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A STUDY OF BACKCOUNTRY USER ATTITUDES AND
COMPLIANCE WITH MINIMUM IMPACT PROCEDURES
AT MOUNT RAINIER NATIONAL PARK

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I. INTRODUCTION

Progress on the MORA Backcountry User Attitudes and Compliance with Minimum Impact Procedures Study during the data collection phase has been satisfactory. The researchers are now involved in final questionnaire mailings and data coding. The following is a series of status reports on the different components of this study.

II. STATUS REPORTS

A. Paradise Day Hiker Study

1. Paradise Meadows Sign Experiment. The weather was a significant adverse factor in the sign experiment data collection. At the beginning of the summer season, the snow melt-out developed at an unusually rapid rate. As a result, all efforts were concentrated on the signs relating to visitor behavior on snow. The data collected were limited but believed to be of satisfactory quality. Coding and analysis of that data is currently in process.

Following the snow sign experiment, the sites to locate the signs relating to behavior on social trails and in rehabilitation areas were identified. Selecting the archetypical site proved more difficult than anticipated. The sites selected were identified by several criteria. First, clear evidence of a social trail and a rehabilitation effort was necessary. Second, signs of continuing depreciative behavior (tracks, vegetative damage, etc.) were necessary to indicate an ongoing problematic situation. A third consideration was that the sites be located at a moderately low elevation in the meadow area so that the user population would be reasonably representative of the universe of

the Paradise Meadow day hikers. A high elevation would bias the observations toward more hardy, fit day hikers. Finally, an effort was made to select sites that were neither already successfully rehabilitated (as in the lower meadow) nor representative of extreme degradation (as is common in the upper meadow, particularly along older horse trails). With the aid of the Park Service personnel involved on site, two locations along Dead Horse Creek Trail were selected.

As originally proposed in consultation with the MORA Interpretive staff, sign texts not related to behavior on snow were to address the issues of depreciative behavior on social trails, rehabilitation sites, and flower picking. Field observations indicated the latter circumstance occurred so infrequently as to render the value of observations near a specific experimental sign to be of little utility. Therefore, the experimental sign texts and locations were related only to rehabilitation sites and social trails. Both situations are currently subjected to the same sign application for visitor management purposes. The control was no sign application on a given site. Experimental treatments were sign texts based on a visual, the NPS standard sign text, and a negative-authoritarian message.

Once in the field, observations and visitor contacts proceeded reasonably well. Data on noncompliance with the sign texts was not rapidly accumulated since there was a low rate of depreciative behavior, even though the sites selected had been subjected to obvious abuse. By the time the observation procedures were proceeding smoothly in August, the weather began to affect visitor use. Several potential observation days were rained out; many other days were marginal due to

unusually low use levels and more conservative subject behavior because of foggy conditions.

A reorganization of effort occurred in August to concentrate project resources on the sign experiment to guarantee data when use levels were higher. An additional employee was hired at the end of the season to maximize observation time. The data collected are of satisfactory quality, but the number of observations are more limited than what might have been expected from the most optimistic positions.

The difficulties and risks of attempting to gather baseline information, develop and pretest observation and experimental procedures and initiate an initial experimental design in one short season was recognized by the project investigator. In the CPSU/MORA meetings in February and March it was decided to proceed as quickly as possible through the initial phases of pretesting and planning, and to maximize time of the actual experiment. While there is no reason to doubt that the decision to accelerate the research procedure was wise, it is important to realize that the results from the sign experiment likely should be viewed as preliminary and tentative.

On those days when two observers were present in the field to work on the sign experiment, site sheets were administered to the users passing the sign locations. These subjects were identified as either complying or not complying with the sign texts, and questionnaires were subsequently mailed to these subjects. A total of 381 site sheets were collected in the field. A preliminary estimate of the response rate indicates an anticipated response rate for the sign experiment questionnaire respondents at approximately 70 percent.

Code books are being prepared for the questionnaires, site sheets, and observation sheets. Coding and entry of the data in a computer file will proceed promptly. Data analysis will be according to the priority established in consultation with the MORA staff.

2. Paradise Meadows Visitor Survey. The administration of the day hikers site sheet in the Paradise Meadow area was executed satisfactorily. The visitors were receptive, and many showed a genuine interest in the study. Refusals to participate were rare.

The CPSU staff is currently completing the mailing of the questionnaires. A total of 949 respondents were contacted. A preliminary examination of the response rate indicates the expected response rate for the Paradise Meadow Visitors Survey should range from 65 to 70 percent. All of the subjects have been contacted and approximately 32 percent have yet to receive a second reminder letter and questionnaire as of the date of this report.

Code books are being prepared; coding and computer entry of the data will begin shortly. This data will be valuable in the sign experiment analysis and in ascertaining the collective exposure of Paradise day-hikers to various NPS information systems. Analysis will proceed according to a priority schedule developed in consultation with the MORA staff.

B. Indian Henry's Meadow Visitors Survey. Visitors to the Indian Henry's Meadow area were contacted on-site as part of an evaluation of the Experimental Minimum Impact (EMI) tent platform. Using the names and addresses provided on the on-site form, a total of 181 individuals were mailed a questionnaire. Final response rate is estimated to be in the 70 to 80 percent range.

The coding and data entry for this survey will begin late this fall. The data will be ready for analysis the first part of 1986.

C. Camp Muir Climbers Survey

The visitor contact procedure and site sheet administration at Camp Muir was successfully executed. The climbing public was receptive, and the interviewer was often asked to explain more about the research project. Problems were minimal, although the early snow melt and dry season altered the traditional climbing route and may have reduced the total use.

A potential problem identified in the first weeks of the sampling procedure was that the guide service clients might be over-represented in the sample due to the impossibility of contacting every private party. However, this can be examined by comparing the sample with the season's registration totals, and weighting statistically.

Apparently the guide service had not been notified the study would take place. After a conference between Tommy Swearingen of the CPSU and Jerry Lynch, one of the owners of RMI, the guides were no longer reticent to cooperate, and interviews proceeded smoothly.

A total of 660 site sheets were collected in the field. The projected response rate for the Camp Muir questionnaire respondents should range from 70 to 80 percent.

Code books have been prepared for the Camp Muir questionnaire and site sheet. A final report from the MORA staff on the season's climbers will be forthcoming shortly, which will be necessary in the data analysis. Coding, data entry, and analysis will proceed according to the schedule worked out following input from the MORA staff.

III. Concluding Remarks

Overall, the fieldwork proceeded satisfactorily. Problems that arose were within the context of the investigators' expectations and were handled within the resource constraints of the project. The coding of the questionnaires has begun; analysis of the data should be possible by January 1986. The Project Leader will contact Pete Thompson for priority in the analyses and release of information.

Project Schedule

Coding and Data Processing	October to January
Data Analysis	January to April
Release of Final Report	April 30, 1986