitoring trips where they recorded social encounters and float plane landings for permit compliance.
- Building upon a 2013 partnership with the SEACC, SEACC employed two stewardship interns to work with the Admiralty National Monument/Juneau Ranger District wilderness crew. These interns assisted with monitoring outfitter/guide small group and large group use areas; removal of noxious weeds in areas enjoyed by guided and non-guided recreationists in Tracy Arm-Fords Terror, Kootznoowoo and Endicott River wilderness areas.

Evaluation of Results

Some results for components of the wilderness character are being reported separately by resource (for example, air quality and invasive plants). There has not been enough information collected to determine whether or not the wilderness character of each wilderness is being maintained.

Action Plan

The action plan for maintaining the wilderness character is highlighted in specific resource monitoring strategies attached to the Tongass Wilderness Character Monitoring Plan, attachments A-G. Protocols have been developed, or are being formulated, to address invasive plants, lichen biomonitoring, wilderness development indexing, preserving outstanding opportunities for solitude, measuring encounters, and campsite inventories.

Resource inventories may establish other monitoring components over time. These may include protection needs for historic properties and additional protections for sensitive plants. Future accomplishments will depend on the available funding and participation by stewardship partners willing to assist in the collection of the required information.