



MINIMUM REQUIREMENT DECISION GUIDE

“ . . . except as necessary to meet the minimum necessary requirements for the administration of the area . . . for the purpose of this Act.”

-Wilderness Act, 1964

**Instructions and worksheets for the
Minimum Requirement Analysis for actions,
projects, and activities in Wilderness**



ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

Acknowledgements

This guide was developed to provide a consistent process for considering the minimum requirement for accomplishing projects and activities in wilderness. It was developed with input from each agency responsible for managing the National Wilderness Preservation System, and is designed to assist wilderness managers regardless of which federal wilderness management agency they work for.

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In the near future, we plan to make this document available through www.wilderness.net. In the meantime, additional copies are available from:

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Introduction

More than 100 million acres of Federal land are managed as wilderness, a Congressional mandate that began with the passage of the Wilderness Act in 1964. In partnership with the public, wilderness managers have a responsibility to preserve and protect wilderness values.

Simply designating a wilderness does not assure its preservation. Careful management is needed to minimize the impacts from human activities in wilderness, including grazing, access to private lands, mining, management of fish and wildlife, fire and recreation. These activities have the potential to negatively impact the values that we are charged with protecting.

This guide is provided to assist managers in making appropriate decisions about their administrative actions in wilderness. The guidance comes from the Wilderness Act, agency policies, and the experience of 35 years of wilderness management. The wilderness resource is fragile and can be lost through the erosion from seemingly inconsequential decisions.

From Legislative Mandate to Agency Policy

A clear understanding and appreciation of the purposes and definitions contained in the 1964 Wilderness Act are necessary before considering appropriate management actions in wilderness.

The purpose of the Act is stated in Section 2 (a), “to secure for the American people of present and future generations the benefits of an enduring resource of wilderness.”

Section 4 (c) of the Act prohibits certain activities in wilderness by the public and, at the same time, allows the agencies to engage in those activities in some situations. Section 4 (c) states:

“except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.”

In the above language, Congress acknowledged that even though certain activities are prohibited, there are times when exceptions to these prohibitions will need to be made for administration of the area.

- However, from the regulations, special orders, and internal agency policy contained in Appendix A of this guide, it is clear that the wilderness management agencies should not view the language in Section 4 (c) as blanket approval to conduct projects or allow activities without an analysis of (1) whether the project or activity is necessary to meet the minimum requirements for the administration of the area, and (2) which tool or method should be used to complete the project that results in the least impact to the physical resource or wilderness values.

Agency employees entrusted with management of wilderness should set the highest standard possible when reviewing management practices in wilderness. Wilderness is intended to be managed differently from other public lands and this difference needs to be demonstrated to the public.

A Word About Traditional/Primitive Tools and Mechanical Transport

There isn't an all encompassing definition of traditional or primitive tools, but generally defined they include a variety of non-motorized devices such as hand saws, axes, shovels, and certain tools that give a mechanical advantage such as wedges, block and tackles, and winches. The Wilderness Act prohibits the use of motorized equipment and mechanical transport, but not mechanized equipment. Technological advances have improved the efficiency and function of traditional tools over the years. These improvements don't eliminate them from consideration as traditional tools. The defining characteristic of traditional or primitive tools is the reliance on human or animal power.

Mechanical transport includes travel within the wilderness by motorized vehicle of any kind. It also includes mechanical devices that provide transportation such as bicycles.

The use of traditional tools has been a cornerstone of wilderness management philosophy since 1964. As a result, certain skills that almost certainly would have vanished, have been kept alive. So few opportunities still exist to perpetuate these skills that are an important cultural tradition in our country. This is one of the benefits of wilderness.

How to Use This Guide

This guide has been developed to help provide consistency to the way project proposals in wilderness are evaluated and to ensure that we constantly strive toward maintaining or improving wilderness character through the decisions that are made. The information in this guide needs to be accompanied by a clear understanding of wilderness values and the ability to translate that understanding to a variety of complex and/or difficult projects in wilderness.

The guide is not a NEPA document, decision document or policy, but rather a series of self-explanatory worksheets designed to assist in thinking through and/or documenting your analysis. The worksheets

include a two step minimum requirements analysis: first, to determine if the project or activity proposed is the minimum necessary for administration of the area for the purpose of the Act, and second, to determine which tool(s) will have the least impact to the wilderness resource. The worksheets lead the wilderness manager through a series of questions to provoke thought and understanding about the necessity of the proposed project and the most appropriate tools to use.

The minimum requirements analysis is provided to stretch our imaginations for the least impactful way of administering the wilderness. The wilderness manager may authorize any of the generally prohibited activities or uses listed in Sec. 4(c) of the Wilderness Act if they are determined to be the minimum necessary to do the job and meet wilderness management objectives.

When deciding what projects or activities to undertake and tools to use, follow these steps:

1. Complete a minimum requirement analysis, Step 1 of the worksheets, for all proposed projects or activities. This step should not be used to justify use of motorized equipment or mechanical transport, but rather, to scrutinize the project or activity and make the best decision for wilderness in the long term.

2. Complete a "minimum tool" analysis for the project. This analysis can follow the attached worksheet or, if not, should at least address the same points. If the analysis shows a justifiable need for motorized equipment, it is important to have this analysis in writing to provide to the official(s) who can authorize the use of mechanical transport or motorized equipment in wilderness. For some units, this analysis may become an integral part of an environmental analysis required to document a decision to use motorized equipment.

Ongoing management practices, especially if they involve mechanical transport, motorized equipment, or structures, should be reviewed to determine if they are still necessary or the best way to complete the task at hand.

How Does the Minimum Requirements Analysis Tie to NEPA?

The minimum requirement analysis is intended to assist you in making a decision and the worksheets will document your analysis. This process does not take the place of NEPA.

If a formal decision under NEPA will be required to implement your project, consider formatting your minimum tool analysis so that it can be incorporated directly into your environmental analysis. The minimum requirements analysis will tie to your statement of Purpose and Need for the project in your environmental analysis.

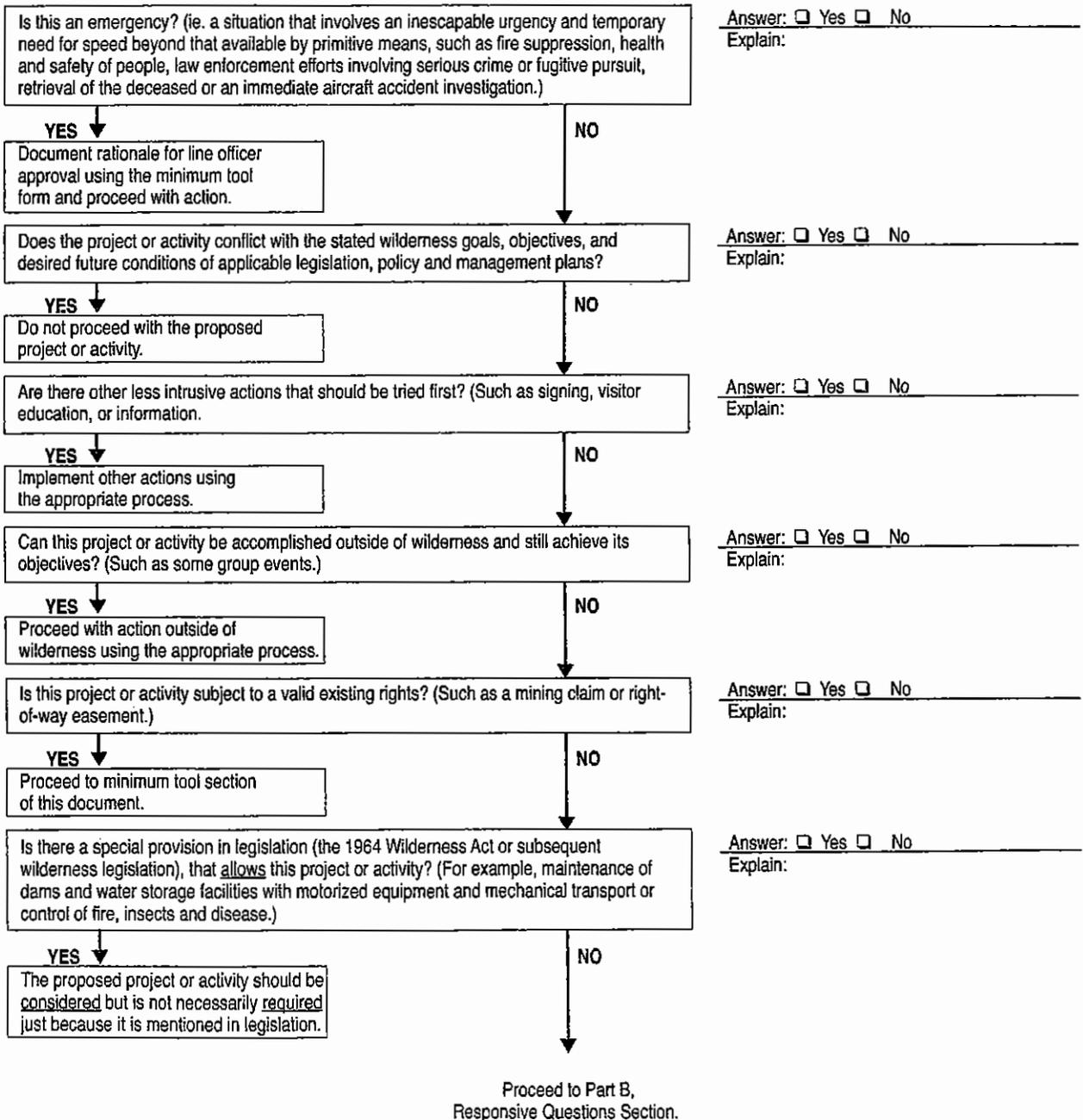
WORKSHEETS

STEP 1 - DETERMINING THE MINIMUM REQUIREMENT (a two-part process)

PART A - Minimum Requirement Key to making a determination on wilderness management proposals

(This flow chart will help you assess whether the project is the minimum required action for administration of the area as wilderness. Answering these questions will help determine **IF** this action is really the **minimum required** action in wilderness. Additional sheets may be necessary for explanations to questions.)

GUIDING QUESTIONS



PART B - Determining the Minimum Requirement

Responsive Questions for Minimum Requirements Analysis: Explain your answer in the response column. If your responses indicate potential adverse affects to wilderness character, evaluate whether or not you should proceed with this proposal. If you decide to proceed, begin developing plans to mitigate impacts, and complete the Minimum Tool Analysis in this guide. Some of the following questions may not apply to your proposed project or activity.

EFFECTS ON WILDERNESS CHARACTER	RESPONSE
How does the project or activity benefit the wilderness as a whole as opposed to maximizing one resource?	
If this project/activity were not completed, what would be the beneficial and detrimental effects to the wilderness resources?	
How would the project or activity help ensure that human presence is kept to a minimum and that the area is affected primarily by the forces of nature rather than being manipulated by humans?	
How would the project or activity ensure that the wilderness provides outstanding opportunities for solitude or a primitive and unconfined type of recreation? (e.g. does the project or activity contribute to people's sense that they are in a remote place with opportunities for self-discovery, adventure, quietness, connection with nature, freedom, etc.)	
MANAGEMENT SITUATION	
What does your management plan, policy, and legislation say to support proceeding with this project?	
How did you consider wilderness values over convenience, comfort, political, economic or commercial values while evaluating this project or activity?	
SHOULD WE PROCEED?	<p>YES Go to Step 2</p> <p>NO Stop</p>

STEP 2 - Determining the Minimum Tool (the Minimum Tool Analysis)

These questions will assist you in determining the appropriate tool(s) to accomplish the project or proposed activity with the least impact to the wilderness resource. This analysis can be used as part of the NEPA process, if desired. This analysis should be documented on separate sheets.

Develop several alternate approaches to implementing the project or activity.

At a minimum consider the following three alternative approaches:

Alternative 1: use of motorized equipment or mechanized transport.

Alternative 2: use of non-motorized equipment and non-mechanized transport.

Alternative 3: Variations of alternatives 1 and 2.

DESCRIBE THE ALTERNATIVES. BE SPECIFIC AND PROVIDE DETAIL.

- What is proposed?
- Why is it being proposed in this manner?
- Who is the proponent?
- When will the project take place?
- Where will the project take place?
- How will it be accomplished? (What methods and techniques)

UTILIZE THE FOLLOWING CRITERIA TO ASSESS EACH ALTERNATIVE (A BRIEF STATEMENT SHOULD SUFFICE) :

Biophysical effects

- Describe the environmental resource issues that would be affected by the project.
- Describe any effects this action will have on protecting natural conditions within the regional landscape, i.e.: non-native insects and disease, or noxious weed control.
- Include both biological and physical effects.

Social/recreation/experiential effects

- Describe how the wilderness experience may be affected by the proposed action.
- Include effects to recreation use and wilderness character.
- Consider the effect the proposed action may have on the public and their opportunity for discovery, surprise, and self-discovery.

Societal/political effects

- Describe any political considerations, such as MOUs, agency agreements, local positions that may be affected by the proposed action.
- Describe relationship of method to applicable laws.

Health and safety concerns

- Describe and consider any health and safety concerns associated with the proposed action. Consider the types of tools used, training, certifications and other administrative needs to ensure a safe work environment for employees. Also consider the effect the proposed action may have on the health and safety of the public.

Economic and timing considerations

- Describe the costs and timing associated with implementing each alternative.
- Assess the urgency and potential cumulative effect from this proposal and similar actions.

CHOOSE A PREFERRED APPROACH FROM THE ALTERNATIVES DESCRIBED ABOVE.

FURTHER REFINE THE ALTERNATIVE TO MINIMIZE IMPACTS TO WILDERNESS.

- What will be specific operating requirements?
- What are the maintenance requirements?
- What standards and designs will apply?
- Develop and describe any mitigation measures that apply.
- What provisions have been made for monitoring and feedback to strengthen future efforts and/or prevent the need for recurring future actions.

NEPA WORKSHEET

Determine the appropriate level of NEPA analysis and documentation. Answer the following questions.

NOTE: This may not apply to every agency. Refer to your agencies policy on NEPA requirements before using this worksheet.

GUIDING QUESTIONS

Is the action authorized by a previous NEPA document?

YES ↓
 Proceed with action, document approval for those actions requiring use of motorized equipment or mechanized transport with a letter of delegation from the appropriate line officer

NO ↓

Answer: Yes No
 Explain:

Is the action of limited scope and duration and qualifies under one of the Secretary of Agriculture exemptions or Chief of the Forest Service exemptions for categorical exclusion without a case file?

YES ↓
 Proceed with action, document approval for those actions requiring use of motorized equipment or mechanized transport with a letter of delegation from the appropriate line officer.

NO ↓

Answer: Yes No
 Explain:

Is the action of limited scope and duration, has no extraordinary circumstances, and qualifies for a Chief of the Forest Service exemption for categorical exclusion with a case file?

YES ↓
 Scope interested publics and prepare Decision Memo for appropriate line officer.

NO ↓

Answer: Yes No
 Explain:

Is the action likely to have significant adverse affects on the human environment?

YES ↓
 Then proceed with an EIS and ROD for the appropriate line officer.

NO ↓

Answer: Yes No
 Explain:

Scope interested publics and prepare an EA and Decision Notice for the appropriate line officer.

APPENDIX A

Agency Policy related to minimum requirement/minimum tool

Bureau of Land Management:

8560 Manual Direction



.13 **Minimum Tool.** Tools, equipment, or structures may be used for management when they are the minimum necessary for protection of the wilderness resources or when necessary in emergency situations for the health and safety of the visitor. Management must use the minimum tool, equipment, or structure necessary to successfully, safely, and economically accomplish the objective. The chosen tool, equipment, or structure should be the one that least degrades wilderness values temporarily or permanently.

A. Acceptable Tools. Acceptable tools, equipment, and structures may include but are not limited to; fire towers, patrol cabins, pit toilets, temporary roads, spraying equipment, hand tools, fire fighting equipment caches, fencing, and controlled burning. In special or emergency cases involving the health and safety of wilderness visitors, or the protection of wilderness values, aircrafts, motorboats and motorized vehicles may be used.

Forest Service:

2320 Manual direction



2326.1 - **Conditions Under Which Use May Be Approved.** Allow the use of motorized equipment or mechanical transport only for:

1. Emergencies where the situation involves an inescapable urgency and temporary need for speed beyond that available by primitive means. Categories include fire suppression, health and safety, law enforcement involving serious crime or fugitive pursuit, removal of deceased persons, and aircraft accident investigations.
2. Aircraft or motor boat use established before the area was designated as wilderness by the Act of 1964 or subsequent wilderness legislation.
3. Exploration and development of valid existing mineral rights (FSM 2323.7).
4. Access to surrounded State and private lands and valid occupancies (FSM 2326.13).

5. To meet minimum needs for protection and administration of the area as wilderness, only as follows:

- a. A delivery or application problem necessary to meet wilderness objectives cannot be resolved within reason through the use of nonmotorized methods.
- b. An essential activity is impossible to accomplish by nonmotorized means because of such factors as time or season limitations, safety, or other material restrictions.
- c. A necessary and continuing program was established around the use of motorized equipment before the unit became a part of the National Wilderness Preservation System, and the continued use of motorized equipment is essential to continuation of the program.
- d. Removal of aircraft wreckage when nonmotorized methods are unsuitable.

Specify, for each wilderness, the places and circumstances in which motorized equipment, mechanical transport, or aircraft are necessary for protection and administration of the wilderness and its resources in the forest plan.

The Line Officer approving the use of motorized equipment, aircraft, or mechanical transport shall specify what uses of that equipment are suitable and will have the least lasting impact to the wilderness resource. Schedule use of this equipment to minimize impact on wilderness visitors.

2326 - USE OF MOTORIZED EQUIPMENT OR MECHANICAL TRANSPORT IN WILDERNESS

1. Accomplish management activities with nonmotorized equipment and nonmechanical transport of supplies and personnel.
2. Exclude the sight, sound and other tangible evidence of motorized equipment or mechanical transport within wilderness except where they are needed and justified.

2326.03 Policy

2. Do not approve the use of motorized equipment or mechanical transport unless justified as described in 2326.1. For definition see 2320.5.

Code of Federal Regulations:

CFR 292.6

Commercial enterprises, roads, motor vehicles, motorized equipment, motorboats, aircraft, aircraft landing facilities, airdrops, structures, and cutting of trees.

Except as provided in the Wilderness Act, subsequent legislation establishing a particular Wilderness unit, or 294.2(b), 294.2(c), and 294.2(e), paragraphs (c) and (d) of this section, and 293.7, 293.8, and

293.12 through 293.16, inclusive, and subject to existing rights, there shall be in National Forest Wilderness no commercial enterprise; no temporary or permanent roads; no aircraft landing strips; no heliports or helispots, no use of motor vehicles, motorized equipment, motorboats, or other forms of mechanical transport; no landing of aircraft; no dropping of materials, supplies, or persons from aircraft; no structures or installations; and no cutting of trees for nonwilderness purposes.

National Park Service:



IV. DIRECTOR'S ORDER #41: WILDERNESS PRESERVATION AND MANAGEMENT

2. Application of the Minimum Requirement Concept

... except as necessary to meet the minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area) there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, not other form of mechanical transport, and no structure or installation within any such area.

– The Wilderness Act: Section 4(c)

All management decisions affecting wilderness must be consistent with a minimum requirement concept When determining minimum requirement, the potential disruption of wilderness character and resources will be considered before, and given significantly more weight than, economic efficiency and convenience. If a compromise of wilderness resource or character is unavoidable, only those actions that preserve wilderness character and/or have localized, short-term adverse impacts will be acceptable.

– NPA Management Policies: 6.3.5 Minimum Requirement

The National Park Service will apply the minimum requirement concept to all administrative activities that affect the wilderness resource and character. The application of the minimum requirement concept is intended to minimize impacts on wilderness character and resources and must guide all management actions in wilderness.

Wilderness managers may authorize (using a documented process) the generally prohibited activities or uses listed in Section 4(c) of the Wilderness Act if they are deemed necessary to meet the minimum requirements for the administration of the area as wilderness and where those methods are determined to be the 'minimum tool' for the project. The use of motorized equipment and the establishment of management facilities are specifically prohibited when other reasonable alternatives are available. The minimum requirements process cannot be used to permit roads or inappropriate commercial enterprises within wilderness unless these are authorized by specific legislation.

The minimum requirement concept is to be applied as a two-step process that documents:

- (1) A determination as to whether or not a proposed management action is appropriate or necessary for the administration of the areas as wilderness, and does not pose a significant impact to the wilderness resources and character; and,
- (2) If the project is appropriate or necessary in wilderness, the selection of the management method (tool) that causes the least amount of impact to the physical resources and experiential qualities (character) of wilderness.

It is important to understand the distinctions between the terms "Minimum Requirement," and "Minimum Tool."

Minimum Requirement is a documented process the NPS will use for the determination of the appropriateness of all actions affecting wilderness.

Minimum Tool means a use or activity, determined to be necessary to accomplish an essential task, which makes use of the least intrusive tool, equipment, device, force, regulation, or practice that will achieve the wilderness management objective. This is not necessarily the same as the term "primitive tool," which refers to the actual equipment or methods that make use of the simplest available technology (i.e., hand tools).

Park managers will apply the minimum requirement concept when making all decisions concerning management of the wilderness area. This includes decisions concerning administrative practices, historic properties, proposed special uses, research, and equipment use in wilderness.

Planned administrative actions that may result in an exception to a prohibited use (i.e., chainsaws, aircraft use, radio repeater sites, rock drills, patrol structures, weather stations), or have the potential to impact wilderness resources and values must be consistent with an approved wilderness management plan and be documented in accordance with the park's minimum requirements process. The minimum requirements process will be conducted through appropriate environmental analysis (e.g., categorical exclusions, environmental assessment/FONSI, or an environmental impact statement/Record of Decision).

When determining the minimum requirement for a proposed action, the manager will strive to minimize the extent of adverse impact associated with accomplishing the necessary wilderness objective. The determination as to whether or not an action has an adverse impact on wilderness must consider both the physical resources within wilderness, and wilderness characteristics and values. These characteristics and values include: the wilderness's primeval character and influence; the preservation of natural conditions (including the lack of man-made noises); cultural resource values, the assurance of outstanding opportunities for solitude; the assurance that the public will be provided with a primitive and unconfined type of recreational experience; and the assurance that wilderness will be preserved and used in an unimpaired condition.

Managers must give appropriate consideration to the aesthetic values of wilderness as well as the physical resource. These factors take precedence over cost or convenience in determining minimum requirement.

National Parks with wilderness must have a documented process for applying the minimum requirement concept. Reference Manual #41: Appendix F includes examples of "decision trees," which may be adopted or referred to as a procedure by which alternatives can be assessed and final management decisions developed. These decision tree examples do not alleviate a park's responsibility for providing adequate environmental compliance documentation for individual projects.

U.S. Fish and Wildlife Service:



Refuge Manual

8. Wilderness Area Management

8.5 Definitions.

A. Minimum tool. The minimum action or instrument necessary to successfully, safely, and economically accomplish wilderness management objectives.

8.8 Administrative guidelines.

A. Use of motorized equipment. Motorized equipment may be used in special circumstances if it is the minimum tool necessary to accomplish a task safely and without long term impairment of the area's wilderness character. However, except where Congress specifically authorizes such uses in the establishing laws or in other acts modifying the Wilderness Act such as ANILCA, the use of motor vehicles, motorized equipment, mechanical transportation, and the landing of aircraft would not be used in the routine administration of wilderness. The determination of when motorized equipment constitutes the minimum tool will be left to the refuge manager. Some examples of special situations are given below:

- (1) Emergency situations involving the public's health and safety, including search and rescue operations.
- (2) Activities essential to accomplishing refuge objectives. For example, if bighorn sheep tanks dry up and the only means of supplying water is by trucking it into the tanks or, where grazing is permitted, bringing a veterinarian in by truck to treat seriously ill cattle.
- (3) In the control of fire, insects, diseases, or other hazards.

C. -Final paragraph related to wildfire management and minimum tool:

While an aggressive approach to wildfire control on certain wilderness areas may be in order, the method(s) utilized should be the "minimum tool." The minimum tool may include, but is not limited to, lookout towers, tool caches, firebreaks, motorized land, water or air equipment, and chemical retardants. In conducting wildfire control activities, care must be taken to ensure that control methods do not harm the refuge and wilderness area more than the wildfire itself. For example, extensive bulldozed firebreaks on a hillside that result in permanent scars and soil erosion may have a far greater adverse effect than the temporary effect of fire. These kinds of situations should be carefully analyzed and adequately provided for in the refuge management plans.

APPENDIX B

DEFINITIONS

Mechanical Transport

Any contrivance which travels over ground, snow, or water, on wheels, tracks, skids, or by flotation and is propelled by a nonliving power source contained or carried on or within the device.

Source: 36 CFR 293.6a

Mechanical Transport

Any contrivance for moving people or material in or over land, water, snow or air that has moving parts and is powered by a living or non-living power source. This includes (but is not limited to) wheeled vehicles such as bicycles, game carriers, carts and wagons. "Mechanical transport" does not include wheel-chairs when used as necessary medical appliances, nor does it include skis, snowshoes, sleds, travois, non-motorized river craft including driftboats, rafts, or canoes, or similar primitive devices. *Source: National Park Service Director's Order #41*

Minimum Tool

The least impactful method, equipment, device, force, regulation, practice, or use that will meet the management objective in a wilderness context. This represents the "how" question that must be asked to insure that the process to implement the minimum required action will minimize impact on social and biophysical wilderness values. Minimum tool is not synonymous with primitive tool. In some cases the minimum tool could be a motorized tool or a form of mechanical transport.

Minimum Requirement

An action that is determined to be absolutely necessary but results in the least discernible impact on all the wilderness values and is the least manipulative or restrictive means of achieving a management objective in wilderness. This represents the "why" and "is it necessary" questions that must be answered before deciding that an action, that could potentially leave a mark of human influence in wilderness, is necessary.

Motorized Equipment

Machines that use a motor, engine, or other nonliving power sources. This includes, but is not limited to, such machines such as chain saws, aircraft, snowmobiles, generators, motor boats, and motor vehicles. It does not include small battery or gas powered hand carried devices such as shavers, wristwatches, flashlights, cameras, stoves, or other similar small equipment. *Source: FSM 2320.5, 36 CFR 293.6b*

Permanent Improvement

A structural or non-structural improvement that is to remain at a particular location for more than one field season. Permanent improvements include such items as trails, toilet buildings, cabins, fences, tent frames, fire grills, and instrumentation stations. *Source: FSM2320.5*

Primitive Skills

The proficient and safe use of primitive tools and methods of transportation.

Primitive Traditional Tool

Implements, devices, equipment, and tools that originated in the pre-motorized or pioneering era such as

the axe, cross-cut saw, hammer, wrench, hand winch, pulley, packstring, oar-powered or paddle-powered water craft, and skis. Modern versions of these tools and other hand or stock operated tools, that are not powered by a non-living source, are also included.

Temporary Structure

Any structure that is easy to dismantle, that could be removed completely from a site between periods of actual use, and that must be removed at the end of each season of use if the non-use period is greater than 30 days. *Source: FSM 2320.5*

Untrammled

Not confined, not restrained, free from hindrances. *Source: American Heritage Dictionary*

Wilderness Appropriate Response

The minimum required action and the minimum tool selected by managers to respond to a wilderness issue, need, opportunity, or threat.

Wilderness Values

The recognized reasons for wilderness to exist and be preserved. The values of wilderness are many and different for each individual. Wilderness has natural values that are vital to the health of our planet as well as the enjoyment of those visiting them. Wilderness values include things such as watersheds for cities, benchmark for scientific research, critical habitat for wildlife, genetic material for plant and animal diversity, undisturbed geological resources, sanctuary from the pressures and pace of modern society, and a repository for cultural resources. *Source: Wilderness Box Land Ethics Curriculum, R-6, page 30-32.*

The public values of wilderness include, but are not limited to, opportunities for scientific study, education, solitude, physical and mental challenge and stimulation, inspiration, and primitive recreation experiences.

OTHER RELEVANT TERMS

The following definitions are straight out of the dictionary but may be useful for the reader to help put the minimum tool/minimum requirement in context.

Appropriate

Especially suitable or compatible.

Minimum

The smallest quantity, number, or degree possible or permissible.

Necessary

That must be done; undeniable; mandatory; required; indispensable; inherent in the situation.

Requirements

Something needed; a necessity; something obligatory or demanded, as a condition; something required.

Tool

Something used in performing an operation; a means to an end.

APPENDIX C

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