

## Wilderness Management

**Goal:** Manage designated wilderness to maintain an enduring wilderness resource while providing for public access and use consistent with the Wilderness Act of 1964 and the Alaska National Interest Lands Conservation Act of 1980 (ANILCA).

**Objectives:** In wilderness, manage for the adopted ROS class. Where the Recreation Opportunity Spectrum (ROS) has not been adopted, manage for no greater development than semi-primitive motorized (with certain localized exceptions due to the effects of activities outside wilderness and ANILCA exceptions).

**Background:** Congressionally designated wilderness in the Tongass National Forest comes from two pieces of legislation, ANILCA and the Tongass Timber Reform Act (TTRA). ANILCA established 14 wilderness areas totaling 5.5 million acres within the Tongass. Two of the areas, Admiralty Island and Misty Fiords, were also previously designated as National Monuments. Prior to ANILCA, there was no designated wilderness on the Tongass. In 1990, the Tongass Timber Reform Act (TTRA) amended ANILCA and designated five new wilderness areas and one wilderness addition totaling 296,080 acres. This brings the total to 5.7 million acres in 19 wilderness areas on the Tongass National Forest.

In 2005, the chief of the Forest Service adopted a 10-Year Wilderness Stewardship Challenge (WSC) to have all wilderness areas managed to standard by 2014, the 50<sup>th</sup> anniversary of the Wilderness Act. This goal has been embraced by the current chief of the Forest Service as well. The Tongass Leadership Team has accepted this challenge and districts are working together to bring all wildernesses to standard by this date.

### **Question 1: Are Standards and Guidelines for the management of wilderness being implemented?**

The applicable standards and guidelines for wilderness and wilderness monument areas have been successfully implemented in 2007. Tongass NF has made progress towards meeting the WSC to manage all wilderness areas to a minimum stewardship standard. Improvements geared toward addressing the WSC include updating the Southeast Alaska / Prince William Sound Fire Management Plan with a fire response language more appropriate to the uniqueness of fire in a wilderness setting, requiring outfitters and guides to update their operating plans so that conduct within wilderness areas is addressed, and testing draft procedures for a Wilderness Information Needs Assessment. Work in 2008 will be to develop a forest protocol for monitoring opportunities for solitude, to review the standards and guidelines of the Forest Plan to ensure that wilderness resources are safeguarded as a result of the plan, and to maintain the ongoing projects that already support these goals.

In accordance with the standards and guidelines, various cooperative projects are underway in conjunction with the State Department of Fish and Game. In Misty Fiords there is a fish study on the Unuk River and a brown bear study, and in the Stikine-LeConte Wilderness is fish study on the Stikine River.

### *Juneau Ranger District*

Beginning in 2002, JRD wilderness rangers created a partnership with Alaska Department of Environmental Conservation (DEC) to monitor the visual emissions of cruise ships entering Tracy and Endicott Arms. The program's success exceeded the expectations of both parties. In 2007, one cruise ship company responded to the work by inviting Forest Service rangers aboard a ship to demonstrate how emissions are reduced upon entrance to Tracy Arm. In July and August of 2007 two cruise ships operating near Tracy Arm actually self-reported to DEC that they had exceeded visual emissions standards. According to the head of DEC's cruise ship program, it was the first time cruise ships had self-reported outside of a city port. He attributed this to the work of the Forest Service rangers, whom he called the most qualified emissions readers in Southeast Alaska. Later, Governor Palin cited the success of the partnership while responding to concerns from a tour operator in Tracy Arm.

In 2007, the wilderness staff successfully used the Minimum Requirement Decision Guide (MRDG) process to plan and implement removal of several abandoned fuel drums from the Chuck River Wilderness. The barrels were abandoned in a muskeg following timber surveys in the early 1980s. Ed Grossman dedicated much time and effort to the complicated removal process. He deserves additional credit for involving private in-holders in the project, which saved money and fostered important communication between the Forest Service and local landowners.

### *Ketchikan / Misty Fiords Ranger District*

The Ketchikan Misty Fiords Ranger District (KMRD) wilderness inventory and monitoring program collected a variety of monitoring information during the 2007 field season. Inventory and monitoring of wilderness areas was performed by the inventory and monitoring crew (2 people), wilderness kayak rangers (2 people) and to a lesser degree by the cabin and trails maintenance crew leaders. Information was collected during a 10 day extended tour and several shorter monitoring trips. Day trips were utilized as well to accomplish monitoring goals in both wilderness and non-wilderness areas. Additional social encounter and wildlife monitoring information was gathered by the kayak rangers as they performed their routine interpretive duties in the core area of Misty Fiords National Monument Wilderness (MFNMW).

Twenty four wilderness Value Comparison Units (VCUs) were visited by wilderness monitoring personnel this season. VCUs were inventoried for new wilderness recreation use sites and existing use sites were revisited and re-surveyed. Areas of current or historic disturbance were surveyed for non-native and invasive plants. Known archaeological sites were monitored in cooperation with the district archaeologist. Incidental wildlife observations and bald eagle nest sites were recorded as well. Most of the wilderness monitoring occurred along the saltwater coastline and FS trail systems because these are the primary travel corridors within MFNMW.

Table 1 details wilderness VCUs visited this season. The specific monitoring activities conducted for each VCU are listed. Some VCUs were only partially inventoried because of poor weather or schedule constraints.

<b>Table 1—VCUs Monitored In 2007 (wilderness)</b>					
	<b>Monitoring Activity</b> (X) = full coverage of saltwater shoreline (P) =partial coverage of saltwater shoreline (-) = not done				
<b>VCU # and Name</b>	<b>Site Inventory</b>	<b>Social Encounters</b>	<b>Invasive / Weed Survey</b>	<b>Incidental Wildlife Observation</b>	<b>Archaeological Site Monitoring</b>
7300 Point Lees	X	X	X	X	X
7810 Claude Point / Pt. Whaley	X	X	X	X	X
7820 Grant Creek	X	X	X	X	X
7800 Pt. Whaley South	P	P	P	P	P
7910 Fitzgibbon	X	X	X	X	X
7900 Klahini River	X	X	P	X	X
7860 Unuk River	P	P	P	P	P
7790 Lake 199'	X	X	X	X	X
7780 Portage Cove	X	X	X	X	X
7770 Snip Islands	X	X	X	X	X
7760 Grace Cove	X	X	X	X	X
7750 Manzanita Bay	P	P	P	P	P
8210 Winstanley	P	X	P	P	-
8200 Checats	X	X	X	X	-
8030 Punchbowl	X	X	X	X	-
8020 Rudyerd	-	P	P	P	-
8010 Nooya	P	P	P	P	P
8199 Wilson Arm*	P	X	X	P	-
8189 Wilson / Blossom*	P	X	X	P	-
8159 Blossom*	P	X	X	P	-
8429 Quartz Hill*	P	X	X	P	-
8360 Hugh Smith Lake	P	P	P	-	-
8350 Humpback Lake	P	P	P	-	-

### *Petersburg Ranger District*

Standards and guidelines of the current Forest Plan are being implemented in the Petersburg Creek-Duncan Salt Chuck, Kuiu, and Tebenkof Bay Wildernesses and are adequate to protect wilderness character. In order to calculate primary output for wilderness under the WSC a wilderness area must meet or exceed a total score of 60%. At this time, the Petersburg Ranger District does not meet six criteria.

In Petersburg Creek-Duncan Salt Chuck the wilderness crew and other recreation personnel surveyed the condition of the Salt Chuck East Cabin and performed routine

maintenance on the building and grounds. The Petersburg Lake Cabin was also surveyed, an accessible outhouse was constructed, and firewood was cut. The Petersburg Lake Trail, of which six miles are within the wilderness boundary, was logged out and brushed. An alternative route was maintained to avoid degradation to the original trail. Creosote pilings on a bridge along the trail were removed and replaced with spruce pilings. A resource inventory team surveyed the Duncan Salt Chuck for the non-native plant, *Cotula coronopifolia* (brass buttons).

In Kuiu a forester, special uses / permit administrator, and wilderness ranger monitored an outfitter / guide permitted site in Port Beauclerc in the Kuiu Wilderness. In Tebenkof Bay two days were spent in the field logging out and brushing the Affleck-Petrof Portage Trail with hand tools. A reroute was created to minimize resource damage and six new trail markers were installed. Five days were spent monitoring recreation and cultural sites by kayak in the Tebenkof Bay Wilderness. A forester, special uses / permit administrator, and wilderness ranger monitored a number of outfitter / guide permitted sites in the Tebenkof Bay Wilderness on two occasions. The wilderness crew completed one Level II campsite monitoring report on a site in Elena Bay in the Tebenkof Bay Wilderness.

Five field days were spent surveying for lichens with the ecologist at the Petersburg supervisor's office. Rare findings of particular interest were: *Lobaria amplissima* (Windfall Islands), *Physconia petrea* (Point Ellis), *Pseudocyphellaria mallota* (Port Beauclerc), and *Hymenophyllum wrightii* (Port Beauclerc).

## Monitoring Results

In Ketchikan / Misty Fiords monitoring was conducted in several ways: fixed point visitor use observations (all encounters and visible traffic is recorded from a fixed observation point within a specific amount of time), informal non-scientific visitor use observations (boat, kayak, or hiker encounters are recorded for an unspecified amount of time), plant and archaeological surveys, wildlife observations, trail assessment and condition surveys (TRACS), and through the analyzation of the end-of-season wilderness cabin use numbers from the reservation system.

Twenty-four previously documented wilderness use sites were monitored and two new sites were discovered and recorded in 2007. Site inventory and monitoring results indicate that visitor use impacts continue to be concentrated, but not limited to, the Misty Core Area (MCA) which is comprised of Rudyerd Bay and vicinity where three level III site re-surveys were done at high use sites. One new Level III survey was completed at a site previously recorded using level II protocol. Level II site inventory forms were completed for the remaining existing sites visited. The site surveys indicate increases in site size at two of the sites. Table 2 details these changes.

Table 2. 2007 Wilderness Level III Site Survey and Resurvey									
Name	Site Area (sq ft)			Impact Level (17 thru 48)			Impact Rank (1, 2, 3)		
	2007	2004	% change	2007	2004	change	2007	2004	change
8200-01 Checats	1856	1204	+65%	33	26	+7	2	2	none
8030-01 Grassy Knoll (Punchbowl)	168	206	-82%	24	24	none	1	1	none
8030-02 Punchbowl	1410	982	+70%	42	41	+1	3	3	none
8210-01 Winstanley	7565	-	n/a	35	-	n/a	3	-	n/a

Since 2004 there have been additional areas cleared of vegetation for tenting and increased erosion on the social trails joining the different tenting areas. Impact levels for these sites were calculated for by 8 different factors including vegetation loss, mineral soil increase, tree damage, root exposure, development, social trails, campsite area, and cleanliness. These surveys show that despite overall increases in site area and impact level the impact score remains unchanged since 2004.

In addition to this monitoring in the MCA an extended wilderness monitoring trip was conducted in the northwestern mainland and neighboring Revillagigado Island portion of MFNMW where visitor use impacts were found to be moderate to non-existent and generally associated with camping, subsistence, or homesteading.

KMRD received funds to treat 3 known weed infestations in MFNMW. Treatment of these sites took place over 3 days in June. The district botanist assisted the inventory and monitoring and kayak ranger crews in the eradication efforts. The weeds *Digitalis purpurea* (foxglove) and *Plantago major* (common plantain) were hand pulled to keep ground disturbance to a minimum. A total of 1.5 acres were treated in both Checats Cove and Johnstone Estuary for plantain and 0.1 acres were treated in Checats Cove for foxglove. Post treatment monitoring will be conducted in 2008.

The Ketchikan / Misty Fiords Ranger district concludes that standards and guidelines for wilderness management were implemented in 2007 for some portions of MFNMW. Since freshwater lakes were not monitored this season, it is unknown if social encounters (in this case lake landings) were exceeded at lakes in the MCA. Over the three previous years, encounter levels have been routinely exceeded on these lakes. In addition to the TLMP standards and guidelines, several elements from the WSC were specifically addressed in 2007 including element 1 (wilderness fire plan), element 2 (invasive plants), element 6 (site inventory) and element 9 (data needs). Progress was made in all four areas this season, with improved ranking in elements 1, 2, and 9. The cumulative score for MFNMW was 47; a score of 60 is considered minimum stewardship level.

The Petersburg Ranger district reports heavy visitor use in the Petersburg Creek-Duncan Salt Chuck Wilderness due to the proximity of the towns of Petersburg and Kupreanof, and the Petersburg Creek. Visual surveys found that visitor use at the mouth of Petersburg Creek might have exceeded the semi-primitive motorized encounter guideline of six parties on several occasions. This was a qualitative observation since there was not any standardized sampling done to monitor this site. Special use permits were reviewed for compliance with wilderness standards and guidelines in Kuiu and Tebenkof Bay. Rare plants discovered on monitoring trips this year in Tebenkof Bay include *Lobaria amplissima* (at Windfall Islands), *Physconia petrea* (at Point Ellis), *Pseudocyphellaria*

*mallota* (at Port Beauclerc), and *Hymenophyllum wrightii* (at Port Beauclerc). An invasive, *Digitalis purpurea* (common foxglove) was pulled from a formerly-inhabited home site in the Tebenkof Bay Wilderness. Kayak monitors in Tebenkof Bay recorded nothing notable 2007.

## **Evaluation of Results**

Continued field monitoring that improves knowledge about public use of wilderness is critical. As a result of monitoring, new visitor use sites are mapped and surveyed, and previously known sites are revisited and resurveyed. Sensitive plant and invasive species monitoring should continue to be incorporated into other resource inventories or field activities, as should archaeological site monitoring. Sound monitoring and social encounter monitoring should continue with more emphasis on how to reduce the negative impacts of sound pollution in wilderness areas, even as no related social encounters occur. The management prescriptions for wilderness along with the standards and guidelines associated with the management of specific resources are utilized when applicable, appropriate, and clearly defined.

## **Wilderness Question 2: Are Standards and Guidelines for the management of wilderness effective in maintaining the wilderness resource?**

The standards and guidelines for the management of wilderness are not explicitly defined in TLMP. Instead wilderness standards and guidelines are drawn from those defined for each individual resource group, such as recreation and tourism, trails, air quality and heritage resources. The 1997 Forest Plan, while sufficient in addressing the current conditions, provides little direction to land managers onto whom responsibility falls under the Wilderness Act to protect and maintain the wilderness character. Several revisions pertaining to wilderness areas have been proposed for the TLRP update which is scheduled for completion in 2008. Recommended changes include:

- Ensure wilderness ecosystems are substantially free from the effects of civilization
- Keep wilderness untrammeled and free from human manipulation, including those actions taken to manage wilderness
- Protect the undeveloped character of wilderness by following legislative guidelines regarding permanent improvements or human occupation, including mechanized transport and motorized equipment
- Apply a multi-disciplinary focus to wilderness management—consider stewardship of wilderness in the annual program of work in all areas
- Preserve and perpetuate biodiversity
- Inventory, reduce, and, when possible, eliminate non-native species in wilderness
- Manage wilderness as a place where self-reliance and primitive skills are needed and can be honed

- Extend group size limitation (up to 12 in wilderness areas) beyond only commercial use to apply to the general public as well
- Strive to adopt the primitive rather than semi-primitive ROS Class as the goal for wilderness areas
- Limit length of stay in wilderness areas to 14 days unless otherwise approved through a special use permit

These recommended changes to the goals, objectives, and management prescription for the wilderness and wilderness monument land use designations were initiated by recent court decisions and the agency's efforts to clarify wilderness direction. As several national groups review direction and methods to conform to the Wilderness Act of 1964, there has been a reconsideration of direction provided at the national, regional and forest levels. At this time, none of the 19 wilderness areas managed by the Tongass have attained the minimum stewardship level for its management. Progress towards this objective has been made over the last several years and there is an expectation that the wilderness areas in the Tongass will reach the minimum stewardship level well before the 2014 time frame.

#### *Ketchikan / Misty Fiords Ranger District*

The TLMP does little to define and establish monitoring protocol for visitor encounters in wilderness areas and there is a consensus at KMRD that the standards and guidelines are too general to be effective in addressing the types of complex and diverse issues faced in MFNMW. By the TLMP definition of social encounters, very few encounters were documented this season, even in the MCA. Motorized boat and air traffic falls outside the jurisdiction of the Forest Service and does not count toward social encounters except while on freshwater lakes. Thus, despite the low number of encounter levels recorded this season, noise levels impact the experience of visitors and the affect the feeling of solitude, remoteness, and sense of isolation of the wilderness.

Since many of the social impacts occur from commercial tours inside the MCA, managers dealing with commercial use should continue to educate all commercial tour operators, permitted and non-permitted, about wilderness ethics and ideals. Visitors who use outfitters to access the wilderness will have a more satisfying experience if they are able to enjoy the solitude and remoteness that the wilderness has to offer, subsequently providing outfitters with higher approval ratings and greater economic benefit. It is important that the Forest Service holds outfitters accountable as stewards of the wilderness resource.

## **Conclusions**

Because the standards and guidelines for the management of wilderness are not explicitly defined in TLMP, wilderness standards and guidelines are drawn from those defined for each individual resource group. Management prescriptions for wilderness are implemented by managers to the best of their abilities but the geographic distribution and expanse of the 19 wilderness units, totaling 5.7 million acres, make the implementation of management prescriptions difficult. Monitoring of wilderness areas in 2007 has been performed in conjunction with plant and archaeological surveys and cabin and trail

maintenance. Wilderness monitoring activities in 2007 include monitoring of cruise ship emissions, wildlife observation, campsite assessment and clean-up, maintenance of buildings and grounds, surveying and eradication of exotic plant species, and exploratory kayak monitoring of saltwater and lake shorelines.

Results indicate that monitoring is essential to provide information on the status of management relative to wilderness management prescriptions. Monitoring in 2007 yielded information on heritage sites, sensitive and exotic plants, compliance of permitted outfitter and guides, cabin and trail conditions, and noise impact levels of motorized boat and air traffic through and near wilderness areas.

### **Action Plan**

Application of monitoring protocols and further refinement of the wilderness management prescription will continue in an attempt to help reach the goals of the WSC. Conflicts associated with the wilderness objectives of solitude, primitive recreation, and aircraft over flights, boat traffic, and facilities constructed adjacent to or on private property within the wilderness will continue to be addressed through interagency collaborative planning, where possible. Monitoring information collected in 2007 highlighted areas in need of improvement: noise impacts that continue to affect the solitude, remoteness, and sense of isolation of the wilderness, specific emphasis needs to be placed on collecting baseline inventory data on rare and exotic plants in wilderness areas. Further development and clarification of wilderness management prescriptions is necessary.