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Misty Fjords National Monument Wilderness Ecosystem Inventory Monitoring Baseline Data 1999 Yearend Report Executive Summary

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Tongass National Forest, Ketchikan Specialist Report

EXECUTIVE SUMMARY

1999

Introduction

Misty Fiords National Monument Wilderness (MFNMW) entered into a third year of wilderness inventory/monitoring that would systematically assess the status of wilderness conditions from saltwater to alpine in eleven Value Comparison Units (VCU). The need to monitor these conditions has become necessary with increasing wilderness use and interests which threaten the integrity of this designated wilderness area. The objective of this project was to establish habitat baseline data for use as comparison information in non-wilderness application, and to establish an existing conditions database for the purpose of wilderness management and planning.

Now is the perfect time to collect baseline data for monitoring changes to the resource and developing future management prescriptions. The physical impacts to the ground are at present very minimal. Having baseline data documenting those conditions now, *before* impacts become apparent, is critical for establishing and maintaining standards and guidelines for detecting degradation over time, thus assuring management response in a timely manner. As use increases and issues become more prevalent there will soon be a need to establish Limits of Acceptable Change (LAC). An existing conditions database would facilitate detecting changes in these conditions for future planning processes. This is necessary to maintain a reasonable level of confidence in making future management decisions that protect and preserve the integrity of this wilderness area.

This monitoring project is in its third year of development and the standards and protocols for Wilderness Inventory and Monitoring are available for application within the Alaska Region. Various surveys have been completed within MFNMW prior to this project, but they have not been organized under an integrated ecosystem approach. Consistent collection methods and organization of baseline status data are needed for future comparison of the impacts and changes to wilderness, wildlife, vegetation, stream, recreation and cultural resources incurred by public use. A systematic ecosystems management approach by VCU was used to plan targets, organize work and data, quantify accomplishments, and make condition assessments based on the expertise of the various disciplines. The crews consist of recreation and wildlife technicians sharing skills and abilities to maximize information collected. This crew is supervised by the Wilderness Specialist in the recreation shop.

This project intends to benefit multiple resources by providing varying habitat baseline data, and existing condition assessments. Primary indicators were established by the various disciplines in conjunction with Forest Plan direction and are applicable in any Tongass wilderness. The VCU's we surveyed during this assessment were chosen based on the high level of use they already receive or have the potential to receive. The six primary elements for inventory and monitoring conditions are: wildlife, vegetation, recreation, stream, forest health, and cultural surveys. Other observational elements include: visuals, landslides, and unique geologic features are recorded as encountered.

Wildlife monitoring included Northern Goshawk, Marbled Murrelet, Bald Eagle, amphibian and small mammal surveys. General wildlife observation notes were also compiled for each VCU focusing on sea mammals and larger predators like Wolves and Brown Bears. Vegetative surveys were accomplished in association with existing and potential campsites and at potential helicopter landing sites to quantify existing vegetative loss and percent disturbance, if any. Plant association and forest health information was collected at all existing and potential recreation sites. Recreation surveys monitored social encounters while documenting existing and highest potential use sites. Data such as number of planes, boats, and trail encounters were recorded daily, conditions of structures and facilities, existence of

campsites and social trails, vegetative losses/percent disturbance, and general accessibility were collected as encountered. Tier 1 survey reports were documented to provide fish biologists general baseline verification and comparison data in determining if a basin wide survey might be of value. Forest Health surveys assists silviculture as baseline data to determine and monitor stand structure and as habitat type information in determining overall conditions and health of MFNMW. Cultural surveys documented evidence of historical native use and existence. Data such as culturally modified trees, fish weirs, pictographs, and historic structure remains were recorded as encountered. Special geologic information (landslides, caves, geothermal activity, etc.) was collected as encountered.

All data collected was input into the Geographical Information System (GIS) layers and additional working database programs. A detailed folder of information was established for each VCU. A year-end report and executive summary were produced highlighting the various elements of monitoring that have been accomplished. Backcountry Recreational Opportunity Guides (ROG) are produced when appropriate. An informational display was produced to illustrate the work being accomplished, why it was accomplished, and how it was accomplished.

The methods chosen for collecting this data were considered consistent with wilderness values and management objectives. Kayak, canoe, and foot travel were the primary methods used to explore these VCU's. In addition to being consistent with wilderness management objectives, these methods prove to be very efficient and effective, enabling us to examine the resource in much greater detail than the general perspective often gained by the various means of motorized transportation. Both perspectives are important and necessary for determining overall and deteriorating conditions within the Monument Wilderness. More detailed information is provided when methods of examining conditions are methodical and systematic. Leading the agency and public by example and becoming the benchmark to which all other wilderness recreation use is measured is an additional benefit of this project work and the Region's overall wilderness management efforts and commitment.

As this project is still a relatively new attempt to set wilderness monitoring standards and protocols for Alaskan application, anticipated ease of data collection is still being explored. Goals were set as high as possible in order to determine what could be achieved by two people traveling over difficult terrain with variable weather conditions. An attempt to adequately assess the existing conditions in an entire VCU by two people traveling with all food, survey and camping gear needed for 9-16 days is obviously ambitious. And yet, it was determined that it is not only possible, but necessary in order to gain adequate detail for making a reasonable assessment of conditions in each VCU.

The rationale for survey intensity for individual VCU's is based on the following criteria. Intensity of survey is based on several factors that include: VCU size, recreational potential, cultural remnants or potential, fish and wildlife habitat, and forest health. The objective of this system is to get a feel for the amount or recreational use occurring, opportunity, and its future potential, wildlife activity, fish and stream status, cultural remnants, vegetative classes, etc... Basically we are seeking an inventory of conditions as seen from the ground. As determined by these factors, each VCU is given a time allotment in order to explore as much of the VCU as possible. Transects are established along traditional travel routes ranking in priority from highest to lowest, saltwater being highest as it is the most accessible, then drainages leading to lakes large enough to support air traffic, then alpine systems with reasonable access from salt water or lake systems, and finally major drainages that could support recreation activity or boat traffic from kayaks/canoes to jet boats. The average length of tour is based around a ten day schedule, though that can vary based on the VCUs size and potential for recreation activity.

Our intention was to combine a wildlife and wilderness technician in each crew to accomplish the varying data collection tasks. Benefits such as valuable cross-training, cost-sharing, and logistical coordination are a result of combining personnel in this fashion and were large factors in the success of this project.

Various wildlife, vegetation, stream, recreation, and cultural resource surveys were completed in each of the eleven VCU's. These areas were: VCU 7980 up Rudyerd River and encompassing Walker Lake; completion of saltwater in; VCU 7990 in Walker Cove and up Walker Creek; VCU 7930 covering saltwater north to Robinson Creek and 10 miles up the Chickamin River; Leduc Lake, Leduc River, the Chickamin wetlands and the Chickamin River in VCU 7940; VCU 7790 on the northeast side of Revi'lagigedo Island; Portage Cove in VCU 7780; VCU 7770 which covers salt water in the vicinity of strip island; VCU 7760 encompassing Grace Creek Trail and Grace Lake; and finally, VCU's 7740 and 7750. including Sargent and Manzanita Bays for training purposes.

General wildlife observations worth noting from summer's work

Numerous brown bear were seen in Walker Cove and the Chickamin River drainage. Wolf were seen and heard on every tour and wolf packs were found in the Chickamin, Portage and Grace drainages. For more detailed information see specialist report and/or individual VCU report folders. A Red-tailed Hawk nest was located up Rudyerd River, a Western Grebe was observed in Chickamin Cove. **A new species of small mammals was identified (Phenacomys intermedius) Heather Vole, this type of information is exactly what we are looking to confirm and document for the purpose if inventorying the existing conditions of MFNMW.**

Conclusion

It is generally regarded that physical impacts to the backcountry of Misty Fiords National Monument Wilderness are minimal in comparison to the size of the country being surveyed; however, physical impacts have been found and documented. Present physical impacts from existing use is minimal and within sustainable levels at most locations. Social impacts, are extreme in some locations due to the unrestricted use of commercial flight-seeing and tour ship traffic, both out of our jurisdiction. To maintain the pristine characteristics of the physical environment, addressing the social disturbances is necessary utilizing interagency negotiations, a strong educational program in conjunction with a watchful eye over these conditions to detect change as early as possible. In recent years there has been an increased interest in sea kayaking, river rafting, hunting, fishing, and cross-country travel. With this increased use physical impacts will most certainly follow. Physical use and impacts are on the rise, every year brings new outfitter guide interest, additional kayakers, as well as expedition quality thrill seekers. For example: A German native attempted to traverse the whole of the MFNMW south to north. And though the southern portion of his attempt from Hidden Inlet to Wilson Lake was weathered out, he did manage to complete the second portion of his journey from Wilson lake to Hyder, an impressive feat! An American couple traversed through the Portage Cove drainage and on out to Swan Lake and Carroll Inlet. These types of experiences are becoming more and more popular as well and are the kinds of experiences wilderness was intended to serve.

It is in the area of social impacts where managers of Misty Fiords National Monument Wilderness have a greater challenge. There are times when we feel like we are in the flight path of an urban airport. This has a negative impact on people using the grounds for the purpose of enjoying solitude, peace, quiet, challenge, and risk. The large cruise ships likewise create a visual impact by temporarily obstructing entire viewsheds. The opportunity for plane crashes and boating mishaps are always possible and difficult to deal with due to the remoteness and varying weather conditions of this area. Typical wildlife

use patterns are sometimes altered due to the mechanized intrusion. Injury and death to individual animals has occurred in alpine areas from harassment by planes for wildlife viewing. Additionally, huge wakes caused by ships can cause injury or death to sea mammals at haul-out locations. The increased access for sport hunting and fishing will in turn result in significant physical impacts over time.

It is critical for us to know and understand to the best of our abilities the existing conditions of our Wilderness area for the purpose of managing this area in compliance with a non-degradation policy and to provide the best available wilderness opportunities within the National Wilderness Preservation System. Alaska is the last frontier. Our desired future condition for Misty Fiords National Monument Wilderness (TLMP 3-24) is one where ecological processes and natural conditions are not measurably affected by past or current human uses or activities.

To be quality stewards of these wilderness acres, like all resources, requires an inventory of their goods and product; in wilderness that product is wildness! Documenting the existing conditions of wildness and establishing a baseline inventory and monitoring system to check those conditions is the bare essential for managing wild country into the next century. Without it we have no starting point for management and typically end up compromising on the level of solitude and remoteness.

Please see attached map. All data collected during these surveys, and the precise locations of all surveys can be found in separate VCU file folders, a GIS database, working databases, data tables, photographs, and VCU maps.

Total Annual Accomplishments 1999:

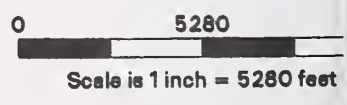
Total # of VCU's Visited:	* 11 VCU's
Total VCU Acreage Cleared:	* 269,294 cleared of 359,059 total VCU acres
Total Distance Covered:	* 161 miles
Proposed Helicopter Landing Sites:	* 7 visited
Total Amphibian Trap Nights:	* 56 trap nights
Total Small Mammal Trap Nights:	* 484 trap nights
Total Goshawk Surveys:	* 25 survey sites (0 sighted)
Total Marbled Murrelet Dawn Counts:	* 6 dawn counts (4 counted)
Total Bald Eagle Nests:	* 5 nests documented
Total Existing Recreation Sites:	* 7 sites documented
Total Potential Recreation Sites Surveyed:	* 56 sites documented
Total Planes Encountered:	* 185 plus 2 helicopters documented
Total Cruise Ships:	* 1 documented
Total Pleasure Craft:	* 9 documented
Recreation Opportunity Guides (ROG):	* 6 (potential cross country routes)
Total Trash Removed:	* 10 lbs. of trash were found and removed
Total Cultural Sites:	* 1 documented
Total Forest Health surveys:	* 45 documented
Total Vegetative Site Disturbance Plots:	* 72 documented
Total Landslide Observed:	* 3 documented
Total Stream Surveys:	* 6 streams documented
Total Permit Inspections:	* 0 sites visited
Total Radio Transmission Points:	* 14 documented (2 successful)
Total Person Days Spent in Field:	* 140 days + 5 supervisor days
Total Person Days in Office:	* 90 days + 90 supervisor days (project work, planning)
Total Person Days in Training:	* 20 days (district orientation, fire, trails)
Total Person Days Used:	* 250 days, GS-5 and 95 days, GS-9 \$19,000.00 + \$27,500.00 = \$46,500.00 total costs
Total Food and Misc. Equipment Costs:	* \$ 20,000.00
Program Costs 1998:	* <u>\$66,500.00</u>



- MFNM Boundary
- VCU Lines
- ▨ 1999
- ▧ 1998
- ▩ 1997

MFNM VCU'S VISITED BY MONITORING CREW

MFN



MONITORING AND EVALUATION REPORT
Ketchikan Ranger District/Misty Fiords National Monument
FY 1999

Recreation and Tourism Question 1: Are areas of the Forest being managed in accordance with the prescribed Recreation Opportunity Spectrum (ROS) class in Forest-wide Standards and Guidelines?

Environmental analyses display change in ROS (in the case of analysis for timber sales), and all management decisions consider ROS when authorizing use, or proposing construction or reconstruction.

As managers it is difficult to use the existing ROS structure for applicability in Alaska wildernesses. Without wilderness planning and the identification of acceptable change limits we continue to amend the ROS to identify the current condition. We progressively allow more encounters and a deterioration of the remoteness and solitude elements. We do not use ROS as a prescription but as an inventory tool.

Recreation and Tourism Question 2: Is Off Road Vehicle (ORV) use causing, or will it cause considerable adverse effects on soil, water, vegetation, fish and wildlife, visitors or cultural and historic resources of the Forest?

There has been a steady increase in off road vehicle use; primarily snowmobile and ATV use in the winter and ATV and jet ski use in the summer. Harriet Hunt, Brown Mountain, and the Road 410 Area near Ketchikan and areas near Hyder are the most heavily used. The muskegs in the Brown Mountain area are receiving damage as a result of ATV use. We have not monitored these conditions in the other areas so are uncertain of the extent of impacts that are occurring. There is a need to complete a travel management plan for the Ketchikan Ranger District/Misty Fiords National Monument and identify more clearly for the public the areas open for ORV use.

TLMP RESPONSE TO MONITORING AND EVALUATION QUESTIONS AS THEY PERTAIN TO WILDERNESS

The monitoring and evaluation questions for the Standards and Guidelines presented in the Tongass Land Management Plan apply directly and indirectly to the work that the Wilderness ecosystem inventory/monitoring crew accomplishes in Misty Fiords National Monument Wilderness. We would like to utilize the data collection detailed in the Monitoring and Evaluation Guidebook to continue the evolution of surveys that this monitoring crew carries out within the Monument Wilderness. The interdisciplinary nature of the work that the crew accomplishes relies on multiple resources within the Forest Service to provide quality, useful, broad-scale, observational, baseline data. The aim, as always, is to better the protocols and hence the inventory of existing conditions within Misty Fiords National Monument Wilderness.

This is an attempt to address these questions with information obtained by field personnel in the 1999 field season, as well as describe the conditions observed on a VCU by VCU basis. The questions selected from the Guidebook are those related to the surveys carried out in the 1999 field season as they pertain to Wilderness management and more specifically to Misty Fjords National Monument Wilderness. In many cases these questions can be narrowed down to individual VCU conditions or down further yet to specific site conditions.

Wilderness Question 1: Are standards and guidelines for the management of wilderness being implemented?

In most cases the existing standards and guidelines are in compliance within the Misty Fjords National Monument Wilderness. However, there are some areas beneath the flight path between Ketchikan to Rudyerd Bay that are out of compliance in the area of social standards and solitude. There have been successes and we continue to have areas of concern in relation to social disturbance and solitude.

There has been a continued effort to acquire private inholdings through the acquisition system in Misty Fjords National Monument Wilderness (MFNMW). Not only do these acquisitions reduce our landline responsibilities but they give the agency greater ability to limit future development that could have negative impacts on the wilderness resource. In 1999, we completed acquisition of two parcels totalling 50 acres in the Unuk River area.

Administratively we have tried to set the highest example for wilderness travel, camping, and working within the monument wilderness. The standards and guidelines for wilderness management must begin with our own actions, at present, our example in many cases are the standards and guidelines for which other possibilities and thoughts for management are realized. Projects within the wilderness have been conducted using wilderness minimum tool standards. Trail and cabin maintenance, heritage resource monitoring and inventory, and fish pass maintenance have all exceeded the wilderness administrative standards, opting to set a non-motorized/mechanized example. It is the opinion of the district that it is not only our job to set the highest standards possible, but our obligation as stewards of this important resource to be the benchmark by which all other recreation use is measured against. We wish to lead by example.

Discussions continue on a proposal to supplement current skiff boating opportunities at public use cabins and trail terminuses in favor of canoes. Not only will this promote a non-motorized/mechanized, compatible recreational opportunity and an easy to use method of transportation at wilderness lakes, but the ease of installation at cabin sites can be facilitated without helicopter use. It will also be beneficial to our maintenance crews by providing them easier manual access to cabins for the purpose of accomplishing maintenance objectives. Minimizing motorized support in favor of manual methods is a criteria used to determine effectiveness and success in the field.

Our wilderness inventory/monitoring crew continues to find equipment caches at remote locations. Decisions need to be made regarding how these cached goods are to be dealt with. Any lake large enough to support plane use has the potential for finding a cache(s) of goods. Since helicopters are a fact of life, though illegal, they could in most cases easily cache goods at desired locations. The past two seasons have found cached canoes, skiffs, outboards, and fuel containers. Cached goods are a

serious problem in some lower 48 wilderness areas and a concern that should be addressed here in Alaska.

Discussions continue regarding the initiation of a wilderness planning effort. This planning effort, once launched, will undoubtedly address all the issues surrounding the management of MFNMW. These issues include: flight-seeing, tour ship traffic, outfitters, aquafarming, tourism, fish and wildlife. Coordinated efforts need to be initiated utilizing adjacent land management as a partner to providing primitive recreation opportunities and the preservation of wilderness. An array of opportunities must exist to meet demand, and wilderness is but one of those opportunities that represents the most primitive end of the Recreation Opportunity Spectrum.

The current partnerships with the cruise tour industry allows the Wilderness Ranger Shipboard Interpretive Program to present strong messages on Wilderness issues, threats, and values. Leave No Trace principles and natural resource education/interpretation are presented as well. There is tremendous support from the public and partners to continue this program. The Chief's "Serving People" comment cards are the primary means of monitoring the public response to the program. Feedback from the cruise ship partners is continuous throughout the summer and they help support the program financially.

Our monitoring of outfitter/guide operations in the field included Wilderness Inquiry with their kayak tours and the three flight-seeing companies. Standards and guidelines are implemented, but goals are not always achieved as only a small fraction of use effecting the upland management is within our jurisdiction. Case in point is activity occurring on salt water and air traffic. These uses though out of our jurisdiction have definite impacts on the upland management of MFNMW. There continue to be social encounters that far exceed the standard (6 landings per site per day) established in the Tongass Land Management Plan (TLMP). The remoteness and solitude values are often exceeded as the sights and sounds of aircraft are very frequent in the primary flight paths. Conflicts between user groups are developing in spite of the informal zoning that has occurred. We are also noting changes in wildlife use patterns as a result of a new Fly/Cruise Tour that is being offered outside our jurisdiction (landing on saltwater). Most other special use permits are in compliance with standards and guides.

Elements needing continued emphasis:

- * Noise and visual impacts from motorized vessels on adjacent marine waters and air traffic increasingly affecting wilderness values outside Forest Service jurisdiction.
- * Displacement or harassment of wildlife due to motorized activities.
- * Development of private inholdings within wildernesses.
- * Flightseeing dock at the Head of Rudyerd Bay
- * Establishing Standards and Guidelines, Limits of Acceptable Change (LAC)

Wilderness Question 2: Are standards and guidelines for the management of wilderness effective in maintaining the wilderness resource?

The standards and guidelines presently established are not always entirely effective in the management of wilderness. Wilderness represents such an array of resources that each of them must be addressed separately in order to define and establish limits when necessary. Although some limits have been established conservatively in favor of wilderness, it is almost impossible to monitor and enforce those limitations. A public planning process by wilderness area, is necessary to address all the elements of wilderness management. Limits of Acceptable Change must be established addressing all issues,

quantifying those limits specifically. An enforcement plan must also be developed and implemented. An active inventory and monitoring program is critical for detecting change over time. (See attached TLMP Standards and Guidelines for wilderness management.)

The Wilderness Ecosystem Inventory Monitoring Program won the 1999 National Aldo Leopold Award for most outstanding and comprehensive wilderness inventory & monitoring program in the Nation. This program is by far the most comprehensive of its kind.

This monitoring program utilizes an ecosystem approach to monitoring Misty Fiords National Monument Wilderness. It was implemented in 1997 and continued in 1998 and 1999. This process systematically assesses the status of wilderness conditions from saltwater to alpine using traditional travel routes as transects through Value Comparison Units (VCU's) as the basis for reporting. Conclusions from the area surveyed indicate that back country physical impacts are still minimal and the opportunities are outstanding. However, Standards and Guidelines are absent for this indicator.

To maintain and improve this condition a strong education program is needed with continued monitoring to detect changes as early as possible. Social encounters, primarily flight-seeing and tour ship traffic, far exceed the Standards and Guidelines outlined in the Tongass Land Management Plan. (See TLMP Standards and Guidelines attachment.)

In the foreground, Standards and Guides have not been effective in preserving the wilderness character by maintaining a low level of social encounters along primary travel ways and areas adjacent to waterways at some locations. Air traffic and cruise ship visitation greatly impacts wildlife, visual remoteness and solitude.

Physical use and impacts are on the rise, every year brings new outfitter guide interest, additional kayakers, as well as expedition quality thrill seekers. For example: A German native attempted to traverse the whole of the MFMNW south to north. And though the southern portion of his attempt was weathered out, he did manage to complete the second portion of his journey from Wilson lake to Hyder, an impressive feat! An American couple traversed through the Portage Cove drainage and on out to Swan Lake and Carroll Inlet. These types of experiences are becoming more and more popular and are the kinds of experiences wilderness was intended to serve.

There are outside influences that are jeopardizing the health of a native sockeye run in Hugh Smith Lake. Attempts have been made to support this stock through raising fish fry to smolt in net pens on site. Little regard has been given to the consequences this action could have on the natural processes of this lake system.

Limited funding and staffing have prevented the development of a comprehensive management plan utilizing the LAC or NEPA planning processes. Planning would provide more direction and a means to measure more adequately the effectiveness of wilderness Standards and Guidelines.

Wild and Scenic River Question 1: Are Wild, Scenic, and Recreational River standards and guidelines being implemented?

The Chickamin River system was monitored this year. This system is vast and it was determined that an additional 20 days should be invested to start the 2000 season. There exist private inholdings at the mouth of the Chickamin River. There also exist an old mining trail/road that one time accessed Texas Creek at the headwaters of the Chickamin River. The river itself has been used historically and has the potential for more modern recreation opportunity in the form of jet boating, rafting, and kayaking. At present it is generally considered to be in pristine condition; however, detailed monitoring of this drainage has yet to confirm that assumption. Alaska Department of Fish and Game (ADF&G) also utilizes a temporary camp for the purpose of monitoring salmon runs. The river was traversed manually up the Leduc drainage and then on up to Leduc Lake. The remainder of the drainage remains largely unsurveyed and dictates the need to revisit this drainage in 2000.

Many opportunities exist for expanded recreation use. Ample camping sites, beautiful scenery, and a wild physical character continue to exist in this system. Additional issues affecting the wild character of this drainage could be identified as more is learned from future monitoring visits.

The Standards and Guidelines, like wilderness, are also in need of more specific issue driven limits. A solid inventory of existing conditions needs to be accomplished in order to accurately identify issues. At present and to the best of our knowledge the existing Standards and Guidelines are being implemented, yet outside influences (overflights) are having a detrimental effect on the social element of the resource.

Wild and Scenic River Question 2: Are Wild, Scenic, and Recreational River standards effective in maintaining or enhancing the free flowing conditions and outstandingly remarkable values at the classification level for which the river was found suitable for designation as part of the national Wild and Scenic River System?

The Chickamin system receives a moderate amount of flight-seeing traffic. As limits begin to be realized in the Rudyerd Bay drainage, alternative destinations will be sought and Walker Cove, the Chickamin Unuk Rivers would be prime locations for this dispersal of use. Existing use in this drainage is within the allowable Standards and Guidelines. Estimated minimum cost of monitoring Misty Fiords National Monument Wilderness \$60,000 annually. Specific Standards and Guidelines are absent for the Wild and Scenic River designation.

The wilderness monitoring crew traverses many of the drainages within each VCU due to route selection, surveying for recreational sites and encounters as well as wildlife. Recreational routes are described, and vegetation surveys are carried out at the individual sites to establish the groundwork for further monitoring. Further monitoring recommendations are given in increments of five to ten years based on the level of activity found at the time of inventory. Standards and Guidelines direct monitoring on a five year cycle for designated *and* proposed Wild and Scenic Rivers; hence the monitoring crew's protocol needs to be updated to meet this directive. Encounters are documented on a daily basis and noted with their corresponding ROS classification, and any visual surveys are

completed on an as-encountered basis. The quality of the river experience is written up in specialist reports as determined from condition surveys and social physical impacts observed.

VCU's 7930 and 7940

The Chickamin and Leduc Rivers are large glacial outwash streams that originate in glacial fields and flow through a tremendous valley with towering ridges surrounding. The river corridor has a wide floodplain vegetated with black cottonwood, Sitka alder and willow. The river system was recommended in TLMP for designation as a Wild River.

A good deal of mining occurred in the valley historically, and marten trapping occurred up the Leduc drainage. Downed logs obstructing the main channel have been cut for safe passage up the mainstem of the Chickamin as far as the wetlands and up the Leduc River beyond the entrance of the Leduc Lake drainage. Aside from the historical use observed during the inventory, the only other physical impact observed was a cabin located approximately two miles upriver from saltwater on the river-right bank. The cabin is not visible until you are right up on it, and the existing structure appears to be the framework for a canvas tent. A 50 gallon oil barrel, chimney pipe, and plastic are the only obtrusive remnants; however, the facility falls outside the wilderness parameter and should probably be dealt with.

Social impacts are moderate within the two VCU's, and do not *yet* deem any adjustments within the primitive ROS classification. Flight-seeing does occur within the Chickamin drainage and should be addressed with respect to regulating air traffic prior to an established pattern of heavy use. One to two planes a day is enough to alter the experience in a Wild and Scenic River system, as was observed on the ground. Two proposed helicopter landing sites fall within the river corridor along King Creek, and these palustrine meadows were inventoried for such use. Not only are the meadows unable to support any use without showing signs of disturbance, but such activity would diminish the value of the system as Wild and Scenic.

There are many other elements of wilderness monitoring that include an array of resources that have specific standards and guidelines identified in the Tongass Land Management Plan (TLMP). They include: Air Quality, Beach and Estuary Fringe, Facilities, Fish, Forest Health, Heritage Resources, Karst and Cave Resources, Lands, Minerals and Geology, Recreation and Tourism; Riparian; Scenery; Soil and Water; Subsistence; Threatened, Endangered and Sensitive Species, Trails, Transportation, Wetlands, Wildlife. I will briefly respond to each of these individually as they pertain to the Misty Fjords National Monument Wilderness.

FISH HABITAT

1) Are fish and riparian standards and guidelines being implemented? 2) Are fish and riparian standards and guidelines effective in maintaining or improving fish habitat?

The wilderness monitoring crew works toward completing Tier I surveys for the watersheds visited. In addition, we were verifying location (or existence) of streams on the present GIS layer as well as the process group and channel type given. In assessing channel conditions we look at channel width and incision, bed width, bankfull depth, gradient, substrate, and the presence of barriers. For MFNMW we are focusing upon finding out what exists at a basic level. With the time investment of fish biologists and hydrologists, perhaps these watersheds could be used as controls in evaluating and

monitoring the health of streams in timber units; not to mention the information that could be gleaned for studying the health of fish populations.

VCU 7760

We were unable to walk Grace Creek due to route selection and surveying the Grace Lake Trail. The sea level stand of timber (approximately 100 acres) has been clear-cut on the north side of the drainage via hand-logging that took place 1951-1955. Pinks were seen returning to spawning grounds over one mile up Grace Creek.

VCU 7770

None of the small drainages were traversed within this VCU. The stream entering just west of Snip Islands supports numerous black bear, with pink salmon observed in the estuary.

VCU 7780

We walked 3.5 miles of the Portage Creek drainage, observing Pink and Chum the length we traveled. Portage Creek experiences tidal influence almost two miles upstream with wide palustrine meadows lining the creek on either bank. Data was obtained on process groups and channel type for the 3.5 miles of Portage Creek as well as .5 miles of a tributary flowing southeast into the mainstem.

VCU 7790

Tier 1 surveys were completed for 2.5 miles of the stream draining from Lake 199'. Juveniles were trapped at the lake as well as seen throughout the upper reaches of the stream. A landslide has choked off the stream approximately one mile below the lake, forming a rock chute barrier.

VCU 7930

The 10.5 miles of the Chickamin River that fall within the VCU boundaries were surveyed for process group and channel type. The watershed is a large glacial outwash system, braiding around sand bars in the upper reaches and around islands in the lower reaches. A good number of logs and downed trees have been deposited in the upper sections of the channel. Pink salmon were seen returning to spawning grounds in the upper reaches as well as in the Choca and King Creek mouths. Juveniles were trapped throughout the system.

VCU 7940

Tier 1 surveys continue on the Chickamin River mainstem up to the confluence with the South Fork of the Chickamin River. A juvenile King was trapped as were a good number of Coho and a couple of other species. Pinks were again seen throughout the system.

The Leduc Lake drainage was surveyed to process group for the most part. Two reaches that were not on the current GIS layer were surveyed down to channel type. No juveniles were captured at either the lake or in the channel.

VCU 7980

We surveyed approximately six miles of Rudyerd River from saltwater on up the South Fork. A fairly recent (post 1950's) landslide has choked off the channel approximately 1.5 miles from saltwater creating a rock chute barrier and flooding a one-mile long section from valley wall to valley wall immediately above the slide. Juvenile fish were trapped below the rock barrier. Another barrier exists three miles from saltwater - fairly major, with a height of over 100' as the stream goes around the corner - where the channel enters a narrow gorge.

The inlet stream for Walker Lake was not on the GIS layer. The stream from the pass down to the lake was classified to process group only. No juveniles were caught.

VCU 7990

Walker Creek was surveyed to channel type in the lower reach, with a change in the GIS layer from a MM to an ES process group. We were only able to verify process groups for the remainder of Walker Creek due to route selection. No juveniles were captured.

HERITAGE RESOURCES

1) Are heritage resource standards and guidelines being implemented? 2) Are heritage resource standards and guidelines effective in protecting heritage resources as expected in the Forest Plan?

The wilderness monitoring crew works toward identifying, photographing, and mapping sites. District archaeologists are notified of anything found and the findings are written up in specialist reports for each VCU.

VCU 7990

The SEALASKA site located within Walker Cove receives little disturbance. There is sign of visitation, yet even that appears to be minimal and from years past.

VCU 7930

Historical Site #273 receives modern day recreational use as the cove at Hut Point provides a nice protected beach on the east side of Behm Canal. The point has a social trail system leading from "tent pad" to "tent pad," and the forest floor remains open. Remnant ceramic sherds can still be found in the intertidal zone.

A good deal of hand-logging occurred in the coves within VCU 7930. At Robinson Creek an old camp replete with rusty cans, broken glass, and a catch pool is connected to a clear-cut of about 150 acres in size.

SCENERY

1) Are the standards and guidelines effective in attaining the adopted visual quality objectives established in the Forest Plan?

The wilderness monitoring crew maintains a database documenting tour ships and pleasure craft on an as-encountered basis. The objective of such data collection is to record increases in use over time and to document the impacts on the quality of experience in Misty Fiords National Monument Wilderness.

As the Standards and Guidelines are directed at timber harvest (an issue for the VCU's bordering on the KRD boundary, 7540 as an example), the scope needs to change somewhat so as to address the scenic quality issues as seen in MFNMW. A large cruise ship in Rudyerd Bay (VCU's 8020 and 8030) is a major obstruction within that viewshed. The number of float planes overhead likewise alters the scenic attributes of the wilderness area, not to mention the auidial which receives no mention in the Monitoring and Evaluation Guidebook.

VCU's 7760, 7770, 7780, and 7790

These VCU's on the western side of the Behm Canal receive moderate float plane traffic overhead, altering the visual and auidial qualitics of the wilderness. This is an issue that needs to be considered, as no standard has been developed to even begin to define levels of acceptable change. Granted, all of this bases itself upon some form of regulation, yet another issue that has not yet been addressed.

VCU's 7930, 7940, and 7980

The VCU's located on the eastern side of the Behm Canal receive major flight-seeing traffic, hence serious social impacts to both the scenic and auidial attributes that should be protected within a wilderness area. MFNMW needs to establish a standard as of yet addressing both the regulation of air traffic and the level of acceptable disturbance within the Monument boundaries. These viewsheds capture the drone of the planes and helicopters long before and/or after the plane is in sight, creating surround sound for longer than desired.

Freshwater landings on Leduc (7940) and Walker (7980) Lakes are yet another assault on the scenic qualities of the viewshed. The Standards and Guidelines establish a maximum of three freshwater landing per day. On a rainy, overcast day in June, two planes were observed on Walker Lake, raising the question of how many might be landing on a high traffic day.

VCU 7990

Walker Cove likewise lies within the flight path of flight-seeing tours, disturbing the scenic and auidial attributes expected in a wilderness area. While Walker Cove does not see the cruise ship traffic that Rudyerd Bay does, the viewshed is very similar. Any mammoth ship makes the scene look like a Grade B Hollywood movie, i.e. unreal.

RESEARCH

1) Have identified high-priority information needs been fulfilled?

The wilderness monitoring crew carries out a number of generalist surveys to assist in establishing baseline data for MFNMW. Much of the data determines presence and absence in various habitat types for marbled murrelets and northern goshawks. The amphibian trapping looks for geographic distribution of frogs, targeted at the spotted frog specifically. Small mammal trapping looks at geographic distribution of species and is accomplished through collaboration with the University of Alaska. Other miscellaneous wildlife observations are recorded with the hope of identifying uncommon sitings or nests.

The wilderness monitoring crew would like to be able to work with others in coordinating research projects in the field. As of yet, potential projects have only been discussed; an actual list has yet to be established and advertising of projects has not occurred.

VCU's 7980 and 7990

A University of Alaska graduate student trapped small mammals in MFNM during the 1999 field season. The project was targeting red-backed voles (*Clethrionomys spp.*) to study the distribution of subspecies and where the range of two particular subspecies might overlap.

RECREATION AND TOURISM

1) Are areas of the Forest being managed in accordance with the prescribed ROS class in Forest-wide Standards & Guidelines?

The wilderness monitoring crew reconnoiters MFNMW systematically, prioritizing the terrain covered within each VCU according to current use or potential use. Shoreline along saltwater receives first priority, followed by lakes large enough to support float plane landings, sub-alpine ridge systems utilized by hunters, and finally any drainages that has the potential for recreation use from hunting /fishing to jet boating/kayaking/rafting.

Surveys look for existing and potential sites and route possibilities, as well as document and quantify encounters during the course of the day. When existing sites are located they are mapped and photographed. Plots are surveyed within both potential and existing sites to determine levels of disturbance and establish a basis for further monitoring. The encounters are broken down into 5 categories: float planes, cruise ships, motorized pleasure craft, non-motorized pleasure craft, and human encounters. Visual surveys are conducted on an as-encountered basis for both existing structures and cruise ships seen within the viewshed.

All data collected is entered into a database and included in the VCU specialist reports. Recommendations for completion of monitoring and rotations for future remonitoring are given based on what was found on the ground. Forest Service personnel are notified of any items that require special attention or fall outside the scope of the Standards and Guidelines and the ROS classifications. As already mentioned, the Standards and Guidelines do not adequately address the issue of air traffic and its related wildlife disturbance and disruption of the wilderness experience.

VCU 7980

VCU falls under the ROS primitive classification, and conditions fall within the specifications designated. EXCEPT for the a one to two mile stretch of Rudyerd River that falls under the flight path of the flight-seeing to cruise ship exchange that takes place at the head of Rudyerd Bay. Audial impacts within the river corridor are compounded by the granite walls, leading to extended periods of loud droning in surround sound.

Walker Lake is a flight-seeing destination, with landings on the lake and visitation to a tributary on the northern side of the lake. The Standards and Guidelines allow for three freshwater landings per day(under permit). On an overcast, rainy day in June two planes were observed landing on the lake proper, leading us to wonder what traffic might be like on a clear, high-traffic day.

Approximately five pounds of trash were hauled out by the crew; they were unable to remove the remaining ten plus pounds of debris left along the lakeshore.

VCU 7990

Walker Cove falls under the semi-primitive motorized ROS category due to the majority of the terrain covered in this VCU bordering on saltwater. Visual surveys should be adjusted slightly to

account for cruise ships and pleasure craft seen within the fjords. One single craft forms an obstacle (slightly or unsightly) within the viewshed. Conditions fall within the designated classification system.

VCU 7940

The Leduc River and the upper reaches of the Chickamin River fall within a primitive ROS classification. VCU 7940 receives flight-seeing traffic through the river corridors and into Leduc Lake, yet nothing like the Rudyerd Bay watershed. The use observed falls within the acceptable parameters outlined in the Standards and Guidelines, although Leduc Lake receives a good deal of air traffic. We have similar concerns for Leduc Lake as we do for Walker Lake, as how do you regulate for the maximum number of freshwater landings per day. The crew observed one freshwater landing and one low fly-by on a clear day.

VCU 7930

The half of VCU 7930 lying along saltwater falls within a semi-primitive motorized ROS classification, the remaining interior portions of the VCU receive a primitive ROS classification. The watershed and the coastal area conditions do not exceed the Standards and Guidelines; however, the plane traffic again infringes upon the "primitive" designation and the wilderness "experience."

VCU's 7790, 7780, 7770, and 7760

The portions of these VCU's lying along saltwater fall within a semi-primitive ROS classification while the interior sections fall under primitive. Those areas adjacent to saltwater do not preserve the characteristic wilderness values, although it could be argued that the ROS classification is suitable for these areas. A primitive classification applies to the interior of these VCU's. Float plane traffic infringes, however, on a true primitive environment. At times the drone leads those on the ground to believe that they are in a motorized primitive ROS.

KARST and CAVES

1) Are karst and cave Standards and Guidelines being implemented? 2) Are karst and cave Standards and guidelines effective in protecting the integrity of significant caves and the karst resource?

The wilderness monitoring crew notes geological features of interest on an as-encountered basis, pin-pointing the location on the map, describing, and photographing the site. Interested officials are notified and the site is reported in the specialist report.

MINERALS and GEOLOGY

1) Are the effects of mining activities on surface resources consistent with Forest Plan expectations, as allowed in approved Plans of Operations?

The wilderness monitoring crew notes anything of interest as they survey the VCU's. Historical mines need to be gleaned from the archaeological catalogs prior to inventorying in the field so as to be able to locate and survey the area. The Quartz Hill molybdenum mine may be of particular interest in the future.

SOIL and WATER

1) Are the standards and guidelines for soil disturbance being implemented? 2) Are Standards and Guidelines effective in meeting Region-10 Soil Quality Standards?

The wilderness monitoring crew locates landslides along the routes of travel within each VCU, giving GPS locations and pin-pointing the site on the topographic map. A general description of the slide is noted in the specialist report in an attempt to characterize the size, slope, and aspect if at all possible. However, many of these slides are seen from a distance and the feasibility of accessing these locations is not possible in most cases.

WILDLIFE

1) Are population trends for Management Indicator Species and their relationship to habitat changes consistent with expectations? 2) Are the population levels and associated distribution of mammalian endemic species on islands and portions of the mainland consistent with the estimates in the Forest Plan?

Misty Fjords National Monument Wilderness maintains a preserve of unique habitat types within Southeast Alaska. Very little physical habitat change occurs outside of natural disturbances; however, physical use and resulting impacts of all kinds are on the rise; the social impacts caused by the tourism industry do alter the environment and both should be closely monitored. As an example, incidental observations last year led field personnel to question whether the lack of brown bear sightings in the Rudyerd River and Nooya estuaries was due to the increased air traffic within the area. Tour ships affect marine wildlife with the wakes thrown. Flight-seeing tours affect big game in sub-alpine areas as the aircraft flies by repeatedly for viewing and photo opportunity.

The monitoring crew collects data on mammal and avian species observed, recording the location of sightings or nests/dens on topographical maps and in the specialist report. Surveys aimed primarily at detecting presence or absence and distribution of species are carried out for a few of the Management Indicator Species.

Amphibian surveys target the spotted frog (any frogs) so as to determine whether or not the range of the species; thus far the crews have not located any species other than the rough skinned newt. Spotted frogs have been located up the Unuk River.

Northern goshawk surveys are carried out to determine the presence of any individuals; once observed, locating possible nests becomes the next priority. The wilderness monitoring crew has not yet located any goshawks, although individual sightings have occurred on the Wilson/Blossom River and Grant River. Marbled murrelet dawn counts are completed with the objective of determining presence, and yes, the species is abundant. Bald eagle nests are located, given a GPS reading, and characterized as active or inactive with a brief description of the nest condition.

Small mammal trapping looks at the distribution of species, and is achieved through collaboration with the University of Alaska Museum. In addition to looking at the distribution of small mammals, the university is interested in the endemic species of red-backed vole and the overlap of subspecies.



Conditions are constantly changing, as shown by Rudyerd River at high water. Any back-country travel must take into account the different dynamics encountered and be prepared for such changes.



Sea kayaks are a primary mode of transportation. Here, the crew takes advantage of the tidal influence to ascend Portage Creek.

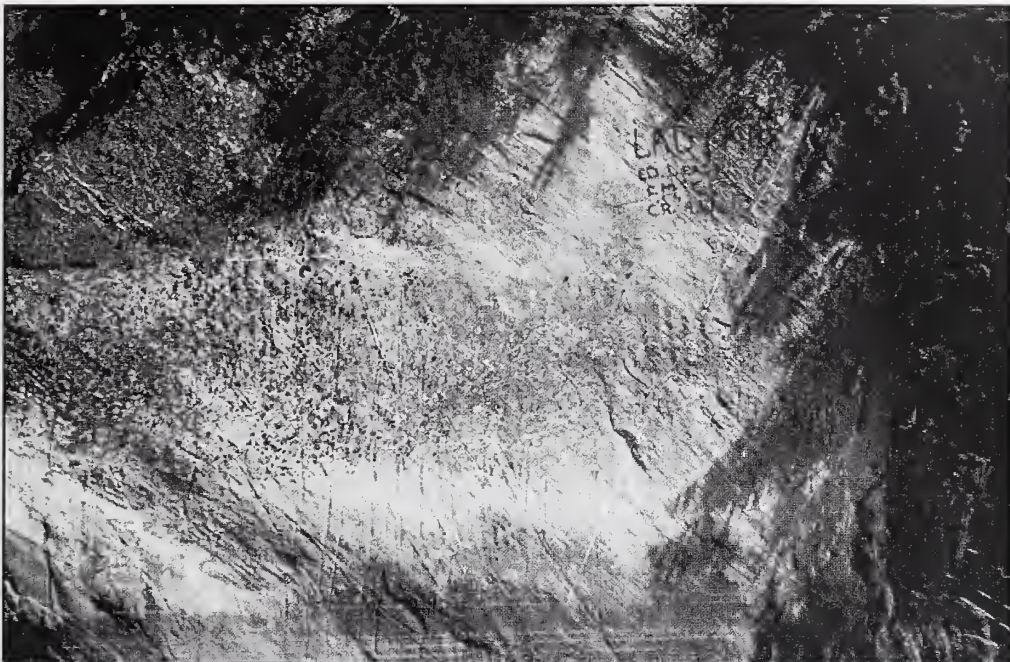


The route up Rudyerd River lies in the valley bottom, with serious bush-whacking through salmonberry and devil's club in addition to alder and willow-filled slide zones. You have to love recent snow melt leaving an open skunk cabbage patch in the flood plain.



Muskeg system leading to Lake 199'

Transect routes cover all types of terrain and the load varies accordingly. The system leading up to Lake 199' required an extra 40 pound inflatable kayak (inside pack) in addition to the usual load.



Graffiti Rock (7930 Nef Chick) dates as early as 1942 to the present day “screw the USFS” in green.



Culturally modified tree located in VCU 7930. The burnt out bowl is one example of archeological and cultural sites the wilderness crew records.



This spotted Sandpiper nest was found in a proposed helicopter landing site.



The mink den is one example of wildlife observations noted during the course of the season.



Amphibian traps in VCU 7780

Minnow traps are set for amphibians in pools, targeting spotted frogs specifically. (note the rock dam at the base of the pool)



Spectacular views abound in Misty Fjords National Monument Wilderness. The beaver pond provides a stop over for the Harlequin duck as well as a beautiful reflection.



Caches are frequently encountered along lake shores. This cache is located at Walker Lake and provides strong evidence of recreational activities.



The cache included: canoe, skiff, outboard, fuel cans, tarps, and other junk. The issue of caches has yet to be addressed in Alaska.



Float plane traffic remains an issue to be dealt with due to the increase in visitation. Here a flight-seeing plane takes off from Walker Lake.



Walker Cover provides breath-taking views exemplary of Misty Fjords.



Minimum impact camping is an important aspect of the “Leave No Trace” ethic adopted by the wilderness monitoring crew.

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