

Surveying Impacts in a Fragile Environment:

A Study of RMC's Winter Visitors

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The alpine zone is home to a delicate ecosystem that has to endure impacts from two primary factors – weather and humans. A lot of research has been conducted on these two factors. However, it has been done largely during the summer season.

With this knowledge, I approached the Randolph Mountain Club and the White Mountain National Forest and asked if they would be interested in having me conduct a winter impact assessment of the Northern Presidential Range. The partnership was mutually beneficial as it provided an avenue for me to improve my environmental research and winter alpine skills, while helping the RMC and the WMNF determine what types of individuals were visiting the alpine zone, the extent of their knowledge, and the degree of their impact. And so, more than a dozen times the winter of 2002-2003, I made the trek from my home in New Bedford, MA, up Lowe's Path to Gray Knob and the Northern Presidentials, to work on this thesis topic.

As part of the study, I conducted a survey at Gray Knob, to determine a profile of those who are venturing above treeline, their winter experience, and their knowledge of alpine recommendations and regulations. The winter use survey contained 16 questions, which were developed jointly with RMC and WMNF. The questions were broken into four sections – user profile, use of the alpine zone, usage of cellular phones and walkie-talkies, and knowledge of the White Mountains National Forest hiking/camping regulations. The survey took place at Gray Knob and Crag Camp from the first week of December 2002 to the last week of March 2003. During that period, there were a total of 651 overnight guests at Gray Knob and Crag Camp. Approximately 10% of guests participated in the survey.

Results of the study indicate that impact to alpine areas does occur during the winter months. I recorded damaged krummholz, due to several winter-only hiking routes, as well as human solid waste next to Madison Hut. What's the reason for these winter impacts? Observed reasons include poor cairn availability or location, hikers' desire to head directly to vista locations and summits, and travel in straight lines, rather than following the established, summer route as it arches from one cairn to the next. The human waste around Madison Hut simply reflected either a

lack of knowledge about proper backcountry protocol, or, more likely, simple laziness in the face of the environmental adversity of winter camping in the Presidentials.

Other key findings include:

*73% of the visitors were male, 27% female.

*The youngest visitor was 18, the oldest was 55.

*About 70 percent of people venturing above treeline have little or no experience in the alpine zone.

*The states or provinces most represented were Massachusetts (22%), New Hampshire (20%), Maine (17%) and Quebec (10%).

*55% belonged to an outdoors organization. The most popular groups were AMC (53% of those who belonged to a group), RMC (39%), GMC (21%) and ATC (14%).

* 71% of the guests were out for two or three nights. The most popular locations to tent were near Madison Hut, Sphinx Col and near Lakes of the Clouds hut. This indicates the popularity of the winter Presidential traverse, a litmus test for the winter hiker. The most used trails were Lowe's Path (97% of all respondents), Gray Knob Trail to Edmands Col (36%), Gulfside Trail (33%) and Spur Trail (28%).

*47% of hikers carried a cell phone or walkie-talkie. 90% of those respondents said the primary purpose of having such a device was in case of emergency. There was about one call made for every two cell phones. Interestingly, the vast majority of calls were deemed to be "emergency" in nature. With very few rescues per winter season in the northern Presidentials over the past few decades, and with cell phone use rising only in the last several years, it's difficult to believe that there has been a sudden increase in true emergencies. It's possible that users were relying on the phone instead of being more self-reliant, or were answering the survey in the way they thought was most socially acceptable, perceiving a sentiment against cell use in the backcountry.

*48% had been above treeline in winter on five or fewer occasions. 10% said they had been above treeline in winter 30 or more time.

*58% knew that two feet of snow is the current minimum depth required for camping above treeline in the winter. 100% knew that they were not to camp on a frozen body of water, such as Star Lake or Lakes of the Clouds.

The final report has been submitted to the RMC and the White Mountains National Forest. By providing some basic information on the level of knowledge of our winter visitors to the alpine zone, and by analyzing winter trail use and impact above treeline, I hope the information provided will help protect these fragile areas. A simple crampon step, ice axe point or metal ski edge can destroy alpine flora, so every possible effort taken to lessen the impact will help maintain the area for its own sake and for future enjoyment.