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MANDATORY WILDERNESS PERMITS: A NECESSARY MANAGEMENT TOOL

Two important and controversial topics in wilderness management concern the need for better control over users and for rationing of use to protect the wilderness environment from excessive impact. Implementing management programs to deal with these two issues, depends to a large degree on the feasibility of requiring permits for all wilderness visitors. In this article we explore some costs and benefits of mandatory permits, basing our judgement on relevant research findings, experience with wilderness registration and permit systems, and an assessment of the need for such control.

Voluntary self-registration systems have been used for several years on many Wilderness, Primitive Areas, and National Park trails. But only recently have mandatory permits for entering wildernesses been used: by the Forest Service since 1966 in the Boundary Waters Canoe Area (Minnesota), since 1971 in California, and, starting in 1972, in Washington and Oregon. The National Park Service is also gaining experience with permits. For example, Rocky Mountain National Park has required permits for overnight backcountry use since 1968; Yellowstone, since 1971. The need for greater control over visitation to protect wilderness from the impact of use is increasingly apparent, particularly in the more heavily used areas (*2, 1, 8*).

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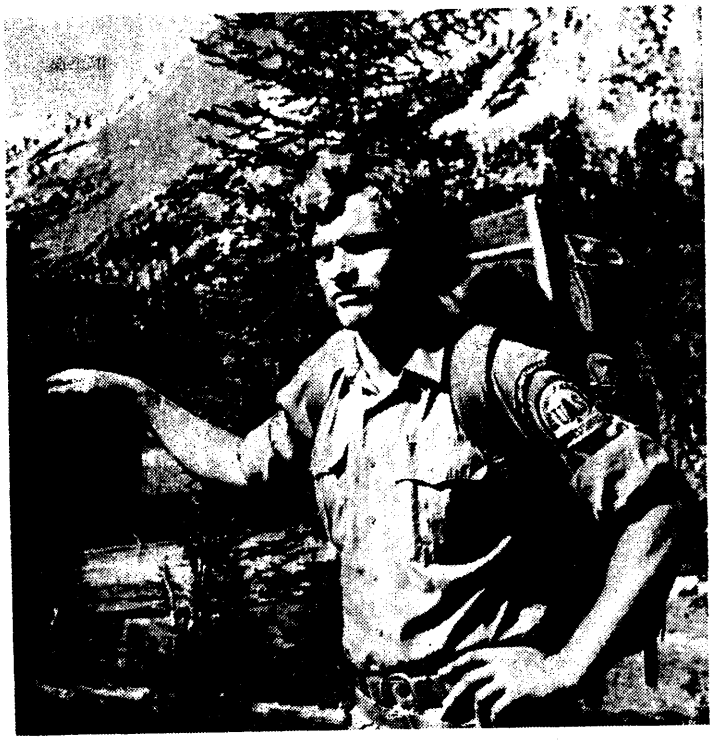
Self-Registration Systems in Wilderness

Self-registration is the main alternative to a permit system; thus, our evaluation requires a look at each system.

Forest Service research has tested the effectiveness of self-registration stations on wilderness trails as a base for use estimates (*11, 12, 7*). In general, from 65 to 75 percent of all visitors register. Those not registering are mainly horsemen, hunters, lone visitors, and people making short visits. In the most recent study (*7*), estimates of total use based on the registration data were fairly accurate, with about 6-percent standard errors, but estimates of types of use and characteristics of users were less accurate and required intensive field work to develop estimating formulas.

The Forest Service has established (RIM Handbook 2309.11, section 124.71b–2) an accuracy standard of plus or minus 25 percent at the 67-percent confidence level for recreation use estimates. Although the self-registration systems employed on the national forests provide the best data available on wilderness visitation, many of the estimates of use do not meet even these very lenient standards.

Because self-registration systems undersample and thus underestimate such users as horsemen and hunters, they require continuing study to keep the nonregistration adjustment factor in line with variation over time and between different kinds of areas. Furthermore, self-registration is most effective for hikers, who usually have less impact on the physical resource and on the satisfaction of other visitors (*9*). It is least effective with horsemen and hunters who usually have more impact. Finally, self-registration stations have sometimes been neglected by managers who are too busy to collect, tabulate, and otherwise administer the system. Such laxity is perhaps related to the rough estimates of



use that self-registration provides, but it severely damages the credibility of the system.

We don't mean to be harshly critical; many extenuating circumstances could be cited in defense of the hard-working managers. However, we do wish to stress the inadequacy of most current wilderness use estimates. We also reject any claim that most managers already have a "good feel for use" on the areas they work with—since intensive study of use on particular areas usually turns up major errors.

Mandatory Wilderness Permits

A mandatory permit system would require each visitor to register his identity and secure a permit from the managing agency before entering a wilderness. Permits could be issued by mail or secured from a central location such as a forest supervisor's office, a ranger station, or a visitor information center.

Ideally, the permit would set forth the requirements and conditions under which the visitor's presence is authorized in the wilderness—such as maximum party size, camping only some specified distance from lakes or streams. It would list prohibitions of some actions—such as use of motorized vehicles, burying garbage, using soap or detergent in lakes or streams, and camping, using horses, or cutting firewood in special critical zones. The permit would also require information about the group and its visit that is essential for effective management, for example, party size, route, destination, estimated length of stay, method of travel, and perhaps planned activities.

Legal authority is available for mandatory permit systems under federal regulations granting powers to resource managing agencies for actions necessary to protect the resources under their administration (36 CFR 251.72).

Costs and Benefits for Users

Several benefits would accrue to users from a mandatory wilderness permit system.

Safety—There would be safety benefits in that everyone would record his departure, destination, and estimated arrival time—valuable information for emergencies.

Regulations—Permits would provide users with accurate, official information as to behavior and practices that are required or expected of them. Not only would well-meaning users know how to behave in the wilderness so as to reduce their impact; but they also could rest assured that other users have been similarly informed, thus helping protect them from intrusions on their experience by uninformed visitors.

Information—The required visit to an agency office would give visitors a good opportunity to ask questions, obtain maps, and otherwise improve their trip with better information. If permits were also issued by mail, some of this information benefit might be lost, but not necessarily all of it.

Wilderness quality—Visitors would obtain other benefits if a mandatory permit system enabled managers to improve conditions in the wilderness by shifting or reducing use, or by improving visitor behavior. Visitors seeking solitude could get much better advice from managers as to when and where to visit. It could even be possible to tell visitors whether someone else was planning to camp at a certain spot during the same time, thus enabling them to adjust plans if they wished.[1]

Although the forgoing benefits would be realized, visitors would also incur some costs.

User costs and inconvenience—Some visitors would have to go out of their way to get a permit. Some plans might have to be changed; if a very early morning start were planned, someone would need to get the permit ahead of time or the departure would have to be delayed.

If the system were used to ration visits, some people would not be able to get permits, at least for their first choice of time and place. This would be the price paid for higher-quality experiences by all those receiving permits and by all subsequent users who would enjoy a less impacted wilderness. The feeling of regimentation and surveillance could also be a cost reflected by loss of satisfaction. We don't want to minimize this possibility but are of the opinion that benefits would more than offset such costs.

Costs and Benefits for Managers

Regulation of use—Perhaps the most compelling argument for mandatory wilderness permits is that such a system is a necessary tool for efforts to ration or modify use and control overuse. Overuse in certain spots now characterizes many wildernesses, with general overuse becoming more of a problem in several of them. If past management experience with required registration and charges for use of developed campgrounds is indicative, then the full implementation of a mandatory permit system will take several years. Thus it is important to start now to perfect procedures and win public acceptance before it is too late to save

[1]The major national parks in the Northern Rocky Mountains started using a similar system in 1972, with a clearinghouse to keep track of use of backcountry camping areas in order to direct visitors away from full campsites.

critically overused locations.

Wilderness is different from other outdoor recreation locations where alternatives to regulate impact through protective development are possible. The Wilderness Act's restrictions on structures and developments, and the emphasis on unmodified nature and solitude, dictate that management consists mainly of managing use, a very difficult task without means to regulate use or contact all users.

Implementing a mandatory registration system in wilderness does not imply immediate regulation of use. In many areas, controls will probably not be needed for many years. In other areas, only specific locations may require rationing of use and then perhaps only during times of heavy use such as holidays or weekends. Possible approaches to using a permit system to ration use include fees, reservations, lotteries, required demonstration of knowledge and skill, and so on. The particular combination of approaches used would depend on many factors and a discussion of this issue is beyond the scope of this paper. In any case, use of the system as a regulation device would not be necessary unless other rationing techniques and persuasive information dispatched with the permit failed to control problems.

A permit system's adaptability to varying conditions is one of its outstanding features. Data from mandatory permits will help show when and where regulation of use is or is not needed. We believe that rationing of use should generally wait until managers have more information. Examples of such information are an inventory of existing and potential campsites, knowledge of campsite use during periods of heavy visitation, estimates of the physical condition and potential of sites to withstand use, and judgments of the carrying capacity of locations to sustain experiences of desired quality. Research is providing better understanding of factors related to these wilderness capacity issues (*5, 6, 8, 9, 10*). Mandatory permit systems will provide additional specific information for particular locations and the means to control overuse where and when it is necessary.

Information for planning and research—Mandatory permits would provide needed planning information about campsites and trail systems, maintenance, clean-up, visitor contact, and information efforts, based on descriptions of amount and type of use, its location and timing, planned activities, etc. Such information reflects harvest of the wilderness resource just as log scaling receipts reflect harvest of the timber resource. In addition to such basic information, permits would make possible sampling visitors by mail to get detailed information about their experience.

Wilderness research would be strengthened in a number of ways. A mandatory permit system would provide accurate use data to relate to physical and esthetic impacts, for example, vegetation, water, wildlife, visitor satisfaction and benefits. Research on use distribution would be facilitated which could aid management efforts to alter use patterns.

Public contact—An outstanding advantage of mandatory permits would be much more efficient contact with users to communicate not only rules, regulations, and desirable behavior but information to enhance the user's experience. It is all too easy and unfair to describe public contacts for control purposes as a coercive and heavy-handed tactic. On the contrary, such contact can be an opportunity to point users to higher-quality experiences by directing them from congested areas to locations better suited to their goals as well as insuring visitor safety. One of the often cited benefits of fire permits on national forests was that, if nothing else, they provided a mandatory public contact that was valuable far beyond the original fire prevention objectives. Mandatory wilderness permits would also provide systematic public contacts consistent with the growing desire of land management agencies for greater public involvement. And, perhaps most important of all, the necessity for rationing or stricter controls will be delayed and reduced to the extent that such contacts reduce use impacts by improving user behavior.

Enforcement—Mandatory permits would provide agencies with greater control over violation of regulations and irresponsible and damaging activity. Citing, documenting, witnessing, and other procedures necessary for prosecution of violations are difficult in wilderness. Mandatory permits would help correct this situation by identifying users and certifying their official knowledge about regulations. Required permits not only would make prosecution of violations easier, but should result in more responsible behavior because of the user's loss of anonymity.

Professional image—If it is mandatory, managers as well as users would be required to take the permit system seriously. Disregard or careless monitoring of self-registration stations by administrators makes a poor impression on perceptive users, who are quick to criticize lack of interest by resource managers. An efficiently operated mandatory permit system could do much to build an image of professional concern for wilderness.

Costs—A mandatory permit system will entail additional costs, particularly if it were to ration use. More employees may be needed on weekends or hours outside the usual workday to issue permits. Training will be necessary to achieve potential benefits of the public contact. Informing the public about the new requirement will mean a good deal of work. But self-registration as an alternative for gathering reliable information on use is not cheap to administer properly, and in some instances could be even more costly than a permit system. Self-registration, of course, cannot be used to ration use.

User Reaction to Permits

Many studies indicate that most wilderness users favor, or at least do not object to, the concept of mandatory permits, registration, or related controls.

For example, a recent study in the Spanish Peaks Wilderness in Montana, an area characterized by a use-ratio of three hikers to one horseman, found 66 percent of the respondents agreeing that mandatory registration of visitors to wilderness is desirable.[2] About 20 percent of all respondents were neutral, and only 14 percent opposed mandatory registration. Fall visitors (mainly hunters), despite typically low self-registration

[2]Unpublished data in files of Robert C. Lucas, USDA Forest Serv., Intermountain Forest & Range Exp. Sta., Missoula, Mont.

rates, favored mandatory registration more than summer visitors.

Furthermore, this study and others (*3, 9*) show substantial visitor acceptance of the need for more control over wilderness use.

Fear of massive public resistance to wilderness permits seems unwarranted. Some visitors will not comply, just as some people drive or hunt without licenses. Undoubtedly, some persons will be offended by mandatory permits, and a few objections may be heard. Recent experience with mandatory registration in California, however, revealed surprisingly little objection and unanticipated support and understanding.[3] The existence of some uncooperative visitors does not seem to justify penalizing other visitors by forsaking the advantages a mandatory permit system would have for them.

In California, up to 90-percent compliance with the registration requirement was found in some areas, although less in others, even though there were no penalties for noncompliance the first year. This is an admirable achievement in the first year of a new and controversial program. Compliance increased the second year as awareness of the permit system grew and enforcement tightened. This was also the case in the Boundary Waters Canoe Area, where compliance with the permit system is nearly 90 percent after five years.[4] Many California wilderness visitors indicated that, despite some objection to such control, they recognized the necessity and desirability of the policy. California wilderness managers report this public attitude also seemed to become stronger in the second year of the permit system. This experience seems to verify previous research findings: whereas managers tend to view users as resisting controls, users are actually willing to comply with reasonable restrictions when they understand them (*4*).

A mandatory wilderness permit seems to follow the precedent of licenses or permits required to use other natural resources such as fish, game, timber, or forage, and this parallel could contribute to public acceptance. Fishing licenses are normally required and, although usually unlimited in number, they carefully specify conditions under which the resource may be harvested. Hunting licenses are more restrictive and often combined with limited numbers of permits to further restrict use and safeguard scarce game resources and quality hunting opportunities.

Conclusion

A mandatory wilderness permit system would provide essential management information far better than any alternative approach. It could be the key to improving wilderness management and thus producing substantial benefits for users. We think the users are ready for a permit system. There would be a variety of costs with a permit system, but we feel the potential benefits far outweigh them. Therefore, we endorse mandatory permits as a needed forward step for wilderness management. It seems to us that a professional job of management is impossible without a foundation of reliable information on use and the means to influence visitor behavior or control overuse where and when it is necessary.

[3]Robert Wier, USDA Forest Serv., California Region, San Francisco.

[4]Based on data in files of David Lime, USDA Forest Serv., North Central Forest Exp. Sta., St. Paul, Minn.

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