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Wilderness: The Last Frontier†

Glen O. Robinson*

I. INTRODUCTION

Among the array of environmental issues, few have so captured the fancy and the fantasy of the environmentally concerned as wilderness preservation. This Article traces the evolution of wilderness preservation and analyzes the administrative, legal, and economic issues of wilderness preservation as a land-use policy. The focal point of the Article is the national forests inasmuch as they comprise the dominant part of the existing and potential future area of wilderness and Forest Service policies have been the dominant element in both the past and current controversies surrounding wilderness preservation. However, the issues and my comments on them have a general relevance not confined either to the national forests or to Forest Service policy.

The values of wilderness have been variously expressed. Some commentators have stressed its scientific and ecological value,¹ and others its recreational value.² But whatever particularized value is specified, ultimate refuge is usually taken in some aesthetic sense. Robert Marshall described wilderness as all the senses "harmonized with immensity into a form of beauty which to many human beings is the most perfect experience of the earth."³ Even many who have never been within sight of a

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* Professor of Law, University of Minnesota (on leave); since July 1974, Commissioner, Federal Communications Commission. The original version of this article was written as part of a larger study of the United States Forest Service and Forest Resource Policy. I am grateful to Resources for the Future, the University of Minnesota, and the United States Administrative Conference for providing financial support for the larger study, and to the Forest Service for its cooperation and assistance. Needless to say, none of the above should be held accountable for the facts or opinions herein, nor should my present employer, the Federal Communications Commission, to which I was appointed after this was written.

1. See generally OUTDOOR RECREATION RESOURCES REVIEW COMMISSION, STUDY REPORT NO. 3, WILDERNESS AND RECREATION 31-33 (1962) [hereinafter cited as ORRRC REPORT NO. 3]; THE MEANING OF WILDERNESS TO SCIENCE (D. Brower ed. 1960).

2. See ORRRC REPORT NO. 3, *supra* note 1, at 28-31.

3. *In the Wilderness*, THE LIVING WILDERNESS, Summer, 1954, at ii

real wilderness have at least some dim perception of its enchantment, thanks in part to the rich profusion of books celebrating its beauty in picture and poetry. On the other hand, to many who have had neither direct nor vicarious experience with wilderness, the preservationist who insists wilderness be preserved at the sacrifice of other land uses often appears as an irrepressible romantic, or a wild-eyed zealot, depending on the intensity of his ardor. As viewed by the steely-eyed pragmatist, the preservationist preaches an elitist creed in urging that land be taken out of uses serving large numbers of the public in favor of restricting it to selective use by a mere handful of enthusiasts (by definition the wilderness cannot accommodate more). This objection surely has substance when measured against the demands of some preservationists; and yet the extremes of one end of the spectrum need not propel us to the extremes of the other. The wonder of wilderness and the value of its preservation are recognized by many who could scarcely be described as romantic, let alone fanatic.

It is not simply in a personal acquaintance with pristine nature that wilderness has meaning and value. It has a larger social and cultural significance as well. It is the symbol of what modern civilization has lost. Wallace Stegner has eloquently expressed this:

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 idea.⁴

In more prosaic, homely terms, wilderness dramatizes the opportunity cost of civilization, what we have given up in “natural” values to obtain the “artificial” benefits of social living. And in an age in which the social “benefits” are all too visibly promoted (by advertising among other things), there is special need to retain at least some visible reminder of our loss. Whatever the rationale, it is hard to deny the existence of a strong *instinct* for maintaining some tie, some residual hold upon a more primitive life, and it is from this instinct that the concept of wilderness ultimately derives its support.

(editorial). For a sampling of other, comparable expressions see R. NASH, *WILDERNESS AND THE AMERICAN MIND* (rev. ed. 1973) [hereinafter cited as NASH].

4. Quoted in ORRRC REPORT No. 3, *supra* note 1, at 34.

The instinct is not a genetic characteristic, to be sure; it is, in fact, the product of very modern times.⁵ Despite its ancient presence at the frontier of man's social world, the *concept* of wilderness is of recent origin. Only now that modern man is faced with its near elimination has the idea of wilderness and the desire for its preservation captured his imagination. As with most things, value comes from scarcity. To the colonist and to the pioneer, wilderness was just a condition of the land. There was no developed social consciousness about wilderness, no concept of it as a thing of nature, to be preserved, cherished, valued. Of course, there were those who specially valued the wilderness and its beauty, but in a new world, in which subsistence was a daily problem, this was a luxury for which little time was afforded. And any such appreciation had to be tempered with the harsh reality that the wilderness condition was the relentless barrier to social settlement. Thus, for most persons wilderness was only something to be overcome. The value of the natural environment lay only in its ability to sustain the physical needs of people pursuing the Biblical injunction to subdue and conquer the earth.

After basic subsistence had been secured from the wilderness, pioneering and economic expansion extended the conquest. The early efforts were largely individual and private; these had an impact on the frontier, though a limited one. The real thrust of expansion followed the Civil War and was heavily promoted by the federal government (and, to a much lesser degree, by state and local governments) through land grants to public and private enterprise and grants of homesteads to individual pioneers. In the face of railroads, wagon trains—and in their wake, settlements and cities—the frontier quickly disappeared, and with it some (though by no means all) of the wilderness.

In the midst of expansion, however, some contended for government protection and preservation of large tracts of land. A proposal was made as early as 1832 by George Catlin, painter of the Indian West, to preserve vast areas of the Great Plains for the benefit of Indians and buffalo.⁶ His proposal received little serious attention. However, the sentiment for preservation persisted and reappeared, in modified form, in 1864, when Congress ceded lands in Yosemite Valley and Mariposa Grove in California, and eight years later when it created the first national park,

5. NASH, *supra* note 3, gives an excellent history of the wilderness concept, from which I have greatly drawn in the following discussion.

6. NASH, *supra* note 3, at 100-01.

Yellowstone. But national parks were not established with the intention of preserving wilderness as such; the main purpose was to secure these areas for public recreational use and to prevent them from being monopolized by private interests which, but for the withdrawal into national parks, would patent or homestead the lands. Essentially the decision was a pragmatic one which gave little attention to preservation of wilderness values.⁷ The significance of the withdrawals of these lands from private use is not that they represented a searching exploration or acceptance of the value of wilderness as such, but that they evidenced the beginning of a public land-use philosophy.

The philosophy which would later give the wilderness preservation movement its intellectual substance, however, had been developing. As urban life became more common, people took to the wilds for recreation or other pursuits. The early wilderness promoters were mostly idealists, romantics in the vein of Emerson, Thoreau, and later Muir, who saw wilderness as a source of the insight and refreshment which could best come from untrammelled nature. Ecologist George Perkins Marsh gave important support to later preservationists by arguing that unthinking destruction of the wilds would disrupt the natural process on which men ultimately depend for survival.⁸

Toward the end of the nineteenth century a conservation movement, which was to contain and nurture the germ of the wilderness preservation effort, began to emerge. The passage of the Forest Reserves Act of 1891⁹ provided the first comprehensive vehicle by which wilderness could be initially protected, and also showed that conservationists were starting to have some noticeable effect on land-use policy. The Act, however, was not primarily preservationist. Conservationists of all persuasions tended to band together against the "resource raiders" (as Stewart Udall has called the timber and mining interests¹⁰). Thus, preservationist leaders such as John Muir did support the Act,¹¹ but so did multiple-use oriented foresters. The lines of future conflict between managed use—"conservation"—and preservation were soon to emerge, however, with the formation of the Sierra Club in 1895 and the development of the Forest Service after 1905.

7. See W. EVERHART, *THE NATIONAL PARK SERVICE* (1972); J. ISE, *OUR NATIONAL PARK POLICY* (1961).

8. See G. MARSH, *MAN AND NATURE* 327 (1867).

9. Act of March 3, 1891, ch. 561, 26 Stat. 1103.

10. S. UDALL, *THE QUIET CRISIS* 64-80 (1963).

11. NASH, *supra* note 3, at 133.

Between 1906 and 1913 a skirmish took place between the advocates of wilderness preservation and wilderness resource utilization. San Francisco, which had just been shaken by an earthquake, urgently renewed its request that it be permitted to build a dam in the Hetch-Hetchy Valley on the Yosemite reservation.¹² John Muir and Robert Underwood Johnson, a publisher and wilderness lover, campaigned against the dam, blocked it in Congress for seven years, and convinced Theodore Roosevelt to change his position and oppose the dam (contrary to the advice of Gifford Pinchot, then Chief of the Forest Service). As never before, the conflict between preservation and use was starkly dramatized. The intense debate was an early rehearsal of controversies to come. Preservationists urged recognition of spiritual, aesthetic, and recreational values, while dam builders explained that wilderness, however desirable, must yield to the greater good represented by material progress. The builders won. It was a celebrated victory, but probably a pyrrhic one for, as John Muir put it, "the conscience of the whole country was aroused from sleep."¹³ To preservationists Hetch-Hetchy became the Alamo of wilderness, a symbol and a call to arms. The national forests soon became the principal battlefield.

II. HISTORY OF WILDERNESS PRESERVATION

The important imprint of history on the current scheme of wilderness preservation calls for a somewhat extended review of the evolution of the preservation policy. Since the relevant history of wilderness preservation centers largely on Forest Service policies, so does the discussion which follows. The Forest Service early set itself against any general policy of preservation for its own sake. Gifford Pinchot, the "father" of the Forest Service,¹⁴ and the dominant figure in the formative years of forest conservation, was no John Muir. He believed forest resources should be actively managed to satisfy the needs of those who would benefit most from their use:

12. On the Hetch-Hetchy episode see W. EVERHART, *supra* note 7, at 15-17; J. ISE, *supra* note 7, at 85-96; NASH, *supra* note 3, at 161-81.

13. Quoted in W. EVERHART, *supra* note 7, at 16.

14. The ancestry of the Forest Service antedates Pinchot by more than a decade. However, it was under Pinchot that the small Division of Forestry, which he joined in 1898, became (in 1905) the Forest Service and acquired management jurisdiction over the national forests (then the "forest reserves"). On Pinchot generally, see M. McGEARY, GIFFORD PINCHOT (1960). On the history of the Forest Service generally, see S. DANA, FOREST AND RANGE POLICY: ITS DEVELOPMENT IN THE UNITED STATES (1956).

The object of our forest policy is not to preserve the forests because they are beautiful . . . or because they are refuges for the wild creatures of the wilderness . . . but . . . [is] the making of prosperous homes. . . . Every other consideration comes as secondary.¹⁵

Pinchot's philosophy steered early policy towards productive managed use and away from wilderness preservation, but his was not the sole influence. Local interests were—and continue to be—a major influence, and they have tended to be less enthusiastic supporters of wilderness than nonlocal interests, at least where significant costs to the local economy are involved.¹⁶

However, the emergence of outdoor recreation as an important concern of the Forest Service brought with it some recognition of the need for wilderness preservation. The first wilderness policies were originated at local levels by officers who had authority, within their budgets, to incorporate recreational considerations into forest-use planning. Aldo Leopold, then an assistant district forester in the district (districts were called regions after 1930) encompassing New Mexico and Arizona, provided a major initial impetus for wilderness preservation. When plans were laid to put roads into the roadless areas of the Gila National Forest, Leopold, aware that the Gila area was the last big roadless area in the district, proposed that the area be withheld from road development and maintained as a wilderness preserve.¹⁷ The Gila fit Leopold's description of an area that should be preserved as wilderness: it was large and could support an extended pack trip, it had abundant game, its preservation would not duplicate other preservation efforts, its timber was not economically accessible, and its mineral potential was not such that it had induced miners to enter the area.¹⁸ When his proposal evoked little initial response of any kind from the public or from the Service, Leopold attempted to stimulate interest through a series of articles in which he described a philosophy of wilderness protection that became influential in shaping sub-

15. Quoted in S. HAYS, *CONSERVATION AND THE GOSPEL OF EFFICIENCY* 42 (1959). See also G. PINCHOT, *BREAKING NEW GROUND* 31-32, 183-85, 266 (1947).

16. This is well illustrated by the controversy over wilderness proposals in West Virginia, discussed in K.P. DAVIS, *et al.*, *FEDERAL PUBLIC LAND LAWS AND POLICIES RELATING TO MULTIPLE-USE OF PUBLIC LANDS, A STUDY FOR THE PUBLIC LAND LAW REVIEW COMMISSION* 32-37 (rev. ed. 1970) [hereinafter cited as DAVIS, *et al.*].

17. For a full account of this early history, from which I have drawn heavily, see J. Gilligan, *The Development of Policy and Administration of Forest Service Primitive and Wilderness Areas, 1954* (unpublished Ph.D. thesis, University of Michigan).

18. ORRRC REPORT NO. 3, *supra* note 1, at 115, 286.

sequent Forest Service wilderness policies. Leopold's recommendations included a proposal that wilderness lands be placed immediately in a kind of tentative, holding category and withheld from development until a permanent decision could be made on the basis of the popular will. For the longer term he urged permanent preservation of some public lands, for which wilderness, rather than commercial exploitation, would be the "highest use."

Although couched in terms of standard, progressive land-use ideas, Leopold's proposals were a significant extension of those concepts. Critics, inside and outside the Forest Service, charged that the proposed wilderness program was elitist and would not result in the greatest good for the greatest number. It was also said that wilderness preservation would conflict with political and professional desires to facilitate free and full use of the national forests. It would complicate fire control. And, it was finally argued, the National Park Service, established in 1916, was the federal agency best equipped to provide for the recreational needs of the people; the Forest Service should not compete with it for management of lands suitable primarily for recreational purposes.

Despite these objections, Leopold, with the support of the Sierra Club and the Izaak Walton League, convinced the district forester in 1924 to designate an area of more than 700,000 acres in the Gila Forest as a wilderness area that would be withheld from development until needed for some other purpose. It was the first official wilderness area, but the idea quickly spread, and by 1925 five other areas in other regions had been designated as wilderness.

Initially the classifications were purely a matter of regional policy; soon, however, a nationwide wilderness policy began to emerge within the Forest Service as part of that agency's growing emphasis on recreation. It was recognized by the Forest Service that a wilderness policy would gain it the support of wilderness advocates for its desired role in recreation; it was further recognized that by providing unrestricted, undeveloped recreational opportunities, the Service could distinguish its recreation administration from that of the Park Service, which promoted development of some wild lands. This would enhance the role of the Forest Service as a recreation agency and justify its retention of lands whose "highest use" was for recreation. It was evident also that there was growing public support for some form of wilderness preservation. For example, a proposal to

build roads in the Superior National Forest in northern Minnesota evoked vigorous opposition from sportsmen's groups and the Izaak Walton League. This opposition generated a controversy which eventually had to be resolved by the Secretary of Agriculture, who in 1926 established the area as a specially protected "canoe area."¹⁹

As finally formulated, however, the wilderness policy placed few restraints on regional foresters, who retained broad discretion to decide whether lands should be withdrawn for wilderness. In fact, the policy was little more than a recommendation to the field officials that they should consider wilderness values in their planning.²⁰ In 1928, the Service promulgated formal regulations which gave increased centralized direction to wilderness protection by providing that wilderness areas—now called "primitive areas"—were to be established and abolished only by action of the Chief of the Forest Service. However, the new regulations did not greatly restrict foresters in their management efforts. The local officers had power to develop their recommended plans to provide freedom in meeting commercial and other needs. Wilderness classification did not necessarily preempt continuation of economic activity. The history of the "primitive areas," 63 of which had been established on national forest lands by 1933, shows that economic activity had occurred in many of the areas; logging activities were specifically permitted in 23 areas and affirmatively prohibited in only eight. Grazing took place in 53 areas and was barred in ten. Roads were expressly prohibited in none of these areas.²¹ Plainly, the concept was a tolerant and flexible one—too much so to satisfy preservationists. When Robert Marshall, one of the founders of the Wilderness Society, was brought into the Forest Service to head the Division of Recreation and Lands in 1937, it was a recognition that a change was needed.²²

19. A detailed history of the Boundary Waters Canoe Area (so named in 1958) is given in FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, TRAINING GUIDE FOR THE SUPERIOR NATIONAL FOREST (1965); a short, summary history is given in S. DANA, J. ALLISON & R. CUNNINGHAM, MINNESOTA LANDS 117-28 (1960). Although the area was specially recognized by statute in 1930, Act of July 10, 1930, ch. 881, § 1, 46 Stat. 1020 (codified at 16 U.S.C. § 577 (1970)), the basis for management remains essentially the policy statement of Secretary Jardine in 1926. The area is, of course, now part of the Wilderness System, though a unique part.

20. See J. Gilligan, *supra* note 17, at 101, quoting from a 1926 Forest Service Bulletin.

21. J. Gilligan, *supra* note 17, at 134.

22. Marshall had previously been head of the Forestry Division in the Bureau of Indian Affairs. His appointment by Chief Silcox as head

Marshall, however, was only partially responsible for the greater attention paid to wilderness. Rivalry with the Department of the Interior, which had earlier played a role in stimulating Forest Service interest in wilderness, was again pushing the agency in the direction of greater attention to outdoor recreation and wilderness preservation. Particular impetus came from the efforts of Interior Secretary Harold Ickes to transfer the Forest Service to a Department of Conservation²³ and also by the Park Service's campaign to obtain national forest lands for park use.²⁴ As part of its increased concern with wilderness, the Forest Service adopted, in 1939, regulations designed to give greater protection and permanence to wilderness areas. Under the new regulations, all primitive areas were to be carefully studied, pared to eliminate commercial aspects that would be needed in the future, and reclassified from primitive area status to wilderness

of the Division of Recreation and Lands represents one of those exceptional instances when an outsider has been brought into high echelons of the Forest Service.

23. Ickes' proposal was to reorganize the Department of the Interior into a Department of Conservation: a proposal made to the Senate in 1935 by S. 2665, 74th Cong., 1st Sess. (1935) and to the House in a companion bill, H.R. 7712. Neither the proposal nor the two bills required the transfer of the Forest Service or national forests into the new department. The composition of the new department was to be determined by the President, and Ickes himself refused to acknowledge that he sought such a transfer. See *Hearings on H.R. 7712 Before the House Comm. on Expenditures in Executive Departments*, 74th Cong., 1st Sess. 1 (1935). However, it was widely recognized that the logical thrust of the bill, and the ultimate objective of Ickes himself, was to obtain transfer of the national forests to the new department. See 2 SECRET DIARY OF HAROLD ICKES 8 (1954). This realization evoked vigorous opposition to the plan from the Forest Service and its supporters.

It might be noted that Ickes proposal was neither the first nor the last effort to consolidate the Forest Service and Interior. In the period 1913 to 1921, bills were successively introduced to transfer the Forest Service to Interior. See H. CLEPPER, *PROFESSIONAL FORESTRY IN THE UNITED STATES* 60 (1971). Clepper attributes these efforts to a political motive to cripple the Forest Service, which had attracted the particular ire of Western interests. However, numerous proposals were made from 1920 up to the time of Ickes' efforts, seeking consolidation on the credible (if exaggerated) rationale of efficiency. Several bills were introduced during the Harding, Coolidge, and Hoover Administrations.

The failure of these proposals and of Ickes' efforts (the most sustained and vigorous of all the efforts to that time) have not discouraged proposals for consolidation. The most recent was part of a more ambitious executive reorganization proposal, now moribund, of the Nixon Administration. See H.R. Doc. No. 75, 92d Cong., 1st Sess. 9 (1971).

24. See, e.g., BROOKINGS INSTITUTION, REP. NO. 11, *INVESTIGATION OF EXECUTIVE AGENCIES OF THE GOVERNMENT, REPORT TO THE SENATE SELECT COMMITTEE TO INVESTIGATE THE EXECUTIVE AGENCIES OF THE GOVERNMENT* 88 (1936).

(areas of 100,000 acres or more) or wild (areas of less than 100,000 acres) area status.²⁵

The 1939 regulations implied, for the first time, a commitment to permanent preservation and to a high degree of protection—both key features of current wilderness policy. Road building, the activity which had given rise to the Service's wilderness policies in the 1920's, was forbidden in wilderness areas. Exceptions were provided, however, for owners of private lands situated within the wilderness boundaries and for miners who could not be barred from working their claims by the Forest Service alone. Commercial timber harvesting was completely barred. Summer camps, resorts, or other structures were, except as needed for fire protection, categorically forbidden in the new classified areas.²⁶

The process of classification from primitive to wild or wilderness status proved to be a slow one.²⁷ The Second World War had a somewhat retarding effect, but probably more significant was the antagonism of many, within and outside the Service, to the permanent preservation of wilderness lands. Foresters, unhappy that their fire protection or resource-management programs would be complicated by the reclassification of areas and the proscription of roads from their lands, did not vigorously press forward with the reclassification efforts. Their unhappiness was reinforced by substantial industry and public resistance. Some local forest officials continued to utilize management plans promulgated under the old regulations for primitive areas that had not been reclassified. To correct this, a directive was issued ordering foresters to manage primitive areas as though they had been classified and to request permission from Washington before any development efforts were undertaken.²⁸ Thus the primitive areas were to be protected until they had been formally classified. However, the commitment to permanent

25. The 1939 regulations—identified as U-1 (wilderness areas), U-2 (wild areas), and U-3 (recreation areas suitable for recreational use, but not for preservation)—and related directives governing reclassification and interim management of the primitive areas are set forth in J. Gilligan, *supra* note 17, at Appendices C-D.

26. See J. Gilligan, *supra* note 17, at 193.

27. In the first decade that followed, only 2 million of the nearly 14 million acres then in primitive classification were reclassified. While great increases were later made—some 9 million acres were reclassified by 1964—they were a late development which occurred only in the shadow of pending legislative proposals for a statutory wilderness system.

28. Circular U-8 (March 30, 1940), reproduced in J. Gilligan, *supra* note 17, Appendix D, at 9.

preservation of wilderness, which the 1939 regulations promised, was blunted. The primitive areas were again placed in a kind of temporary status which was not changed except as demands for the resources of an area set the formal classification procedure in motion.

Not only the pace of reclassification but also the results of the reclassifications that did occur were challenged by preservationists. Particularly distressing to them was the practice of removing valuable timber lands from areas to be classified as wilderness, thereby reducing the size of particular areas. Although between 1939 and 1963 there was a net gain in protected acreage of more than 130,000 acres,²⁹ the average size of the protected areas decreased, and of all the previously nonclassified areas added, only one of the total 14 was of wilderness size.³⁰ In addition, qualitative changes occurred: the Forest Service exchanged verdant valley timber land for acreage above the timber line. There was also growing skepticism among preservationists as to whether the Forest Service would, or could, maintain permanent preservation even for lands classified as wilderness. The mounting public demand for forest products and forest use only increased the anxiety that a natural distrust of the bureaucracy instilled.

Preservationists began to seek surer protection for wilderness through Congressional action; as early as 1947 the idea of a statutory wilderness system began to take shape.³¹ However, it was nearly a decade later when Congress first considered a bill to accomplish this, and some eight more years passed before the Wilderness Act of 1964³² was enacted.

The Act created a system of statutory preservation for some 9.1 million acres of national forest lands already placed in wilderness status by prior Forest Service classification. In addition to this "instant wilderness," it provided for a 10-year review by the Forest Service of its primitive areas and for recommendations with regard to inclusion of these areas in the wilderness system. The Department of the Interior was directed to under-

29. J. Hughes, *Wilderness Land Allocation in a Multiple-Use Forest Management Framework in the Pacific Northwest* 259, 1964 (unpublished Ph.D. thesis, Michigan State University).

30. *Id.* at 260.

31. See Mercure & Ross, *The Wilderness Act: A Product of Legislative Compromise*, in *CONGRESS AND THE ENVIRONMENT* 53 (R. Cooley & G. Wandersforde-Smith eds. 1970).

32. Act of Sept. 3, 1964, Pub. L. No. 88-577, 78 Stat. 890 (codified at 16 U.S.C. §§ 1131-36 (1970)).

take a similar review and to make recommendations with regard to all roadless areas within the national parks and wildlife refuges. Lands included in the system were withdrawn from timber harvesting, road building, commercial activities, and other uses incompatible with the wilderness character. Uses requiring motor transportation, except as required to gain access to private lands where the use of motors was well established, were also banned, and mining exploration is to be prohibited beginning in 1984.

The Act was obviously a victory for preservationists even though it did not give them all they had demanded. The victory was not achieved easily, however, and certainly not without prolonged and sometimes bitter controversy.³³ For the most part, the debate skirted the foundational question whether any land should be preserved as wilderness. There were few interests which by the late 1950's would not at least publicly express some support for the idea of preservation. Thus, the debate was cast largely in terms of ostensibly subordinate issues: whether *statutory* preservation was necessary or desirable; what kinds of uses should be permitted in preserved areas; and what kinds of procedures should govern the classification process. Although these questions seemingly assumed the desirability of preservation, in fact each of the issues vitally affected the basic one of preservation itself.

The question of statutory, as opposed to administrative, preservation was of course the very heart of the controversy, since that was the whole point of the legislation. Preservationists argued that administrative discretion was not adequate. Not only was it subject to easy reversal, but also it could not be relied upon to support an expansive recognition of wilderness. The Forest Service and Park Service initially opposed the concept of statutory preservation.³⁴ Both agencies saw the proposed wilderness legislation as depriving them of administrative discretion and flexibility in managing the forest and park lands.

The Forest Service had special reason to fear the Act. Quite apart from the fact that the Act would constrain its discretion in regard to wilderness areas, the Forest Service feared that if particular lands were dedicated by *statute* to some particular use, similar treatment of other uses could follow. The effect of

33. On the general legislative history of the act, see Mercure & Ross, *supra* note 31; McCloskey, *The Wilderness Act of 1964: Its Background and Meaning*, 45 ORE. L. REV. 288 (1966).

34. See Mercure & Ross, *supra* note 31, at 54.

this would be to replace the agency's multiple-use system with a dominant-use scheme. This would also incidentally undercut the Service's jurisdiction, for if land use were to be prescribed by statutory classifications of dominant use, a logical further step might be to reorganize administrative control accordingly. In particular this might mean that many of the agency's recreation-dominant areas would pass from the Forest Service to the National Park Service.

The preservationists attempted to meet this objection by including in the proposed legislation a provision that multiple use would continue to be the goal of forest policy. It was not enough. Instead the Forest Service sought, and with enactment of the Multiple-Use and Sustained-Yield Act of 1960³⁵ it obtained, separate congressional ratification of the multiple-use principle. Armed with that security, the Forest Service withdrew its opposition to the Wilderness Act. The Park Service followed suit, apparently concluding that preservation would not greatly alter the character of national park lands.

Needless to say, the agencies were not alone in their early opposition to statutory recognition of wilderness; they were joined by all commercial users of the forests. Timber, livestock, power, and mining interests all advocated maintaining multiple-use management and urged that any preservation be accomplished only by administrative decision, expecting this would serve their needs more flexibly than would a statutory system.³⁶ This was particularly true of mining and water-development (chiefly hydroelectric power) interests. Under the Forest Service's administrative system of wilderness preservation, their activities had been largely unhampered. The Forest Service has virtually no power to limit or regulate mining or the construction of dams within the national forests. The legislation initially proposed would have banned both these activities. Small wonder, then, that both these users of the national forests were particularly vocal opponents of wilderness legislation.

As suggested by the opposition of the mining and water-development interests, the question whether preservation should be prescribed by legislation was intimately bound up with the question of what uses were to be permitted in areas set apart as wilderness. For activities such as timber harvesting, the statutory scheme would not, of course, have changed the status quo.

35. Act of June 12, 1960, Pub. L. No. 86-517, 74 Stat. 215 (codified at 16 U.S.C. §§ 528-31 (1970)).

36. See McCloskey, *supra* note 33, at 298-99.

Harvesting was already banned by statute on all national parks and wildlife refuges and by agency regulation on Forest Service primitive areas. The mining and water-development interests, whose uses of the land would be curtailed, fought for special provisions to permit their continued access to wilderness areas; as the legislation was finally enacted, they did obtain some concessions. Mining was banned, but the ban was not to be effective until 1984. Water development—dam construction—could continue on a finding by the President that it would be in the national interest. Except for these activities, the legislation made little change in the kind and level of protection given wilderness under the prior administrative scheme for, as noted, parks and wildlife refuges were already protected by statute and the primitive and wilderness areas of the Forest Service were protected by regulation. One change in regard to the latter areas was effected by the Act's ban on grazing except where it had been previously established; but inasmuch as grazing on wilderness lands had been decreasing anyway,³⁷ this was not an important change.

The last major set of issues in the controversy involved the determination of what lands should be included in the system, and, more particularly, how the determination was to be made. On the one hand, there was no real dispute that lands already classified as "wild" or "wilderness" (some 9.1 million acres) should be automatically included as "instant wilderness." Conversely it was generally agreed that parklands and refuges administered by the Department of the Interior should not be included until after the review to determine whether they were of predominantly wilderness character and whether preservation was in other respects appropriate. This left the Forest Service's primitive areas, for which a final review and determination as to permanent status had not been made, but which were being preserved as wilderness pending permanent classification. Preservationists urged that these lands be provisionally included in the system subject to subsequent exclusion only on a showing that they should not be protected as wilderness. The Forest Service, among others, opposed such an interim inclusion as unwarranted. Both sides correctly saw the issue as one of procedural strategy and political advantage. Interim inclusion would not in any way affect the level of protection accorded the lands, since primitive areas were managed in the same manner as wilderness lands. But it could affect the burden of proof. Preser-

37. See ORRRC REPORT No. 3, *supra* note 1, at 89.

vationists reasoned that it would be more difficult for the Forest Service to exclude an area than not to include it. In the end, the preservationists lost; however, in retrospect the loss was probably not important. With relatively minor boundary adjustments—which have actually resulted in an area's being recommended for preservation which was greater than that within existing primitive area boundaries—all of the primitive areas reviewed to date have been proposed for inclusion and it seems very unlikely that they will not be favorably acted on by Congress.³⁸

Apart from the issue of interim inclusion, the debate over the process of making wilderness classifications centered on two questions: first, who should make the initial selection of candidate areas; and second, what should be the role of Congress. As to the first, the preservationists sought to shift responsibility away from the Forest Service—a further reflection of that same distrust of the agency which was a major motive for their seeking the legislation in the first place. Instead, it was proposed to establish a Wilderness Preservation Council (composed of six citizen members and the heads of the Forest Service, Park Service, Bureau of Indian Affairs, Fish and Wildlife Service, and Smithsonian Institution) which would examine all agency evaluations and proposals and transmit them to Congress.³⁹ The Council was intended to guide agency discretion by contributing its own expertise and by providing public scrutiny of the agency's review process. The Forest Service vigorously opposed the idea of an outside group reviewing its work, and ultimately the Council idea was dropped. Under the statute as enacted, the President transmits reports to Congress. Unlike the Council, which would have had only the duty to transmit and perhaps to create some fanfare about the agency reports, the President was given broader powers in several areas. First, he can not only recommend a change in the boundaries suggested by the agencies, but he can also recommend that "any contiguous area of national for-

38. Although individual proposals by the Forest Service have been frequently attacked by preservationists, it is noteworthy that in the wilderness proposals made through 1973, the Service's recommended additions to the Wilderness System have exceeded by over 400,000 acres the acreage in the primitive areas which were the basis for those proposals. U.S. DEP'T OF AGRICULTURE & U.S. DEP'T OF THE INTERIOR, NINTH ANNUAL REPORT ON THE STATUS OF THE NATIONAL WILDERNESS PRESERVATION SYSTEM, H.R. Doc. No. 194, 93d Cong., 1st Sess., pt. 1, at Appendix III (1973) [hereinafter cited as NINTH ANNUAL REPORT].

39. See, e.g., S. 1123, 86th Cong., 1st Sess. § 4(a) (1959).

est lands predominantly of wilderness value"⁴⁰ be added to the system. Further, he can declare an increase in the sizes of primitive areas within prescribed limits and, in this manner, increase the area to be administered as a primitive area while the congressional review is proceeding. The role of the President later became a pivotal issue in the celebrated case of *Parker v. United States*,⁴¹ which involved the classification of lands contiguous to primitive areas.

As to the role Congress was to play in the wilderness allocation decision, the two competing alternatives were a negative veto power and a requirement that areas be added to the wilderness system only upon enactment of affirmative legislation. Preservationists sought the former on the assumption that any requirement of affirmative congressional action could delay, and in many cases defeat, proposals to add primitive areas to the system. Jealous of its power, Congress chose the latter.⁴²

III. WILDERNESS CLASSIFICATION: THE REVIEW PROCESS

The impact of the Wilderness Act on forest resource policy is not easy to measure. The "instant" inclusion of some 9.1 million acres already administratively classified as wild or wilderness may have given a more permanent status to those lands—so preservationists believe—but that is debatable. While the future of primitive areas, as well as that of other unclassified roadless areas, was clearly uncertain, there is little indication that most of the lands classified as wilderness were any more susceptible to reclassification for nonwilderness use under administrative than under congressional discretion. While one might suppose that administrative classifications are inherently more flexible, in this case that is not so evident; the fact is much of the land that the Service transferred into the wilderness classification is land for which other uses, particularly timber production, are very limited.

The Act did, of course, achieve some additional protections for wilderness and primitive lands, at least one of which—the 1984 ban on mineral exploration⁴³—was beyond the power of the

40. 16 U.S.C. § 1132(b) (1970).

41. 309 F. Supp. 593 (D. Colo. 1970), *aff'd*, 448 F.2d 793 (10th Cir. 1971), *cert. denied*, 405 U.S. 989 (1972). See text accompanying notes 71-76 *infra*.

42. 16 U.S.C. § 1132(c) (1970).

43. In *Izaak Walton League of America v. St. Clair*, 353 F. Supp.

Forest Service. However, for the most part the differences between administrative and statutory protection do not, at least yet, appear substantial.

The principal impact of the Act was the mandate to the Forest Service to review all primitive areas with a view towards permanent preservation of lands deemed suitable for wilderness and the mandate to the Department of the Interior to make comparable studies of national park and wildlife refuge lands. Of course, the Forest Service had already been engaged in a process of review and reclassification of primitive areas under its 1939 regulations, during the pendency of which primitive lands enjoyed the protection of wilderness. However, until proposals for a Wilderness Act appeared, the Service's own review and classification efforts had been desultory. It is true that by the time the Act was passed, some three-fifths of the acreage initially classified as primitive had finally passed into permanent wilderness. Much of this, however, was accomplished under the shadow of a proposed statutory scheme that would have mandated such protection, possibly on terms that would have limited Forest Service discretion. In short, the pendency of the legislation was undoubtedly a spur to administrative action. Moreover, without the mandate of the Act, the process of administrative review might have ground to a halt as it had done before. Such a slow-

698 (D. Minn. 1973), a federal district court, finding mining to be incompatible with wilderness preservation, held that the former was prohibited by the Wilderness Act notwithstanding the fact that the Act very specifically postpones such a ban until 1984. This decision was reversed on appeal on the basis of the language of the statute permitting mining until 1984. The appellate court stated:

[T]he factual questions regarding the effect of mining activity upon the wilderness, and whether a permit should issue with restrictions that would be adequate to protect the wilderness quality of the [Boundary Waters Canoe Area] are those types of questions peculiarly within the competence of the Forest Service, and statutorily delegated to it by the Wilderness Act.

497 F.2d 849, 852-53 (8th Cir.), *cert. denied*, 43 U.S.L.W. 3274 (U.S. Nov. 12, 1974). The case was therefore remanded with directions to allow the Forest Service to determine whether a mining permit should be issued and to develop a record on that determination.

Attempts have also been made to change the mining provisions of the Act through legislation. A bill was introduced in the 93d Congress that would amend the Wilderness Act to prevent mining and mineral exploration on wilderness areas immediately. S. 1010, 93d Cong., 1st Sess. (1973). The Forest Service opposes the bill, preferring the Administration's bill, which would revise the mining laws to allow the federal government to control mineral activity on *all* public lands through a leasing system. *Hearings on S. 1010 Before the Subcomm. on Public Lands of the Senate Comm. on Interior and Insular Affairs*, 93d Cong., 1st Sess. 60 (1973) (statement of the Chief of the Forest Service).

down was particularly likely because the Service's review process had already taken care of the easiest choices—those most suitable for wilderness and those involving the least sacrifice of other valued uses. Perhaps most important of all, the Act expressed a political mood in favor of substantial wilderness preservation. While this mood did not itself create any new wilderness, it put political pressure on the Forest Service to think twice before excluding existing primitive areas from the permanent wilderness system. In plain political reality the Act ensured that virtually all of the existing primitive areas would be proposed for inclusion and that the only real contention would be over boundaries. This in fact has been the case.

As this is written the 10-year review period established by the Act is nearing an end (although most of the administrative review process has been completed, Congress has yet to consider all of the proposed additions to the system⁴⁴). This is by no means the end of the review and classification task, however. On the contrary, there lies ahead a task more formidable than what has gone before: the review process now shifts from formally classified primitive areas to unclassified and heretofore unstudied roadless areas within the national forests.

The Wilderness Act *mandated* an evaluation of national forest lands which are within or contiguous to existing primitive areas. Thus, the principal thrust of the classification process so far as the Forest Service is concerned is to review its own prior classifications. In addition, however, the Act permits—but does not specifically mandate—review of other roadless areas outside of (and not necessarily contiguous to) existing primitive areas. In 1967, the Forest Service undertook an inventory program for such roadless areas to determine their suitability for inclusion in the Wilderness System.⁴⁵ Regional foresters were

44. A status report as of July, 1973, indicates that a total of 11 million acres was in wilderness status; the three agencies had proposed the addition of 9.3 million acres, but this proposal was awaiting congressional action. See FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, FINAL ENVIRONMENTAL STATEMENT ON ROADLESS AND UNDEVELOPED AREAS 10 (1973) [hereinafter cited as FINAL ENVIRONMENTAL STATEMENT]. Final administrative action on some 2.9 million acres of primitive areas was at that time uncompleted, as was final action on the vast bulk of Interior lands (over 50 million acres) to be studied. It is doubtful, however, that much of this park and refuge land will be found appropriate for preservation.

45. The basis on which the Forest Service undertook this inventory was the Multiple-Use and Sustained-Yield Act of 1960, 16 U.S.C. §§ 528-31 (1970), which, of course, recognizes wilderness as a use of the national forests. Presumably the reason for basing the inventory on the 1960 Act rather than the Wilderness Act was that the Service believed it would

directed to inventory all roadless areas of 5000 or more acres and select those warranting future study as to possible wilderness classification. This inventory was the product of mixed motivation. Part of the initiative came from the preservationists. Aware of vast acreage of roadless forest lands outside the existing primitive areas, national parks, or wildlife refuges, the preservationists wanted to insure that such lands would not be frozen out of the Wilderness System. The strength of their interest is understandable once it is noted that these national forest roadless lands of 5000 acres or more comprise a total area which is more than three times the size of the total existing Wilderness System. While national forest lands in wilderness or primitive classification total some 15 million acres, the additional roadless areas comprise an area of approximately 56 million acres.⁴⁶ However, demands by preservationists, who received a hearing at the White House before the order to study these areas, were not the lone motive for undertaking this inventory. Although the Forest Service did not favor expansion of the wilderness areas, it had a strong interest in knowing what it was, or would be, confronted with in the way of demand for the particular land use. In order to facilitate resource planning, and in particular planning for timber and recreation, it was essential to know what lands might become wilderness—the “maximum universe” of lands suitable for wilderness classification. The problem of information was made more acute by virtue of the fact that, as the primitive area review program progressed, numerous demands were being made to Congress to preserve individual areas outside existing primitive areas. Since the lands lay outside the primitive areas being studied, the Forest Service was hard pressed to respond to these demands in the absence of some systematic inventory. The continued addition of such individual areas not only impeded its management planning, but also threatened to take initiative and control over wilderness classification away from the Service and subject it to the “caprice” of local interests and pressures.

However, despite these incentives to produce a comprehensive inventory as soon as possible, little effort was made by most

have greater flexibility under the former. A detailed account of the roadless area review program is contained in the pleadings and statements filed in *Sierra Club v. Butz*, Civil No. 1223-72 (D.D.C. 1972). For most of the following chronicle I have relied on the Statement of Material Facts As To Which There Is No Genuine Issue filed in that case. An outline of the review process is also contained in the FINAL ENVIRONMENTAL STATEMENT, *supra* note 44, at 14-77.

46. FINAL ENVIRONMENTAL STATEMENT, *supra* note 44, at 15.

of the regions to complete the inventory. The Washington office made equally little effort to press them until 1971, one year before the deadline set for the completion of the inventory (not the completion of the study). In 1971, the Chief issued new directives to the regions to complete the inventory in accordance with new specified procedures and to report their recommendations for areas to be designated as New Study Areas by 1972. The reports, submitted in June, 1972, recommended only about 10.7 million of the qualifying 56 million acres of roadless areas for further study by the regional foresters. The recommendations were in the main adopted and incorporated in a draft environmental impact statement in January, 1973.⁴⁷ After further review and after public response to the draft impact statement, the selection was revised with the result that over a million more acres were added. The final list encompasses some 12.3 million acres.⁴⁸

The initial selection of some 10.7 million acres by the Forest Service evoked outrage from the Sierra Club and other preservationist groups, who proceeded to bring a suit challenging the adequacy of the selection process. The suit itself was withdrawn when the Service agreed to issue an environmental impact statement before any of the roadless areas not selected for further study were subjected to uses incompatible with wilderness.⁴⁹ The consequences of this agreement remain to be seen; we will return to this after examining the processes of classification and the primitive area review program.⁵⁰

47. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, DRAFT ENVIRONMENTAL STATEMENT ON ROADLESS AREAS (1973) [hereinafter cited as DRAFT ENVIRONMENTAL STATEMENT].

48. See FINAL ENVIRONMENTAL STATEMENT, *supra* note 44, at 14-77. This figure includes some areas that had been previously recommended for further study independent of the 1971 directive.

49. See *Sierra Club v. Butz*, Civil No. 1223-72 (D.D.C. 1972). The suit was later withdrawn after being transferred to San Francisco. *Wall St. J.*, Dec. 4, 1972, at 8, col. 3.

50. On the basic procedures and standards of the Forest Service for review and classification, see FOREST SERVICE MANUAL § 2320 [hereinafter cited as FSM] and FOREST SERVICE HANDBOOK § 2309.13. My discussion also draws on study reports of individual wilderness areas and discussions with Forest Service officials, as well as other identified sources. Interior Department procedures and standards for classification, while much less clearly stated, can be found in U.S. Dep't of the Interior, Secretarial Order No. 2920, Jan. 20, 1969, and in U.S. Dep't of the Interior, Memorandum from the Assistant Secretary for Fish and Wildlife and Parks to the Directors of the National Park Service and the Bureau of Sport Fisheries and Wildlife, Guidelines for Wilderness Proposals, Jan. 24, 1972.

The classification procedure used to decide which areas are to be recommended to Congress for inclusion in the Wilderness System has been clearly stated only by the Forest Service. Since the Wilderness Act states that both formally classified primitive areas and contiguous multiple-use lands of predominant value as wilderness may be admitted to the System, Forest Service procedures provide that, before a detailed analysis of resource values is made, a general study area including both primitive areas and potential contiguous wildernesses shall be chosen. Once the general area to be studied is defined, it is surveyed and evaluated according to three primary standards: suitability, availability, and need.⁵¹

The suitability test⁵² measures the qualities of the area against the definition of wilderness given in the Act—not a very precise formulation. The pristine character of the land and its natural protection against man-made interferences are most important; these are also the points on which most of the major controversies between the Forest Service and preservationists have centered. The Forest Service has been reluctant to include in the System any land into which there has been substantial intrusion by man, even though the physical evidence of man's activities has been, or will be, erased by natural process. The traditional rationale for this has been that the inclusion of such lands not only is itself inconsistent with the wilderness ideal, but also will provide a precedent for permitting on-going activities inconsistent with wilderness preservation.⁵³ Forest Service policy in this respect differs from that of the Park Service, which has been less "purist" in its approach to the problem of

51. The Department of the Interior does not use these standards. Rather, each area is considered separately, with special attention given to its unique character. Memorandum, *supra* note 50, at 1. General criteria of availability and suitability are mentioned as factors in this individual determination, however. See notes 52, 57, *infra*.

52. See FSM, *supra* note 50, §§ 2314.36(c) (5), 2321.11. The Department of the Interior, while considering suitability when developing wilderness proposals, does not place nearly so heavy an emphasis upon it as does the Forest Service. For example, the Interior's guidelines for wilderness proposals state:

An area should not be excluded from wilderness designation solely because established or proposed management practices require the use of tools, equipment or structures, if these practices are necessary for the health and safety of wilderness travelers, or the protection of the wilderness area.

Memorandum, *supra* note 50, at 1. Similarly, the presence of visitor-use structures and facilities, roads, or utility lines will not preclude an area from being proposed for wilderness classification. *Id.* at 2.

53. See, e.g., Cliff, *The Wilderness Act and the National Forests*, in WILDERNESS AND THE QUALITY OF LIFE 9 (1969),

man-made intrusions.⁵⁴ The Forest Service approach has been bitterly attacked as a thinly veiled attempt to restrict wilderness preservation.⁵⁵ Although it is that in part, there is more to the matter than this somewhat simplistic criticism suggests. There is also more to it than the Forest Service's defense implies.

Just as the Forest Service has sought to exclude lands showing evidence—however faint—of significant past use, so also has it sought to exclude lands without natural barriers adequate to protect them against encroachments by intensive uses from adjacent lands or by more distant influences that would disrupt the "wilderness experience" with the "sights and sounds of civilization."⁵⁶ Here it is evident that the Forest Service is much more deeply, and understandably, concerned about the difficulty of preserving wilderness values, since the impact of established commercial or intensive recreational uses is all but impossible to guard against by administrative fiat.

Once an area has passed the suitability test, an assessment of its social utility as wilderness is made under the criteria of "availability" and "need."⁵⁷ To translate from one jargon into another, "availability" is essentially the "opportunity cost" of wilderness, the value of all of the resources which are removed from active use or management.⁵⁸ The "need" criterion is, essen-

54. See, e.g., NATIONAL PARK SERVICE, U.S. DEP'T OF THE INTERIOR, ADMINISTRATIVE POLICIES FOR NATURAL AREAS OF THE NATIONAL PARK SYSTEM 40 (1967) [hereinafter cited as ADMINISTRATIVE POLICIES].

55. See, e.g., WILDERNESS REPORT, Nov. 1972, at 5.

56. See, e.g., *Hearings on San Gabriel, Washakie & Mount Jefferson Wilderness Areas Before the Subcomm. on Public Lands of the Senate Interior and Insular Affairs Comm.*, 90th Cong., 2d Sess. 8 (1968) (statement of the Chief of the Forest Service). This consideration was one of the reasons for the Service's insistence, prior to the Act, that wilderness areas be large. Size is still an important consideration, both under the Act (5,000 acres or "sufficient size as to make practicable its preservation and use in an unimpaired condition," 16 U.S.C. § 1131(c) (1970)) and in Forest Service policy. Despite pressures to add small parcels of land here and there, of the areas recommended by the Service through 1973, there were included only three under 35,000 acres. NINTH ANNUAL REPORT, *supra* note 38, at Appendix III.

57. FSM, *supra* note 50, § 2321.12-.13. The Department of the Interior also recognizes availability as a criterion for its decisions on classification, stating:

Those areas which presently qualify for wilderness designation but will be needed at some future date for specific purposes consistent with the purpose for which the [area] was originally created, and fully described in an approved conceptual plan, should not be proposed for wilderness designation

Memorandum, *supra* note 50, at 2-3. "Need" is not mentioned by the Department as a decision criterion.

58. FSM, *supra* note 50, § 2321.12 lists the following examples of "unavailable" lands:

tially, the benefit side of the benefit-cost equation. Insofar as it is anything more than the expression of a willingness to classify all "suitable" and "available" lands as wilderness, a determination of "need" theoretically considers the demand for wilderness in the particular area encountered. Such an assessment takes into account the amount of wilderness land already set aside in a particular location, the population of the area, and other factors pertinent to prospective use, including whether other nonwilderness lands can satisfy the demand. In theory, the determination of "need" also considers the quality of the area in question and its ability to provide "wilderness experience"—the latter supposedly being influenced by the scenic quality of isolation and the variety of experiences available in the area.

I have pointedly noted that the components of need are theoretical, for it is not apparent whether such determinations have had much impact to date. Indeed, even the "availability" criterion, which would seem to lie at the heart of the basic preservation decision, has not played much of a role in the review of primitive areas. A basic political commitment having been made to recommend most of the land in primitive areas for inclusion in the Wilderness System, the primary use of these economic considerations has been in adjusting boundaries here and there and in excluding particular areas where valuable timber is present. At times, they have even resulted in a refusal to study areas where timber contracts existed.⁵⁹ Even in those cases where some economic appraisal has been made, it has been more the product of thumbnail estimates than of a careful cost analysis. In recent years, however, attention to more sophisticated benefit-cost analysis has become evident, first in recent studies of

1. Areas where the need for increased water protection and on-site storage is so vital that the installation or maintenance of works and facilities incompatible with wilderness is an obvious and inevitable public necessity.

2. Areas where wilderness classification would seriously restrict . . . the application of wildlife management measures of considerable urgency and importance.

3. Highly mineralized areas which . . . clearly show economic mining potential of such an extent that restrictions necessary to maintain the wilderness character of the land would not be in the public interest.

4. National forest areas supporting heavy stands of high quality timber, all of which is essential to the economic welfare of existing dependent communities.

5. Areas containing natural phenomena of such unique or outstanding nature that general public access should be provided.

59. See *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).

a few primitive areas⁶⁰ and then in the preliminary survey of New Study Areas.⁶¹

When an area has been found suitable for classification as wilderness, the agency proposal is given to the President, who transmits it to Congress. The Wilderness Act provides that prior to submitting recommendations to the President regarding the preservation of any area as wilderness, public notice is given and hearings held. In addition, the general public as well as federal, state, and local officials concerned with the area are specifically invited to submit their views.

After an evaluation of the views submitted, the proposal is reviewed and modifications—usually minor—are made as warranted. The revised proposal then provides the basis for preparation of a draft environmental impact statement. This draft statement is circulated, as required by the National Environmental Policy Act,⁶² for a second review by public agencies and the public.⁶³ When their response has been received, a regional fores-

60. The Idaho Primitive Area, one of the largest and most controversial areas, is an example; I am told by Forest Service officials that a full benefit-cost analysis was undertaken there.

61. See FINAL ENVIRONMENTAL STATEMENT, *supra* note 44, at 25-46. The analysis reflected in this impact statement is noteworthy not only for its detailed quantification of opportunity cost, but also for its attempt (not totally successful) to reflect some measure of benefit ("need"). The latter was measured by calculating the quality of each area, as rated by the regional forester, who evaluated scenic value, isolation, and variety of experience, and multiplying that by the size of the area to arrive at an "effectiveness" index. Cost was measured by two indices: first, the value of timber foregone; second, the value of *all* resources—minerals, recreation, and timber, together with the costs of establishment and administration. Comparison of these then provided the primary basis for dividing roadless areas into those with the highest and lowest potential for inclusion and for selecting 235 areas for final identification and temporary protection (pending final study) as New Study Areas. Subsequent data corrections and response to public input then produced a net increase of 39 areas, for a total of 274. *Id.* at 46-64.

62. 42 U.S.C. § 4321 *et seq.* (1970).

63. The requirements of the Wilderness Act are more specific in regard to public participation than those of the National Environmental Policy Act (NEPA), but interpretive rulings of the latter have made the public participation process which it requires essentially similar to that of the former. NEPA requires that the comments of other federal agencies be solicited for major actions having a significant impact on the environment. Under NEPA, notice to the public is mandated in accordance with the procedures of the applicable portion of the Administrative Procedure Act, 5 U.S.C. § 552 (1970) (the Freedom of Information Act). While NEPA does not *itself* mandate public hearings, or even the affirmative solicitation of public views, Executive Order No. 11,514, 3 C.F.R. 271 (1974) and Guidelines promulgated by the Council on Environmental

ter compiles a final report—a revision of the draft environmental statement—making adjustments in accordance with the evidence gathered at hearings and the other information which has become available since the initial proposal. After approval by the Washington office, the final environmental impact statement is forwarded to the President for approval and thence to Congress. To date all but one of the recommendations of the Forest Service have been endorsed by the President.⁶⁴

IV. WILDERNESS CLASSIFICATION: THE POLICY ISSUES

A. SOME PRELIMINARY THOUGHTS

The Wilderness Act of 1964 settled (at least for a time) the question whether wilderness lands ought to be permanently preserved. However, by the time the Act was passed, that question had ceased to be an important element of the controversy over wilderness. Notwithstanding the fears of preservationists to the contrary, the Forest Service appears to have committed itself to some permanent preservation prior to 1960, and after that date to have accepted the concept of a statutory system. The timber and mining industries may not have warmly endorsed the preservationist ideal, but even among their ranks *public* opposition to *any* wilderness preservation became increasingly infrequent in the course of the debates over the Wilderness Act. The true dispute centered around the questions of how much wilderness and on what conditions. As to the former, since the Act directly protected all of the then existing "wilderness" land (some 9.1 million acres), a large portion of the lands *then identified as suitable* for wilderness was removed from dispute. What remained were the national forest primitive areas and unidentified areas within the national parks and wildlife refuges. Now that the survey of lands contemplated by the Act is largely completed, the advantages of hindsight are available, and in that specially favored position it seems somewhat curious that so

Quality require an agency to obtain public views. For current CEQ Guidelines on public participation see 38 Fed. Reg. 20554, 20555 (1973) (to be codified at 40 C.F.R. § 1500.9). In some cases a full, formal hearing has been mandated by the courts. See, e.g., *Hanley v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973).

64. The High Uintas recommendation is the lone exception of which I am aware; endorsement was withheld pending further examination of a conflict with the Central Utah Water Project. See U.S. DEPT OF AGRICULTURE & U.S. DEPT OF THE INTERIOR, FIFTH ANNUAL REPORT ON THE STATUS OF THE NATIONAL WILDERNESS PRESERVATION SYSTEM, H.R. DOC. NO. 58, 91st Cong., 1st Sess., pt. 1, at 5 (1969).

much controversy was generated over what now appear to be *relatively* small areas. Moreover, at least by the time the review was half completed it should have been apparent that most of the national forest primitive areas, and more, would ultimately be recommended for inclusion.⁶⁵ Politically, the Forest Service had little choice but to recommend inclusion of almost all of this acreage. After all, most of the primitive land had already been recognized as at least *prima facie* suitable for wilderness—the primitive classification itself established that. That these lands had not heretofore been elevated to permanent wilderness status does perhaps suggest that they had not been the *foremost* candidates for protection. As a practical matter, however, under the 1964 mandate of Congress, the Forest Service could scarcely have been so cautious as it had been before. The primitive lands were generally “available” for wilderness, and most have little other practicable use. Much of the land is fragile and unproductive. Timber is of little value, at least in relation to the cost of access. Mineral value is not fully known, but in many areas it is plain that such value would not justify the cost of access and extraction.

Yet for all this seeming unimportance, the debate over the inclusion or exclusion of particular areas has been vigorous and sometimes vitriolic. The explanations, I think, are two; both shed important light on the character of the overall controversy. The first and most obvious explanation for the strident character of the debate over reclassification of primitive areas is that each particular occasion giving rise to contention between preservationists and “multiple-use” advocates is quickly escalated into a grand debate over wilderness versus nonwilderness values. This in turn becomes an even more wide-ranging debate over the character of modern civilization. For some preservationists, each battle is but a part of a larger “holy war” and has a symbolic significance far beyond any measurable objective. So too for some of the opposition. Each side is looking not only at immediate gains and losses, but also toward future casualties in battles yet to be fought. However, it is not merely this larger struggle over ideology that is involved in the explanation. Seen in the perspective of a total system of, for example, 15 million acres, the inclusion or exclusion of 50,000 acres here or there does

65. As of the end of 1973, the Forest Service had recommended for permanent preservation a total area 13 percent greater than the area contained within the present boundaries of those primitive areas reviewed. NINTH ANNUAL REPORT, *supra* note 38, at Appendix III.

not seem like much to quarrel over, except in symbolic terms; but from a local perspective it may be exceedingly important. Noninclusion of 50,000 acres may not reduce by much the overall extent of the Wilderness System (particularly since, as it has turned out, all deletions have been more than offset by new additions), but that is small comfort to local preservationists who want *their own* wilderness area. On the other hand, to take commercial timber as an example, preservation of an area will have a negligible effect on the national timber supply no matter how richly endowed; but it could have enormous impact on local mills.⁶⁶

Both of these phenomena—the holy war aspect and localism—have had and will continue to have important consequences for wilderness preservation. The former suggests the difficulty of using objective measures to define wilderness or to determine the extent to which it should be preserved. This is already evident in the opposition of many preservationists to the use of an economic approach in evaluating the costs of wilderness. The latter phenomenon compounds the difficulties of decision insofar as it impedes political settlement through trade-offs on a national basis. From a national perspective it is chiefly the *overall* size and, to a lesser extent, the quality of the wilderness lands that is important—the exclusion of one small area can be offset by the inclusion of another. But insofar as local interests on both sides must be consulted and considered, such trade-offs between, for example, the national Sierra Club on one side and the National Forest Products Association on the other, are not possible. Therefore, there is really little choice but to perform an exhaustive and exhausting area-by-area review. That is what has been done with the primitive areas; that is what will have to be done with other roadless areas.

B. DEFINING WILDERNESS

The first question that emerges in controversies over wilderness is what is meant by that term. The Forest Service, as noted above, characterizes the concept in terms of suitability of land for wilderness, which suggests practical considerations independent of the abstract question of defining wilderness. But virtually all of the practical considerations refer back to the underlying abstraction.

66. See, e.g., DAVIS *et al.*, *supra* note 16, at 32-37, for a discussion of the local impact of preservation in the Monongahela National Forest in West Virginia.

The search for an acceptable answer to this question has proven to be one of the most intractable problems in forest resource management. The core of the difficulty lies in the fact that wilderness is not merely a condition of the land, but also a condition of the mind which is evoked by the land. At the very least a definition based on this latter condition is likely to vary a great deal with individualized experience and taste. Even Thoreau, the guru of modern preservationists ("in wilderness is the preservation of the world"), seems to have been of two minds on the matter. From pastoral Walden Pond he wrote wonderful words about *la vie naturelle*, but the slope of a mountain in a real wilderness caused him considerable discomfiture: he found it "savagely and dreary"—a "place for heathenism and superstitious rites."⁶⁷ Thus it is not surprising that those whose nearest forest is Central Park may see wilderness as any place without dogs and mounted police.⁶⁸ Plainly, something more was contemplated by Congress. Even by the loosest standards, Central Park is not a wilderness (a jungle perhaps, but not a wilderness).

What has emerged, therefore, from attempts to articulate the meaning of wilderness has tended to be the stuff of poetry—not the best guide for the land-use planner. The Wilderness Act, in a burst of eloquence rare for Congress, declares wilderness to be an area "where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain."⁶⁹ That is not helpful. The Act, how-

67. Quoted in NASH, *supra* note 3, at 91.

68. Noteworthy in this regard is a survey by researchers in the Department of Sociology at the University of Minnesota of campers returning from wilderness trips. The following is a list of conveniences they desired to have in the wilderness:

<u>Conveniences:</u>	<u>Percent of interviewees desiring conveniences</u>
More campsites	82
First-aid stations	52
Garbage disposal places	79
Toilets	78
Picnic tables	60
Fireplaces	54
Wells for drinking water	72
Places to buy groceries	49
Public telephones	21
Planned recreation	16
Showers and washrooms	15
Electricity	12

Hearings on the Wilderness Preservation System Before the Subcomm. on Public Lands of the House Comm. on Interior and Insular Affairs, 87th Cong., 1st Sess., ser. 12, at 311 (1961) (statement of E.C. Cleveland).

69. 16 U.S.C. § 1131(c) (1970).

ever, is not wholly without practical guidelines. It instructs us that the area must be "without permanent improvements or human habitation"; that it must appear "to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable"; that the area should offer "outstanding opportunities for solitude or a primitive and unconfined type of recreation"; and, finally, that it must be at least 5000 acres or "of sufficient size as to make practicable its preservation."⁷⁰ These are minimal guidelines, and as a practical matter they simply pass on the task of definition to the further working of the administrative (and political) process.

The absence of clearer guidelines from Congress has permitted debate over an extreme range of alternatives—generally with the Forest Service at one pole and the Sierra Club and Wilderness Society at the other. The Forest Service, as mentioned earlier, has rather doggedly insisted on a purist definition of wilderness. It has been very reluctant to include in its recommendations lands where timber has been cut or roads and other still-visible structures built. *Parker v. United States*⁷¹ offers one instructive example of this attitude, and the prolonged controversy over "Wilderness East" another.

Parker was a suit to enjoin a timber sale in a portion of an area contiguous to the Gore Range-Eagles Nest Primitive Area in Colorado's White Mountain National Forest. Plaintiffs contended that a timber sale in the area would in effect preclude any future consideration of the area for wilderness. Their basic contention was that once an area had been determined to be "suitable" for wilderness, the Forest Service could not take any action which would impair that suitability until the President had had the opportunity to determine whether or not to propose the area for inclusion within the Wilderness System. The Forest Service contended that the area was neither "available"—because it had long been planned to harvest timber in the area—nor "suitable"—because of the presence of a small "bug road," built in the early 1950's to provide access for fighting the bark beetle. The trial court found for the plaintiffs and enjoined the sale. The decision, upheld on appeal, was enthusiastically acclaimed by preservationists and roundly criticized by the Forest Service and the timber industry.

70. *Id.*

71. 309 F. Supp. 593 (D. Colo. 1970), *aff'd*, 448 F.2d 793 (10th Cir. 1971), *cert. denied*, 405 U.S. 989 (1972),

The opinion makes two noteworthy holdings. First, it held that the agency's determination that the area was not "available" was of no consequence. Under the court's interpretation, the Act precludes the Service from cutting in any area contiguous to a primitive or wilderness area if the contiguous area is "predominantly wilderness in character."⁷² While the Service's recommendations to the President for permanent disposition can take such matters as cost and benefit into account, if it is determined that the area is "suitable" for wilderness, the agency must stay its hand until the President has acted. The full implications of this part of the decision are potentially broad; it is the second part of the opinion which is of interest here, however. The court's finding that the area was suitable for wilderness gave short shrift to the "purist" argument of the government that the presence of the road precluded such a determination. The court observed that the road had been blocked off, was partially overgrown, and because of the dense growth around it was not visible from more than 100 yards away.⁷³ Moreover, the boundaries of the area could be drawn to exclude it.

At first glance, the court's opinion on this point seems sensible. In fact, it was not challenged by the government on appeal.⁷⁴ Why should the status of the entire area turn on the

72. 309 F. Supp. at 601.

73. The plaintiff's proposal for the wilderness area was to draw the boundaries in such a way as to exclude the road. This was not such a unique idea. The boundaries of the Boundary Waters Canoe Area (BWCA) in Northern Minnesota have been very greatly "gerrymandered" to exclude nonconforming roads as well as some private land holdings. The Forest Service, however, has always insisted that the BWCA is a unique area which does not fully conform to the standards prescribed for other areas and which is not managed the same as the others. For example, timber harvesting has been permitted under the Shipstead-Nolan Act, 16 U.S.C. §§ 577-577b (1970); see also sections 4(a)(2) and 4(d)(5) of the Wilderness Act, 16 U.S.C. §§ 1134(a)(2), (d)(5) (1970). However, a recent decision preliminarily enjoined certain timber harvesting activities in the BWCA until a final determination by the court of the plaintiff's challenge to the adequacy of an environmental impact statement on, *inter alia*, these activities and of the plaintiff's claim that logging in the BWCA is inconsistent with the concept of wilderness preservation and accordingly prohibited by the provisions of the Wilderness Act. *Minnesota Public Interest Research Group v. Butz*, No. 4-72-Civil-598 (D. Minn., Sept. 18, 1974). See also *Minnesota Public Interest Research Group v. Butz*, 358 F. Supp. 584 (D. Minn. 1973), *aff'd*, 498 F.2d 1314 (8th Cir. 1974) (injunction prohibiting certain logging activities in BWCA issued, under National Environmental Policy Act of 1969, 42 U.S.C. § 4321 *et seq.* (1970), until completion of an environmental impact statement by the Forest Service). This decision suggests that the BWCA may be treated as a full-fledged wilderness, in which case it might be used, wisely or unwisely, as a model for other areas.

74. The government's main challenge on appeal was to the first

presence of one small "bug road" that would ultimately disappear? On second thought, however, this "sensible" answer raises some difficult questions. If an "invisible" bug road does not disqualify an area from protection as wilderness, what about a road once used for logging, still visible because of use by hunters in jeeps?⁷⁵ After all, these roads too will eventually disappear naturally, and they can be made to disappear more rapidly by administrative action.⁷⁶

Parker represents one relatively trivial illustration of the purist position taken by the Forest Service. Although the Service was overruled in that particular instance, it has continued to insist on a rather high standard of suitability. This insistence is illustrated by the "Wilderness East" controversy. Statutorily protected wilderness is unevenly distributed; virtually all of it is located in the eleven western states and Alaska. Apart from the unique Boundary Waters Canoe Area in Minnesota, the amount of wilderness in the East is negligible. This is the case for two reasons. First, there is a relatively small amount of federal land holdings in the East.⁷⁷ Second, most fed-

holding of the court, the one that was clearly seen by the agency as the most important. 448 F.2d at 796.

75. See *Hearings on San Gabriel, Washakie & Mount Jefferson Wilderness Areas*, *supra* note 56, at 17.

76. In fact, the Forest Service has sometimes eliminated such evidence of man's intrusions, occasionally to the discomfiture of those who use the area. A well-known example of this occurred when the Forest Service was directed by Congress (at the insistence of local preservationists) to include Marion Lake within the Mount Jefferson Wilderness Area in Oregon. The Service had opposed the inclusion because of the heavy use of the lake and the surrounding area and of the existence of various man-made improvements. After the area was included, the Forest Service removed certain facilities such as picnic tables, fireplaces, water pumps, and a boathouse along the lakeshore. This provoked criticism that the agency was simply trying to get back at Congress and its local supporters. See *Hearings on S. 316 and Related Bills (Eastern Wilderness Areas) Before the Subcomm. on Public Lands of the Senate Comm. on Interior and Insular Affairs*, 93d Cong., 1st Sess. 27 (1973).

The National Park Service, on the other hand, accepts as a "fundamental tenet" of park management policy the idea that wilderness areas within the national parks can be restored by the removal of adverse uses. ADMINISTRATIVE POLICIES, *supra* note 54, at 40. For example, the Park Service cites the case of Sequoia National Park, which in 1893 was so overgrazed by sheep that it was very close to permanent destruction. The acting superintendent of the park at that time recommended that the cavalry troops stationed there be replaced by infantry, since no natural forage was available for horses. Today, however, the park contains "wilderness comparable to any other national park." *Id.* at 40-41.

77. Over 90 percent of federal lands outside Alaska are located in the eleven westernmost states. PUBLIC LAND LAW REVIEW COMMISSION, ONE THIRD OF THE NATION'S LAND 22 (1970).

eral lands in the East were acquired after they had been heavily used—indeed, it was just such overuse that led to their acquisition by the Forest Service. Such areas have been denied statutory protection, however, by the Service's purity standard of suitability; after passage of the Wilderness Act and the initial inclusion of a few small Eastern wilderness areas in the Wilderness System, the Service declared, "there are simply no suitable remaining candidate areas for wilderness classification in [the Eastern] part of the national forest system."⁷⁸ Since that time, only a few proposals have been made to Congress for inclusion of Eastern areas in the Wilderness System, and these have concerned only small wildlife refuges.⁷⁹ No Eastern national forest areas have been added. At the same time, however, the demand for wilderness in the East is high. The greater population density, the concrete and steel pressures of modern society, and the inaccessibility of western wilderness areas are only some of the factors that contribute to this demand.

In recent years, this conflict resulted in two proposals: one to establish a special class of near-wilderness lands; the other to add some 28 areas (a total of 471,000 acres) to the existing wilderness system. Under the former, Congress would have created a system of "wild areas." These were defined as primitive areas where, although man might have "left his mark," the imprint of human activity was slight enough to allow restoration of the areas to a natural state. The protection that would have been extended to these areas was similar but not identical to that given wilderness areas: timber harvesting and grazing would have been banned; all new mining activity would have been prohibited; the use of motor vehicles and equipment would have been restricted; and only public facilities of a "rustic, primitive nature" would have been permitted.⁸⁰ The rationale for such a separate wild-areas system was that of maintaining the sanctity of wilderness areas; indeed the proposal was really a reflection of the well-known position of the Forest Service on

78. Quoted in *Hearings on S. 316 and Related Bills, supra* note 76, at 19, 46 (statements of Sen. Hechler and the Wilderness Society).

79. There have been only 12 Eastern areas totaling less than 35,000 acres added to the Wilderness System since the passage of the Act; all of them are national wildlife refuges. There are no Eastern national forest proposals and only five Eastern national park proposals, encompassing approximately 287,000 acres, currently before Congress. NINTH ANNUAL REPORT, *supra* note 38.

80. See generally *Hearings on S. 3699 and Related Bills Before the Subcomm. on Environment, Soil Conservation & Forestry of the Senate Comm. on Agriculture and Forestry, 92d Cong., 2d Sess. (1972)*.

purity. Most of the Eastern areas proposed for wild-area status (which were essentially the same ones proposed by others for inclusion in the Wilderness System) were less than 5000 acres or showed visible signs of man's influence.⁸¹

Most preservationists opposed the wild-areas proposal because, they contended, it was a subterfuge to limit true wilderness by giving legislative sanction to the restrictive notions of purity advanced by the Forest Service.⁸² They argued that the proposed wild areas qualified for full wilderness protection, and they accordingly supported alternative legislation that would have effected this protection by designating some 28 areas as part of the Wilderness System. One bill⁸³ would also have amended the Wilderness Act specifically to permit the inclusion of areas where the evidence of man's presence had been substantially erased and the area "restored" to wilderness. This proposal would thus have permitted certain nonconforming uses or improvements to be present at the time the area was designated a "wilderness," the assumption having been that they would be removed.

Recently, the Senate passed a compromise bill which incorporates elements from each of these two proposals.⁸⁴ Nineteen Eastern areas would be added to the Wilderness System immediately upon passage of the bill, and 40 additional Eastern areas would be designated for further study. Management of the new Eastern wilderness areas, however, would incorporate certain special protections reminiscent of those formerly advocated for "wild areas": the lands (both Eastern wilderness and study areas) would be immediately withdrawn from all forms of appropriation under the mining laws, grazing on wilderness land

81. At least one conservation group—the Izaak Walton League—has supported the wild areas proposal on the assumption that in time these areas will develop into wilderness. *Id.* at 19-20. Others have doubted that this development will ever occur under Forest Service management. *Id.* at 71. Another argument advanced in favor of the concept is that wild areas will sustain greater recreational use than wilderness. *Id.* at 35. However, that argument seems to run counter to the intent of many of the bills, which would expressly restrict public use to a level consistent with the retention of the areas' primitive characteristics.

82. See, e.g., *Hearings on H.R. 14392 and Related Bills Before the Subcomm. on Forests of the House Comm. on Agriculture*, 92d Cong., 2d Sess. 46, 57, 122, 136 (1972) (comments of the Sierra Club, Wilderness Society, and Friends of the Earth).

83. S. 316, 93d Cong., 1st Sess. 1973, introduced by Senator Jackson. See *Hearings on S. 316 and Related Bills*, *supra* note 76.

84. S. 3433, 93d Cong., 2d Sess. (1974). See generally 120 CONG. REC. S 9383-99 (daily ed. May 31, 1974).

in the East would be by permit only, and new water or power projects would be banned on new lands protected as Eastern wilderness. Unlike the wild-areas bill, there is no provision allowing primitive public facilities, and, in fact, the new bill clearly provides that except as otherwise mentioned the new Eastern wilderness areas would be managed under the same standards as existing components of the Wilderness System. Thus, timber harvesting and the use of motorized vehicles and equipment would be prohibited in new Eastern wilderness areas to the same extent as in other components of the Wilderness System.

For quite some time, the Forest Service kept a discreet silence in public concerning these various proposals, although in fact it was widely known that it favored the wild-areas proposal. In the face of vocal criticism from preservationists, however, the Forest Service eventually threw its support behind a third proposal submitted by the Administration to add to the existing System certain Eastern lands which had been "restored" to a wilderness state. This support has been carefully limited to Eastern (east of the 100th meridian) lands only,⁸⁵ and, unlike the bill recently passed by the Senate, the Administration's alternative would require an amendment of the Wilderness Act changing the definition of wilderness to expressly allow inclusion of Eastern areas showing the imprint of man.⁸⁶

Thus, the endorsement of a "Wilderness East" proposal by the Forest Service represents only a small step back from its purity policy; apart from this compromise, the Forest Service has continued to embrace the purity ideal and to insist that purity, like virginity, cannot be restored. The traditional argument for this position has been that the same standards which govern protection of wilderness (after it is classified as such) should govern the initial selection process. Otherwise the high level of protection against demands for nonconforming uses cannot be maintained. A former Chief of the Forest Service, Edward Cliff, explained:

Personally I hope very much that we will not see a lowering of quality standards to make acceptable some manmade intrusions or defects of other kinds simply for the sake of adding acreage. If this is done, we will surely see an undermining of our defense against similar intrusions on lands already in the system. . . . Quality standards may be eroded and significantly lowered in the future unless we keep our sights high. . . . The quality we insist on in classification will shape the character and

85. *Hearings on S. 316 and Related Bills, supra* note 76, at 21-22.

86. *Id.* See also S. 938, 93d Cong., 1st Sess. (1973).

quality of the environment that can be maintained in future management of the resources.⁸⁷

Preservationists have attacked this rationale as inconsistent with the more flexible standard of the Act, which says that the imprint of man's work need only be "substantially unnoticeable". The Service's argument is, they contend, only an excuse for opposing expansion of the Wilderness System.⁸⁸ While this view seems extreme, the agency's rationale does appear more restrictive than the Act commands and also a bit disingenuous, or at least incomplete, in not elaborating a deeper reason for its conservative approach. Contrary to the belief of the preservationists, however, there are practical reasons for high standards. First, there is the problem of maintaining standards of preservation once an area is identified as wilderness. Clearly this problem is related somewhat to the character of the initial classification. If land bearing visible signs of man's intrusions is included in the wilderness, it will be more difficult to preclude future nonconforming uses of that land. It is doubtful that the problem is a major one, however, since it appears the difficulties the Service has faced in this respect are only slightly related to whether the land was once "trammelled" by man. The major problem of administration existing today principally stems from the pressures of large numbers of users and demands for incompatible uses, such as motorized equipment; the magnitude of both *generally* has little to do with how pristine the land was when it was first designated a statutory wilderness.⁸⁹ There

87. Cliff, *supra* note 53, at 9. See also Costley, *An Enduring Resource*, 78 AM. FORESTS, June, 1972, at 8 (Costley was head of the Recreation Division under Cliff and one of the modern architects of the Service's wilderness policy).

88. See, e.g., WILDERNESS REPORT, *supra* note 55, at 5: "No agency policy is more clearly misconceived, nor more deliberate an effort to frustrate the Wilderness Act."

89. This requires some qualification. Where the area is *still* extensively used, the problem can be significant, as the Marion Lake example, cited in note 76, *supra*, illustrates. The problem typically is not that the offending man-made improvements cannot be removed, it is that the improvements may be necessary to prevent hordes of recreation users from damaging the area. For example, an outdoor privy can be removed, but where a large number of visitors use the area, removal of all privies can only lead to toilet paper being strewn randomly around the forests, not to mention possible pollution of the local water supply. Fire grates or rudimentary campgrounds present a similar problem. To the person who seeks pure wilderness, a fire grate or a cleared campground may be an unwelcome reminder that he is still within the frontier of man's dominion. But these are not inconveniences for the visitor; they are intended to limit the risk of "nonnatural" fires. At some point, however, the density of use becomes so great that it is impossible to protect the area without significantly altering the wilderness character. That,

is, however, a more significant reason for maintaining high standards. High standards of purity do not, as the preservationists claim, represent a simple opposition to wilderness expansion, but rather a method of drawing a desirable limit to preservation. For many preservationists, the fact that an area may have been subjected to use in the past is a matter of relatively little concern, provided the natural condition and appearance has been or can soon be restored. There is some practical appeal to this; once the condition of the land is restored, who will know whether at some time in the "distant" past (as we now gauge time, a matter of a score of years or so) part of the land was roaded, logged, or explored by miners? To paraphrase the Lady Clairol advertisement, only the Forest Service will know for sure. And who will care? To the extent people are responding to the area as it is *now*, past use is unlikely to be of much consequence to most of them.

The difficulty is that such a flexible approach leaves too few limits on preservation. If any land can become wilderness through either natural or artificial restoration to a primitive condition, the *potential* expanse of wilderness becomes not only great, but greatly elastic. What former Chief Cliff ought to have said was not that we should keep the standards restrictive in order to keep them high, but rather that we should keep them high in order to keep them restrictive.

Though Cliff seems to have been chary of putting it in those terms, his successor has been somewhat more candid. In urging that any lowering of wilderness standards to accommodate "restored" areas be confined to the East, Chief John McGuire argued:

There are several reasons for maintaining such a distinction. If almost any of the restored eastern national forest lands . . . were deemed to meet present Wilderness Act criteria, it would be extremely difficult to define a degree of disturbance that would disqualify many millions of acres of Federal lands for wilderness consideration. These listed areas have almost all been substantially altered by man's work. Should such areas be considered as "primeval," vast areas within the various Federal land systems could also qualify. The uniqueness of the present wilderness system would disappear.

The national forest system has been established for a multiplicity of land uses and services. These publicly owned lands provide timber, wildlife habitat, water, forage, and developed recreation sites and experiences. Just as it is important to assure preservation of a portion of our Nation's land heritage for

of course, always leaves the option of simply closing the area to use, or at least restricting it,

wilderness purposes, it is necessary to have a relatively stable base for providing these other resources and uses on a permanent, sustained yield basis.

A "restored" lands definition of wilderness for all national forest lands could markedly reduce the management options for a great portion of the national forests in the West. Wilderness designation means that a number of other resource values and opportunities are foregone. For example, watershed improvements, wildlife habitat improvement projects, timber harvesting, range improvement, other vegetative alteration projects and developed recreation are not permitted within wilderness. Even the development of limited "back-country" recreation facilities, without road construction would be foreclosed.⁹⁰

The ultimate question, of course, is why the standards should be restrictive. What began as a question of environmental "suitability" has become a question of what the Service calls "availability" and "need." Not how much land looks like wilderness, but how much wilderness we can afford to preserve becomes the focus of the issue.

C. ECONOMIC CRITERIA

Casting the classification problem in the above form suggests that, perhaps, the economic analysis proposed for judging the suitability of individual areas may also be useful in gauging the need for overall preservation. This tool has yet to gain acceptance, however. Thus, it is not surprising that, in expressing Forest Service policy on the extent of wilderness preservation, former Chief Cliff chose to avoid putting the issue in terms of economic allocation but couched it rather in terms of maintaining quality.⁹¹ Until recently the Forest Service has not made much use of economic analysis in its primitive area review process. Even now, one senses it is groping somewhat in deciding just how and to what degree an economic analysis, beyond crude thumbnail calculations, will aid in decision-making. For example, the degree of enthusiasm for the kind of benefit-cost analysis used for preliminary assessment of roadless areas⁹² varies depending on whom one talks to in the agency. Outside the agency, however, no such uncertainty clouds the thinking of the major factions in the wilderness debate. The timber industry is quite certain economic analysis is necessary, while most preservationists seem equally convinced such analysis is simply a tool of the commodity-user interests.

90. *Hearings on S. 316 and Related Bills*, *supra* note 76, at 23-24.

91. See text accompanying note 87 *supra*.

92. See text accompanying notes 58-61 *supra*.

The attitude of those who want to avoid considering the economics of wilderness seems to me a strange one, but it is one with which we need to reckon. To begin with, it is plain that this is an economic problem insofar as it involves an allocation of scarce resources. If it were not an economic problem, it would not be a problem at all. To be sure, the issue is not *merely* an economic one; it is also a political, social, and even a cultural one. This is true of virtually all problems important enough to discuss, however; an economic problem does not cease to be one merely because of the presence of such other elements. All of this is trivially true and would hardly warrant mention were it not for the tendency of some preservationists to regard the issue of wilderness as one somehow wholly removed from economic considerations.

Characterizing the issue as an economic one does not itself indicate the appropriate solution, but it does suggest a particular way of analyzing the issues.⁹³ Here, it would seem, is the real explanation for resistance to defining the problem in economic terms—it is not the economic characterization as such but rather the calculus generally attending it that inspires opposition. In short, it is argued that the problem may be an economic one but economic analysis is inappropriate, or at least so inadequate that it is not worth the bother.⁹⁴ This attitude is hard to understand as anything but a confusion as to what economic analysis claims to accomplish, although perhaps, too, it reflects a confusion of economic analysis in general with a particular economic situation. In its broadest sense economic analysis is simply the evaluation of alternative choices under conditions of scarcity. Its distinctive contribution is its insistence on a careful and complete valuation of the alternatives and on a choice of the alternative with the greater value.

It is this valuation process that is most suspected by preservationists. The notion appears to be widespread that wilderness represents intangible values, impossible to measure; thus, no

93. The best single discussion is that of the ORRRC REPORT NO. 3, *supra* note 1, at 203-64, which also contains a useful bibliography of the pertinent theoretical literature. Other analyses include Hines, *Wilderness: Economic Choice, Values and the Androscoggin*, in WILDERNESS AND THE QUALITY OF LIFE, 74-80 (1969) (generally critical of economic analysis, at least to the extent of formal benefit-cost analysis); Hughes, *Wilderness and Economics*, 66 J. FORESTRY 855 (1968).

94. See, e.g., Hines, *supra* note 93, who argues against benefit-cost analysis because it too clearly simulates the private market choices that he finds inadequate.

equation between wilderness and competing uses is conceivable. This view is by no means confined to preservationists, since a similar sentiment was recorded in interviews with Forest Service officials. One official asked, "How can you put a price tag on solitude and spiritual refreshment?" The question reflects a rather basic misunderstanding of how a pricing system works, and so mistakes the nature of the problem. There is nothing inherent in wilderness land, however intangible, that prevents it from being priced. Wilderness is no different than any other scarce resource that produces intangible satisfaction. A rubber ball is valued for the intangible thrill it produces when bounced, a Rembrandt painting for the intangible pleasure derived from viewing it, a church for the spiritual uplift it affords. But we do not give away rubber balls, Rembrandt paintings, or the building materials with which churches are made. The problem is not that the value of wilderness is immeasurable; it is simply that here, in contrast to rubber balls, Rembrandt paintings, and stained glass windows, the resource has not been left to market forces but has been allocated by administrative and political decisions.

The economic theory often raised in defense of this refusal to value wilderness is that wilderness, like many other land resources, is a "public good" for which private prices are an inappropriate measure of social value.⁹⁵ We need not pause to consider the concept of public goods, so exhaustively developed by modern economic theory.⁹⁶ I am willing to accept the reason-

95. A useful analysis of the concept of public goods as applied to wilderness is given in the ORRRC REPORT No. 3, *supra* note 1, at 205-07.

96. See generally P. STEINER, PUBLIC EXPENDITURE BUDGETING (1969). The most restrictive concept of public goods is that of the so-called "collective consumption" good, which is consumed "collectively" by the public at large and cannot be withheld from individuals unwilling to pay. See, e.g., Samuelson, *The Pure Theory of Public Expenditure*, 36 REV. ECON. & STAT. 387 (1954). If one applies the concept rigorously, there are few goods which qualify. Other than national defense, it is difficult to think of goods the consumption of which is inherently indivisible and which cannot be withheld from "free riders." The fact that most cases of actual government expenditure do not fully meet the criteria suggests an apparent artificiality of this theory. See Margolis, *A Comment on the Pure Theory of Public Expenditure*, 37 REV. ECON. & STAT. 347-48 (1955). The limited scope of the collective consumption good concept has led some economists to develop a broader category of public goods. These are "merit goods," goods provided by the private market, but not in the amount which "society," through the political process, deems appropriate. See R. MUSGRAVE, *THE THEORY OF PUBLIC FINANCE* ch. 1 (1960). Whether this concept is anything more than a description of those goods that are *in fact* provided by collective choice may be debated. Certainly it seems to be an elastic concept.

ableness of public choice.⁹⁷ Public choice does not mean irrational choice, however, and in any formulation of criteria for rational choice, it is difficult to see how economic factors—considerations of economic costs and benefits—can be avoided. Even a decision not specifically articulated in economic terms clearly has an economic consequence. For example, a decision to opt for wilderness preservation without considering the value of the productive uses sacrificed is tantamount to a decision that the value of wilderness exceeds any probable value of those resources. That is an economic choice however it is rationalized. The real question is whether, and to what extent, the economic consequence will be clearly and rationally identified in the choice.

It is one thing to identify the relevance and importance of economic factors, but quite another to describe the methodology and the detail of the analysis to be incorporated into the decision-making process. Of course, if the choice were left to the market, the interplay of market processes would take care of allocation. But since it has been decided that the market is inadequate to measure the full social values involved, the task becomes one of applying *some kind* of benefit-cost analysis.⁹⁸

Calculating the benefits of wilderness preservation is obviously the difficult part of the task. As emphasized earlier, this does not mean that wilderness value is intrinsically beyond the measure of price, but only that in the absence of a market mechanism for pricing this resource there is no clear measure of its value. One can describe in general terms some of the value, as attempted at the outset of this Article, but that brings us no closer to a solution of the problem. Alternatively, one might construct an imputed demand schedule, based on the expenditures persons incur in connection with visits to a particular area. This has been suggested for calculating the demand for outdoor recreation generally,⁹⁹ and it could be applied to wilderness also.

97. I do not feel compelled to justify this in terms of economic theories, such as Samuelson's collective consumption goods or Musgrave's merit goods. I am content with Steiner's looser definition of collective goods as those which "some segment of the public collectively wants and is prepared to pay for . . . other than what the unhampered market will produce." Steiner, *supra* note 96, at 70. As he notes, collective goods need not be always publicly provided; however, in the present case I doubt that it could be otherwise; hence, collective goods equal public goods.

98. A very helpful treatment (particularly for the lay reader) is E. MISHAN, *COST-BENEFIT ANALYSIS* (1971).

99. See M. CLAWSON & J. KNETSCH, *THE ECONOMICS OF OUTDOOR RECREATION* 64-77 (1966).

However, there are a number of difficulties with this technique, even as applied to ordinary recreation. Among them is the fact that the needed information about such costs is difficult to obtain, and even when obtained is not a complete measure of the value that the visitor places upon the visit. In the case of wilderness the difficulty is even greater in this latter respect. If it is true that the primary value of wilderness goes beyond its enjoyment by visitors, the use of an imputed demand for wilderness based on visitor data will, of course, undervalue the wilderness benefit. For example, one of the values that presumably cannot be measured by visitor data is what has been described as the "option demand" for the resource.¹⁰⁰ Many persons who have no present intention of visiting a wilderness would value—and pay for—the option of permitting themselves or their children to do so in the future. Even the option-demand theory, however, does not quite reach to the heart of the broader social value which wilderness is commonly thought to have and which provides the basic rationale for public, rather than private, market choice. We might label this the "social-option" value—the value which society at large places on having a refuge against civilization, a place where, in Romain Garry's words, man "can feel safe from his own cleverness."¹⁰¹ In part, this is an aggregate of the individual option demand, but it also goes beyond it in the sense that the value is one which requires a broad social perspective specially commending itself to public choice rather than to market determinations.

100. See Weisbrod, *Collective-Consumption Services of Individual-Consumption Goods*, 78 Q.J. ECON. 471 (1964).

101. Quoted in ORRRC REPORT No. 3, *supra* note 1, at 31. See also the general discussion of valuation, *id.* at 213-19. It is in valuation of the benefits of wilderness that I am most disposed to Hines' critical view of benefit-cost analysis, note 93, *supra*. It should be observed, however, that difficult as it may be to calculate usefully the benefit of wilderness under the circumstance of public choice, one can construct reasonable means for comparing different areas in terms of this relative benefit. The Forest Service has done this in its preliminary analysis of unclassified roadless areas, evaluating the "effectiveness" of different areas according to certain criteria: size, scenic quality, isolation (and likely dispersion of visitors), and variety of experience available. See FINAL ENVIRONMENTAL STATEMENT, *supra* note 44, at 25-27. These criteria are components of the "need" criterion which the Forest Service has at least in theory applied in all of its wilderness-review processes. See FSM, *supra* note 50, § 2321.13. However, the roadless area review program appears to be the first instance of weighting and quantifying these components to measure the relative "need" for particular areas. Notice, however, that these factors still do not measure "benefit" as such; for that reason they appear to have quite limited utility in benefit-cost analysis.

If the benefits of wilderness are extremely difficult to measure, the costs are not, and they are really the more important part of the benefit-cost analysis. Even if we could derive no meaningful measure of the value of wilderness benefits, it is essential to rational decision-making to have some notion of the costs. An initial calculation of the costs may resolve the issue without the necessity of becoming involved in the difficulties of valuing benefits. If, for example, the cost of preserving a particular tract is trivially small, then no significant land-use conflict exists and choice for preservation can be made without further ado. At the other end of the spectrum, if the demonstrable costs are determined to be extraordinarily high, it might be that no conceivable wilderness benefits flowing from the preservation of, say, a marginal increment of land can override them. As mentioned earlier, just such estimates seem to have characterized most of the economic analysis undertaken in the earlier stages of the classification process. Conceptually, the determination of cost is simple: it is measured by the value of the alternatives foregone ("opportunity cost"). In the case of wilderness, the cost would be the value of timber that cannot be cut, minerals that cannot be withdrawn, and other uses, such as developed recreation, that will be precluded by the wilderness status. Unlike wilderness benefits, we can obtain price figures for at least some of these preempted uses since they are sold in the market.

It is sometimes argued that the protected resources are not really sacrificed: since they are preserved for the future, they should be considered more an investment than a current cost. Quite apart from the dubious assumption that preservation status is one which can be easily reversed when demand for the resource arises, the notion that nothing is lost in foregoing present consumption is simple nonsense. This assertion does not imply that the future value of the resource should not be considered; that, of course, is taken care of by capital budgeting techniques that are a part of any efficient management. The future economic value of the resource is part of the benefit-cost analysis of resource investment and use. In such an analysis, the period of investment ("preservation") of, say, a timber stand will obviously vary, depending on such factors as expected future yield and the interest (or discount) rate, which reflects the opportunity cost of capital tied up in the investment. But whatever that period would be, it would not correspond to the indefinite preservation of the resource. This is apparent even on

the most restrictive assumptions. Suppose, for example, that the economic management objective were to maximize the *physical* annual productivity of a timber stand. Such an objective might lead to a relatively long period of investment—up to perhaps 120 years for Douglas fir timber—but it could not lead to an indefinite preservation.¹⁰² Allowing the stand to go uncut (or unburned) beyond the period of maximum incremental growth would yield diminishing physical productivity. If one introduces more refined notions of capital budgeting, the period of investment becomes even shorter. Thus, if one seeks not maximum *physical* yield but rather maximum *economic* yield, the age of the stand might be a fraction of the 120-year period mentioned above. Depending on the discount rate, the maximum economic yield of a stand may occur at periods as short as 30 to 60 years.¹⁰³

I am not suggesting that these maximization criteria should in all cases govern. I cite them simply to demonstrate the foolishness of the assumption that preservation can be justified as an economic investment for the future. Not only does preservation not correspond to economic criteria for efficient investment—that is, for efficient allocation of resources over time—but it also is directly antithetical to such a purpose. It is not just that preservation exceeds the period appropriate for efficient utilization of resources; it also leads to a deterioration in the economic resource as the forest matures into old age. Though conservationists are constantly, and correctly, reminding us that a forest left in a natural state can and does renew itself, no one would argue that the *economic* productivity of an unmanaged forest is equal to that of a well-managed one.¹⁰⁴

102. The traditional standard for setting the "rotation age" of a timber stand (the age at which it is harvested) is its "biological maturity," defined as the culmination of its mean annual growth—the point where the volume yield of the stand is maximized. The age at which this takes place varies depending on the tree species, the climate, the soil, and the management techniques. For Douglas fir (the leading commercial softwood), a rotation age of 100-120 years has been fairly typical, though under modern management techniques this age is probably beyond the age at which annual volume yield is maximized. See REPORT OF THE PRESIDENT'S ADVISORY PANEL ON TIMBER AND THE ENVIRONMENT 172 (1973).

103. Forest Service, U.S. Dep't of Agriculture, Forest Regulation Study 43-44, 1973 (unpublished, draft report). On economic maximization criteria generally, see K.P. DAVIS, FOREST MANAGEMENT 234-42 (2d ed. 1966); E. MISHAN, *supra* note 98, at 194-97.

104. For illustrative data see, e.g., FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, FOREST RES. REP. No. 20, THE OUTLOOK FOR TIMBER IN THE UNITED STATES 93-125 (1973), which estimates that selective manage-

Whether or not the wilderness benefit exceeds the sacrifice in economic productivity (capital value) has still to be resolved; the point here is merely that capital value is sacrificed.

Many preservationists insist that refined cost calculations are really pointless because the total amount of land—and resources—that can become wilderness is a trivial portion of the total land—and resources—of the nation. Thinking simply in terms of acres, this is clearly true. Suppose, for example, one were to take all the presently identified but unclassified roadless areas (56 million acres), add them to existing wilderness and primitive areas (about 15 million acres), add a half million acres for Eastern wilderness proposals, and then add all Interior lands which have to date been proposed for wilderness (about six million acres);¹⁰⁵ all of this would come to only about ten percent of all federal lands and something more than three percent of the nation's lands.¹⁰⁶ But this display of figures, like a parlor trick, hides more than it reveals. What we are interested in is not gross acreage but productive land; and, as anyone who drives across the Nevada desert quickly notes (until he reaches Las Vegas), there is a great deal of land neither productive nor wilderness. Just how much there is, I do not know, nor do I see any reason to find out, unless one wants to engage in the game of numbers, percentages, and ratios. What really matters is the productive value of the proposed and prospective wilderness, and how much of that value will be lost by preservation. As to these figures, only partial and very crude estimates are available now, and they may be all that will ever be available. So far as the areas presently within the Wilderness

ment practices—only those justified by the condition that they will yield at least five percent return for the investment—can increase yield three percent by 1980 and 25 percent by 2020 above that which would be produced by present management practices. The latter already produce more than unmanaged yield.

105. As of July, 1973, of the 28.5 million acres in the National Park System scheduled for study, 200,000 acres had been classified as wilderness and 5 million had been recommended for inclusion. Of 29.6 million acres in the National Wildlife System, 100,000 acres had already been designated as wilderness and another 900,000 proposed. Finally, the Bureau of Land Management had classified approximately 154,000 acres as primitive (these are not formally part of the wilderness system). FINAL ENVIRONMENTAL STATEMENT, *supra* note 44, at 10, 11, 13. Probably more than 6 million acres will ultimately be proposed for wilderness, but I think it unlikely that the figure will go very much higher.

106. The gross area of the United States, including Alaska and Hawaii, is 2.3 billion acres, of which about 762 million acres are owned or managed by the federal government. U.S. DEP'T OF INTERIOR, PUBLIC LAND STATISTICS 1 (1972).

System (including primitive areas not yet reclassified as wilderness) are concerned, there does not appear to be any reliable calculation of the total productive value of such lands. Although general mineral and timber surveys have been made in these areas at some time in the past, many of them are old and reflect neither current market values nor other present conditions which bear on value (such things as the operability of timber and the cost of gaining access). Thus, even if early studies had been done with exacting benefit-cost techniques—and they were not—we would not have a very *precise* indication of the current opportunity cost of this wilderness. However, it appears that *most* of the areas within the existing wilderness system have little productive value.¹⁰⁷ As far as timber is concerned, many of the areas are not even sufficiently productive to be classified as “commercial forest,”¹⁰⁸ and much of those areas which do include commercial forest is only marginally productive. That is in fact why many of them have remained roadless and “unexploited”; the timber was not worth the high cost of access. To preserve such lands involves, then, little loss in timber value. When one further considers the very poor return on investment from active management of marginal timber lands, and then adds to that the unrecovered environmental costs (such as soil erosion) of access to and removal of timber from lands of low productivity, it is apparent that the opportunity cost of preserving such lands as wilderness is close to zero.¹⁰⁹ Indeed, quite apart from the question of wilderness preservation, it has been argued that the low rate of return on investment makes it uneconomic to manage such marginally productive lands for sustained-yield timber production.¹¹⁰

107. See M. Clawson, *Conflicts, Strategies, and Possibility for Consensus in Forest Land Use and Management* 22-24 (unpublished paper prepared for Resources for the Future Forum, May 8-9, 1974).

108. The Forest Service standard for commercial timberland requires an annual yield of 20 cubic feet per acre. FSM, *supra* note 50, § 2412.14.

109. See M. CLAWSON & B. HELD, *THE FEDERAL LANDS* 77 (1957).

110. This was the conclusion of the so-called Bolle Report on the Bitterroot National Forest in Idaho and Montana. SELECT COMMITTEE OF THE UNIVERSITY OF MONTANA, *A UNIVERSITY VIEW OF THE FOREST SERVICE*, S. Doc. No. 115, 91st Cong., 2d Sess. (1970). It should be noted that the Northern Region and northern portions of the Intermountain Region, to which the Report's conclusions were primarily directed, account for a giant share of the current Wilderness System. For example, approximately one-half of the existing national forest wilderness and primitive land is in four states: Idaho, Montana, Utah, and Wyoming. See U.S. DEP'T OF AGRICULTURE & U.S. DEP'T OF THE INTERIOR, *EIGHTH ANNUAL REPORT ON THE STATUS OF THE NATIONAL WILDERNESS PRESERVATION SYSTEM*, H.R. Doc. No. 357, 92d Cong., 2d Sess., pt. 19, at Appendix V (1972) [hereinafter cited as *EIGHTH ANNUAL REPORT*].

Turning from existing primitive and wilderness areas to other roadless areas, a first glance at the inventory of such areas suggests that the generalizations that hold for the existing System also hold for much of this land. Of a total inventory of some 56 million acres, only about 18.6 million are commercial forest and some of that is, again, in a region of low productivity which may be uneconomic to harvest.¹¹¹ However, the first appearance *may* be deceptive. Forest Service estimates put the total annual allowable cut for all of the 56 million acres at some 2.3 billion board-feet, by no means an insignificant volume.¹¹² More important (though also less reliable) are the estimates of *total* opportunity cost for the roadless areas, including not only timber value but also the values of other major resource uses which preservation would foreclose and the cost outlays for establishing and maintaining the wilderness. The total opportunity cost for all 56 million acres is estimated at over \$2.5 billion.¹¹³

The above figures suggest merely the rough parameters of what is involved in the unclassified roadless areas; they indicate that the costs of preservation, while not overwhelming, are not negligible either. Beyond that, it is not possible to be more exact, for the specific calculations made by the Forest Service are not only preliminary but also ambiguous as to some of the underlying assumptions. For example, it is unclear in light of other investment opportunities whether all of the timber for which value was calculated is operable, or in any

111. See DRAFT ENVIRONMENTAL STATEMENT, *supra* note 47, Appendix A, at 2-a. It is particularly noteworthy that the Intermountain Region accounts for some 11.5 million acres of roadless area, one-fifth of the total; however, the total annual allowable harvest from such lands is a mere 172 million board-feet—less than the cut of some single forests in the Pacific Northwest. The total annual allowable cut calculated for the entire 18.6 million commercial forest acres within roadless areas is 2.3 billion board-feet, half of which is in the Pacific Northwest (Oregon and Washington) and Alaska.

112. *Id.* at 37; Appendix A, at 38-a. One difficulty here is that the figure appears to include total inventory on the lands whether or not all of the timber is operable. On the 12.3 million acres finally selected as New Study Areas, the estimated annual allowable harvest is 299 million board-feet, about two percent of the current total for the national forests. FINAL ENVIRONMENTAL STATEMENT, *supra* note 44, at 77, 90. Again the estimate is at least ambiguous as to whether all of this is operable timber.

113. DRAFT ENVIRONMENTAL STATEMENT, *supra* note 47, Appendix A, at 37-a. The figure for the finally selected New Study Areas alone is approximately \$238 million. FINAL ENVIRONMENTAL STATEMENT, *supra* note 44, at 77.

case economically sound to manage. It is doubtful, however, whether it would be worthwhile to attempt a more precise and detailed calculus for the entire roadless acreage, or even for the 12.3 million acres designated by the Forest Service as New Study Areas. As discussed previously, it would greatly simplify matters if we could deal in nationwide terms, for then compromise tradeoffs between preservation and, say, timber values, would be much easier to make. Unfortunately, a nationwide approach seems out of the question for the reason previously stated: the controversy over wilderness is inevitably a local one.¹¹⁴ It seems inevitable that there is no alternative but to engage in a case-by-tiresome-case appraisal of the costs and, if possible, the benefits, until every acre of potential wilderness has been examined. It will be a long process.

V. PRESERVING WILDERNESS

To date, paramount public attention has been fixed on the question of establishing wilderness while, outside of a few exceptional instances or matters of special local interest,¹¹⁵ problems of managing it have clearly been of secondary public interest. To some it will no doubt appear strange even to talk of managing a wilderness—by common understanding as well as by ap-

114. See text accompanying note 66 *supra*.

115. Probably the most noteworthy example is the Boundary Waters Canoe Area (BWCA), where controversy has raged for years over allowing timber cutting, mineral exploration, and the use of motorboats and snowmobiles in the wilderness. See, e.g., *Izaak Walton League of America v. St. Clair*, 353 F. Supp. 698 (D. Minn. 1973), *rev'd*, 497 F.2d 849 (8th Cir.), *cert. denied*, 43 U.S.L.W. 3274 (U.S. Nov. 12, 1974) (mineral exploration); *Minnesota Public Interest Research Group v. Butz*, 358 F. Supp. 584 (D. Minn. 1973), *aff'd*, 498 F.2d 1314 (8th Cir. 1974), *prelim. injunction granted on other grounds*, No. 4-72-Civil-598 (D. Minn., Sept. 18, 1974) (timber cutting). See generally *SIERRA CLUB, A WILDERNESS IN CRISIS—THE BOUNDARY WATERS CANOE AREA* (1970). Recently the BWCA controversy has escalated in response to the Forest Service's proposed multiple-use plan, which, by steering a middle course between preservationists on the one hand and users on the other, has resulted in displeasing both sides equally. See *FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, BOUNDARY WATERS CANOE AREA MANAGEMENT PLAN AND ENVIRONMENTAL STATEMENT* (1974); *Minnesota Public Interest Research Group v. Butz*, No. 4-72-Civil-598 (D. Minn., Sept. 18, 1974) (challenge, *inter alia*, to adequacy of environmental statement); *In re Boundary Waters Canoe Area Management Plan, Appeal of Sierra Club, North Star Chapter* (filed Oct. 16, 1974) (appeal of the management plan to Chief of Forest Service). The BWCA, however, is an exceptional case; many of the activities and uses (timber cutting, use of motors) have been permitted in the area under special legislation unique to the BWCA. See note 118 *infra*.

parent congressional design,¹¹⁶ a wilderness is an area left to nature's own devices. Unfortunately, the matter is not so simple. Surrounded by an urban, industrialized civilization, even a wilderness cannot be preserved by declaration alone. At the very least, administration is required to interpret—or establish—and enforce restrictions on access and use.¹¹⁷

Initially, the task is one of interpreting and enforcing *statutory* restrictions on access to and activities within wilderness. The basic statutory restrictions have been discussed earlier; essentially, they forbid commercial uses such as timber harvesting¹¹⁸ and livestock grazing (except where established prior to the Act). As noted earlier, a special exception was provided for mining and mineral exploration, which may continue until

116. For a Forest Service directive to the same effect, see FSM, *supra* note 50, § 2320.

117. On the agency's management functions within wilderness areas, see Cliff, *supra* note 53, at 10-11.

118. One exception is Minnesota's Boundary Waters Canoe Area (BWCA). When the area was first set aside for special administrative protection, timber harvesting in parts of the area (the portal zone, or outer boundaries) was permitted to continue. In 1930, Congress—prompted primarily by proposals to construct hydroelectric power projects in the area—enacted the Shipstead-Nolan Act which gave special statutory protection to the area in order to conserve its natural beauty. Act of July 10, 1930, ch. 881, 46 Stat. 1020 (codified at 16 U.S.C. §§ 577-577b (1970)). As with the prior administrative scheme, the statute did not establish the BWCA formally as a wilderness area, and it specifically recognized continued logging in the area (logging, however, was prohibited within 400 feet of lakeshores). The Wilderness Act specifically provides that the terms of the Shipstead-Nolan Act continue to apply to the BWCA, 16 U.S.C. § 1133(a)(2) (1970), and that, notwithstanding the Wilderness Act, the management of the BWCA shall remain subject to prior regulations of the Secretary of Agriculture "in accordance with the general purpose of maintaining, without unnecessary restrictions on other uses, including that of timber, the primitive character of the area." 16 U.S.C. § 1133(d)(5) (1970). The Forest Service has continued to permit timber cutting in the portal zone, prompting challenges from local conservationists. At this time, a federal district court has enjoined the cutting until it can determine the adequacy of an environmental impact statement regarding a management plan for the BWCA which anticipates continued cutting in that area, BOUNDARY WATERS CANOE AREA MANAGEMENT PLAN AND ENVIRONMENTAL STATEMENT, *supra* note 115, and until a determination of the plaintiff's claim that timber harvesting activities are prohibited in the BWCA by provisions of the Wilderness Act. *Minnesota Public Interest Research Group v. Butz*, No. 4-72-civil-598 (D. Minn., Sept. 18, 1974). For the previous history of this case, see *Minnesota Public Interest Research Group v. Butz*, 358 F. Supp. 584 (D. Minn. 1973), *aff'd*, 498 F.2d 1314 (8th Cir. 1974) (certain timber cutting activities in BWCA enjoined until completion of the environmental impact statement). See also *In re Boundary Waters Canoe Area Management Plan*, Appeal of Sierra Club, North Star Chapter (filed Oct. 16, 1974) (appeal of the management plan to Chief of Forest Service).

1984.¹¹⁹ For the most part, these general statutory restrictions on wilderness use do not impose on the agencies any significant burden either of interpretation—the courts have taken that out of their hands—or of administrative implementation—the restrictions are self-enforcing. With some of the other restrictions, however, the administrative responsibility has been more weighty.

The use of motorized equipment has caused special difficulty. Although the Act generally bans the use of motorized equipment (including vehicles) within wilderness areas, a number of exceptions are provided: (1) the use of motorboats or aircraft established before the Act may continue subject to agency restrictions; (2) the use of equipment for mining or mineral exploration is permitted; (3) the use of roads or motor transport is impliedly authorized where it is necessary for obtaining access to private land within the area; (4) the use of motor vehicles or other equipment is permitted where they are necessary either for handling emergencies or for administrative purposes.¹²⁰

We can set aside the mineral exploration problem, for the

119. The exception was for a time eliminated by the federal district court decision in *Izaak Walton League of America v. St. Clair*, 353 F. Supp. 698 (D. Minn. 1973), which declared that mining and mineral exploration conflicted with the objectives of the Wilderness Act and that the latter override the former. The decision was reversed by the court of appeals, 497 F.2d 849 (8th Cir.), *cert. denied*, 43 U.S.L.W. 3274 (U.S. Nov. 12, 1974), which found Congress' clear language to the contrary controlling. *Id.* at 853. The decision of the court of appeals seems entirely sound. While one might agree, as a matter of personal taste, that mining and mineral exploration are incompatible with wilderness, it is surely a remarkable piece of arrogance for a court to nullify Congress' very clear decision to permit it nevertheless. If in fact the consequence is to destroy the wilderness character, is this not within the power of Congress to do? If Congress wishes to declare an area as a "wilderness, vacation, and training ground for the 7th Cavalry Division," are we to suppose that Congress could not do so because "wilderness," "vacation," and "training ground for the 7th Cavalry" are, to all reasoning minds, inconsistent?

120. 16 U.S.C. §§ 1133(c), (d) (1970); see also FSM, *supra* note 50, § 2326.1; ADMINISTRATIVE POLICIES, *supra* note 54, at 42-43. Again an exception is made for the Minnesota Boundary Waters where the Act allows the continuance of uses and activities previously authorized; further, the Act specifically allows the continued use of motorboats within areas where their use has already been established. 16 U.S.C. § 1133 (d) (5) (1970). The use of motorboats and snowmobiles is currently restricted to certain routes, and the Forest Service has recently proposed to restrict their use further. See BOUNDARY WATERS CANOE AREA MANAGEMENT PLAN AND ENVIRONMENTAL STATEMENT, *supra* note 115.

In the national parks, motor-powered craft are also banned except where their use was established prior to an area's inclusion in wilderness. ADMINISTRATIVE POLICIES, *supra* note 54, at 43.

use of particular equipment is an integral part of the larger anomaly of mining and mineral exploration within wilderness areas. Once that basic incongruity is accepted, the use of motorized equipment poses no special problem. Conversely, if mining and mineral exploration were to be prohibited, the problem of motors would be solved.

The problem of access to private inholdings is a significant one. Within the exterior boundaries of the nearly 15 million acres of national forest wilderness and primitive areas are extensive private lands with the only access to many of these lands being across wilderness. While the agencies can regulate this access, they cannot restrict it to a point where it would be in effect destroyed.¹²¹ The problem of private inholdings is particularly acute in the case of the national forests; there the Forest Service has attempted to diminish this problem of regulating access, together with the more general problem presented by nonconforming private uses within wilderness areas, through gradual acquisition of the private lands by purchase or exchange.¹²² However, given the funds at its disposal, it is not likely that the Forest Service will be able to rid itself of this problem within the immediate future. If anything, the problem is likely to be compounded by the addition of the New Study Areas.¹²³

More troublesome than the problem of restricting modes of private access is that of determining means of access for emergencies and administrative purposes. In conformance with its approach to wilderness classification, the Forest Service has taken a "purist" approach in regard to both its own activities and those of other agencies (for example, agencies conducting scientific investigations). Motorized equipment or vehicles are authorized only under very limited circumstances and only with the ap-

121. Quite apart from the provisions of the Act which preserve private rights of access, any substantial curtailment of access would constitute an impairment of the value of the private property and, thus, a "taking" for which the fifth amendment requires compensation.

122. Purchases are made under section 6 of the Land and Water Conservation Act of 1965, 16 U.S.C. § 4601-9 (1970). Exchanges are made under authority of the General Exchange Act, 16 U.S.C. §§ 485-86 (1970) and the Transfer Act of 1960, 7 U.S.C. § 2201 (1970).

The National Park Service, on the other hand, seeks to exclude inholdings from any area classified as wilderness. Such inholdings are acquired by the agency if possible, and then if suitable they are proposed for designation as wilderness. ADMINISTRATIVE POLICIES, *supra* note 54, at 43.

123. This will depend in large measure on how much latitude is given the agency in drawing the boundaries of wilderness to exclude areas with substantial private inholdings.

proval of the forest supervisor or a higher official.¹²⁴ As in the case of wilderness classification, the restrictive policies of the Forest Service have brought it criticism from various groups such as outfitters and backpackers who want to use power saws to cut fuel wood or to blaze trails; mining companies or agencies such as the Geological Survey that want to use helicopters to make mineral or other scientific surveys; and so on.¹²⁵ For example, when two students in an Outward Bound program were killed in a wilderness area, a local Forest Service official refused to permit the use of a helicopter to recover the bodies because the students were already dead and therefore no emergency existed that would justify the use of a helicopter. The refusal was later reversed by the Chief, who denied that the initial decision reflected Forest Service policy.¹²⁶ The reversal, however, did not prevent criticism of the initial action on the evident assumption that it did indeed reflect the basic attitude of the agency towards wilderness. That assumption seems to be accurate but the criticism itself dubious. It is not at all obvious that helicopters should be used in a case involving no question of actual rescue. Indeed, even in many rescue cases the use of helicopters or other motor vehicles might be reasonably debated. Suppose, for example, a group of experienced, adult backpackers become lost in a

124. FSM, *supra* note 50, § 2326.11 permits use of motor vehicles or equipment in four situations:

1. Where there is an inescapable urgency and need for speed beyond that available by primitive means (such as for fire suppression, safety or law enforcement).
2. A problem exists the solution of which is necessary to meet wilderness objectives, and which cannot reasonably be met with the use of primitive methods.
3. Limitations of time, season, finance, etc., make use of primitive methods for an essential wilderness administration activity either impractical or impossible.
4. For continuance of an essential program established prior to the Act.

In the first situation, the supervisor's approval is required. All others require approval by the regional forester, and the Chief himself must approve all use of heavy equipment. Requests by other government agencies for such uses are considered in light of the same criteria; many have been denied. EIGHTH ANNUAL REPORT, *supra* note 110, at 5.

The National Park Service policy is similar, banning the use of motorized vehicles or equipment, but it provides only one exception of a more general nature: "except as otherwise provided herein to meet the needs of management." ADMINISTRATIVE POLICIES, *supra* note 54, at 44. Specific provision for the use of such devices is made elsewhere with regard to fire control and rescue or emergency operations. *Id.* at 42.

125. See Cliff, *supra* note 53, at 11.

126. See *Hearings on Eastern Wilderness Areas Before the Subcomm. on Public Lands of the Senate Comm. on Interior and Insular Affairs*, 93d Cong., 1st Sess. 29 (1973) (statement of Senator Hatfield).

wilderness on a scheduled 10-day trip. After they have been gone, say, three days past their scheduled return, their families ask that helicopters be dispatched to search for them. On just the facts recited it seems to me that the value of sending a helicopter or other mechanized vehicle into the area is genuinely doubtful. If that seems harsh, it is so only because that is what the wilderness condition implies. Even granted a sympathetic instinct and an explicit congressional recognition that emergencies justify some qualification of the wilderness condition, lines must be drawn somewhere; and if wilderness is to mean anything, the line must be a fairly severe one. Otherwise, why stop at helicopter rescues? Why not construct permanent rescue roads, aid stations, or telephone lines? At some point on this slippery slope of logical "next steps," it becomes difficult to see any real point to wilderness preservation. I am not suggesting mechanical devices ought never to be permitted for emergency or administrative purposes, but rather that any restriction giving meaningful recognition to wilderness as an area of "primeval character" will be regarded by many, particularly by those unsympathetic to the wilderness ideal, as unnecessary and harsh.

The use of mechanized equipment and vehicles for purposes of meeting the needs of administrative management raises the more general issue of what those needs are. A major problem in this respect has been defining the proper scope of various protective activities such as fire control and disease prevention. Taking a very purist view, the question of what measures to apply to protect wilderness against the depredations of fire, insects, and disease would seem to admit of but a single answer—none. Whatever else a wilderness is supposed to be, the Wilderness Act declares it an area "affected primarily by the forces of nature." That would imply that at least natural fires¹²⁷ ought to be permitted to burn, and insects and disease to work their destruction—in short, that natural ecological forces be given free play. Such a laissez-faire policy is dictated not simply out of respect for the wilderness ideal, but also because it is essential to maintain the vitality of the natural environment. Control of

127. I am informed by Forest Service officials that in Western forests lightning-caused fires greatly predominate over those caused by man. This fact should be particularly true of wilderness areas where human use is relatively slight and stands in contrast to the nationwide incidence of wildfires, which were predominantly man-caused in the period 1966 to 1970. Glascock, *Forces Shaping the Public Opinion Toward Fire and the Environment*, in SYMPOSIUM ON FIRE IN THE ENVIRONMENT 65-68 (Forest Service, U.S. Dep't of Agriculture, No. 276, 1972).

insects, disease, and fire interferes with the process by which the forest rejuvenates itself.¹²⁸ With timber cutting banned from wilderness, these natural processes become the only means by which old timber is removed and forest regeneration is fostered.

Unfortunately, a completely laissez-faire solution is ruled out by the fact that these natural forces do not recognize wilderness, or even public, boundaries. The fire that sweeps through a wilderness may sweep across adjoining public or private lands as well. The problem has been to find a balance of protection that reasonably meets both the needs of the wilderness and the interests of adjacent land owners. The early response of the Forest Service was one of vigorous prevention and control of fire in particular. Since then, however, its policy has shifted towards the giving of greater latitude to natural forces. Insect and disease control is normally not undertaken unless the danger threatens to spread to other lands or unless the epidemic presents a greater threat to wilderness values than does the control.¹²⁹ The stated policy on fire is a bit vague, partly because it appears to be still evolving; in general, however, this policy, like that established for insect or disease control, appears to be one which aims for a "less aggressive" control of fire in those wilderness areas where life, private property, and lands outside the area will not be endangered.¹³⁰

In recent years, many conservationists have urged that controlled burning be used as a tool of forest management, particu-

128. See *Minnesota Public Interest Research Group v. Butz*, 358 F. Supp. 584, 609-17 (D. Minn. 1973).

129. FSM, *supra* note 50, §§ 2324.1-12. The Park Service follows a similar policy. NATIONAL PARK SERVICE, U.S. DEP'T OF THE INTERIOR, ADMINISTRATIVE POLICIES FOR NATURAL AREAS OF THE NATIONAL PARK SYSTEM 56 (rev. ed. 1968). Insect and disease control seems contrary to the wilderness ideal, but it can perhaps be justified on the grounds that to the extent fire is artificially controlled, it eliminates the natural check on the spread of insects and disease.

130. See FSM, *supra* note 50, §§ 2324.2-24. The quote is that of former Chief Cliff in *Hearings, "Clear-Cutting" Practices on Federal Timber Lands, Before the Subcomm. on Public Lands of the Senate Comm. on Interior and Insular Affairs*, 92d Cong., 1st Sess. 866 (1971). Cliff's statement is, incidentally, an indication of the vagueness on this question. In one sentence he denied that the Service permits fires to burn as an environmental control; in the very next he stated it uses a less aggressive form of control—which would seem to be the same thing as permissive burning. I was told by agency officials that *present* policy is definitely one of permissive burning, subject to the two conditions stated above. See text accompanying note 129 *supra*. Again, the Park Service policy is similar, see ADMINISTRATIVE POLICIES FOR NATURAL AREAS OF THE NATIONAL PARK SYSTEM, *supra* note 129, at 56.

larly in wilderness areas.¹³¹ Although controlled burning to aid wildlife and range management or as a means of clean-up and site preparation in timber harvest areas has been employed, there has been a reluctance to embrace this method of ecological control more generally. One problem is that of containing the spread of the fire. Another is that controlled burning, while *emulating* natural forces, is an artificial interference with those forces, only slightly different than cutting trees. However, both objections are at least partially countered by the fact that burning is required because of the agencies' own prior suppression of natural fire, the effect of which has been to build up excessive "fuel" in the forest to the point where the outbreak of any fire creates the risk of a conflagration.¹³² In apparent recognition of this, the Forest Service has now endorsed controlled burning in wilderness areas, subject to approval by the Chief of the Forest Service.¹³³ Just how vigorously such a program should be pushed at this time is debatable. Carefully implemented, there are benefits to such a policy—not only in wilderness areas but in other areas also. On the other hand there are at present substantial gaps in our knowledge of the ecological and economic consequences of controlled burning and of the techniques for burning effectively and safely (with an acceptable risk of the burning spreading out of control); all of these dangers counsel a cautious approach to the use of this management tool.¹³⁴

The most serious threat to wilderness, however, is far more subtle than commercial exploitation or natural depredations such as fire, pests, or disease: it is excessive use by individuals. The problem runs essentially parallel to that of recreational use of the forests in general; like the more general problem, indications are that it will become increasingly more troublesome. In 1970, nearly six million visitor-days were reported for areas in the wilderness system.¹³⁵ Even if this figure in-

131. See, e.g., Leopold, *Ecological Requirements of the Wilderness Act*, in *WILDERNESS AND THE QUALITY OF LIFE* 188-97 (1969); Heinselman, *Preserving Nature in Forested Wilderness Areas and National Parks*, 44 *NAT. PARKS & CONSERV. MAG.*, Sept., 1970, at 8.

132. See Leopold, *supra* note 131.

133. FSM, *supra* note 50, § 2324.24. The National Park Service approves prescribed burning in general, see *ADMINISTRATIVE POLICIES*, *supra* note 54, at 17, but makes no mention of its use in wilderness areas.

134. For an interesting discussion of some of the uncertainties in controlled burning see Zivnuska, *Economic Tradeoffs in Fire Management*, in *SYMPOSIUM ON FIRE IN THE ENVIRONMENT* 69-74 (Forest Service, U.S. Dep't of Agriculture, No. 276, 1972).

135. *REPORT OF THE PRESIDENT'S ADVISORY PANEL*, *supra* note 102, at 494.

creased only at the same rate as general recreational use, the danger to wilderness is evident. In fact, however, wilderness use is expected to increase at a higher rate,¹³⁶ compounding an already serious future threat to wilderness preservation.

The problem of overcrowding is particularly acute for wilderness because of its very limited, and relatively fixed, carrying capacity. In part, this limited capacity is a consequence of the particularly fragile character of most wilderness. As noted earlier, the very absence of exploitation typically attests to the relatively low productivity of these areas. Soils are often shallow; vegetation is insecure and can easily be damaged, even by soil compaction. Once damaged, the land and vegetation recover very slowly. The carrying capacity of a wilderness, however, is set not only by the tolerance of which the physical environment is capable, but also by the psychological impact which use has upon the wilderness experience of the "users"¹³⁷ themselves. At least in some areas, this latter aspect may be the controlling factor in determining the maximum capacity of the wilderness, calling for a lower level of use than would considerations of environmental protection. Thus, an area capable of tolerating, say, 1000 visitor-days a month without serious environmental impact may in fact tolerate only a fraction of that when "psychological congestion" effects are taken into account. A wilderness in which one encounters two or three campers each hour over the period of a 12-hour day may still retain its physical vitality, but it would hardly seem like much of a wilderness. This would particularly be the case where, in order to protect the physical environment against those 24 to 36 persons, the Forest Service adds outdoor privies.

This psychological aspect adds a most difficult dimension to the problem of overuse. Unlike the physical constraints associated with maintaining the ecology, the wilderness experience can hardly be defined, yet alone measured. We are back to the conundrum raised earlier in regard to the initial decision whether or not to preserve land: what is wilderness? Yet in a way the problem here is more vexing, for it forces the agency—and the public—to articulate more precisely the concept of

136. For example, Lucas, *Wilderness Perception and Use: The Example of the Boundary Waters Canoe Area*, 3 NAT. RES. J. 394, 398 (1964), estimates a tenfold increase in wilderness visitor days as against a threefold increase in general outdoor recreation visitor days.

137. I here use the term "users" in a broad sense, to include persons who enjoy or appreciate wilderness vicariously or indirectly, as well as those who actually enter wilderness areas.

wilderness (and that of wilderness "experience"). Initial decisions to remove land from economically productive use can usually be made without any clear conception of what wilderness means. Given a political decision to preserve some lands, a determination of "suitability" (as distinct from "availability") can be made on the basis of scenery, or a very gross judgment about the capacity for solitude, and so on; but there is no occasion for defining precisely what is meant by "solitude" or the other attributes of wilderness. A decision to establish a limit on use, however, requires just such a definition. It is a very difficult one to make; not only is there no ready-made standard, but there is no fully satisfactory process for setting one.

In several areas, visitors have been polled to see how they define the wilderness experience. In general the results show that most wilderness visitors seek a high degree of "purity"; they value solitude and react adversely to encounters with other visitors or to evidence of other use (particularly in the form of litter).¹³⁸ One difficulty with such surveys is that they test a very selected sample because they are limited to actual, rather than *potential*, users. Thus, the sample population is biased in the direction of whatever expectations have been created for the particular area. A very "pure" wilderness—with low visitor density, no significant evidence of use, and few or no facilities—is likely to attract primarily a very select population of visitors who place high value on that purity. It follows that any poll of such a group will produce a significant majority, at least, in favor of purity. On the other hand, an area that has, and shows, a high density of use will draw visitors from a broader, more "tolerant" (if that is the word) population. The logic can be followed through the entire spectrum of recreational experience, from a backpack adventure in the High Sierras to an afternoon at Coney Island. If the latter seems far-fetched, consider the proposal of one writer who, far from seeking solitude, proposed the construction of aerial tramways into wilderness so that it might be enjoyed by all.¹³⁹ One wonders how the tramway rider would respond to the pollster's question, what is wilderness?

There is, of course, good reason for selecting as a benchmark the standards of the most discriminating wilderness visit-

138. See Stankey, *A Strategy for the Definition and Management of Wilderness Quality*, in *NATURAL ENVIRONMENTS* 88 (J. Krutilla ed. 1972).

139. See Jubler, *Let's Open Up Our Wilderness Areas*, *READER'S DIGEST*, May, 1972, at 125.

ors, since those standards provide the foundation for achieving a high degree of purity. Indeed, for that reason recent surveys have not been content with polling visitors in general but have differentiated between the true purists and those less insistent on purity. The underlying rationale is that wilderness should serve the purists, and the rest should be accommodated by other recreational lands.¹⁴⁰ As a general proposition, this is an appealing rationale. We can scarcely justify going to the opposite extreme and consulting everyone, for the very concept of wilderness preservation cuts against the grain of popular, majoritarian taste. If we simply counted noses, it is unlikely we would have wilderness at all.

And yet, the visitor-sampling technique does not really solve the specific problem of determining the level of purity to be maintained. To define the level of purity by reference to an admittedly predetermined group of "purists" is evasive: by what standards is the group to be defined? If we have standards by which that group can be defined, there is no point in *asking* them; the group-defining norm can itself simply be made the standard of wilderness. Then, of course, the problem is how we establish the suitability—or legitimacy—of *those* standards. In short, reliance upon visitor perception would seem to be meaningful only in obtaining some measure of the nature and extent of acceptability of *agency* standards among those who are perceived as the primary *users* (not necessarily beneficiaries—since, as I have pointed out, the benefits of wilderness must be supposed to extend beyond users).

It has been suggested that instead of merely asking visitors to define their ideal of wilderness, visitors might be requested to order their preferences according to how much they would be *willing* to pay for varying conditions (whether they would be required to pay, assuming the responses to be candid, is a separate issue).¹⁴¹ This approach offers some advantages over the simple poll: in particular, it permits the benefits associated with a certain level of wilderness preservation/use to be measured in terms which can thereby be compared with the costs of secur-

140. See Stankey, *supra* note 138, at 96-97.

141. See Fisher & Krutilla, *Determination of Optimal Capacity of Resource-Based Recreation Facilities*, in *NATURAL ENVIRONMENTS* 115 (J. Krutilla ed. 1972). It should be noted that, though the authors consider the willingness to pay as being separate from actual payment, they do propose a user charge to ration use. As noted below, such user charges are now prohibited by statute.

ing those benefits—for example, the cost of restricting or channeling use to avoid encounters and the cost of additional land acquisitions. However, this type of poll does not fully answer the point raised above. Insofar as it is directed at an already selected group, it still presupposes a certain basic standard of use.

Once a determination is made as to carrying capacity, there remains the problem of deciding how use will be controlled. We can quickly pass over the alternative of closing the wilderness to all visitors. Although the Forest Service has indicated that some of its areas might have to be closed in order to prevent environmental damage,¹⁴² it is scarcely an appropriate solution to the problem of overcrowding. Even if such a measure were politically acceptable—a most dubious assumption—it could be justified only in cases where no less drastic a solution would be effective or practicable. It is difficult to imagine a situation where no control short of a total ban would be effective. Perhaps there could be cases where the environment itself is so threatened that no further human use should be permitted. However, as noted earlier, it is the psychological character of the wilderness experience, not the physical environment, that will generally set the maximum limit on use. Where this is the case, to close the area in order to “preserve the wilderness” would make no sense at all.¹⁴³

On the basis of expected use, it is reasonable to predict that even an efficient system for controlling concentration will not be adequate without controlling the number of visitors.¹⁴⁴ The crucial task, therefore, is to find an effective and acceptable basis for rationing visitor use.

One major possibility, rationing by means of a pricing system, has been forbidden by legislative fiat. Under amendments to the Land and Water Conservation Fund Act, no fees may be charged except for developed recreational areas where special facilities or services are provided.¹⁴⁵ The rationale of this legislative prohibition is not entirely clear, since it has not been articulated fully and carefully. In general, it appears to reflect a common assumption that because wilderness is a “public good,”

142. FSM, *supra* note 50, § 2320.

143. In effect the “wilderness experience” would be preserved by destroying it. One recalls the military’s celebrated statement that it was necessary to destroy a South Vietnamese village in order to save it.

144. On methods for dispersing visitors, see FSM, *supra* note 50, § 2323.12.

145. 16 U.S.C.A. § 460l-6a (1974).

only the public at large, and not individual users, should be charged whatever costs are involved in preserving and maintaining it. At the risk of distraction, we need to digress here to consider this notion more fully, for it has substantial importance to wilderness management.

The notion reflects, I believe, a misunderstanding of the nature of public goods and the uses of pricing. If wilderness were a case of a "pure" collective-consumption good whose benefits were enjoyed entirely by the public at large,¹⁴⁶ then it would make sense to spread the cost over the entire public in the form of taxes. That is hardly the case here. While wilderness preservation does provide some such general public benefits—which is, after all, the rationale of preservation—it does not follow that these benefits flow equally to the user and nonuser. Surely it must be supposed that the backpacker who hikes through the High Sierras receives some benefit not realized by the Brooklyn cafeteria worker who merely contemplates the mountains while slinging hash. Therefore, even if there were some undifferentiated public benefit derived from wilderness beyond that measured by the aggregation of individual users, it would not support a policy of providing it at zero or minimal cost. At the very most it would support provision at a price somewhere short of recovery of the full cost of the resource, the deficit reflecting the general social benefit.¹⁴⁷

The free provision of goods can often be explained not as an allocation policy but as one of income distribution. In the area of natural resources management, one encounters this notion in the form of statements that user fees are inappropriate because they "discriminate" against the poor. But this is something that such fees have in common with all prices; what distinguishes wilderness enjoyment from other enjoyments? Although I do not wish here to embark upon a general discussion of the economic justice of prices, a couple of pertinent observations are in order.

While in some sense pricing obviously disadvantages the poor in relation to the affluent, it is a mistake to suppose that a pricing system reflects nothing more than relative endowments of wealth; it also reflects relative preferences in the choice of goods.

146. See notes 95-97 *supra* and accompanying text.

147. See Milliman, *Beneficiary Charges and Efficient Public Expenditure Decisions*, in *ANALYSIS AND EVALUATION OF PUBLIC EXPENDITURES: THE PPB SYSTEM*, 91st Cong., 1st Sess. 291, 310-11 (Joint Economic Comm. Print 1969).

For this reason, the common supposition that the rich would always outbid the poor in buying wilderness permits is foolish. Whether they would do so would depend on their individual preferences—their “utility functions,” as the economists would put it. Smith, whose income is \$45,000, may be willing to pay more for the sight of an eagle in the wilderness than Jones, whose income is \$15,000. But he may not be. Perhaps he would prefer to watch the Philadelphia Eagles at \$6.00 per game rather than to search for bald eagles at \$6.00 a chance. Moreover, to the extent any fee system does favor those who are relatively well-to-do, this would be the case even without a fee system because the nongovernment-controlled costs of making a typical visit serve to exclude the poor from the wilderness. Thus, a fee system would serve largely to ration demand among a relatively affluent group. Seen in this light, it is not easy to become excited about the ethical “problem” of charging the poor for wilderness enjoyment.

This latter point bears emphasis in view of the sometimes expressed notion that zero-priced goods are a means of redistributing wealth to the poor. Passing over the general question whether distributions in kind are a suitable way to accomplish this aim,¹⁴⁸ no possible justification can be found for them in the context of allocation of wilderness use. To all appearances, the effect of providing free access to wilderness lands is to shift wealth from a majority of the public to a minority and from relatively low-income groups to the well-to-do.¹⁴⁹ Even the most casual observation should suffice to show the regressive effect of free provision of outdoor recreational facilities. If the wilderness backpacker typifies America's needy, we need to rethink our “war on poverty.” To talk about helping the needy by not charging even a moderate charge for the use of this resource thus becomes a cruel hoax on the *real* poor whose taxes help to provide the resource, but who cannot afford the travel or other expenses of using it.

Thus, “equity” would seem not to favor zero or minimal pricing. In any event, it must be emphasized that equity is not the core concern. It is not conceivable that establishing even high

148. For contrasting views, compare, e.g., M. FRIEDMAN, CAPITALISM AND FREEDOM 190-95 (1962), with Thurow, *Cash Versus In-Kind Transfers*, 64 AM. ECON. REV. PAPER & PROC. 190 (1973).

149. *Hearings on H.R. 6730 Before the Subcomm. on National Parks and Recreation of the House Comm. on Interior and Insular Affairs*, 92d Cong., 1st Sess., ser. 11, at 58, 64-65, 106 (1971).

user fees for wilderness areas will have any meaningful impact on low, high, or middle-income persons; what is conceivable is that user fees will have an impact on the use of the wilderness. This brings us back to our point of departure: the use of prices as a system of rationing demand. The degree of rationing which a user-fee system would permit is impossible to estimate in the absence of experience with such a system in this area. It may be supposed that it would have little effect on overall wilderness use, since any practicable (that is, acceptable) fee level would constitute such a small part of the typical user's costs as to have slight effect on his general demand. However, properly designed user fees might be expected to affect choices at the margin, determining where or how long one visits an area. This suggests the possibility of controlling some of the congestion in heavily used areas by means of user fees.

The alternative to price rationing is, of course, administrative rationing. The agencies are now in the process of developing and implementing a permit system, with a limited number of permits being issued on a first-come-first-served basis. As this is written, such a system has been implemented in two national forest wilderness areas in California¹⁵⁰ and, I am informed by Forest Service officials, is under active consideration in several others; a similar system is currently used in five wilderness areas administered by the Park Service. These systems provide for reserving permits in advance, and it is contemplated that eventually a national system for making reservations will be established for all national forest wilderness areas for which permits are required by regional directive, and perhaps even for the entire Wilderness System.¹⁵¹ It is yet too early to know what

150. These are the San Gorgonio and San Jacinto areas in southern California. The system went into effect in both areas in 1973, although the use of permits began in 1971. The earlier permits, however, were not used as restrictive devices but simply for keeping track of visitors and obtaining visitor information.

151. Various possible methods for reservation have been suggested. One is to use a well-known private communications system, such as Western Union; another is to use the post office. A more sensible system would simply be the establishment of a central federal reservation center which would handle reservations essentially in the same manner as a motel reservation system. The cost of such a system would not, of course, be negligible, but a fee could be charged to cover this cost; in fact, I am told that the Forest Service contemplates such a fee. This fee would appear to be outside the restriction of the Land and Water Conservation Fund Act, see text accompanying note 145 *supra*, since according to Forest Service officials, it would be based not on use of the resource but on the provision of the *reservation service*.

the public acceptance of this rationing will be, although informal reports indicate that early returns are favorable.¹⁵² In any event, as a practical matter there is no alternative likely to be more acceptable if price rationing is eliminated.

Aside from a pricing system, the only possible basis for allocation would be that of administrative selection based on "merit." This is a rather vague basis of selection which can conceivably encompass any number of desiderata, but in the plan suggested by one noted conservationist, Garrett Hardin, the element of merit is one of physical ability to withstand the rigor of true wilderness.¹⁵³ On first hearing, the suggestion has a tone of reasonableness and plausibility. Certainly it conforms to the basic assumption that wilderness ought not to be modified to accommodate the "effete" with civilized comforts and aids. However, if the system is to do no more than exclude those who could not make the trip without an automobile, it is essentially pointless because such persons would at present be excluded by a reasonably rigorous enforcement of wilderness quality standards. The problem is what to do with the excessive number of visitors who can still "make it" after we have banned vehicles, motors, and other such aids.

Because it does not focus on the real problem, Hardin's proposal gives no real answer, although we may suppose the logic of his solution suggests some further standards of physical prowess. These standards, however, would open up huge difficulties, both practical and normative. The practical problems are fairly obvious. Who should define the standards: the agencies or the legislature? What criteria should be used: age, skill, physical condition, mental alertness? What mechanisms should be available for supervising the exercise of administrative discretion, either in setting the standards or in applying them to particular cases? Would every decision be subject to judicial review?

The practical problems of establishing and administering standards of merit also illuminate the very questionable, normative foundation of Hardin's merit proposal: what is the "merit" of physical vigor? As mentioned above, we assume maintaining rigorous standards of environmental purity will serve to exclude

152. I was so informed by Forest Service officials; their conclusions were not based on formal surveys.

153. See *Hearings on Effects of Population Growth on Natural Resources and the Environment Before the Subcomm. on Conservation and Natural Resources of the House Comm. on Government Operations*, 91st Cong., 1st Sess. 90, 95-96 (1969) (statement of Garrett Hardin).

many persons not physically able to endure the wilderness on its own terms. This exclusion is not specifically based on any notion that these are, *ethically*, more deserving persons. However, to go beyond this incidental exclusion and select only the most fit clearly assumes that the most fit are the "most deserving." Hardin explains that the physically fit are best able to appreciate the true character of wilderness. Those who make it "on their own," unaided by mechanical devices, are able to enjoy not merely the experience of being in a wilderness, but also the additional "experience of getting there"—that is, of self-achievement. That may be, but once one assumes all persons must *minimally* be able to make it "on their own," without any artificial aids (radios, roads, vehicles), is there any basis for *further* selection on the basis of physical vigor? Is there any reason to suppose that, for example, a 20-year old person for whom the rigors of wilderness are only moderately challenging appreciates the wilderness more than the 60-year old person who can barely endure it? If any generalizations are possible, I would be more inclined to say that just the reverse is likely to be true. But more to the point, there is simply no real basis in psychology for drawing any general inferences about the keenness of a person's experience or appreciation from his physical condition. Even if there were such findings, they would not provide a *moral* basis for "merit awards" (in the form of permits to use the wilderness) to those with keener sensitivities.

Whether or not such a notion of merit positively offends one's ethical sensibilities, it certainly is difficult to explain or justify by reference to any widely accepted notion of distributive justice. It is curious, to say the least, that Hardin concludes on the one hand that allocation of visitor permits through the marketplace should be rejected as "unfair," and on the other that allocation to those with the keenest physical abilities and mental faculties should not be. Whatever inequities there may be in the distribution of wealth that cause persons to be suspicious about the marketplace, the inequity in the distribution of physical vigor or mental sensitivity is no less pervasive. If one measures ethical merit independently of original endowment, there is no a priori reason to prefer health over wealth in the distribution of "merit goods."¹⁵⁴

154. Indeed, the contrary was once argued with some plausibility by Henry Simons:

Let us imagine a competitive economy, without inheritance, where all persons have substantially equal talents for straight thinking, imagination, salesmanship, and chicanery, but are

VI. CONCLUSION

The controversy over wilderness preservation has raised virtually the entire range of basic issues confronted in federal land management. For the land manager, all the questions concerning land-use allocation policy are posed: should any large land area be given over to a single use or to nonuse; by what criteria should such lands be chosen; how should the trade-offs between economic use and preservation be measured? The allocation questions lead to other questions of administrative management: how shall land use be regulated to conserve the resource; should use of the resource be rationed by a pricing system or by administrative controls? And underlying these substantive policy questions are the questions concerning the structure and processes of decision: what should be the role of public participation in making decisions; what relative weights should be given respectively to national and local public interests; should decisions be aimed at achieving an optimal balance of resource use within particular regions or over the nation as a whole? Finally, there is the further question for decision-makers outside the agencies, notably those in the legislature and in the courts: how much discretion should the agency have in answering all of the above questions?

Quite obviously none of these questions has produced anything resembling a consensus among interested parties. Perhaps none ever will. Certainly there are some very substantial impediments to be overcome, as I noted earlier. One of these is the orientation of national forest policy generally, with its emphasis on regional and local interests and needs. Giving preeminent consideration to regional and local land-use interests appears to complicate land-use policy. For one thing, more individual deci-

enormously unequal in physical strength. Here, of course, the millionaires will be the persons with strong backs; and the apology of productivity ethics will be that they are entitled to share in the social income according to their respective differential contributions (productivity). A dose of Calvinist theology would make this doctrine more palatable to the masses; but persons of a critical temper might be led to restate the implications and to revise the conclusions simply by reversing them. If a person has been greatly favored by the Creator in the dispensation of rare physical blessings, it is hard to regard that initial good fortune as a basis for preferential claims against his fellows with respect to scarce goods whose distribution is amenable to some deliberate, human control. Indeed, one is almost obliged to admit the reasonableness of the opposite system of ethical bookkeeping, whereby rare physical blessings would be debited to the recipient's account with the universe.

H. SIMONS, *PERSONAL INCOME TAXATION* 12-13 (1938),

sions must be made, not only adding to the burdens of land-use administration, but also increasing the potential for conflict. For another, a focus on local and regional interests precludes the possibility of trade-offs across geographical regions. Specialization of land use is limited in favor of achieving balance within each geographical area.

Such a policy of decentralized land use is not without its political and social virtues, the same virtues that underlie the federal structure of the nation. Whether these virtues require the degree of balkanization that has characterized land-use policy—and wilderness policy in particular—is debatable. However, as it is not possible to debate it here, I shall leave this as merely a provocative assertion.

The other major impediment to consensus on wilderness preservation is what I earlier termed the “holy war” aspect of the controversy. The struggle over wilderness is not simply a conflict of practical interests, but of basic social values as well. Such conflicts are hard to resolve by consensus. The “naturalist” who deeply believes the world is too preoccupied with material goods is unlikely to be persuaded that wilderness should be sacrificed to produce more of them, just as the “utilitarian” is unlikely to be enchanted with the idea that utilitarian benefits should be sacrificed to preserve the spiritual values of wilderness.

What this suggests is that it is probably futile to seek consensus on the broad issues of wilderness preservation. Attention to the general, abstract issues can only exacerbate the conflict among partisans on both sides of the preservation controversy and make compromise more difficult. Instead the general issues must be broken down into the smallest components and each of these examined as an individual problem, hopefully with at least a modest degree of rationality and a minimum amount of moralizing.

