



Resource Management Challenges

Recreational development is a job not of building roads into lovely country, but of building receptivity into the still unlovely human mind.

Aldo Leopold

Natural resource management is really people management. After all, the natural resources would do fine if it were not for the people involved. In chapter 8 we talked about natural resource management concepts. This chapter is concerned with resource management issues and challenges, especially the human component. In particular, it covers objections to land protection and access issues, special problems stemming from human use, issues and threats regarding natural resources, funding challenges, and environmental management debates.

Challenges to Public Land

Although some people complain that government is “too big,” or that the federal government is trying to “take over” private land, that is essentially untrue. In general, the amount of government land has decreased over the years. In 1978,

federal land comprised 34% of the United States; it has remained below 30% since 1989, measuring only 27.6% today (excluding Native American land).

Land Acquisition and Retention

During the Revolutionary War, the federal government's policy was to dispose of land, mostly to finance the new government. When the country was founded, the federal government ceded its land east of the Mississippi to the states. Following the Louisiana Purchase (1803), the government continued to acquire, sell, and dispose of "public domain" land. Over the years, the government has disposed of a tremendous amount of property, transferring it through different programs to private ownership. The Bureau of Land Management (BLM), which manages public domain, and its predecessors handled most of the disposal transactions.

In 1976 the policy of the federal government changed from one of land disposal to one of land retention. That year, Congress passed the Federal Land Policy and Management Act (FLPMA), reflecting a concern for environmental values and open space that replaced the drive for private development and increased production. The FLPMA specified that "the public lands be managed in a manner that will ... preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation." The land policy act states that the United States will generally retain its public lands in federal ownership—referring to the remaining 261 million acres of public domain administered by the BLM. Despite the FLPMA, however, the amount of BLM land has decreased since 1976.

Since 1980 a number of western states have challenged the government's land retention policy. The Reagan administration in the early 1980s initiated a policy of selling public land, which eventually stalled. In 1994 the Republican-controlled House of Representatives again attempted to initiate extensive privatization programs. Undoubtedly, this issue will reemerge in various forms.

Access to Public Land

Since 1980, some have argued that government should not own or manage any land, and that private enterprise would do a better job. However, private enterprise managed and destroyed the land and resources until the 20th century. It will continue to do so because that is more profitable, and our economic system is based on maximizing profits.

The conservation movement was started precisely to manage better the resources that remained. The federal government may not be perfect, but we now have nearly as many trees as in 1900, our water and air are cleaner than in 1960, soil erosion is minimal compared to the disastrous losses of the 1930s, and some nearly extinct species are coming back. Since 1980, conservation measures have decreased energy and water use while serving an ever-growing population and economy. Conservation works, and conservation requires resource protection.

Others argue that all public land should be "multiple-use" and that there should be few restrictions on use, e.g., no land protection laws or restricted use areas. This argument has been framed by some in terms of conservation versus preservation, with "preservationists" considered to be obstructionist and multiple-use advocates as "conservationists." This distinction muddies the issue. First, the framework of multiple-use recognizes that it is entirely appropriate to have some land with restricted uses, because it looks at the total land picture. Second, people in favor of wilderness or land protection are not opposed to all uses; usually, they are in favor of restrictions on certain kinds of usage. The real issue is appropriate uses of the resources and satisfying a diversity of users.

Another issue federal land managers have had to address is the closing off of access to public land by private landowners. With the creation of more roads near parks, wilderness areas, and other public land, homeowners are purchasing land near the parks and posting their land to close it off to users. A significant component of BLM and USDA Forest Service responsibilities and budget is now focused on developing or maintaining access.

As rivers become more crowded with boaters, landowners are closing off access to rivers out of frustration with boaters on their riverbanks. In some cases, fishing clubs buy land on rivers and restrict access. Access to climbing land is also a concern, because some private landowners worry about liability (even though they are protected by recreational use statutes) or the disrespect climbers show toward their land. In the case of other climbing closures, the land managers feel that users interfere with the natural or cultural resource protection mission of their agency.

One of the ways land managers manage access to land is through permits, especially for national parks and wilderness areas. For many years, there has been an extended waiting list to float the Grand Canyon. In 2000 the wait was nine years. Moreover, beginning in 2003, people could no longer get on the waiting list. In most other national parks and wilderness areas, permits and sometimes reservations are needed to go into the backcountry for overnight trips.



Thoughtful planning ensures that people with disabilities have convenient access to outdoor locations.

Beginning in 1996, many parks and wilderness areas began requiring a fee for a backcountry reservation, or even for a backcountry camping permit. In heavily regulated areas, such as the Grand Canyon or Rainier National Park, a major concern of noncommercial users is that most of the permits (up to 90%) have been allocated to commercial outfitters and guide services, leaving only a small proportion of permits for those with less money.

For those working for colleges and university outdoor programs or clubs, permitting has become a major issue. In many places, competition for group permits is significant. In addition, many places have instituted a fee for the permits. In some of the more popular spots, all the permits have been allocated to long-standing users, and groups who use an area less frequently have been "locked out." Again, commercial users often acquire most of the group permits, leaving noncommercial or nonprofit groups without access.

A strategy some noncommercial groups have used is to incorporate service learning into their programs. Often a park may allow access if it can obtain important service benefits, such as trail maintenance, in exchange.

The issue of limited access to natural areas for citizens with disabilities has been addressed by legislative acts and new policies of various federal agencies. The Forest Service and National Park Service (NPS), for instance, concentrate on modifying existing facilities to improve access rather than building separate facilities for people with disabilities so they do not feel isolated from the rest of the population.

Human Issues

Users of the land create challenges for land managers. As the population grows and people become more urban, they bring urban values and practices to outdoor recreation areas. Some issues that have been particularly problematic are crime and misbehavior, the use of off-highway vehicles and personal watercraft, and the increase of traffic in natural areas.

Crime and Misbehavior

Crime and misbehavior are management problems encountered by practically every agency. In addition to actual crime, the perception of crime constrains recreation use, causing many people to avoid public areas, especially at night, because they perceive crime as a problem even when it isn't.

Actual crimes and misbehavior of most kinds are increasing in outdoor recreation areas. These range



The cultivation and consumption of drugs such as marijuana on Forest Service lands is a growing problem.

from nuisances such as loud music, late-night parties, and rowdiness to more serious crimes such as poaching, vandalism, burglary, arson, assault, drug trafficking, and natural and cultural resource theft. The production and smuggling of drugs have been significant problems on Forest Service lands.

Crime has caused many rangers in the national parks and forests to obtain commissions in law enforcement. Many rangers now openly carry weapons and make arrests. They find it hard to keep from developing a "cop" attitude when they are obligated to deal with criminals to protect other park patrons. As the number of visits to recreation areas has increased, rangers have had more law enforcement duties and less time for other responsibilities, which are often then left to volunteers. Additionally, funding cuts have forced cutbacks in law enforcement capabilities.

Vandalism in public campgrounds and surrounding areas is much more frequent than on private property. The Forest Service estimates its annual losses from vandalism at more than \$6 million. According to research on vandalism at Army Corps of Engineers reservoirs, the most common type is breakage of facilities and equipment. Defacement and graffiti rank second, and ecological or cultural destruction is third.

Other forms of misbehavior may be accidental or careless. Additionally, misbehavior as defined by a manager may be acceptable behavior to a user. Exam-

ples include shortcutting on trails, driving off roads, chasing wildlife, leaving food available to animals, camping near streams, building illegal fires, and picking flowers. Although rules may prohibit such activities, the fact that users don't understand or agree with the rules may result in their breaking them.

Following are some methods of controlling crime and vandalism (Cordell & Bergstrom, 1999):

- ❖ Educating the public
- ❖ Using strong measures against those who do not value environmental integrity
- ❖ Using direct supervision
- ❖ Charging user fees, to make users aware that services cost money
- ❖ Keeping facilities in good repair and removing signs of misbehavior

Off-Highway Vehicles and Personal Watercraft

Most off-highway driving in the nation takes place on federal lands. Over half occurs on lands managed by the BLM. Between 1995 and 2000, off-highway vehicle (OHV) ownership increased 30%. There are more than 36 million off-road vehicles, plus snowmobiles, in the United States. Major resource management agencies have now become highly sensitive about off-



Photo courtesy of US Forest Service

Although snowmobiles and other off-highway vehicles might be fun to use, they can destroy natural habitats, and interfere with the recreational enjoyment of others.

highway vehicles. Some agencies are making efforts to adequately monitor and control their use.

The Forest Service has identified inappropriate OHV use as one of the major threats to its lands (USDA Forest Service, 2004c). Motorcycles, four-wheelers, and dune buggies have done extensive damage to vegetation, wildlife, and surface soil in our western deserts and forests. One especially harmful practice, hill-climbing contests involving motorcycles and four-wheelers, has marred the landscape on slopes throughout the nation.

In 2000 the BLM recognized that existing regulations were created when OHV usage was much less; its regulations had not kept pace with the growth of OHV use. The agency also noted that it was lacking the funding to identify areas appropriate and inappropriate for OHV uses (Bureau of Land Management, 2000c).

Off-highway vehicles disrupt the peaceful existence of wildlife in their natural habitat; dilute the backcountry experiences of many recreationists; and threaten endangered species, cultural resources, wildlife habitat, and riparian areas. The Forest Service estimates that in a forest the noise from a motorcycle may be detectable 7,000 feet away.

For several years, there have been debates about the use of snowmobiles in Yellowstone and Grand Teton National Parks. The issue with them has been exhaust from the heavy usage, noise, and the disruption to wildlife that, especially in winter, do not have excess energy reserves for survival.

In the 1990s personal watercraft (PWCs, or jet skis) became a major nuisance for many recreationists. Part of the problem has been their shallow draft, which allows them to go more places, the maneuverability and stunting that occurs, accidents, and noise. The NPS has chosen to close some areas to PWC use.

Transportation and Access

Data from the Department of the Interior (DOI) show that, nationwide, 90 to 95% of all visitors to recreation sites outside communities use private automobiles. Some related problems are as follows:

- ❖ Traffic congestion
- ❖ Hazards for pedestrians and cyclists
- ❖ The need for extensive roads and large parking lots
- ❖ Air pollution

The NPS and some other government agencies have initiated many on-site transportation systems

to relieve congestion and reduce interference with native environments. There are currently nearly 65 such programs in national park areas, most of which are shuttle bus systems.

Environmental Resource Issues

In previous sections we identified human and environmental resource issues and strategies. In this section, we summarize some of the environmental and management issues not covered elsewhere.

Invasive Species

Invasive species are nonnative species of plants, animals, insects, or diseases that threaten to eliminate native species. Because the USDA Forest Service is the lead agency on combating invasive species, this problem was introduced in chapter 10 with the US Forest Service. However, the problem exceeds the resources of the Forest Service, and it is being addressed by all federal and state land managers. Since 1999, the threat from invasive species has become much more evident as the problem has grown, and federal and state governments are investing far more money into combating the problem.

Water Issues and Rights

Water conflicts are already occurring in the western United States. The population of the West is expected to increase 30% in the next 20 to 25 years, increasing the problem. The Colorado River, and in some years the Rio Grande, is completely dry before it reaches the Mexican border. Fortunately, as a result of conservation measures, water use is less than it was at its peak in the 1980s. Nevertheless, without more conservation and protection of water sources, shortages will increase.

The debate in the West is over who owns or has rights to the water, and how to appropriate water. In the East, water rights are based on riparian doctrine, in which landowners along a lake or river may use the water, as long as that use does not affect the use of other landowners.

In the West, the appropriation doctrine is in force. Under the appropriation doctrine, first in use means first in priority. The first water users, regardless of land ownership, have prior rights to use as much as they need up to the limit of their right. Subsequent water users have junior rights in order of historical

chronological usage. In periods of drought, more junior users might not have water.

Two additional water use concepts are *use it or lose it*, and *beneficial use*. As long as the water is being used “beneficially,” the owner gets to retain the rights. Western water law allows owners to sell or lease their rights, even to communities several hundred miles away. If there is unappropriated water, a person or agency may apply for water rights, but not much water is unappropriated (Washington Alliance for a Competitive Economy, 2004).

Traditionally, beneficial uses referred to irrigation, drinking, or ranching. Since the 1970s, habitat preservation, fish, and other noneconomic values have been included. Part of the debate is over who has greater rights, and how much water they control. Another issue is how much users pay: It is argued that rural beneficiaries of federal water projects pay much less for their water than urban users pay.

Recently, recreationists, and especially commercial operators, have begun to argue that recreational use is a beneficial use. In Colorado, towns such as Golden, Vail, and Breckenridge, which have white-water parks or extensive commercial rafting programs, have argued this case in the courts. As the water shortages continue to grow, there will only be more fights over water rights.

Bears and Dangerous Animals

Dangerous animals include several species, but the bear most often comes to mind as a problem for recreationists. The black bear normally feeds on grasses, berries, nuts, insects, carrion, and occasionally small game. Traditionally, the main problem with bears has been in national parks. However, as humans have moved into their country, they leave food around, which attracts black bears. In Colorado, bears occasionally go into houses after food. In a confrontation with a bear, the bear is the loser. Bears can be a special nuisance in the spring when coming out of hibernation. Outside of Alaska, the grizzly bear is not a problem to recreationists. It is found only in a few isolated regions of the contiguous United States.

Land managers have used the following bear control measures:

- ❖ Bears have been trapped, tagged, and transported to outlying areas. If they return, they are exterminated.
- ❖ Certain recreation areas have been closed or restricted when bear encounters are likely.
- ❖ Several garbage areas and other features that attract bears have been fenced or eliminated.

Special bear-proof garbage cans have been developed.

- ❖ The education of recreationists to avoid feeding bears is a continuing process.

Following are other potentially dangerous wildlife that concern recreation managers:

- ❖ Sharks and other ocean life that can harm swimmers and divers
- ❖ Poisonous reptiles and insects, particularly in desert areas
- ❖ Cougars, which are becoming a concern in a few areas, particularly in parts of California and Colorado, although incidents are still quite rare
- ❖ Rodents that can transmit diseases through a bite or other direct contact

Fortunately, serious incidents involving animals are quite rare. More people die from lightning each year than from encounters with bears, cougars, sharks, and reptiles combined. A person is 10 times more likely to be killed by a domestic dog and 20-30 times more likely to be killed by a cougar than to be killed by a bear. Bigger concerns for the recreationist are automobile accidents, heart disease, Lyme disease, and skin cancer.

Mining

A perennial issue has been mining on protected lands such as national parks and wilderness areas. Based on patent claims prior to the formation of national parks, the 1872 Mining Law allows mining for hardrock minerals (copper, silver, gold, etc.), and some mining occurs within NPS lands. By this law, hardrock mining is allowable in wilderness areas; in practice, however, there is no mining as of yet in wilderness areas. Mining for energy (coal, gas, etc.) or nonhardrock minerals (gravel, sand) is not allowed on NPS or wilderness lands, but can take place on other federal lands. Since 2001 the federal administration has pushed for more extensive exploration of energy resources on federal lands. The BLM has authority for all subsurface minerals and controls permits.

Four issues are related to mining. One is the presence of old hazardous mines and materials. Prior to the 1970s, mining was unregulated. Abandoned mines create physical and environmental hazards. Environmental hazards including (1) acid runoff destroying vegetation, wildlife, and aquatic life; (2) lead, mercury, zinc, and arsenic poisoning of water; and (3) abandoned chemicals. Physical

hazards include the possibility of people entering caves and becoming hurt. Even under the current regulations, “unintended” environmental impacts occur (Bureau of Land Management, 2004a). Others charge that federal land managers have insufficient authority to compel adequate cleanup on newer sites.

Another issue is the federal subsidizing of mining through charging below-market fees. Not only are mines charged negligible fees, but they have tax incentives (write-offs) as well. Royalties could generate \$80 million per year which would be extremely useful given the substantial budget shortfalls. A third issue is the debate over the number of lands withdrawn from mining. For example, the Clinton administration had authorized the BLM to refuse permits if irreparable harm would be caused. However, this was criticized as too restrictive. In general, the second Bush administration has worked to open up federal lands for mining.

Outsourcing and Privatization

Outsourcing involves using private businesses to conduct previously “in-house” functions. A general movement toward outsourcing and privatization began in the 1990s. Although outsourcing is touted to save money, there are significant concerns. When outsourcing, one may not have as much control of the quality of the product or the service. Of particular concern is that the people hired to replace rangers will be less trained and less committed to the mission of the agency.

Another major reason for government intervention is that the for-profit sector tends to cater to those with money. This leads to disenfranchising the poor, leaving public recreation services only for those who can afford them.

A third concern is outsourcing to those with an inherent conflict of interest. For example, management decisions regarding fire control are being put into the hands of the logging companies. Some suggest that stewardship contracts—contracts with private timber companies to be stewards of a tract of land—are like putting the fox in charge of the chicken coop.

Finally, there is a question of whether outsourcing really saves in all circumstances. Especially when the outsourced service or product is not up to standard, outsourcing can end up costing more money in the long term. Big business scandals involving companies such as Enron, Tyco, Adelphia, and several others in the first years of the 21st century showed that perhaps privatization might not save money.

Planning for Ecological Sustainability and Recreation

Game protection was the original impetus for many conservation efforts. Consequently, early conservation efforts focused on protecting individual species or geographical units of land. Although early conservationists such as Aldo Leopold advocated for better understanding of ecosystems, emphasis on managing ecosystems rather than land is a late 20th-century trend (Cordell and Bergstrom, 1999).

During the 1990s, ecological sustainability became a priority for managing federal lands. Ecological sustainability recognizes that we need to manage lands to sustain entire biological ecosystems, which extend beyond the boundaries of even the largest parks or national forests. Related to this was the concept of ecosystem management, which meant taking a holistic ecological approach “blending social, physical, economic, and biological needs and values to assure healthy...ecosystems” (Cordell and Bergstrom, 1999, p. 5). This became the policy of the USFS and other land managers in the later 1990s. In 2000, a national forest planning rule established that the management of national forests was to be guided by ecoregion sustainability, and the best available science, including social science. Thus, this recognized that the national forest planning must involve units much greater than national forests.

However, in 2001, the new administration began to reverse this policy. A 2002 report suggested that the wildland fires, threats from invasive species, maintenance backlogs, and unhealthy watersheds were the results of expensive and time-consuming regulatory processes compounded by unclear or contradictory mandates (USDA Forest Service, June 2002c). Despite evidence from the General Accounting Office that examples of delays used in the report were exceptions rather than the general rule, the administration followed up on the report by creating new rules to reduce the regulatory procedures. These new rules eliminated ecological sustainability as the main priority and, some claimed, reduced the role of citizen input in planning decisions (Gorte & Vincent, 2003). In 2005, a new national forest planning rule was published which removed the regional emphasis on national forest planning, and reduced citizen ability to object to plans (USDA Forest Service, January 2005).

Recreation is mandated to be a part of the planning actions by several congressional laws, beginning with the Multiple-Use Sustained-Yield Act of 1960. The BLM was guided by a recreation plan called Recreation 2000, but by 2000, the BLM plan was

mostly abandoned. With the change in administration in 2001, the Forest Service Recreation Agenda was essentially dropped.

In addition, two important traditional sources of funding for recreation, the Land and Water Conservation Fund (LWCF) and the Urban Park and Recreation Recovery (UPARR) program, have been substantially cut for many years. Thus, planning for ecological sustainability and recreation could have greater priority.

KEY POINTS

- ❖ Natural resource management is really people management.
- ❖ Significant issues for federal park managers include crime, OHV and personal watercraft use, transportation crowding, and pollution in national parks.
- ❖ Major resource management issues relate to the thinning and diminution of environmental protections, water use and rights in the West, human encroachment on the habitat of bear and other potentially dangerous animals, mining, and outsourcing.
- ❖ Some people argue that the government should not retain and maintain land, and that private enterprise would manage the land better. This ignores the fact that the land and our resources are in much better shape than they were prior to government intervention.
- ❖ Early conservation efforts focused on protecting individual species or geographical units of land. During the 1990s, ecological sustainability, the idea that we need to manage lands to sustain entire biological ecosystems, was a priority in the management of federal lands.
- ❖ Since 2001 the administration has eliminated ecological sustainability as a priority and worked to decrease environmental protections and procedures, which are seen as unnecessarily expensive, time consuming, and cumbersome.
- ❖ As mandated by a number of different planning laws, in the 1990s, planning for recreation received the same amount of attention as other federal land uses. Since 2001, recreational plans developed in the 1990s by the BLM and the Forest Service have been abandoned. Important recreation grant programs (e.g., LWCF and UPARR) have been underfunded.

DISCUSSION QUESTIONS AND STUDENT ACTIVITIES

1. Which agencies are most likely to preserve (rather than conserve) resources, and vice versa? Explain why that distinction is not clear-cut. What is the real issue?
2. How does western water law differ from eastern water law?
3. What is meant by ecosystem management, as developed in the 1990s?
4. Privatization of government services has been growing since 1990. What are specific examples of services that have been privatized? What are the kinds of partnerships governmental agencies are making with the private sector? What are several specific partnerships? (May need to refer to previous chapters.)
5. Several federal laws mandate, or suggest, that recreation have equal priority with other uses, including especially watershed, range, timber, and fish and wildlife. Which, specifically, are these laws? (See appendix B).
6. The Cato Institute, a libertarian think tank, believes that federal land ownership is a socialist policy, and that we should auction off all public lands (Anderson, Smith, & Simmons, 1999). Part of their argument is based on the fact that the federal land management agencies, such as the NPS and the Forest Service, have run at a deficit—that is, they take in far less money than they spend.
 - ❖ Based on how and why those agencies are funded, what is wrong with that argument? In keeping with this question, be aware of *all* the different services they provide (e.g., fire fighting, technical advice, grants, etc.). What would be the result if *all* their services were privatized?
 - ❖ Other government agencies, such as the executive branch and Congress, also spend more money than they take in. What would be the consequences if we privatized the White House and required the president and various cabinet members to raise money to cover what they spend? What about other departments, such as the Department of Defense?