

# **Appendix H**

## **Managing Wilderness As a Resource**

# Managing Wilderness as a Resource

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## Objectives:

1. Understand what the wilderness resource is.
2. Understand the principles within a general framework to guide wilderness management decision making given various real life situations.

## Basic Principles

“...to secure for the American people of present and future generations the benefits of an **enduring resource** of wilderness.’ (The Wilderness Act. 1964, emphasis added.)

This statement of purpose from the Wilderness Act of 1964 is the foundation for wilderness management philosophy and policy. Wilderness is managed as a unique and vital resource, producing numerous benefits for the American people.

This paper describes the wilderness resource, presents a model for managing wilderness as a resource, and provides 16 basic management principles, all of which are derived from the Wilderness Act. These concepts and principles have been refined and have effectively guided Forest Service wilderness management for 25 years.

Wilderness is a unique and vital resource made up of inseparable parts. It is a place people can visit and enjoy without occupying it or modifying it to suit themselves. It is a place where natural ecological processes are in control and humans are merely visitors. Yet, it is a place where visitors can derive great personal benefits, such as emotional and spiritual renewal, improved self-esteem, improved physical or mental health, and a test of their outdoor living skills. Wilderness is a natural preserve, but at the same time, a place for present and future generations to use and enjoy.

The wilderness resource, as defined in the Wilderness Act, has three equally important characteristics:

1. It is a place not controlled by humans, where natural ecosystem processes operate freely and where its primeval character and influence are retained.
2. It is a place not occupied or modified **by** mankind, where humans are merely visitors, and the imprint of their work is hardly noticeable.
3. It is a place with outstanding opportunities for solitude for a primitive and unconfined recreation experience.

The wilderness resource also is composed of basic natural resources, such as soil, water, wildlife, vegetation, and air to be managed as inseparable parts of the whole--the wilderness resource (Fig. 1). We as managers have the challenge to ensure that all other resources or activities within wilderness are managed in a way that preserves the wilderness resource.

When properly managed, the wilderness resource produces numerous social, cultural, and natural resource benefits. Beyond the seer-renewing personal benefits experienced by users, wilderness produces social benefits, such as improved work performance, economic returns, and the opportunity for environmental education. Wilderness produces cultural benefits, such as a tie with our history, improved national character, and a bequest to the future. Wilderness preserves ecological benchmarks for comparison with more manipulative land management practices: a haven for species diversity and for preserving gene pools. The list of human benefits from wilderness is long indeed and should be carefully considered when making long-term land management decisions.

The Wilderness Act directs the management of wilderness ecosystems in as natural a condition as possible while providing for human benefits and use. It established a National Wilderness Preservation System, which now comprises 504 wilderness totaling 92 million acres of federal lands in nearly every state. The System is managed by four federal Government agencies: The Forest Service in the Department of Agriculture, the National Park Service, the Bureau of Land Management, and the Fish and Wildlife Service in the Department of the Interior. Although these agencies have different overall missions, the Wilderness Act generally brings their lands together under one National Wilderness Preservation system. Improved coordination and consistency within as well as among agencies (within the law's direction for each agency) is crucial for preserving a high quality National Wilderness Preservation System.

The system contains a wide variety of natural ecosystems, including deserts, grasslands, mesas, canyonlands, swamps, brushlands, hardwood and conifer forests, and coastal and alpine zones. Because of this diversity, national management policy is based on principles derived from the Wilderness Act. Local management practices are tailored to each wilderness. At the same time, policy has been kept as consistent as possible to meet the overall purpose of maintaining an 'enduring resource of wilderness.'

The concept of managing wilderness as a resource under the Wilderness Act is illustrated in Figure 2, The Wilderness Management Model. This model shows the relationship between the natural, undisturbed purity of a wilderness and the human influence that affects it. The more human influence, the less pure a wilderness is; the less human influence, the more pure the wilderness could be.

The absolute wilderness, no human influence modifies the area from its purest natural conditions. But, few places, if any, remain where humans have neither set foot nor where human influences, such as pollution, have not been felt. The Wilderness Act, then, defines wilderness as some point below absolute wilderness.

The Wilderness Act permits certain activities that also tend to lessen the opportunity to reach absolute wilderness. Mining is permitted on valid claims, as is access to valid occupancies and private land. Fire, insect, and disease control, grazing, and visitor use are

permitted with limits. Considered together, these potential modifications define minimum legal wilderness.

Each wilderness is affected by a variety of human influences. In one wilderness, human influence may be very limited; in another, major disturbances occur. The number or intensity of these influences cause a gap between the attainable legal wilderness and the current conditions. Therefore, the overall goal of managing each wilderness is to attain the highest level of purity of fits wilderness character within legal constraints. The model illustrates this goal as a management effort to move the wilderness up into the zone between minimum legal and absolute wilderness.

Wilderness management is **not** resource management, ‘business as usual.’ This is perhaps the hardest concept for foresters, biologists, range conservationists, and other resource professionals to understand or accept. It is not management in the sense of “doing something,” “manipulating,” or improving, each separate natural resource for maximizing a particular human benefit. **It is preservation of the wilderness resource and experience** for humans to enjoy as wilderness. Wilderness management consists of allowing natural processes to operate freely --- “protecting” nature’s opportunity to “manage” the area without human interference. The word “untrammled” was used in the Wilderness Act to clearly convey that the wilderness must be kept “uncontrolled” by humans.

When writing wilderness management policy, managing agencies are guided by the Wilderness Act, its legislative history, and subsequent legislation. In each subsequent wilderness act, Congress clearly directed that the objectives and direction given by the Wilderness Act apply to newly designated lands. Where there are specific exceptions for a particular wilderness, these are written in the act designating that wilderness or in its legislative history. Congress has chosen to assure a consistent wilderness management policy by not amending the Wilderness Act’s purpose and management direction, while at the same time selectively providing for special management exceptions. This policy consistency, to preserve an enduring National Wilderness Preservation System, is as important today as it was in 1964. Congress has amended the Wilderness Act only once. It removed Section 4(d) (5), management direction for the Boundary Waters Canoe Area, in passing a more management-specific act for the area in 1978.

To ensure that wilderness is managed and preserved as an “enduring resource,” a set of management principles has been derived from the Wilderness Act. These principles guide the development of specific management objectives and management practices for each wilderness.

The first list of principles was published in **Wilderness Management** (USDA; 1978). The Wilderness Society also published their own five principles, which combine many aspects of the earlier list, in fits **Wilderness Act Handbook** (The Wilderness Society; 1984). The following 16 principles have been tested by wilderness managers and have proven effective in ensuring that wilderness is managed as a unique and vital resource.

## **Principles of Wilderness Management**

### **1. Manage Wilderness as a Distinct Resource With Inseparable Parts**

Wilderness is a unique and vital resource that produces many human benefits. Chief among these is the recognition gained by visiting or reading about wilderness that we **are** an important part **of** the continual chain of life that connects us as a society to our past and future. We must tap into this resource and be continually renewed. We also **must** recognize our responsibility to preserve wilderness and other natural resources for untold generations to come. We are a part of the natural world--not an intrusion in it--and we must contain our urge to "... occupy and modify ..." all corners of the earth, preserving at least a small part of its as "... an enduring resource . . ." to enjoy as wilderness ..."

### **2. Manage the Use of Other Resources and Activities Within Wilderness in a Manner Compatible With the Wilderness Resource**

The wilderness resource comes first. We, as managers, should ensure that proposed management actions or activities will not harm the wilderness resource. For example, we should not manipulate wildlife habitat to improve huntable wildlife numbers. Recreation activities should be managed and kept within levels that maintain the land's wilderness character, including opportunities for solitude, and retain a quality visitor experience.

### **3. Allow Natural Processes to Operate Freely Within Wilderness**

In wilderness, we give nature the freedom to perform the managing and manipulation of the vegetation and wildlife species. This means not introducing exotic plants and animals. This means allowing natural processes such as fire, insects, and disease to play their ecological roles as much as possible. In wilderness, these processes are not destructive; not good or bad, but *natural*. When allowing natural processes to operate freely, however, allowances must often be made to protect human life and property and resources outside wilderness boundaries.

### **4. Attain the Highest Level of Purity in Wilderness Character Within Legal Constraints**

An overall goal of wilderness management is to make it as wild and as natural as possible. This includes restoring wilderness character when it has been severely damaged by human use. An example is closing old roads or restoring severely damaged trails and use sites. Each wilderness is a unique ecosystem, therefore, protection actions must be determined for each.

### **5. Preserve Wilderness Air and Water Quality**

Air and water can bear pollutants that affect the health of a wilderness ecosystem. Managers should monitor and report pollution levels and implement other laws specifically designed to protect air and water quality. Internal pollution sources such as animal and human waste should also be controlled.

### **6. Produce Human Values and Benefits While Preserving Wilderness Character**

Wilderness is for people. It is for people to visit or otherwise use and enjoy “... as wilderness ....” As managers, we should not be so protective of the ecosystem that we unnecessarily close the opportunity for people to enjoy the wilderness. To some people just knowing it is there is of great benefit. The preservation of ecosystems in their natural condition is a long-term benefit for people.

### **7. Preserve Outstanding Opportunities For Solitude or a Primitive and Unconfined Recreation Experience in Each Wilderness**

One of the most important human benefits of wilderness is the opportunity to enjoy solitude and to escape all of the controls of our busy society. We, as managers, should **leave** visitors alone, and plan for the least amount of contact or control over visitors. **Visitors also** should be allowed to freely camp in a primitive manner. Campsite convenience structures should not be furnished. StA visitor use levels should not be allowed to reach the point where the individual visitor’s solitude is destroyed.

### **8. Control and Reduce the Adverse Physical and Social Impacts of Human Use in Wilderness Through Education or Minimum Regulation**

When human use must be controlled to prevent overuse and wilderness resource damage, it is the best to do so in the following order of increasing control: (1) education in proper wilderness camping and travel techniques; (2) indirect control methods, such as dispersion of use; and (3) the minimum regulation of use necessary to meet management objectives. Where overuse is occurring, specific steps should be taken to reduce these impacts. Tighter temporary or long-term controls through a permit or quota system may be necessary. Restoration of damaged sites through natural or artificial means may be justified.

### **9. Favor Wilderness Dependent Activities When Managing Wilderness Use**

Wilderness is a scarce resource, and many recreational or other activities taking place in wilderness can be enjoyed elsewhere. Examples are cross-country skiing on groomed tracks, horse and foot racing, motorized or mechanical recreation, and manipulative research. Managers should not wait for severe conflicts to occur between activities before shifting non-dependent activities outside of the wilderness.

### **10. Exclude the Sight, Sound, and Other Tangible Evidence of Motorized Equipment or Mechanical Transport Wherever Possible Within Wilderness**

One of the most important directions in the Wilderness act is to ban the use of motorized equipment and mechanical transport within wilderness. The Wilderness Act allows managers to approve their use in emergencies or if they are minimum necessary tools for a wilderness management task. Previously established aircraft and motorboat use and motorized access to private inholdings may be permitted to continue. (The Alaska law provides for general public motorized travel.) Therefore, the management goal is to

exclude the evidence of these activities wherever possible. Managers must take the lead demonstrating that management tasks can be performed well by primitive or traditional non-motorized methods.

### **11. Remove Existing Structures and Terminate Uses and Activities Not Essential to Wilderness Management or Not Provided For By Law**

We as managers should lead the way in demonstrating that not all existing structures are necessary for wilderness management and use. Administrative cabins, lookouts, trail shelters, radio towers, weather stations, and the like have a huge impact on one of the important characteristics of wilderness—that it is a place not occupied or modified by mankind. Even a so called ‘small’ weather station is a human **occupation** of the wilderness, the very antithesis of wilderness.

### **12. Accomplish Necessary Wilderness Management Work With the Minimum Tools**

**Managers** should scrutinize each and every planned management action to see first if it is necessary, then plan to do it with the *minimum tool* required. This important principle **leads** us to maintain a true ‘wilderness environment.’ For example, hand tools create less lasting impacts than motorized equipment. Abused vegetation will, in most cases, heal naturally. Managers should train wilderness workers in the use and maintenance of traditional hand tools and primitive travel methods. Management leadership in the maintenance of traditional skills among workers will carry over to wilderness visitors.

### **13. Establish Specific Management Objectives, With Public Involvement, in a Management Plan for Each wilderness**

By using these principles from the Act and by involving wilderness users, managers should define acceptable levels of use and specific management practices for each wilderness. These should be documented in management plan. Each of the characteristics of the wilderness resource and each resource and activity is addressed in the plan. It is essential that wilderness visitors and other users understand the purpose of wilderness and support management decisions.

### **14. Harmonize Wilderness and Adjacent Land Management Activities**

Wilderness does not exist in a vacuum. Managers should plan activities on both sides of wilderness boundaries in a manner that recognizes differing land management goals. For example, constructing a large campground or a large parking lot at a wilderness trail head can lead to overuse. Severe insect outbreaks within the wilderness may cause unacceptable damage to valuable resources outside wilderness if not controlled.

## **15. Manage Wilderness with Interdisciplinary Scientific Skills**

Because of complex relationships involved, managers need to use the skills of resource and social science specialists. An interdisciplinary team must focus on preserving wilderness as a resource. Managers should assure themselves that each resource specialist understands the purpose of wilderness and the principles of wilderness management.

## **16. Manage Special Exceptions Provided For By Wilderness Legislation with Minimum Impact on the Wilderness Resource**

The Wilderness Act protected the interests of surrounded private landowners and provided for certain rights and activities (such as mining legitimate claims and livestock grazing) established before the law passed. Subsequent wilderness legislation also has provided for special exceptions that do not normally conform to the concept of wilderness. In all cases, the public's mandate is to provide for those special exceptions while preserving the Wilderness Act's basic management direction. Congress has made this clear by providing that despite special exceptions, each new wilderness is to be managed according to the Wilderness Act.

We, as managers, should seek ways to manage these exceptions in a manner that is sensitive to the needs of the user and provides the least impact on the wilderness resource. Some examples are: access to private land might be by trail or a very simple road versus by a high-standard road; approved access for mineral exploration might be by air instead of by a new road; and many grazing management activities can be performed without the use of motorized equipment.

These principles are the basic management direction for every National Forest wilderness. Guided by these principles, you and I, as wilderness managers, develop specific management practices to 'fit' the ecological and social characteristics of each wilderness. The Forest Service wilderness directive system can give further specific advice, but no directive system all the questions that arise in managing wilderness. A manager well grounded in these principles will make good wilderness management decisions.

## References

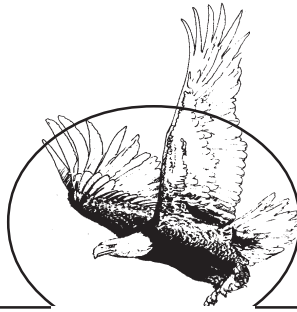
The Wilderness Act. Public Law 88-577.

U.S. Department of Agriculture. 1986. Forest Service Manual Chapter 2320, Wilderness Management. USDA Forest Service.

Hendee, John C., George H. Stankey, and Robert Lucas. 1990. *Wilderness Management*. North American Press-Fulcrum Publishing, Golden, CO. 546 pp.

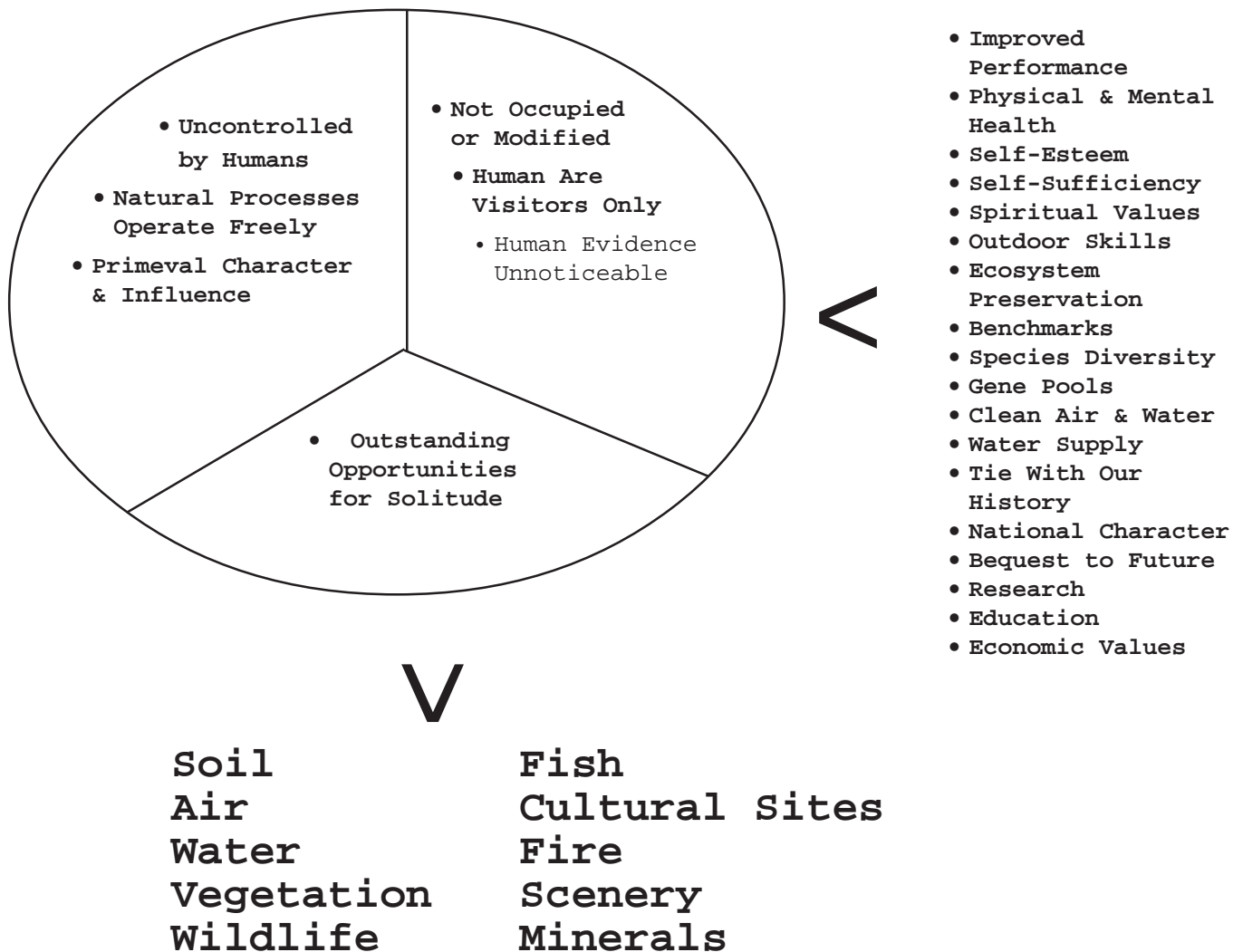
The Wilderness Society. 1984. *The Wilderness Handbook*. The Wilderness Society, Washington, D.C. 64 pp. (Out of print)

Figure 1



The Wilderness Resource...

## ...Producing Social, Cultural and Natural Resource Benefit for Humans

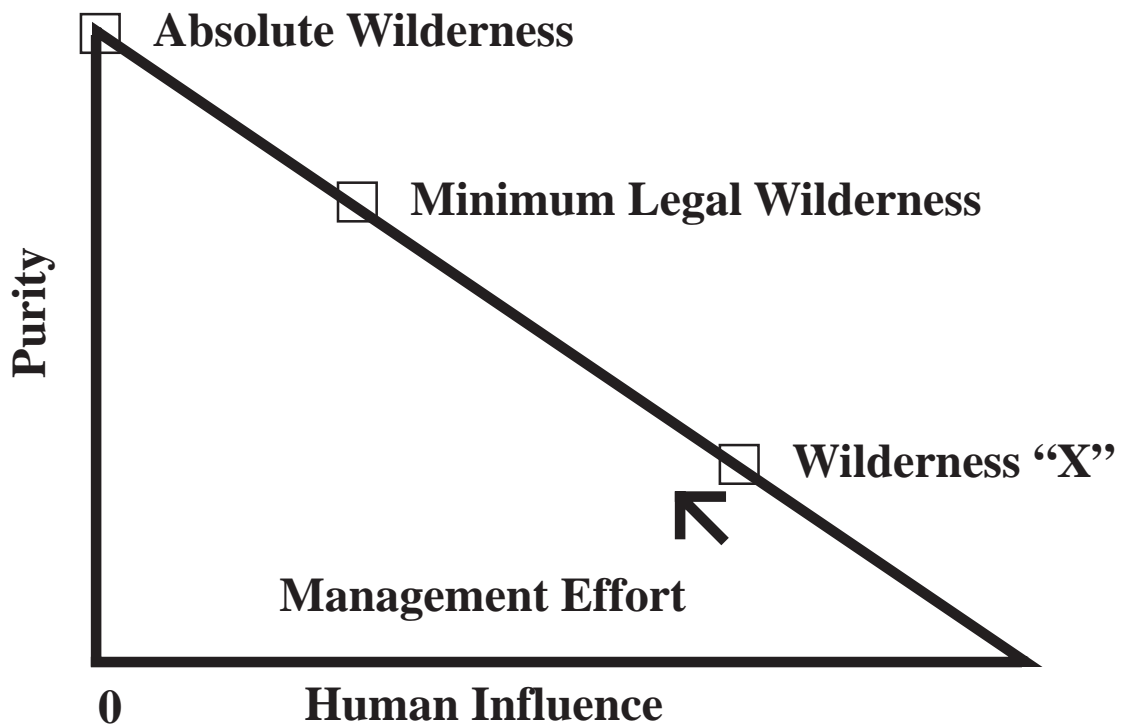


(Source: USDA Forest Service)

Figure 2

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# The Wilderness Management Model



(Source: USDA, Forest Service)