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Trends in Recreational Use Of National Forest Wilderness

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ABSTRACT

Trends in recreational use are useful as predictors of the need for future management decisions. As more land has been added to the National Forest Wilderness System, increases in use have occurred primarily on areas established by 1965. Visitor use of the areas designated by 1965 has been increasing at an average rate of 4 percent per year.

KEYWORDS: wilderness, wilderness use, trends in visitor use

INTRODUCTION

Information about the amount of wilderness recreational use is important for better wilderness management. Trends in use are particularly important as predictors of the need for future management decisions. This research note presents trends in visitor use for the National Forest portion of the National Wilderness Preservation System during the period 1965-80. The land size of the Wilderness System has grown during this period, particularly in the last 5 years. Reported increases in recreational use include both use intensity and wilderness acreage. In this analysis, wildernesses are grouped by year of designation and trends in visitor use are identified for each group of areas. This allows increased use on previously designated areas to be evaluated separately from increases resulting from additions to the wilderness land base.

The recreational use estimates used in this report (obtained from the annual reports of the Forest Service) begin with 1965. Prior to this date use was tallied in man-days and visitor days and man-days are not comparable nor convertible with any precision. A visitor day is 12 hours of use from any combination of users. A man-day is essentially one person for a day of the week; however, it becomes complex when handling fractions of days.² The estimates include both wilderness and primitive areas because the primitive areas did not differ significantly from the wildernesses, and were undergoing study for wilderness classification. Shifts within the 1965 base (from primitive to wilderness designation) are not noted as new additions to the Wilderness System.

Accuracy of the use estimates is unknown and it probably varies from area to area. Sharp changes in yearly use for individual areas may reflect changes in estimating procedures rather than actual changes in use. They could also reflect weather fluctuations and, possibly, closures due to fire hazard. Examining the data reveals some substantial fluctuations over the 15-year period. Provided that there is no nationwide tendency to under- or overestimate use, year-to-year variations for particular wildernesses should have little effect on systemwide trends.

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²Hendee, John C., George H. Stankey, and Robert C. Lucas. 1978. Wilderness Management. USDA For. Serv. Misc. Publ. 1365. Washington D.C.

RESULTS AND DISCUSSION

Visitor use of the areas designated by 1965 has almost doubled, increasing 82 percent over 15 years (table 1)! This represents an average increase of over 4 percent per year.

By 1980 over 8 million additional acres (3.2 million ha) had been added to the 14.6 million National Forest wilderness acres (5.9 million ha) established by 1965. It was not until 1979 (fig. 1) that recreational use within the added wilderness areas became appreciable. Even then, the additions accounted for only 10 percent of the total use. In 1978, 96 percent of the total use occurred on the original areas; by 1980 the original areas accounted for 88 percent. However, this 88 percent of total use occurred on only 65 percent of the National Forest Wilderness System acreage. Changes in total visitor-day use after 1978 reflect adding land areas with significant amounts of use, although these areas account for only 12 percent of the total. The 15 areas added to the system in 1979 have more total use than all the other areas designated since 1965 combined. Thus, there is a trend for wilderness additions to account for an increasing percentage of the total use. Because of their nature, most recent wilderness additions may contribute little to this trend, however. For example, in December 1980, 5.4 million Alaskan acres (2.2 million ha) were added to the National Forest Wilderness System. Because of the vast size and remoteness of these areas, they will likely continue to be lightly used.

A frequent assumption is that recreational use increases after an area is designated "wilderness" because of the appeal of the name. Although no use data are available for the period immediately before designation, the use of new wilderness areas in their first few years of existence may partially illuminate the effect of designation. Areas designated in 1973, 1977, 1978, and 1979 have had higher average annual rates of increase, from 15 to 27 percent, than the 1965 areas (table 1). These increases should be viewed cautiously, however, because they reflect the trends of only one to three wilderness areas for a given year's designation. In 1979 there were 15 new areas, so that only 1 year's change is available. Perhaps the best indicator of a possible trend for changing use after wilderness designation is noted from the 16 eastern wilderness areas established in 1975. The average annual rate of increase for these areas is 6.7 percent (table 1), only 2.4 percent higher than the annual rate of increase for the 1965 areas.

Without any "before wilderness designation" use data it is not possible to measure directly the effect of wilderness designation on recreational use. However, although use of newly designated areas usually increases more rapidly than does use of older areas, it appears that the effect is neither strong nor universal.

Table 1.--Visitor-day use and percentage change (%Δ) of National Forest wilderness in existence from 1965 through 1980 (1973-1979 are the years additions were made; parentheses denote the number of areas added to the system).

Year	1965	%Δ	1973	%Δ	1975	%Δ	1976	%Δ	1977	%Δ	1978	%Δ	1979	%Δ
1965	4,522,100	--												
1966	4,789,200	5.9												
1967	4,690,100	-2.1												
1968	5,056,500	7.8												
1969	5,071,900	.3												
1970	5,842,800	15.2												
1971	6,703,000	14.7												
1972	6,459,400	-3.6												
1973	6,665,300	3.2	16,400(1)	--										
1974	6,723,000	.9	19,700	20.1										
1975	7,297,100	8.5	15,300	22.3	201,000(16)	--								
1976	6,789,600	6.9	41,400	170.6	253,500	26.1	22,500(1)	--						
1977	7,755,200	14.2	32,900	-20.5	198,300	-21.8	19,000	-15.6	2,900(1)	--				
1978	8,290,900	6.9	33,700	2.4	205,600	3.7	15,600	-17.9	3,100	6.9	62,200(3)	--		
1979	8,651,500	4.4	36,300	7.7	217,200	5.6	22,900	46.8	4,100	32.3	87,100	40.0	585,800(15)	--
1980	8,177,000	-5.5	48,400	33.3	260,500	19.9	22,700	-9	5,400	31.7	78,500	-9.8	675,300	15.3
Average annual percentage change		4.3		27.3		6.7		3.1		23.6		15.1		15.3

ADDITIONS TO THE NATIONAL FOREST WILDERNESS SYSTEM BY YEAR

1973:	Sagegoat
1975:	Sipsey, Caney Creek, Upper Buffalo, Bradwell Bay, Cohutta, Ellicott Rock, Beaver Creek, Presidential Range-Dry Creek, Joyce-Kilmer Slick Rock, Gee Creek, Bristol Cliffs, Lye Brook, James River Fall, Dolly Sods, Otter Creek, Rainbow Lake
1976:	Hells Canyon
1977:	Hercules Glade
1978:	Manzano Mountains, Sandia Mountains, Fitzpatrick
1979:	Golden Trout, Kaiser, Santa Lucia, Gospel Hump, Hunter-Fryingpan, Indian Peaks, Great Bear, Welcome Creek, Chama River Canyon, Wenaha-Tucannon, Wild Rogue, Lone Peak, Blackjack Springs, Whisker Lake, Savage Run.

Figure 1.--Trends in recreational use for base 1965 wilderness and primitive areas from 1965-80.

CONCLUSION

The change in total use of National Forest wilderness from 1965 through 1980 is due primarily to increases in use intensity on the original areas existing in 1965. It is not until 1978 that the first substantial increases due to the increasing land base are evident. Even so, 88 percent of the total visitor-day use in 1980 occurred on the 1965 areas that comprised only 65 percent of the total National Forest wilderness acreage.

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The Intermountain Station includes the States of Montana, Idaho, Utah, Nevada, and western Wyoming. About 273 million acres, or 85 percent, of the land area in the Station territory are classified as forest and rangeland. These lands include grasslands, deserts, shrublands, alpine areas, and well-stocked forests. They supply fiber for forest industries; minerals for energy and industrial development; and water for domestic and industrial consumption. They also provide recreation opportunities for millions of visitors each year.

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