Wilderness Management and the Multiple-Use Mandate

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Note: Wilderness Management and the Multiple-Use Mandate

One of the most vexing problems which historically has confronted lawmakers, both legislative and judicial, is the necessity of transforming philosophical concepts into legal precepts. Such a definitional problem was encountered in the attempt to translate the abstract idea of "wilderness" into statutory law. Wilderness is a state of mind, an experience brought on by a particular set of surroundings. As such, the concept varies from person to person and a general definition cannot easily be expressed in words. As Roderick Nash has said, "[o]ne man's wilderness may be another's roadside picnic ground." Nevertheless, the desire to set aside certain areas of land which would be maintained in a natural state led Congress to attempt the task of definition and to embody a particular view of wilderness in the Wilderness Act of 1964. This view, though perhaps as good as any definition yet advanced, has inevitably resulted in problems when stretched over the many functions which such a definition must serve.

This Note is concerned with one such problem, that of the management of wilderness areas protected by the statute. Wilderness management is in itself a contradiction in terms, for the very idea of a wilderness as a place preserved from interference by man would seem to preclude the type of ordered control implicit in the concept of management. A managed wilderness would not be a wilderness at all, but rather a primitive park. Physical realities, however, dictate that certain functions falling within the scope of "management" be performed even in wilderness areas. The problem has been succinctly expressed by one commentator:

The quality of wilderness is an ephemeral thing best nurtured in neglect. But this is impossible if the area is to be used with adequate provision for human safety and enjoyment. Some management is essential but with so light a touch that it makes hardly a mark on the unblemished canvas of the wild.

The determination of how and to what extent such management activities are to be carried on presents a problem of harmonizing the concept of wilderness embodied in the Act with the realities encountered in its actual use. Achieving a proper balance in the relationship between concept and reality may be crucial to the continued existence of wilderness.

I. THE DEFINITION OF WILDERNESS

The concept of wilderness can be and has been defined in many ways. One group of definitions centers around the intangible aspects of the “wilderness experience.” For example, Rod- erick Nash has said of wilderness: “The term designates a quality . . . that produces a certain mood or feeling in a given individual and, as a consequence, may be assigned by that person to a specific place.” Nash’s idea of wilderness as a state of mind is also characteristic of many other definitions. It appears again in the testimony of the late Howard Zahniser, a leading conservationist, before one of the early Senate hearings on the wilderness bill:

Wilderness is a character that land has. It is not a special use. “Wilderness” is a term that has significance because of the things it negates. “Chastity” is another such term. The various kinds of lands that have their various uses can all be wilderness. Wilderness is the first basic resource that we started out with in this country . . . .

This type of definition, therefore, reflects a view of “wilderness” as an experience, almost an emotion. Although in theory this state of mind could be produced in a particular individual by almost any semi-wild surrounding, proponents of such a “purist” definition of wilderness have concentrated their preservation efforts on land which remains in a natural state, unaffected by civilization, and which affords a visitor an opportunity to be alone. These two elements, virginity and solitude, appear to be the most conducive to the “wilderness experience” and therefore provide the standard by which the purist is able to classify land as wilderness. Accordingly, under the purist philosophy

4. One writer has offered the malapropian definition that wilderness is a place “where the hand of man has never set foot.” Brower, Forward to Voices for the Wilderness xi (W. Schwartz ed. 1969). For a sampling of other, more serious attempts at definition, see Nash, supra note 1, at 1-7.
5. Nash, supra note 1, at 1.
these are the elements which any management system should seek to preserve.

This does not mean, however, that the adherents of a purist definition feel that the benefits derived from wilderness are available only to those who actually experience primitive surroundings. The benefits are thought to extend to society as a whole, even to those members of society who will never visit the area. Society benefits by perpetuation of the spiritual, educational, historical, scientific, and abstract values7 to be derived from wilderness. Another, more direct benefit is thought to accrue to each individual. Wallace Stegner, head of the Creative Writing Center at Stanford University, described this intangible value of wilderness for the Outdoor Recreation Resources Review Commission:

Something will have gone out of us as a people if we ever let the remaining wilderness be destroyed; . . . if we pollute the last clear air and dirty the last clean streams and push our paved roads through the last of the silence, so that never again will Americans be free in their own country from the noise, the exhausts, the stinks of human and automotive waste. And so that never again can we have the chance to see ourselves single, separate, vertical and individual in the world, part of the environment of trees and rocks and soil. . . . Without any remaining wilderness we are committed wholly, without chance for even momentary reflection and rest, to a headlong drive into our technological termite-life, the Brave New World of a completely man-controlled environment. We need wilderness preserved—as much of it as is still left, and as many kinds—because it was the challenge against which our character as a people was formed. The reminder and the reassurance that it is still there is good for our spiritual health even if we never once in ten years set foot in it. It is good for us when we are young, because of the incomparable sanity it can bring briefly, as vacation and rest, into our insane lives. It is important to us when we are old simply because it is there—important, that is, simply as [an] idea.8

7. The relationship of each of these values to wilderness and their benefit to society has been well explained by conservationists. For a detailed explanation, see generally Gilbert, Notes From a Wilderness Layman, in WILDERNESS AND THE QUALITY OF LIFE 81 (1969) (spiritual value); Hearings on S. 1176, supra note 6, at 185-86 (educational value); id. at 183-84 (historical value); THE MEANING OF WILDERNESS TO SCIENCE (D. Brower ed. 1960) (scientific value); OUTDOOR RECREATION RESOURCES REVIEW COMMISSION, STUDY REPORT NO. 3, WILDERNESS AND RECREATION—A REPORT ON RESOURCES, VALUES, AND PROBLEMS 34 (1962) [hereinafter cited as ORRRC STUDY REPORT 3], quoted in text accompanying note 8, infra (abstract value). It is noteworthy that the Wilderness Act itself provides that wilderness areas shall be devoted to “the public purposes of recreational, scenic, scientific, educational, conservation, and historical use.” 16 U.S.C. § 1133(b) (1970). See also 36 C.F.R. § 293.2 (1973).

8. ORRRC STUDY REPORT 3, supra note 7, at 34.
A purist definition of wilderness is not completely satisfactory for all purposes, however. Nash, after offering the definition quoted earlier, sums up the problems which it presents:

Given . . . the tendency of wilderness to be a state of mind, it is tempting to let the term define itself: to accept as wilderness those places people call wilderness. . . . The limitation of this procedure, however, is the way it makes definition an individual matter and hence no definition at all.9

The purist concept of the wilderness experience can never be expressed in units of measurement. A more practical definition embodying quantifiable values is required for purposes of selecting certain areas to be protected, drawing boundaries, and deciding which activities will be permitted and which will be banned. Thus, when the Outdoor Recreation Resources Review Commission (ORRRC) began its study and classification of land suitable for protection as wilderness, it formulated its definition in terms of the physical characteristics which such an area should possess:

A wilderness tract is defined as an area of public or Indian land available for overnight recreation use within the contiguous United States (1) at least 100,000 acres in extent, (2) containing no roads usable by the public, (3) within a reasonably unified boundary configuration, and (4) showing no significant ecological disturbance from on-site human activity—except that domestic livestock grazing is an accepted disturbance in the West and early-day logging is accepted for eastern tracts.10

This definition, showing the strong influence of recreation as the Commission's central object, was to have a significant effect upon the idea of wilderness that was finally written into statutory law.

Such a practical, quantifiable definition is in sharp contrast to the inspiring but vague ideas of Nash, Zahniser, and Stegner. They represent two possible approaches to the definition of wilderness: the purist definition is a more accurate representation of what we seek to preserve, while the practical standard of the ORRRC is a result of the necessity of making choices. Although both might reach the same result, the possibility for disagreement is substantial.

The definition of wilderness which came to be embodied in the Wilderness Act is an attempt to combine these two approaches.11 The first sentence of section 2(c) of that Act states the ideal:

A wilderness, in contrast with those areas where man and

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10. ORRRC Study Report 3, supra note 7, at 3 (footnotes omitted).
his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.\textsuperscript{12}

It thus expresses the ideas of virginity and solitude which have been identified as major elements of the "wilderness experience." But the second sentence of that same subsection offers a more practical definition of what an area must be in order to qualify for protection under the Act:

An area of wilderness is further defined to mean in this chapter an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.\textsuperscript{13}

In this respect the statutory definition is very similar to that of the ORRRC, although modified somewhat to make it clear that an area is not to be denied protection merely because it has some significant feature besides its wilderness character, and also to make the size requirement more flexible. The practical definition, by itself, does not consider the purist criteria of virginity and solitude to be controlling. The use of words like "generally," "primarily," and "substantially" indicates that this half of the definition also takes other values into account, notably recreational value. Thus, applying only this half of the definition, an area of land which does not produce a true "wilderness experience" could nevertheless be protected by the Act if it provides valuable primitive recreational opportunities.

The practical definition cannot be considered alone, however. It represents only half of the statutory definition, and the two halves must be considered together to effect the intent of Congress. That the two strains are not easily synthesized is evident from the fact that Congress itself was not able to do so and eventually compromised on the dual definition after seven years of refining the statute. In so doing, Congress essentially left to the administering agencies the job of applying its definition to concrete situations. But it has not been able so easily to rid itself of a difficult problem. The tension between the two halves of

\textsuperscript{12} 16 U.S.C. § 1131(c) (1970).

\textsuperscript{13} Id.
the dual definition has already created a major dispute in the classification of federal land as wilderness, and in this form the difficulties inherent in the dual definition have come back to plague Congress.

The problem in classification became an issue because, under the terms of the Act, a large proportion of the wilderness immediately protected was located in the Western states and as such was not available to the masses of Eastern city dwellers who were unable to travel across the country in search of a wilderness experience. Although the Act did mandate a review of all primitive areas managed by the Forest Service and all roadless areas

14. The "instant wilderesses" created by the Act were those areas previously designated as "wild," "wilderness," or "canoe" by the Forest Service. 16 U.S.C. § 1132(a) (1970). These areas were almost exclusively in the Western states. Only three of the 54 instant wilderness areas were located east of the 100th meridian: the Great Gulf Wilderness in New Hampshire, and the Linville Gorge and Shining Rock Wildernesses in North Carolina. These three areas encompassed 26,455 acres out of a total of 9.1 million acres immediately protected. A fourth area of semi-wilderness, see note 113 infra, was also made an "instant wilderness"—the Boundary Waters Canoe Area in Minnesota, covering 886,673 acres (later reduced to 747,840 acres by boundary adjustments and more accurate surveys). First Annual Report on the Status of the National Wilderness Preservation System, H.R. Doc. No. 79, 89th Cong., 1st Sess. 7-12 (1965).

The Act also provided for immediate inclusion of 34 national forest primitive areas totaling 5.5 million acres. These areas, which had formerly been classified as "primitive" by the Forest Service, were protected as part of the National Wilderness Preservation System pending review by the Forest Service of their suitability for permanent protection. See note 15 infra. None of these areas is located east of the 100th meridian. First Annual Report, supra, at 13-16.

15. 16 U.S.C. § 1132(b) (1970). As of November, 1973, the review had been completed on 23 of the original 34 national forest primitive areas. Twelve areas, totaling nearly 1.5 million acres, had been added to the Wilderness System, and at least another 290,000 acres had been added by major adjustments of existing areas. Eleven other areas, encompassing approximately 1.7 million acres, had been proposed to Congress for inclusion but not acted upon. The remaining 11 areas were still being reviewed. Ninth Annual Report on the Status of the National Wilderness Preservation System, H.R. Doc. No. 194, 93d Cong., 1st Sess. 2-4 (1973).

In addition to the above review, which was mandated by the Act, the Forest Service has also voluntarily engaged in an inventory and review of roadless and undeveloped areas of 5,000 acres or more under its control to identify for further study any possible additions to the Wilderness System. Of 1,499 such areas (totaling 56 million acres) studied, the Forest Service had by November, 1973, selected 274 as potential New Wilderness Study Areas. These 274 areas total approximately 12.3 million acres, and of them only two areas, encompassing about 37,000 acres, are located in the East. One other area of 8,500 acres is in Puerto Rico. Forest Service, U.S. Dept of Agriculture, Final Environmental Statement on Roadless Areas 65-76 (1973).
of over 5,000 acres within the national parks with the intention that any areas found suitable should be recommended for addition to the National Wilderness Preservation System, the review program has thus far not provided wilderness lands for the eastern United States. This lack of wilderness in the East has

16. 16 U.S.C. § 1132(c) (1970). The Department of the Interior actually has two responsibilities in this regard. First, it must review every roadless area of 5,000 acres or more within the National Park System and recommend to Congress those which it deems suitable for protection as wilderness. Of the 63 areas reviewed as of November, 1973, four which encompass 190,945 acres in total have been added to the Wilderness System. None of these four areas is located in the East. Of the 24 areas recommended to Congress but on which action was still pending as of that date, five which total over 287,000 acres are located east of the 100th meridian: the Badlands National Monument, South Dakota (58,924 acres); Cumberland Gap National Historical Park, Virginia, Kentucky, and Tennessee (6,375 acres); Isle Royale National Park, Michigan (120,588 acres); Shenandoah National Park, Virginia (73,280 acres); Theodore Roosevelt National Memorial Park, North Dakota (28,335 acres). NINTH ANNUAL REPORT, supra note 15; S. 602, 93d Cong., 1st Sess. (1973).

Second, the Department of the Interior is charged with reviewing every roadless island and roadless area of 5,000 acres or more within the National Wildlife Refuge System. As of November, 1973, 113 units of 29 million acres had been identified as requiring review under this provision of the Act. Of those, 23 areas totaling 103,611 acres had been added to the Wilderness System as of that date. Twelve of these are in the East. NINTH ANNUAL REPORT ON THE STATUS OF THE NATIONAL WILDERNESS PRESERVATION SYSTEM, H.R. Doc. No. 156, 92d Cong., 1st Sess. 22-23 (1971).

17. Hereinafter referred to as the Wilderness System or the System. This is the name given to the collection of federal lands which the Wilderness Act declared would be protected as wilderness. 16 U.S.C. § 1131 (a) (1970). Upon passage of the Act, the Wilderness System was made up of 54 areas of "instant wilderness" amounting to 9 million acres, see note 14 supra, plus 34 primitive areas totaling 5.5 million acres which were protected as wilderness pending completion of a review by the Forest Service to determine if they should be proposed to Congress (by the President) for permanent inclusion in the System. See note 15 supra. As of November, 1973, 41 new areas encompassing nearly 1.3 million acres have been added to the System, as follows: 12 national forest areas totaling approximately 1.5 million acres, see note 15 supra; four national park areas totaling over 190,000 acres, see note 16 supra; and 25 national wildlife refuges totaling over 103,000 acres, see note 16 supra.

For a history of the wilderness preservation movement which culminated in the establishment of the System, see generally D. BALDWIN, THE QUIET REVOLUTION: GRASS ROOTS OF TODAY'S WILDERNESS PRESERVATION MOVEMENT (1972).

18. Since passage of the Act, only 12 Eastern areas have been added to the Wilderness System out of a total of 41 additions. All 12 are national wildlife refuges. See note 16 supra. These refuges are typically small—the 12 areas total only 34,891 acres and the largest is 25,150 acres—and relatively inaccessible, doing little to satisfy the demand for wilderness recreation which has resulted in the Eastern wilderness move-
precipitated the first real confrontation between adherents of differing definitions of wilderness. On one side, the Forest Service has taken the purist approach and, ignoring the more practical, recreation-oriented purpose which its critics justly feel can also be found in the Act, it has concluded that since nearly all of the Eastern national forests were at one time significantly affected by man's works—primarily logging—they cannot qualify as wilderness. Opposition to this position has come from a diverse coalition of preservationists and Eastern interests who for various reasons want land in the East set aside as wilderness. The fact that the Forest Service's position derives from the ideas of preservationists such as Nash and Zahniser demonstrates the difficulties in a dual definition: although both sides embrace the purist ideal embodied in the first part of the Act's definition, they translate it into different practical terms.

The proponents of Eastern wilderness, thus frustrated in their attempts to persuade the Forest Service to propose certain lands in the East for inclusion in the Wilderness System, have begun to bring their proposals directly to Congress in circumvention of the statutory procedure. Once again, therefore, Congress is faced with the problem of deciding how the purist ideal it endorsed in the first portion of the statutory definition is to be translated into reality: whether wilderness is to be a pure and solitary area of untrammeled natural beauty or a not-so-pure and not-so-solitary area where people may engage in prim-

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19. See Hearings on S. 316 Before the Subcomm. on Public Lands of the Senate Comm. on Interior and Insular Affairs, 93d Cong., 1st Sess., pt. 1, at 19, 46-49 (1973) (Forest Service accused of taking a "purist" attitude in assessing the potential of Eastern lands as wilderness).

20. Id. at 22-23. Doubt was cast on this position, however, by a court decision which held that an area of land was not disqualified from consideration as wilderness by the presence of an overgrown service road. Parker v. United States, 309 F. Supp. 593 (D. Colo. 1970), aff'd, 448 F.2d 793 (10th Cir. 1971), cert. denied, 405 U.S. 989 (1972).

21. See generally Hearings on S. 316, supra note 19.

22. The statute clearly contemplates that the Secretaries of the Interior and Agriculture, through the President, will recommend additions to the Wilderness System to Congress. See 16 U.S.C. §§ 1132(b)-(c) (1970). A bill which was introduced in the 93d Congress, however, would bypass the Secretaries and would directly add new lands to the System. S. 3433, 93d Cong., 1st Sess. (1974).
Ittive recreation. Legislation now pending before Congress apparently leans toward the former.\textsuperscript{25}

Under pressure,\textsuperscript{24} the Forest Service has recently modified

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\textsuperscript{23} S. 3433, 93d Cong., 1st Sess. (1974), was passed by the Senate on May 31, 1974. \textit{See} 120 CONG. REC. S 9363–S 9399 (daily ed. May 31, 1974). This bill would include 19 Eastern areas in the Wilderness System immediately upon its passage, and would designate 40 other Eastern areas as study areas on which the Secretary of Agriculture must advise the President of his recommendations within five years.

Management of the new Eastern wilderness areas would be generally in accordance with the provisions of the Wilderness Act. The multiple-use mandate of the original Act is therefore presumably preserved. However, consistent with the view that these areas require special protection in order for natural restoration to return them to their untrammeled state, the bill provides special safeguards not extended to Western wilderness lands. For example, the lands designated by the bill (either as wilderness or as study areas) are withdrawn from all forms of appropriation under the mining laws immediately upon passage; grazing is allowed only by permit on wilderness areas; and new water development projects on Eastern wilderness lands are prohibited.

The study areas are required to be managed "so as to maintain their potential for inclusion in the national wilderness preservation system until Congress has determined otherwise . . ." An outside limit on this protection is set at the expiration of the third Congress from the date of the submission of the President's recommendation for the area, however. It was felt that Congress should be able to act within this period, which might total eight years. \textit{Id.} at S 9322.

Therefore Congress, although including areas in the Wilderness System which are not up to the standards which the Forest Service has set, would make special provisions designed to allow these lands to return to their natural state, thus preserving the purity of the Wilderness System. This is in marked contrast to an earlier version of the Eastern wilderness bill, which would have enacted findings that an area is qualified and suitable for designation as wilderness which (1), though man's works may have been present in the past, has been or may be so restored by natural influences as to \textit{generally} appear to have been affected \textit{primarily} by the forces of nature, with the imprint of man's work \textit{substantially} unnoticeable, . . . (3) which may, upon designation as wilderness, contain certain preexisting \textit{nonconforming} uses, improvements, structures, or installations; and the Congress has reaffirmed these established policies in the subsequent designation of additional areas, exercising its sole authority to determine the suitability of such areas for designation as wilderness . . .

\textbf{S. 316, 93d Cong., 1st Sess. § 1(e) (1973) (emphasis added).} S. 316, if enacted, would have modified the definition of wilderness so as to change the emphasis of the Act from wilderness preservation to primitive recreation. S. 3433, while allowing temporary inclusion of less qualified areas, maintains the purist ideal of the Act as well; as such, it is consistent with the dual definition in the Wilderness Act. Because the multiple-use mandate (discussed later in this Note, see text accompanying notes 30–63) and the emphasis on primitive recreation are allowed to remain, however, this substantial amendment of the Wilderness Act would not solve the major problems to which this Note is directed.

\textsuperscript{24} \textit{See, e.g.}, the 1972 Environmental Message to the Congress of President Nixon:

Unfortunately, few of these wilderness areas are within easy
its position on this question and has called for an amendment to the Wilderness Act which would allow areas affected by man's works to be included in the Wilderness System in the East only.\textsuperscript{26} Different criteria of suitability would be employed for these areas.\textsuperscript{26} However, the Service still adheres to its "purist" interpretation of the original Act—as evidenced by its feeling that an amendment is required to permit a different interpretation—and will continue to judge the suitability of Western lands accordingly.\textsuperscript{27}

The problem of Eastern wilderness is a good example of the basic conflict between the halves of the statutory definition of wilderness. That problem will probably be solved by statute in the near future, but the solutions which have been proposed to solve it are narrow ones which do not seek to resolve the underlying conflict between two different concepts of wilderness. A partial solution for one small problem will only serve to exacerbate difficulties in other areas.

One such area, where the conflict within the dual definition has resulted in special difficulties, is that of wilderness management. The problem of administering protected lands consistent with the nature of wilderness presents itself not only in major policy decisions on the nature and extent of uses to be made of wilderness land but also in day-to-day management decisions. The administering agencies have apparently tried to solve both aspects of the problem by an accommodation of the opposing

\textsuperscript{26} Hearings on S. 316, supra note 19, at 21-24 (statement of John R. McGuire, Chief of the Forest Service). See also S. 938, 93d Cong., 1st Sess. (1973).

\textsuperscript{27} Hearings on S. 316, supra note 19, at 24, 31.
interests—a balancing approach. In the case of the day-to-day management of wilderness areas, by giving great weight to the purist interest, this balancing technique has succeeded in producing solutions which are acceptable in terms of both parts of the definition. But when major policy decisions on the uses of the land are to be made, the balancing process breaks down. The reason is that another factor enters into policy decisions, a factor which weighs very heavily on the side of practical usage. This factor is the multiple-use concept. Before considering its effects on the management of wilderness areas, however, it will be useful to review the history of the multiple-use concept with reference to wilderness.

II. THE MULTIPLE-USE CONCEPT AND ITS IMPLICATIONS FOR WILDERNESS MANAGEMENT

Although conservationists warmly welcomed the idea of statutory protection of wilderness areas from the very first, support among other groups was by no means unanimous. Timber and mining interests, fearing the loss of their privileges on wilderness lands, voiced strong opposition to the bills that were introduced to provide this protection. They were joined by other groups which felt that the creation of statutorily protected wilderness areas would effectively bar use of these areas for their respective special interests. Although many of these groups agreed in principle with the idea of preserving certain areas in their natural state, they felt that this objective should not preclude other concurrent uses of the land. Thus, in the late 1950's, in order to win more general support for the wilderness bill, some assurance

28. See, e.g., text accompanying note 51 infra.
29. See text accompanying notes 51-63 infra.
30. See, e.g., Hearings on S. 1176, supra note 6, at 327-29 (statement of the American Mining Congress); id. at 150-52 (statement of the National Lumber Manufacturer's Association).
31. Recreationists were prominent among the opposition. See Hearings on S. 1176, supra note 6, at 423-26 (letter from the Outboard Boating Club of America); id. at 336 (letter from the National Forest Recreation Association). But see id. at 401-06 (Federation of Western Outdoors Clubs). Other groups included grazing interests, see id. at 397-401 (statement of the National Cattlemen's Association), and water development interests, see id. at 409 (letter from the Colorado State Watershed Conservation Association). Wildlife managers, while generally noncommittal, expressed fear as to the result of improving access to wilderness areas. Id. at 112-13 (statement of Richard Griffith, Assistant Chief, Branch of Wildlife Refuges, Bureau of Sport Fisheries and Wildlife).
32. See, e.g., id. at 423-26 (letter from the Outboard Boating Club of America).
was needed that such legislation would not exclude other uses from the protected areas.

In 1960, perhaps partly in response to the proposed wilderness legislation,\(^3\) the Forest Service asked Congress to give statutory recognition to the multiple-use principle which had been the unofficial policy of the Forest Service for many years.\(^4\) Simply stated, this principle holds that

> the national forest lands will be allocated in such ways as to reflect demand for uses to which the lands may be put, within limitations imposed by the nature of the land. . . . [M]ultiple use depends only partly on the physical characteristics of the land and equally on the uses demanded for the land.\(^5\)

The multiple-use concept is an affirmation that lands administered by the Forest Service will not be confined to a single use, but rather will be utilized in such combination as to achieve the maximum benefit for the greatest number of uses.\(^6\)

In response to the Forest Service request, Congress passed the Multiple-Use and Sustained-Yield Act of 1960,\(^7\) declaring that

> “Multiple use” means: The management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources . . . ; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources . . . without impairment of the productivity of the land, with consideration being given to the relative values of the various resources . . . .\(^8\)

The statute specifies five purposes for which the national forests may be used consistent with this definition: outdoor recreation,


\(^4\) Hearings on S. 174, supra note 11, at 43 (statement of Richard E. McArdle, Chief of the Forest Service). Many attribute this philosophy to Gifford Pinchot, first professional forester in the United States and Chief of the Forest Service (earlier the Division of Forestry and the Bureau of Forestry) from 1898 to 1910. For a history of the development of this concept, see OUTDOOR RECREATION RESOURCES REVIEW COMMISSION, STUDY REPORT No. 17, MULTIPLE USE OF LAND AND WATER AREAS 1-2 (1962).

\(^5\) ORRRC STUDY REPORT 3, supra note 7, at 36.


range, timber, watershed, and wildlife and fish purposes. It specifically provides that "[t]he establishment and maintenance of areas of wilderness are consistent with the purposes" of the Multiple-Use Act. Clearly, however, the Act was intended to negate the idea that any area of the national forests is to be managed for any single purpose.

Having received this assurance, the proponents of the wilderness bill proceeded to incorporate the multiple-use concept into their legislation in order to win the support of many of the groups which had expressed fear of being "locked out" of the wilderness. Senator Hubert Humphrey, one of the wilderness bill's major supporters, declared during the 1961 hearings:

[T]his proposal is one that respects the importance of other programs. It is a multiple-purpose wilderness program. Every area included in the proposed national wilderness preservation system is now serving some other purpose, or purposes, consistent with the continued protection of the area as wilderness. Under this legislation, these areas will continue to serve these purposes . . . .

Similar sentiments were expressed by the Chief of the Forest Service and the Secretary of the Interior. As enacted, the Wilderness Act thus contains the provision that "[n]othing in this chapter shall be deemed to be in interference with the purpose for which national forests are established as set forth in . . . the Multiple-Use and Sustained-Yield Act . . . ."

39. Id. § 528.
40. Id. § 529.
41. Congress, by this action [the Multiple-Use Act], made it clear that wilderness can no longer be considered to serve only a single use. It provides a habitat for wildlife, opportunities for hunting, fishing, scientific research, exercise and other enjoyment of the outdoors.

42. Hearings on S. 174, supra note 11, at 135-36.
43. The Multiple-Use Act itself which was passed by Congress in 1960 recognized that the wilderness preservation was not incompatible with the multiple use principle. The multiple use principle doesn't mean that all uses must occur on all lands at the same time. It does mean that these major uses would occur on a major area of land, probably not necessarily concurrently. But the wilderness use does permit of hunting and fishing and watershed protection, grazing, so that there would be multiple uses in a wilderness area . . . .

44. See Hearings on S. 174, supra note 11, at 19-20 (exchange between Sen. Dworshak and Secretary Udall).
Certain uses, such as logging, are implicitly banned from the wilderness as inconsistent with the idea of maintaining the land in its natural state. But other active uses are expressly permitted by the Act, and outdoor recreation is apparently viewed as one of the major uses of wilderness land. The management policies of the Forest Service reflect this idea that wilderness land is to be managed on a multiple-use basis. One Forest Service publication states, "Multiple use management, then, is providing this generation of Americans with optimum opportunities for wilderness recreation. And for the benefit of those generations of Americans yet to come, it is making certain that these

irreplaceable wilderness lands shall endure." This statement expresses the essence of multiple-use management of wilderness lands: present use for recreation and other purposes, and preservation for the future.

Thus, the management philosophy of multiple-use was impressed upon the concept of wilderness by statutory mandate. In that action Congress strongly reinforced the idea of wilderness as an area which is to be used—the concept embodied in the practical half of the dual definition. The multiple-use philosophy is not as consistent with the other half of that definition, however. The purist approach emphasizes the preservation of certain lands in their natural state, undisturbed and unaltered by man; the multiple-use concept, while also endorsing preservation of those lands, contemplates active management of the land to achieve the optimum benefit to the American people. A management philosophy based on multiple-use would therefore seem to lead to preservation in a less than natural state if this is necessary in order to promote the greatest overall benefit. Ironically, it is this threat which originally prompted the move to give statutory protection to wilderness lands.

The recognition given to the multiple-use philosophy in the Wilderness Act has therefore made it very likely that in any given case the balance between the purity of wilderness and the practical use of land will be tipped in favor of the latter. In ordinary management decisions, however, even the multiple-use mandate does not seriously threaten the values of the purist. This is so for at least two reasons. First, the multiple-use theory does not clearly mandate one course of management action over another so long as the course chosen does not prohibit multiple use of the wilderness land. Therefore, the administering agencies have in practice given heavy weight to the sanctity of the wilderness. For example, a Forest Service publication states:

The dominant theme and intent of the Wilderness Act is to insure an enduring resource of wilderness for the Nation.

For the Forest Service, this means that protection and advancement of wilderness values must be given priority in many decisions that are made day by day . . . . It means that such "non-conforming uses" as the Act authorized must be conducted in such a manner that they have only a minimum effect on the wilderness resource.51

50. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, WILDERNESS 12 (1967) [hereinafter cited as WILDERNESS].
51. SEARCH FOR SOLITUDE, supra note 41, at 8-9.
The Forest Service has been so careful in this regard that it has been criticized for its "purist" position, which has resulted, for example, in extreme reluctance to allow a helicopter to be used to remove the body of a hiker killed during a wilderness storm.\(^5^2\)

A second reason to discount the multiple-use threat to purist values is that the problems encountered in the context of ordinary management decisions are relatively minor. A decision in favor of either the purist or the practical approach, while possibly of great theoretical significance, does not significantly threaten the other. An excellent example of the effect of this type of decision is the problem of the use and control of fire in the wilderness.

The fact that naturally occurring fires would have burned uncontrolled in a wilderness where man had never ventured has been thought to present the question of whether natural fires and even fires caused by people should be controlled on modern wilderness lands.\(^5^3\) A related problem is whether controlled burning should be used within the wilderness to thin the forest and allow new growth.\(^5^4\) The Wilderness Act leaves the former problem to the discretion of the Secretary of Agriculture, but it is silent on the question of controlled burning.\(^5^5\) Presumably the administering agency could also permit controlled burning by classifying it as a fire control tool, however, since without it, deadwood and other dry material could build up in the forest and present the danger of a very destructive fire.

The purist would argue that since a wilderness is a place where man's influence is not present, there should be no control of fire and no prescribed burning. The practicalist, however, would say that wilderness fires should be fought in order to preserve the scenic beauty of the wilderness which makes it uniquely valuable for recreation\(^5^6\) and also to reduce the danger to adjacent non-wilderness lands.\(^5^7\) For the same reasons the

\(^{52}\) Hearings on S. 316, supra note 19, at 29.


\(^{56}\) See, e.g., Leopold, supra note 53, at 190.

\(^{57}\) See Hearings on S. 1176 Before the Subcomm. on Public Lands
practicalist would favor prescribed burning. Whichever way the agency decides this question, however, the decision will not seriously threaten the values held by either the purist or the practicalist. The purist, although favoring the absence of fire control, would not find his "wilderness experience" interrupted if fire control is carried on in a manner consistent with the nature of wilderness; the result would be essentially the same as if the fire had never started. Similarly, prescribed burning is as close to a natural method of thinning forests as can be found. The practicalist, on the other hand, while favoring fire control and prescribed burning, would not find himself excluded from the wilderness if they are not practiced; the upholding of purist values in this respect would not interfere with the multiple-use of the land. The possibility of a particularly devastating fire which could ruin the wilderness as a recreation area may be sufficient reason to adopt the more practical approach, however. In fact, the Forest Service has approved the use of both fire control measures and controlled burning, with certain modifications "to meet the special management objectives of each individual wilderness."

Similar questions have been raised concerning insect and disease control, the administrative use of motorized vehicles and equipment, the use of helicopters to place and check scientific instruments, and even the possible eradication of non-

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58. This is the requirement of the Forest Service. FSM, supra note 49, § 2324.21-.23.

59. FSM, supra note 49, § 2324.2. The Forest Service allows its normal fire suppression policies to be used on wilderness land with necessary modifications consistent with the character of the wilderness. Controlled burning can be used, subject to the approval of the Chief. See also NPS, supra note 49, at 56, allowing fire control "as necessary to prevent unacceptable loss of wilderness values, loss of life, damage to property, and the spread of wildlife to lands outside the wilderness." The National Park Service does approve of prescribed burning on natural areas, see id., at 17, and presumably this policy also would apply to wilderness.

60. See Hearings on S. 1176, supra note 57, at 95 (statement of Richard E. McArdle, Chief of the Forest Service); FSM, supra note 49, § 2324.1; NPS, supra note 49, at 56.


62. Cliff, supra note 61, at 11; FSM, supra note 49, § 2326.12; NPS, supra note 49, at 56. Cf. FSM, supra note 49, §§ 2323.43-.44, detailing the Forest Service's policy on scientific research and weather modifica-
native plants and animals so as to more closely approximate the "natural condition of the land." Like the fire problem, all require the exercise of agency discretion to strike a balance between the purist and the practicalist theories of wilderness management. The theoretical implications of each decision are strong, for it is in this manner that the statutory definition is given substance. The practical implications, however, are minor. The differences in the long-run character of the wilderness where a helicopter rather than a man on foot is used to check a snow gauge, or where chain saws rather than hand axes are used to clear a trail, are so slight as to be insignificant. A visitor to the wilderness might have his solitude disturbed momentarily by use of a helicopter or a chain saw, thereby making it important to consider available alternatives, but the ultimate character of the area would not be noticeably affected.

When, however, the question involves not day-to-day administration but rather the determination of basic policy as to the permissible degree of intrusion by one or another of the uses sanctioned by the Wilderness Act, the statutory policy of multiple-use clearly favors the practical half of the wilderness definition at the expense of purity. Major disruptions of the wilderness character may be permitted under the statutes in order to further a nonconforming use. One such disruption is that of recreational overuse, which has created a serious problem for wilderness management.

III. MANAGEMENT PROBLEMS AND ATTEMPTED SOLUTIONS

Basic guidance for the management of wilderness areas is given by the Wilderness Act itself. In an explicit reference to the Multiple-Use Act, the Wilderness Act declares that there is no conflict between the two; it then specifically states a multiple-use management policy:

Except as otherwise provided in this chapter, each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area.

Although the wilderness may be used for scientific purposes, it must be under circumstances which will preserve the wilderness environment. Weather modification is permitted where the effects are temporary and compatible with the wilderness appearance.

63. See Heinselman, supra note 54, at 13; NPS, supra note 49, at 56.

64. See note 40 supra and accompanying text.
and shall so administer such area for such other purposes for which it may have been established as also to preserve its wilderness character. Except as otherwise provided in this chapter, wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use.\textsuperscript{65}

Having established a basic management policy of multiple-use, the Act goes on to impose a number of specific prohibitions designed to adapt the multiple-use concept to the management of a wilderness area.\textsuperscript{66} The prohibited activities include commercial enterprises, construction of permanent roads, and the use, beyond minimum administrative and emergency needs,\textsuperscript{67} of motor vehicles, motorized equipment, motorboats, aircraft, temporary roads, and other structures and installations. Within this broad outline of wilderness protection, the Act makes certain exceptions which appear to be designed either to legitimize established uses or to promote the multiple-use development of the protected land. Falling within the first category are provisions which allow mineral interests to remain in effect\textsuperscript{68} and established graz-

\textsuperscript{66} 16 U.S.C. § 1133(c) (1970). See also 36 C.F.R. § 293.6, 293.8 (1973).
\textsuperscript{67} 16 U.S.C. § 1133(c) (1970). See also 36 C.F.R. § 293.6(c) (1973); FSM, supra note 49, § 2326; NPS, supra note 49, at 56, 58.
\textsuperscript{68} 16 U.S.C. § 1133(d)(3) (1970). This section provides that the mining laws of the United States shall extend to wilderness lands until December 31, 1983, subject to the reasonable regulations of the Secretary of Agriculture. Rights existing before September 31, 1964, are apparently unaffected by this provision, but those which come into effect between 1964 and 1983 are subject to this provision. No rights can be created after 1983. See also 36 C.F.R. § 293.14 (1973); FSM, supra note 49, § 2320.3(8)(d); NPS, supra note 49, at 57 (mining and prospecting present in an area proposed for designation as wilderness required to be phased out before designation, or excluded when drawing the boundaries thereof).

It was reported in 1973 that there were 2,600 claims staked on national forest wilderness lands. No claims, however, had been patented since the passage of the Wilderness Act, nor were there any producing mines—and only two mines capable of production—with wilderness boundaries. \textit{Hearings on S. 1010 Before the Subcomm. on Minerals, Materials, and Fuels of the Senate Comm. on Interior and Insular Affairs, 93d Cong., 1st Sess. 60 (1973)} (statement of the Chief of the Forest Service).

There have been several attempts to protect wilderness further against mining and prospecting. In Izaak Walton League v. St. Clair, 353 F. Supp. 698 (D. Minn. 1973), which was brought by conservationists seeking an injunction against mineral activity in the Boundary Waters Canoe Area (BWCA), Judge Neville held that the mineral rights provisions of the Wilderness Act are contrary to its wilderness objectives and that the latter of necessity override the former. The court therefore enjoined lessors and lessees of mineral interests in the BWCA from carrying on exploratory or other mineral activity. This result, however, was
and use of aircraft or motorboats to continue. In the second category are exceptions for continued prospecting and the initiation of new mineral claims; state programs to control hunting, fishing, and water resources; water-related projects such as power plants and reservoirs authorized by the President; and commercial activities which "are proper for realizing the recreational or other wilderness purposes of the areas."

The result of this collage of policy, prohibitions, and exceptions is that an administering agency has a great deal of discretion with regard to the activities and improvements which it can allow on wilderness lands. Almost any activity that the Forest Service may decide to permit could arguably be brought within one or another of the exceptions. Although the scope of the exceptions has received little attention in the courts (probably be-
cause the strict interpretation given to them by the Forest Service has provoked little controversy), recent cases indicate that the wide latitude given to the agencies by the Act is judicially reviewable. For the present, however, the day-to-day management of wilderness areas appears committed to agency discretion.

The fact that the agencies have wide discretion in deciding what activities and improvements are to be permitted on wilderness lands does not mean that it extends to deciding what uses may be made of the land. There is a difference between the ability to decide the purposes for which the land may be used and the ability to regulate the manner in which a permissible purpose is carried out. Although the agencies have wide discretion in the latter area, the former is virtually closed to them.

Judicial review may be justified on at least two theories. In Minnesota Public Interest Research Group v. Butz, 358 F. Supp. 584 (D. Minn. 1973), aff'd 498 F.2d 1314 (8th Cir. 1974), the court enjoined a number of management decisions to allow timber cutting in the Boundary Waters Canoe Area on the theory that these actions, taken as a whole, constituted a major federal action significantly affecting the quality of the human environment and as such required an environmental impact statement on the management plan for the area. Because substantive review as well as procedural review is now thought to be possible under the National Environmental Policy Act of 1969, 42 U.S.C. § 4321 et seq. (1970), see, e.g., Environmental Defense Fund v. Corps of Eng'rs, 470 F.2d 289 (8th Cir. 1972), cert. denied, 412 U.S. 931 (1973), this may be one means of obtaining judicial review of a management decision. A second way of obtaining judicial review might have been opened by the district court decision in Izaak Walton League v. St. Clair, 353 F. Supp. 698 (D. Minn. 1973), wherein the court enjoined mineral exploration in the Boundary Waters Canoe Area as incompatible with the concept of wilderness preservation under the Wilderness Act. Broad dicta in the opinion could provide a basis for arguing that other management actions, even if expressly permitted by the Act, are inconsistent with the idea of wilderness: "[I]f the area is to remain true wilderness, there is no reasonable usage to which the surface can be put and still retain the area's character as wilderness." Id. at 715. On appeal, however, the court held that while the construction of the Wilderness Act is a legal issue cognizable in the courts, questions regarding both the effect of mining upon the wilderness and the adequacy of restrictions designed to preserve wilderness quality are ones of fact, properly within the competence of the Forest Service under the doctrine of primary jurisdiction. 497 F.2d 849, 852-53 (8th Cir.), cert. denied, 43 U.S.L.W. 3274 (U.S. Nov. 12, 1974). The case was reversed and remanded with instructions that the Forest Service be allowed to determine whether a mining permit should be issued. Id. at 853. There remains a possibility that the district court's theory will survive despite the reversal. A recent case makes the argument that certain logging activities within the BWCA are incompatible with the concept of wilderness preservation. See Minnesota Public Interest Research Group v. Butz, No. 4-72-Civil-598 (D. Minn., Sept. 18, 1974) (preliminary injunction issued).

See text accompanying notes 51-63 supra.
The multiple-use mandate in the statute prevents the agency from completely excluding certain uses of the land even if it should decide that exclusion would be in the best interests of the area.

An example of this dilemma which now faces wilderness managers is the threat of recreational overuse. The fact that recreational use of the wilderness area not only affects the perception of the wilderness by its visitors but also menaces the long-term survival of the wilderness resource is complicated greatly by the fact that under the Act recreation seems clearly designated as a major intended use of the protected lands.\(^7\)

Even before the Wilderness Act was passed, the ORRRC observed:

> Public agencies apparently administer wilderness areas on the principle that recreation, among all wilderness values, should be predominant. . . . Budgetary increases for administration of wilderness and other lands suitable for recreation seem to be based primarily on expanding amounts of recreational use, and other values of wilderness—including abstract benefits available in limited recreational use—are difficult to defend in current administration. The public interest is often evaluated in terms of use statistics. The trend is to encourage more recreational use even in wilderness areas now heavily used; often deliberately, but sometimes unwittingly, through trail improvements, facility developments, and peripheral road extensions.\(^8\)

Although the managing agencies have certainly become more aware of this problem in recent years and have taken certain


\(^8\) ORRRC Study Report 3, supra note 7, at 298. Earlier in the same report, the Commission expanded on this idea:

> In most instances, agencies responsible for management of wilderness tracts have recognized the need for special forms of recreational management. Less often, however, have they recognized the need to manage wilderness lands—especially for their biology—for maintenance of wilderness environments which are essential for provision of all wilderness values. Partly this is a reflection of fragmented authority; but mainly it results from the fact that personnel with on-the-ground responsibilities generally have training and experience—and concepts which spring from these factors—oriented toward the management of land for commercial resources and for mass recreation rather than for the retention of wilderness values. . . .

. . .

A further management tendency inconsistent with wilderness concepts is to view wilderness almost exclusively as a recreational resource. The other rather abstract values, which are only incidentally related to wilderness recreation, are often neglected—principally because of their very abstract nature. In turn, wilderness resources tend to be manipulated along conventional recreation management lines. Such management has the effect of diluting the unique environmental characteristics which distinguish wilderness resources.

*Id.* at 14,
steps to correct it,\textsuperscript{79} the emphasis on recreation persists. The Forest Service and the National Park Service both have tended to deal with wilderness in recreational terms,\textsuperscript{80} to publicize its recreational attributes,\textsuperscript{81} and to encourage recreational use of the wilderness by laying out trails and publishing maps.\textsuperscript{82} The agencies have not been alone in their view of wilderness as a recreation area: they have been joined not only by timber interests\textsuperscript{83} and members of Congress,\textsuperscript{84} but also by many if not most conservationists.\textsuperscript{85} This is not to say that these groups support unregulated use of wilderness for recreation, but rather that they support recreation in keeping with the character of wilderness. The fundamental problem may be, however, that management for recreation may be as destructive to the wilderness experience as recreational overuse is to the wilderness resource.

Much of the damage from recreational overuse is obvious. In the words of Roderick Nash, wilderness is in danger of being "loved out of existence."\textsuperscript{86} Since 1945, wilderness-type recreation has grown by more than 1200 percent;\textsuperscript{87} in 1970, wilderness visitation was estimated to have doubled over the past decade, and was projected to increase ten times by the year 2000.\textsuperscript{88} In the Boundary Waters Canoe Area of Minnesota, one of the most heavily used wilderness areas, use increased 31 percent from 1969

\textsuperscript{79} See text accompanying notes 99-108 infra.

\textsuperscript{80} See, e.g., Hearings on H.R. 9070 and Related Bills Before the Subcomm. on Public Lands of the House Comm. on Interior and Insular Affairs, 88th Cong., 2d Sess., ser. 15, pt. 4, at 1107 (1964) (statement of Secretary Udall); Hearings on S. 1176 Before the Subcomm. on Public Lands of the Senate Comm. on Interior and Insular Affairs, 93d Cong., 1st Sess. 98-99, 104 (1973) (statement of the Chief of the Forest Service).

\textsuperscript{81} See, e.g., \textsc{Forest Service, U.S. Dept of Agriculture, National Forest Wildernesses and Primitive Areas} (1974); \textsc{Search for Solitude, supra note 41}; \textsc{Wilderness, supra note 50}.

\textsuperscript{82} See \textsc{Search for Solitude, supra note 41}, at 11.


\textsuperscript{85} See, e.g., Brower, Foreword to \textsc{Voices For the Wilderness, supra note 54}, at vii (Sierra Club); Hearings on H.R. 9070, supra note 80, at 1195 (statement of the Wilderness Society).

\textsuperscript{86} R. Nash, \textsc{Wilderness and the American Mind} 264 (rev. ed. 1973).

\textsuperscript{87} Hearings on S. 316, supra note 83, at 17 (statement of Sen. McGee).

\textsuperscript{88} Nash, supra note 86, at 263.
The results of this heavy recreational use are unfortunately predictable: polluted water,\textsuperscript{89} destruction of the vegetative cover,\textsuperscript{90} littering.\textsuperscript{91} Another result of overuse, although harder to measure,\textsuperscript{92} can also be anticipated. This is dilution of the atmosphere essential to the wilderness experience. As ecologist Stanley A. Cain has remarked, "[T]he numberless people cannot enjoy solitude together."\textsuperscript{93} If wilderness is a place "where man... is a visitor who does not remain,"\textsuperscript{94} it may be less a wilderness when one meets another human being or groups of them at periodic intervals. At some point each individual ceases to feel that he is in a wilderness, and at that point, for him, the wilderness ceases to exist.

Recreational overuse, therefore, poses a great threat to the "purist" concept of wilderness as well as a lesser, but still significant, danger to even the "recreational" wilderness; in the latter case, the physical threat to the resource is of primary importance, while in the former both this and the threat to the visitor's perception of his experience are important. Recognizing the tendency to attach a disproportionately greater weight to recreation in the context of the multiple-use theory, one would predict that proposed solutions to the problem of recreational overuse would concentrate on protection of the physical resource, would be applied only when recreational use reaches the point of permanent physical damage to that resource, and would be impaired by simultaneous promotions of wilderness recreation. In fact, this prediction has been realized.

Proposed solutions to the recreational overuse problem all tend to begin with the idea of "carrying capacity,"\textsuperscript{96} which de-

\textsuperscript{89}. Gilbert, Peterson, & Lime, \textit{Toward a Model of Travel Behavior in the Boundary Waters Canoe Area}, 4 Environment and Behavior 131, 132 (1972).


\textsuperscript{92}. See ORRRC Study Report 3, supra note 7, at 301.


\textsuperscript{94}. Quoted in Nash, supra note 86, at 264.


\textsuperscript{96}. See generally the authorities cited in note 93 supra.
fines the “maximum level of use that does not cause unacceptable levels or kinds of ecological damage or user dissatisfaction.” Thus formulated, the concept has two elements—the level at which the use of the land begins to damage the physical resource, and the level at which the wilderness experience of the users of the land becomes adversely affected. Presumably whichever of these two levels is reached first would determine the maximum level of use for a particular area. Both of these elements are difficult to quantify, and the “carrying capacity” of the land is therefore usually determined by a subjective evaluation of the physical damage to the ecology. The more abstract values of wilderness are generally not considered.

Various proposals have been made for keeping land within its carrying capacity. One possible solution would be to accommodate the increased demand by adding more wilderness land to the system. This alternative is potentially unsatisfactory, however, since even by the estimates of conservationists only about two percent of the nation’s land area would qualify. Even if all of this land were committed to wilderness purposes, demand might still exceed supply. In addition, there is the difficult economic question of whether the incremental value of an additional acre of wilderness is greater than the incremental value of that land put to some other use.

Other proposals would control the use of wilderness areas by any one of a number of methods, including redistribution of visitors to less crowded zones, requirement of advance reserva-

98. This observation is based on discussions and correspondence with a number of people involved in planning for recreational use of wilderness areas. See, e.g., National Park Service Extends Backcountry Protection Plan, Department of the Interior News Release (June 24, 1973); Letter from Robert W. Rogers, Acting Superintendent of Isle Royale National Park, to Mark C. Peterson, November 29, 1973 on file in the Univ. of Minn. Law Library; Telephone call to Carl Westrate, Recreation Management Division of Forest Service Region Five, from Mark C. Peterson, November 26, 1973.
101. See Gilbert, Peterson, & Lime, supra note 89, at 135-36. The Forest Service recommends this as a possible system of use rationing. FSM, supra note 49, § 2323.12(c). Direct methods of dispersion include zoning, campsite permits, and roving rangers to channel traffic to less heavily used areas. Indirect methods include information provided to
regulation of the rate at which persons enter the wilderness or the duration of their stay, or direct limitations on the number of people allowed in each area. The latter suggestion could be implemented by the use of admission fees, set at a rate high enough to reduce the demand by admission on

visitors as to the best areas to visit or camp, improvement of access and addition of rustic improvements to make lightly used areas more attractive, and removal of such improvements in heavily used areas. The indirect methods seem preferable, inasmuch as they require no enforcement, respect the quality of the wilderness experience, and preserve individual freedom of choice.

The basis for a dispersal program could be the three "management situations" presently recognized by the Forest Service in each wilderness. The first "situation" is presented by the really remote land which is preferably inaccessible even by horse or mule. Here the Service recommends no improvements—not even trails—which could encourage visitors. The second "situation" is that of the bulk of typical wilderness land, in which there may be trails, signs, primitive campsites, and sanitation structures. It is within this second area that most dispersion would take place. The third "situation" is presented by buffer zones, which are better situated for hourly and one-day, rather than overnight, use. FSM, supra note 49, § 2322.12. If the Service were able to ascertain the needs and plans of each visitor, it could channel him directly into one of these zones or possibly even into a specific area within one of the zones, or information could be furnished to him so that he could choose the best area for his needs.

The drawback to this form of use control is that if use becomes too heavy, even dispersion cannot reduce it to an acceptable level. That this has evidently become the case in several wilderness areas is confirmed by the more drastic rationing measures now in effect in those areas. See notes 107-108 infra and accompanying text.

102. See I. COWAN, WILDERNESS—CONCEPT, FUNCTION, AND MANAGEMENT 30 (1968); Gilbert, Peterson, & Lime, supra note 89, at 135-36. Reservations are often used in combination with rationing. See notes 104-106 infra.

103. See Gilbert, Peterson, & Lime, supra note 89, at 135-36. "Flow-metering," or selective regulation of the rate at which people enter through various access points, has certain disadvantages. For example, the use might be so heavy as to effectively exclude people from the wilderness; at that point the system becomes a first-come-first-served rationing system. Also, such a system provides very little control over where people go once they are inside the wilderness—they may congregate near a particularly scenic point, especially in a small wilderness area.

A different type of regulation places a limit on the length of time a visitor can spend in the wilderness or at a particular campsite. This is a more acceptable form of visitor control than flow-metering in that it eliminates "waiting at the door," but it may tend to drive inexperienced wilderness users deep into the wilderness faster. Also, in an especially heavy use period, such as a long summer holiday weekend, the great influx of visitors within a short time span might defeat the purpose of the plan. These restrictions are permitted by FSM, supra note 49, § 2323.12(c).

104. See ORRRC STUDY REPORT 3, supra note 7, at 253-54. The possibility of charging entrance fees at most national forest wilderness areas
a first-come-first-served basis, or by admission based on “qualifications such as physical condition, preparedness, or ability to appreciate the wilderness.” In several areas such plans are already in effect. For example, the Forest Service has instituted a first-come-first-served plan at two heavily used Western wildernesses and the National Park Service has expanded its 1972 plan seems remote, however. The Forest Service Manual restricts the charging of entrance fees to National Recreation Areas administered by the Forest Service, allowing no entrance fee to be charged at any other national forest area. FSM, supra note 49, § 2331.2. Special-user fees do not appear to be barred where “substantial investments have been made in facilities for the exclusive use of an individual or group, or where special services are provided at public expense.” Id. § 2331.23. But the very nature of a wilderness area would seem to preclude fees for these types of services. A recent amendment to the Land and Water Conservation Fund Act, 78 Stat. 897 (1965) (codified at 16 U.S.C. § 4601-4 to 11 (1970) ), makes it impossible to charge user fees at national forest wilderness areas by requiring such highly developed facilities as flush toilets before such fees can be charged. 16 U.S.C.A. § 4601-6a(b) (1974).

The possibility of special legislation by Congress to provide a fee system for regulating use of wilderness areas therefore seems slight. During hearings on possible amendments to the Land and Water Conservation Fund Act, supra, which provides the authority for charging fees on federal recreation lands, the Senate committee rejected any idea that fee collections should be used to limit usage of the areas. See Hearings on S. 1893 and Related Bills Before the Subcomm. on Parks and Recreation of the Senate Comm. on Interior and Insular Affairs, 92d Cong., 1st Sess., pt. 1, at 59 (1971). Senator Church of Idaho observed that methods were available to control and regulate the use of public lands other than admission fees, which would be tantamount to a tax. The committee was especially hostile to the possibility that the Administration’s proposed individual annual permit for entrance into the various federal lands that do charge admission fees might become a basis for charging admission at wilderness areas. See id. at 68-69.

105. See Public Land Law Review Commission, One Third of the Nation’s Land 206-07 (1970). This method, which is the one used by the agencies at present, see notes 107-08 infra and accompanying text, generally favors the early riser and the person who lives nearby. Thus it is best combined with some sort of reservation system. Because it gives each person a reasonably fair chance of getting into the wilderness, however, this system is probably the most equitable, even though it restricts freedom of choice.

106. See ORRRC Study Report 3, supra note 7, at 302. Besides being vulnerable to charges of making the wilderness “elitist,” such a plan would pose great practical problems of development and application. See generally Robinson, supra note 100, at 62-63. The judgments, especially on ability to appreciate, would necessarily be subjective. Finally, studies tend to disprove the idea that any particular class of the population is physically unfit for wilderness recreation. See, e.g., ORRRC Study Report 3, supra note 7, at 130-31.

107. The plan was originally begun in 1971 in the San Gorgonio and San Jacinto wildernesses in the San Bernardino National Forest, but was used only for better user contact and to gather information until 1973, when it was transformed into a rationing system. Both areas then re-
permit program to a number of major parks across the nation, including wilderness areas within the parks.108 To the extent that the promotion of wilderness areas continues, however, it creates increased demand for wilderness recreation and the effect of use restrictions is thus counteracted.

The effect of these plans is not yet clear, although they have been well received by the public.109 To a certain extent, however, any rationing system is unfair;110 and protests may be forthcoming as more and more people are turned away from wilderness areas which they have been encouraged to visit by the advertising of both agencies and conservationists. Such protests, if widespread, could threaten the entire Wilderness System. More basically, the idea of regulated access is in itself incompatible with the idea of wilderness as a natural and unrestricted area. If no other alternative is available, then such controls may be necessary; but before that point is reached other measures, more consistent with wilderness preservation, should be considered.

IV. A PROPOSED REMEDY

The solutions which have thus far been proposed or implemented suffer from the same basic flaw: they are stopgap meas-

108. The National Park Service plan, although not limited to national park wilderness areas, is very similar to that being used by the Forest Service, see note 107 supra. Hikers and campers must obtain a free permit to use specified trails in the remote backcountry areas of a number of major parks. The number of permits issued for each trail or campsite is limited to the number of visitors which park personnel feel these areas can accommodate without environmental damage. When the maximum is reached, other available trails are suggested to applicants. Permits are issued on a first-come-first-served basis. National Park Service Extends Backcountry Protection Plan, supra note 98.

109. See authorities cited in note 98 supra.

110. Any rationing system, by its operation, would favor some group over others. A fee system favors the rich, while a first-come-first-served system favors early risers and those who live nearby. The idea that there should be free access to our public lands is deeply rooted and militates against any rationing system. See Hearings on S. 1893, supra note 104, at 68-69.
ures intended to preserve the multiple-use character of the land while at the same time avoiding damage to the wilderness resource. The effect of overuse upon the wilderness idea has been neither considered nor remedied; in fact, it is in a sense aggravated by imposing further management on the natural area. Yet these results necessarily follow from the heavy emphasis placed on multiple-use and recreation by the governing statutes. So long as this emphasis remains, the problems which now beset wilderness managers cannot be effectively solved.

Therefore, the first step toward a solution is removal of the multiple-use mandate from the statute. The concept of wilderness is incompatible with the concept of multiple-use: wilderness is essentially a single-use or, more properly, a non-use. If administrators are forced to view protected areas as multiple-use land, they cannot make proper decisions in terms of what best preserves the wilderness character. Wilderness managers are similarly constrained by the emphasis on recreation, which therefore should also be removed from the Wilderness Act.

This is not to say that recreation or other compatible uses should be banned from wilderness areas. To a limited extent, these activities can take place without damaging either the resource or the wilderness experience of visitors. The danger lies not in permitting, but in requiring, wilderness lands to be made available for such uses. If the administrator does not have the discretion to permit or prohibit such uses on the basis of their compatibility with wilderness values—as is true under the multiple-use mandate of the Act—wilderness preservation becomes secondary to recreation and other uses.

If the multiple-use concept is deleted from the Wilderness Act and all references indicating the primacy of other uses are removed, the way will be open for the administrator to consider solutions to the problems which endanger wilderness values without considering the effect of those solutions on other uses. In attempting to solve the problems presented by recreational overuse, the administrator would no longer be constrained by the need to keep the wilderness open to the maximum extent as a recreation area. The problem would still remain, of course—changing the structure of the Act could be expected to have no effect on the demand for primitive recreation—but the change in the Act would allow a greater freedom in attacking that problem.

One solution which has been proposed by several writers, and which would be feasible upon the removal of the multiple-
use mandate, is a shift to emphasizing user concepts of recreational land.\textsuperscript{111} Basically, this proposal would reserve wilderness areas for those people who truly desire an unmanaged, wild, and natural recreation experience—without maps, trails, privies, or other similar conveniences. Other areas of varying degrees of "comfort"—and hence management—would be provided to accommodate the recreationists who would be satisfied with something less than a completely primitive wilderness.\textsuperscript{112} If a num-

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\item This idea was developed by Robert C. Lucas, a Forest Service scientist, on the basis of his studies of user perceptions of wilderness. Dr. Lucas concluded:
\end{itemize}

\textit{There are different wildernesses. The dichotomy, which the Wilderness Act continues, between wilderness in one class and all other land in another class, may be unfortunate. A variety of access and facilities, degrees of restriction of nonrecreational uses, and limits on type and amount of recreational use, seems to be implied.}

Lucas, \textit{Wilderness—User Concepts}, 15 NATURALIST, Winter, 1964, at 22, 25-26. See also \textit{Hearings on S. 316, supra note 83}, at 33 (Sen. Hatfield); ORRRC \textit{STUDY REPORT 3, supra note 7}, at 11. Confirmation of the consistency of the semi-wilderness proposal with the statutory definition of wilderness is provided by the National Park Service, which recognizes the dual definition of wilderness, see Scoyen, \textit{National Park Wilderness}, in \textit{Voices FOR THE WILDERNESS} 22 (W. Schwartz ed., 1969), and at present maintains a semi-wilderness program within each national park. See Hartzog, \textit{The Wilderness Act and the National Parks and Monuments}, in \textit{WILDERNESS AND THE QUALITY OF LIFE}, 13, 19-22 (1969). The National Park Service divides land into six classes; one represents wilderness-type areas and another (Class III) is a transition zone similar to semi-wilderness. \textit{But see FSM, supra note 49, § 2320.3 (9)}, which declares that buffer strips will not be maintained for national forest wilderness. The Park Service has been criticized, however, for allegedly classifying land suitable as wilderness into this transition zone, where it is not protected from development. \textit{See, e.g., Brandborg, infra note 115}, at 31, 37.

\begin{itemize}
\item For example, Dr. Lucas found in one study that motorboaters and canoeists perceived wilderness differently: the motorboaters were willing to accept more frequent contact with other humans than were the canoeists. Lucas, \textit{Wilderness Perception and Use: The Example of the Boundary Waters Canoe Area}, 3 NATURAL RESOURCES J. 394 (1964). Based on observations such as this, he recommended:
\end{itemize}

User concepts make possible evaluation of rationing recreational use in terms of at least some measure of its effect on the quality of the use. Expansion might be considered, at least in part, in terms of setting up various types of semi-wilderness in the presently roadless, undeveloped, but undesignated areas which still exist. \ldots The addition of semi-wilderness is probably more feasible than establishing more strictly wilderness areas, and might actually produce more satisfaction for more people at less cost to society.

Lucas, \textit{supra} note 111, at 26. One way of implementing Dr. Lucas' suggestions might be to establish "buffer zones" to accommodate those recreationists who would be satisfied with less than a full wilderness experience. These areas would be suitable for primitive recreation, although not so primitive as that provided in true wilderness areas, and would thereby be expected to divert demand from true wilderness areas,
number of areas of different degrees of primitiveness were present in a given locality, administrative personnel could counsel with the visitors to see that they went to the area which best suited their desire and preparation. That there is a significant demand for a less primitive type of recreation is indicated by the enormous popularity of the Boundary Waters Canoe Area (BWCA) in Minnesota, a semi-wilderness area protected by the Wilderness Act. Since there are really no other areas like the BWCA at present, that demand presumably now serves only to increase the pressure on conventional wilderness areas.

At present, both the limitation of wilderness lands to wilderness use and the establishment of semi-wilderness areas seem unlikely. The wilderness manager is constrained by the multiple-use mandate to keep wilderness lands open to other uses, and opponents of the semi-wilderness idea argue that it is merely a scheme to avoid classifying roadless areas as wilderness so that they remain in a less protected classification. Upon removal of the multiple-use mandate from the Act, however, the wilderness manager's constraint would disappear and the focus of the preservationists' argument could shift to the classification process of deciding what level of protection would best suit the character of each area. The objections of the opponents of semi-wilderness areas could be fully met by giving these lands statutory protection as well, allowing only primitive recreational improvements and establishing many of the safeguards now provided for wilderness.

Such buffer zones of semi-wilderness might be immediately adjacent to true wilderness areas or merely conveniently near. However, the current Forest Service policy is that buffer strips will not be maintained for national forest wilderness. FSM, supra note 49, § 2320.3 (9).


114. See text accompanying note 89 supra.

Preservation of semi-wilderness areas in a near-natural state would allow true wilderness areas to be preserved in a completely natural, unmanaged condition. The exact nature of that condition would, of course, remain a matter of definition since certain minimal management functions would probably be required no matter how little one wished to interfere with the area; for example, administrators would no doubt want to keep the area under general observation to prevent conditions such as fires or insect plagues on the wilderness land from spreading to adjacent non-wilderness land. But management actions should be limited to those absolutely necessary to preserve the wilderness; this would tend to exclude the most objectionable interferences, such as trails, privies, maps, signs, and other improvements which only serve to encourage recreational use.\footnote{\textit{116}} Use of the land would still be possible for those persons willing to accept the land without such improvements, but management designed for recreation or other multiple-uses would not be undertaken.

Obviously, the semi-wilderness proposal is not without its drawbacks.\footnote{\textit{117}} There would be problems in its implementation, \footnote{\textit{116}} See \textit{ORRRC STUDY REPORT 3, supra note 7, at 302: “Generally, it is our impression that constructed ‘primitive’ facilities along major trails are not appropriate to wilderness recreation use, and they act as concentration points deleterious to wilderness conditions.”} \footnote{\textit{117}} A number of arguments have been raised in opposition to the idea. The agencies charged with the protection of wilderness lands have long maintained that certain management of wilderness areas is necessary to accommodate recreational use without permanently damaging the area. For example, Edward Cliff, Chief of the Forest Service, recently stated, “I am personally convinced that the wilderness of the future must be skillfully managed if it is to survive the large increase in use that can be expected.” Cliff, \textit{Discussion}, in \textit{TOMORROW'S WILDERNESS} 176, 179 (F. Leydet ed., 1963). Without trails, maps, publicity, or conveniences, however, it is to be hoped that recreational use would be light enough to obviate the need for such protection. A more serious argument against this concept is that it would result in the creation of an elitist wilderness. \textit{See, e.g., Hearings on S. 1176, supra note 80, at 98-108 (testimony of the Chief of the Forest Service); Hearings on S. 4 Before the \textit{Subcomm. on Public Lands of the Senate Comm. on Interior and Insular Affairs, 88th Cong., 1st Sess. 78-79 (1963).}} Wilderness, however, is by definition elitist; it is an area where only a few may enter and none may remain. Some rationing system is surely necessary in view of the threat of recreational overuse, and a rationing system by its very nature excludes some persons who want to enter. The semi-wilderness system would be fairer than most, since it would ration on the basis of the preferences of the visitor; if he honestly desires a true wilderness experience, then he would not be prevented from entering the wilderness to obtain it; if, on the other hand, he is content with a primitive recreational opportunity, this, too, would be available.
such as the control of litter on the unmanaged true wilderness land. But these problems should be significantly fewer and smaller than those faced by wilderness managers today, because the conflicts underlying many of the current problems would be eliminated.

The tension between the two halves of the dual definition would remain. With the multiple-use concept removed, however, a balance between the two parts would be restored. For example, if the semi-wilderness proposal should be adopted, the "true" wilderness areas could be preserved in a completely natural state, both by a drastic reduction in the number of visitors and by a "hands off" management philosophy, while recreational use and other uses compatible with the overriding purpose of wilderness preservation would still be permitted to a limited extent. Thus both the purist and the practicalist would be accommodated; the balancing approach would be allowed to function at the policy level as well as at the level of day-to-day management decisions. If the semi-wilderness proposal were not simultaneously adopted, the same result could nevertheless be obtained, but the excess recreational demand would have to be turned away rather than satisfied in alternate ways. Clarification of the definition might be desirable in any case in order to ease the problems of classification, but the major management problems could be alleviated by removal of the multiple-use mandate for wilderness land.

V. CONCLUSION

Wilderness is a spendthrift trust. By setting aside wilderness land we preserve certain things, both tangible and intangible, against the excesses of the present. Any use which is to be made of that land in the present should be consistent with the objectives of preservation for the future. The multiple-use provision in the Wilderness Act now makes this nearly impossible and should be eliminated so as to free the administering agencies to take any steps they deem necessary to protect the land.

In doing this, of course, the growing demand for primitive recreation cannot be ignored. This demand, however, does not have to be met by treating all our wilderness areas as recreational land. Greater attention must be paid to the full range of needs of the primitive recreationist, and attempts must be made to satisfy those needs without invading wilderness. It is

118. See text accompanying notes 14-27 supra.
119. See note 7 supra.
the responsibility of the wilderness manager to work out solutions to these problems which best accommodate all needs; it is this for which he has been trained. He cannot do this job so long as he is restrained by statutory provisions which limit his discretion. The courts have recognized the need for wide discretion on the part of the wilderness manager;\textsuperscript{120} Congress should do likewise.

\textsuperscript{120} See Izaak Walton League v. St. Clair, 497 F.2d 849 (8th Cir.), \textit{cert. denied}, 43 U.S.L.W. 3274 (U.S. Nov. 12, 1974), where the court of appeals reversed the district court's ban on mineral exploration in the BWCA and remanded with directions that the Forest Service should be allowed to determine whether an exploration permit should be granted.