TRENDS IN LAND AND WATER AVAILABLE FOR OUTDOOR RECREATION

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Abstract.--A data base for assessing the availability of land for outdoor recreation does not exist. Information on related issues such as vandalism, easements, and land posting is scanty. Construction of a data base for assessing land availability should be a high priority for USFS and HCRS, and for SCORP's and the RPA and RCA assessments.

Outdoor recreation is by definition a land-using activity. The intensity of use may vary from a few visitors per acre per year in the far corners of the North Cascades to thousands per acre per year at Coney Island. It is of obvious interest, then, to review the current and likely future trends in land available for outdoor recreation. Completeness requires that land and water be considered together.

In this paper we outline the problems that must be considered in assessing and influencing recreational land availability in local areas.

To define the availability of land for outdoor recreation, we must classify land acreage by the following variables:

1. Physical characteristics (ponds, beaches, rapids, mountains)
2. Ownership (state, federal, private)
3. Management policies of the owners
4. Requirements of the activity
5. Accessibility - boat ramps, rights of way, roads, fencing.

No data base of this sort now exists. Creating such a data base should be one of the principal concerns of HCRS research, the SCORP process, and the U.S. Forest Service and Soil Conservation resource inventory and assessment processes now underway.

In this paper, we summarize bits of existing data to suggest how the problem may more fruitfully be studied. We think that our review leads to important policy implications. In searching for raw material, we queried administrators in state agencies responsible for parks, wildlife, and forestry, and federal land managing agencies. We received many helpful responses. We also reviewed a hefty sampling of recent state SCORPs. The written record reflects that inadequate attention is being devoted to the strategic long-term issues which we were asked to discuss

here.[1] We suspect that much of the research and inventory activity addressing land supply and access is not well documented yet.

We make no effort to construct a new data base for this paper. Instead, we review the broad background trends in land ownership that affect recreation. We then discuss the problems of defining effective access to land for recreation and some of the factors that determine effective access. Finally, we note four major policy issues: should public subsidies be tied to access policies?; what is the future role of government in providing land for recreation?; how can the private sector role be promoted?; and, what are the issues in land acquisition?

MAJOR TRENDS

To characterize the major economic trends affecting the availability of land and water for recreation is perhaps more useful than attempting to add up all the numbers. General data are shown Table 1. Major forces at work in the past quarter century include:

-- The reversal of rural outmigration and revived settlement and construction in remote regions. This revival includes residential settlement, which directly changes land use and often produces posting. A far greater acreage, however, has been affected by speculative "recreational subdivisions" catering to speculators and well-to-do urbanites. Such developments now cover millions of acres of rural land, often blocking access to water and to major public reservations as well (U.S. CEQ, 1976; Payne, Gannon & Irland, 1975). Development trends on our nation's coasts have led coastal zone planners to identify public access to the coast as a prime policy issue.

Table 1. Outdoor Recreation Acreage - Ownership Trends (Million Acres)

	1950	1960	1972	1976	% increase
National Forests	181	--	--	138	4%
National Parks	23.8	--	--	29.6	24%
State Park & Recreation Areas	--	5.6	--	9.8	75%
Municipal & County Park & Recreation Areas	0.6	--	1.7	--	67%
Wilderness	14.9 (1945)*	--	31.2		122%

*USFS administratively designated wilderness

SOURCE: 1973 Statistical Abstract of the United States. U.S. Government Printing Office, Washington D.C.

-- The significant growth in acreage devoted to recreation through increased public ownership and leasing.

-- The growth in recreation activities which produce substantial disamenity has expanded some recreational opportunities and reduced others. Few lakes and forests are now havens for peaceable strolling, out of range of the noise of trailbikes, waterskiers and snowmobilers.

-- Sizable regions, on the other hand, have been devoted to back country activities, often with motorized and developed opportunities excluded. The potential exclusion of motorized activity has often been the most loudly

[1] In preparing this paper, we have found virtually no trend material on vandalism, other than the Alfano and Magill (1976) Symposium. We suggest that state and federal crime statistics, and the USFS RIM system, might be worth searching for this purpose. We also do not treat specialized issues regarding access to federal lands, such as range land fencing and coal development in the west.

contested question in wilderness area debates. Our informal survey found that a number of states have established wilderness areas on state-owned lands.[2]

-- Public agencies and private groups have made major progress in maintaining public access through agreements with landowners--acquiring easements, leasing and similar measures. The classic example, of course, is the Appalachian Trail (Burch, 1979). Snowmobiling, Hunting and fishing have also been, major areas of activity. Such steps have not yet been, it appears to us, widely applied to nongame wildlife, day hiking and cross-country skiing.

-- Private enterprises have expanded the supply of many recreation opportunities, including camping, boat access and services, lodging and in other traditional fields. Other specialized activities such as trout farms, cross-country ski areas, and the like have as yet not achieved a large role in their respective fields. Much more could be done to apply the capabilities of private enterprises to recreation supply.

-- Recreation developments requiring massive construction now face declining prospects for acceptance in the nation's high mountains and in vulnerable coastal areas. These developments usually serve high income clienteles, cause major local social disruption and can cause significant environmental impact. The prospects for increasing numbers of such developments in the next few decades are low. (Anon.,1975).

DEFINING EFFECTIVE ACCESS

In many respects, comprehensive data on land ownership, were it available, would not tell the true story about the availability of lands and waters for recreational use. The total supply available is not the most important factor controlling public availability. We need to define "effective access" with respect to each land and water unit.

A comparable problem has been faced by timber resource survey experts in estimating the supply of privately held timber available for harvest. Methods used in that field should be reviewed for applicability to assessing effective access for recreation.

Effective access is controlled primarily by the ability of recreationists to "get there." A unit of land or water is of little recreational value if the public is unable to get to it in the first place. In many areas, particularly in larger public and private holdings, effective access has been significantly increased since World War II through accelerated private and public road building programs.

As an example, the large private landholdings which constitute the major portion of the northern half of the State of Maine, were accessible only by float plane and/or canoe prior to World War II. Since that time, this area has become laced with a comprehensive network of private woods roads, open to the public on a regulated basis. In the future, road building will continue to open up more areas to recreation, but at a declining rate. According to some, of course, this increased access is a trend for the worse, since it adds to fishing and hunting pressure and reduces the wilderness atmosphere.

Closely linked to the impact of road building into previously unroaded

[2] Examples culled from our survey of the States: Hawaii, 93,000A. of Natural areas; W. Virginia, "several areas"; Massachusetts, 4 areas: Michigan, 53,000A; Pennsylvania, 224,000A of primitive and wild areas; Maine, 20,000 acres in Allagash Wilderness Waterway plus 200,000A of trust lands in Baxter State Park.

areas, is the changing technology of recreational transportation. The use of snowmobiles and other off-road vehicles (ORV's) in conjunction with expanding road systems has opened up many areas previously limited in access. Increasing fuel costs will most likely stabilize the use of this access tool in the future.

Effective access may be limited in the more traditional physical sense as well. Lack of boat ramps can close off otherwise "public" waters. Strip development along roadways has effectively closed off large blocks of public and private land since World War II. This trend is likely to continue into the future in areas of high population density and economic growth.

Conflicts between mutually exclusive recreation user groups can effectively limit accessibility on a unit of land or water for a given recreational user. User group conflicts have escalated considerably since World War II and will continue to intensify (Bryan, 1979). In the future these conflicts can be most effectively reduced by zoning recreational lands to separate conflicting users either in time or in space. This technique will not eliminate the problem completely, and user group conflicts will continue. In Maine, improved cooperation betwee x-c skiers and snowmobilers is reported. Such cooperation should be encouraged.

In many parts of the country, a traditional package of social, cultural and historical use of lands and waters may effectively preclude exclusion from private ownerships. This phenomenon serves to highlight the dichotomy between the explicit and implicit availability of lands and waters. Explicit availability is determined by specific legal provisions for accessibility. The most common approach for obtaining explicit availability is through public ownership. Implicit availability, on the other hand, usually does not stem from any legal provisions, but rather from historical patterns of use. For example, the woods of northern Maine have been used by residents for hunting and fishing for generations, despite the fact that they are almost entirely privately owned, and accessible only by private roads. Efforts by some owners to regulate access to these lands in the last 10 years have met with strong resistance from local residents (For case studies, see Hengsbach, 1970; Stewart, 1963).

In some cases, implicit availability may be incorporated into provisions of state law, as with the various Great Ponds Acts common in New England, which were enacted in Colonial times. These laws commonly hold that on Great Ponds the public has the right to fish, fowl, cut ice, swim and boat (Smith, 1950). In some cases, this historical ordinance provides for access to Great Ponds over private land. As population pressures increase, and as community cohesion weakens in our mobile society, implicit access to private land will erode in the future.

LAND POSTING

The posting of private land against use by others has disturbed those concerned with outdoor recreation, especially hunting and fishing, for decades. The ORRRC reports on hunting and fishing in the early 60's reported that access to private land was a major future priority for expanding the supply of these activities. Yet their reports did not offer extensive analysis of alternative policies to promote such areas. (ORRRC, 1962a, 1962b). Nor, disappointingly, does the Third Nationwide Plan emphasize the issue.

Considerable private land remains open to public use. The Third Nationwide Plan estimates that 32% of the non-corporate land acreage is open to the public (217 million acres) and 54% of the corporate land is open (40 million acres). Most of the land owned by forest products companies is open to the public. In the South, acreage of forest industry land open to the public for recreation rose from 19.5 million acres in 1962 to almost 25 million acres in 1974 (Convery, 1979, p.29; Cordell and Maddock, 1969; and Patrick, 1969).

Land posting results from social change and social conflict. In the

past, rural landowners in many regions accepted the right of others to cross their property for the purpose of hunting, fishing and travel. When the people doing so were neighbors, and when the owner himself expected to enjoy the same right elsewhere, a supportive social consensus favoring public access to private land could exist. Today, the users are increasingly strangers from a distance. They at times damage roads with four-wheel drive vehicles, hot-rod snowmobiles, or hunt birds in the backyards of persons who disapprove of hunting. The consensus supporting public use wrinkles. When fences are broken and buildings vandalized, it collapses. The increased development of rural regions means that residents are closer together; but even neighbors are often strangers.

Our survey of recreation agencies and perusal of SCORP's yielded little comparative data on posting trends over time. In a Michigan study comparing 1929 to 1960, a sample of Upper Peninsula counties saw land posting rise 600%, while a lower peninsula sample rose more than threefold (ORRRC, 1962b, p. 97-98). This is the only study of posting trends we were able to locate. As an example of currently available data, results of several U.S. Forest Service studies are summarized in Table 2. They display considerable variation in landowner reactions to different public uses of their land.

The importance of these landowner preferences cannot be overemphasized. A change of 10 percentage points in the proportion of owners allowing a given activity can nullify the statewide effect of millions of dollars of outlays on land acquisition, leaving the general public no better off than before.

Posting is likely to continue to increase, based on the social trends now visible in rural America. To preserve access to land and water in the face of changing land owner attitudes will require that the major conflicts be addressed. User groups and public agencies will have to assure land owners that vandalism, littering and noise will be controlled. Owners may have to be paid for allowing recreational uses. Users will have to accept "corridoring" along designated

Table 2. Activities Permitted on Private Lands. Selected Northeastern States 1979's

Region and item	Hunting	Fishing	Hiking	Snowmobiling	All Use	Total owners or acres
	percent permitting					
Southern New England 1972-73 1/						
% of Owners	25	17	42	N/A	-	18,400 owners
% of Land	37	30	48	N/A	2/3	4.4 million acres
New Hampshire & Vermont 1973 2/						
% of Owners	51	17	51	50	51%	164,000 owners
% of Land	50	59	73	59	-	8 million acres
Kentucky 1975 3/						
% of Owners	24	6	12	1	39%	455,000 owners
% of Land	46	13	22	3	52%	11 million acres
West Virginia 1975 4/						
% of Owners	49	5	37	11	60%	124,000 owners
% of Land	58	26	44	11	65%	6.7 million acres

1/ Neal P. Kingsley. The Forest Landowners of Southern New England. USDA Forest Service, Resource Bulletin NE-41, 1976.
2/ Neal P. Kingsley and Thomas W. Birch. The Forest-Land Owners of New Hampshire and Vermont. USDA Forest Service, Resource Bulletin NE-51, 1977.
3/ Thomas W. Birch and Douglas S. Powell. The Forest-Land Owners of Kentucky. USDA Forest Service, Resource Bulletin NE-57, 1978.
4/ Thomas W. Birch and Neal P. Kingsley. The Forest-Land Owners of West Virginia. USDA Forest Service, Resource Bulletin NE-58, 1978.

paths and corridors that avoid gardens, tree plantations and homes. These arrangements can only be made by organizations. Snowmobile groups have successfully used this approach in many states. (Nordstrom, Stephenson and Nies, 1977).

In States where citizens have enjoyed common law rights of access to seashore, to Great Ponds and to undeveloped wildland, the basis in custom exists to rebuild a consensus in support of public use and access. A possible model is the program of Public Footpaths in England, in which the public is secured the right of transit over private lands for recreation. The Footpaths are well marked and provided with occasional parking places off small rural lanes. Thus, a medieval system of public rights necessitated by the three-field system of farming and the lack of public roads has been turned into a basis for recreational use by visitors from afar. The essential rights are supported by a public consensus. (See Sidaway, 1979 for related information on trails in England)

In efforts to prevent the loss of public access through posting, most states have provided laws limiting land owner liability and otherwise promoting public access. These have been extensively reviewed by Bradley (1977), Quaterman (1975), and Strodtz and Dane (1968). These laws are probably of greater importance in reducing the anxiety level of large owners than they are in promoting public use on small ownerships.

POLICY ISSUES

Should Public Subsidies and Tax Breaks Be Tied to Public Access?

Our society offers a variety of subsidies, some trivial, some substantial, to private landowners. They range from low-cost wildlife bunches and extension pamphlets to the $15 million in public funds spent to fight the spruce budworm in Maine. We offer land owners help in cutting and planting trees, in planting cover crops, and for an impressive array of management practices, including construction of farm ponds.

Because of its political sensitivity, it is understandable that a coherent policy has never emerged concerning any obligation on the part of the beneficiaries of subsidies to allow public recreational use of the benefitting lands. We think that this issue must be addressed immediately. Where land owners benefit substantially from production or amenity - increasing public subsidies, they should be required to allow public access. There is no excuse for subsidizing timber stand improvement or cover crops on private estates closed to all public use. The task will be to design programs that protect legitimate land owner interests that are at stake, and to achieve their acceptance politically. Enforcing the access provisions will be a challenge.

An additional subsidy is use-value taxation. Should owners benefitting from lowered tax assessments be required to allow public use of the land or a portion thereof? We understand that in Michigan such a policy is in effect under that state's forest tax program, covering 1.25 million acres (Act 194, PA 1925).

Future Role of Government

The Federal Government has taken on an awesome responsibility for the nation's outdoor recreation needs. This is based on the large federal landownership, on the ease of raising revenue through federal taxes, on the multistate nature of outdoor recreation, on explicit economic development considerations and, frankly, on the unwillingness and incapacity of state and local governments to address the issue.

Specific groups have used their organizing ability to use government as a potent tool in advancing their interests. Hikers have led the fight to preserve wilderness areas and constrain the activities of ORV'rs on federal lands. Snowmobilers have worked with state programs to expand

the supply of trails, and have taxed themselves to provide those services. Most successful of all, of course, have been sportsmen, whose taxes on equipment and successful lobbying are responsible for large programs of land acquisition, wildlife and fish management, and research. This is for a series of activities on which state and federal governments are demonstrably unwilling to spend general fund dollars. (Recall that a major source of LAWCON funding is offshore oil revenues and motorboat fuel taxes.)

On the whole, investors in intensively developed recreation such as marinas and ski areas have been modestly successful in receiving government support in terms of use rights on public lands, construction of roads, subsidized financing for buildings and pollution control facilities, and subsidized tourism promotion. But this seems to be changing. The opposition of environmental groups and nearby residents, financial difficulties, and the complexities of government permit processes are now the key factors affecting future developments of this kind.

One role played by government in recreation is the management of its own lands. Major opportunities for improved recreation supply exist on federal, state and locally owned lands. As an example, significant undeveloped opportunities exist on some 3 dozen Corps of Engineers reservoirs in New England (U.S. Congress, 1975). Much of the nonfederal land has the major asset of being close to the major cities.

Government affects recreational land supply profoundly through the tax system. Over the years, millions of acres of land have been preserved for public use by private charity. Prominent in fostering such donations have been the provisions of federal and state tax laws concerning charitable donations. Thus government, through its taxing power, has significantly promoted land supply for outdoor recreation.

Government sets the rules of liability for landowners and recreational users. One-sided views of this problem can fail to understand the issues in their full complexity. But clearly, on both public and private land, the allocation of liability appears as a significant role of government.

As an arbiter and definer of shifting public consensus on the content of property rights, government affects the right of the public to use privately owned land. Government is the only available instrument for expressing changing public attitudes about this problem. Unfortunately, it is likely that attitudes of small owners are changing away from allowing public uses of their land. Large owners still appear to accept a responsibility for public recreation access.

State and federal governments must play a major role in gathering and interpreting information, in developing and evaluating better management policies, and in basic research. A good part of the effort now invested in meaningless demand projections could profitably be diverted to studies of the costs and benefits of alternative policies for expanding the supply of recreation opportunity. The first step is a better data base on current effective land supply.

Public agencies have been crippled in the past by underfunded workloads in management, acquistion and enforcement. They have been unable to take active roles, except in a few cases, in promoting the application of private initiative to these problems. Numerous success stories exist. In our emerging era of financial stringency, we must look more and more to promoting our objectives by relying on the user groups themselves to organize and arrange for their needs.

The difficulty will be to employ private initiative in a manner that allows fair access to the general public. Already, significant opportunities for hunting are engrossed by individuals and private clubs leasing or owning land.[3] Often the members are more

[3]There is no good national data on the extent of privately leased land held by hunting clubs. In Alabama alone, some 2.5 million acres were leased by hunting clubs in the early 70's (Alabama SCORP, Vol. 20, p. 82).

affluent than most. They have succeeded, however, in preserving their own recreation opportunities and in managing open spaces in a generally beneficial manner. But to remove the opportunity for exclusivity dilutes the incentive for private action.

Promoting the Private Sector

Far more effort should be devoted to increasing the role of profit-making enterprises in supplying outdoor recreation. In the 1977 NACD inventory, 44,356 out of a total of 71,483 enterprises were operated for profit. (National Ass'n of Conservation Districts, 1977). This base of successful enterprises should be used to expand in existing areas like camping, and could be an innovative source of supply for less traditional fields now handled by the public and non-profit sectors. The Task Force Report (n.d.) prepared on this subject for the 1978 Nationwide Plan at least identified major issues, though it was flawed by self-serving argument and undocumented assertions. Serious research and case studies are needed to develop improved policies for promoting an expanded private role in providing recreation.

One key obstacle in promoting private recreation enterprise is the public provision of recreation at prices below cost. While this question is a complex and serious one, it appears to us that public recreation pricing policies should recognize this concern to a greater degree than is now the case. The enduring belief in "Davy Crockett Economics" -- hunting and fishing free of charge -- is a serious obstacle to progress.

In summary, the most important contributions that government can make to the supply of land for recreation are:

1. Develop more fully the latent opportunities on its own ownerships. Examples:
   (a) better access and land use at existing reservoirs;
   (b) effective access for winter recreation;
   (c) opportunities specifically for day use and short walks.
2. Use owned properties as cores for regional networks of water trails and land trails.
3. Promote self-help by organized private user groups and local governments. Perhaps the best example is the Appalachian Trial.
4. Effectively address the policy issues raised by public use of private land.
5. Promote development by the private sector.

Land Acquisition

The SCORPs and most traditional reviews have placed their primary emphasis on government acquisition of interests in land. Such interests have ranged from fee simple acquisition, to easements and other limited rights, to short-term leaseholds. While dramatic progress has been made in the past half century, much more needs to be done. Because of the steady pressure of development, which consumes three million acres per year, we can be confident that our current best efforts to acquire more land for public purposes will be appreciated by our descendants.

At the same time, fee simple acquisition for recreation encounters severe obstacles --

-- local opposition to removing land from tax rolls;

-- sentiment against government ownership and against single-purpose land uses;

-- the rapidly escalating cost of purchasing land.

These problems will cripple future land acquisition programs. To adapt, it will be necessary to pursue a mix of strategies. These will rely increasingly on less than fee methods

tailored to specific purposes, such as fishing easements (in the 1960's, some 27 states had programs of acquiring fishing easements).

Programs of leasing private land should be de-emphasized in favor of methods offering more permanent protection. In SCORPs, several states report difficulty in maintaining leased acreage for hunting. The State of Pennsylvania operates one of the most extensive leasing programs, leasing 2.7 million acres from 16,000 cooperators. The State of Florida also has a large program.

Many states have traditionally planned land acquisition around providing access to water. This is a sound emphasis and should be continued, especially in view of the increased amenity value of waterways resulting from pollution cleanup. There is a serious danger that the recreation benefits of water pollution cleanup will simply be capitalized into private land values and not benefit the general public. For a useful review of one state's approach, see, the 1979 Connecticut SCORP (p. 143-163).

CONCLUSION

If sound recreational planning and development is to be carried out in the future, a comprehensive nationwide system for gathering information on the lands and waters available for recreation, classified by relevant variables, is essential. As we argue here, simply tabulating ownership and facility data tells us almost nothing about recreation land availability. The Heritage Conservation and Recreation Service (HCRS) should take lead responsibility for this activity, in close coordination with the U.S. Forest Service through its Resource Planning Act activities, and the Soil Conservation Service through the requirements of the Resource Conservation Act. HCRS should promulgate standards for assessment to ensure comparability and implement them through the existing State Comprehensive Outdoor Recreation Plan (SCORP) process.

This data base will be essential in evaluating existing programs and in suggesting cost-effective ways to increase effective access. It will allow a periodic appraisal of the true availability of land for recreation, a task which cannot be accomplished with existing data.

In research, case studies and pilot tests are needed to evaluate potential techniques for increasing the involvement of the private sector in providing and maintaining recreational lands and waters. Improved programs for increasing public access to private land, especially small holdings, are needed. Some of the effective examples of self-help by nonprofit user groups deserve analysis and emulation. Critical evaluation of existing programs, with particular emphasis on economic analysis of costs and benefits of their ability to provide needed recreational opportunities is needed. Only such a close look at various alternatives and their relative effectiveness in achieving expanded land supply will enable responsible agencies to keep up with the demands for increasing the land base available for outdoor recreation.

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