



ALDO LEOPOLD WILDERNESS RESEARCH INSTITUTE

<http://leopold.wilderness.net/>

FACTORS THAT LIMIT COMPLIANCE WITH LOW-IMPACT RECOMMENDATIONS



Keywords: low-impact recreation, low-impact behavior, noncompliance, recreation

Background & Management Issues:

Faced with increased levels of use and the need to minimize human impacts, wilderness managers have increasingly emphasized low-impact backcountry techniques as an alternative to limiting access to popular destinations. Educational efforts have been instrumental in changing wilderness users' practices, and low-impact techniques such as Leave No Trace (LNT) are now well known among wilderness users. Despite these successes, minimizing recreational impacts remains a major challenge for wilderness managers. To encourage compliance, managers must first identify why users are not practicing low-impact techniques.

Project Objective:

- ❖ To provide a framework for understanding the social and psychological factors affecting recreationists' noncompliance with low-impact techniques.

Project Description: Based on previous research, the authors speculated that a lack of knowledge about low-impact behavior is not the only factor leading to noncompliance. Drawing on psychological theory, they outlined four interconnected stages in the process of considering whether to practice low-impact techniques: interpretation of the situation,

information retrieval, judgment formation, and expressions of behavior.

Results:

Stage 1: Interpretation of the Situation

In any particular situation, recreationists interpret what they see and assess the need for low-impact behavior. In choosing a campsite, for example, campers might first try to determine the amount of use a site receives or the presence of fragile vegetation. Correctly evaluating a situation can be difficult, even for experienced backcountry users.

Stage 2: Information Retrieval Strategies

If a user determines the need for low-impact behavior, the user must then retrieve information about that behavior from memory. The most frequent memories are the most available, and relevant knowledge is not always completely and accurately retrievable from memory. Even a user who correctly identifies the need for a behavior may not remember the correct technique to minimize impacts.

Stage 3: Judgment Formation

After the need for a low-impact technique is identified, and the user is knowledgeable about low-impact behavior, the user may still choose to behave in a manner that is inconsistent with low-impact techniques. An individual's ethics play a particularly large role in affecting judgment. For instance, in choosing a campsite, a user with an "ethic of justice" might feel that all visitors should have an equal right to use a campsite, regardless of amount of use. An "ethic of care" would lead an individual to consider the relative merits of each campsite. The "ethic of equal treatment" would lead a user to camp in a previously used, but still relatively pristine campsite, which is often not the best choice from a low-impact standpoint.



Stage 4: Expressions of Behavior

Social pressure and identity influence how individuals' perceptions, knowledge, and judgment are expressed through

ALDO LEOPOLD WILDERNESS RESEARCH INSTITUTE

behavior. Social pressure may encourage or discourage users to practice low-impact techniques. Practicing low-impact techniques

may be inspired by either a genuine desire to protect the resource, or by the pressure to do what is expected by one's peers.

Management Implications:

- ❖ Understanding why some users don't practice low-impact techniques will improve efforts to change visitor behavior.
- ❖ The assumption that non-complying users simply don't know about low-impact techniques is not always correct. A wide range of factors influence noncompliance with low-impact techniques.
- ❖ Persuasive strategies to change behavior will be more effective if those strategies are developed in response to the specific factors that limit compliance. For example, if correct interpretation of the situation seems to be problematic, managers could emphasize educational efforts focusing on correctly reading the environment.
- ❖ Minimizing ambiguity in communicating low-impact recommendations increases the chance that users will feel social pressure to comply with low-impact techniques.

Publications / Products:

- ❖ Borrie, William T., and Harding, James A. 2002. Effective recreation visitor communication strategies: Rock climbers in the Bitterroot Valley, Montana. Research Note RMRS-RN-15. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 11 p. **Leopold Publication Number 503.**
- ❖ Borrie, William T.; Harding, James T. 2001. Basic Knowledge of Factors that Limit the Practice of Low-impact Behaviors. Draft report on file at: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Aldo Leopold Wilderness Research Institute, Missoula, MT. 183 p. **Leopold Unpublished Report Number 100.**
- ❖ Harding, James A.; Borrie, William T.; and Cole, David N. 2000. Factors that limit compliance with low-impact recommendations. *In*: Cole, David N.; McCool, Stephen F.; Borrie, William T.; O'Loughlin, Jennifer, comps. Wilderness science in a time of change conference Volume 4: Wilderness visitors, experiences, and visitor management; 1999 May 23-27; Missoula, MT. Proceedings RMRS-P-15 VOL-4. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station: 198-202. **Leopold Publication Number 392.**

For additional information...

David Cole, Leopold Institute Investigator
phone: 406-542-4196
email: dcole@fs.fed.us

James Harding, Union College
phone: 606-546-1710
email: jharding@unionky.edu

Bill Borrie, University of Montana
School of Forestry
phone: 406-243-4286
email: borrie@forestry.umt.edu

