



ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

MINIMUM REQUIREMENTS DECISION GUIDE

INSTRUCTIONS

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

– the Wilderness Act, 1964

Introduction

The Minimum Requirements Decision Guide (MRDG) is designed to assist wilderness managers with completing a Minimum Requirements Analysis for wilderness projects. These instructions refer to completing the MRDG [Worksheets](#). More information about the background of the MRDG and its appropriate uses can be found in the [Overview](#). Please also refer to your agency policies and other guidance in the [Agency Guidelines](#) for more direction on how and when to use the MRDG.

Use of this document assumes familiarity with the Wilderness Act, other relevant legislation, and agency policy. For training in the Wilderness Act or on conducting a Minimum Requirements Analysis, go to the [e-learning course listing](#) for the Arthur Carhart National Wilderness Training Center.

The MRDG Overview, Instructions, Worksheets, and Agency Guidelines are found at: www.wilderness.net/mrdg/.

The MRDG is derived from Section 4(c) of the Wilderness Act and involves two steps. Step 1 determines whether action is **necessary**. If action is necessary, then Step 2 provides guidance for determining the **minimum** activity.

Worksheet Instructions

Step 1: Determine if any administrative action is necessary

Description: Describe the situation.

Describe a problem or situation that prompts a possible need for action. Include supporting information (i.e. cause, threat, existing use, etc.) as needed.

The description should explain, in general terms, the proposed action -- but should not identify a specific method or tool unless it is necessary to understand the situation. The description should not attempt to justify the use of motorized equipment or mechanical transport; or the placement of a structure, facility, or temporary road. This description of the existing situation helps determine whether any action is necessary in wilderness and sometimes the appropriate administrative response may be no action at all. If action is needed, the specific actions, methods, tools, etc. will be identified and evaluated in Step 2.

The table below provides correct and incorrect examples describing a situation or project.

Minimal descriptions are provided here for example purposes only. Actual descriptions should provide all relevant background information.

Correct examples of description	Incorrect examples of description
An administrative cabin is deteriorating and there is a proposal to reconstruct the structure. The cabin is located six miles inside the wilderness and is currently used by trail crews and wilderness rangers.	There is a need to use motorized tools to restore an administrative cabin
A request is received for access into a valid, existing mining claim. The request includes building a temporary road for 2.3 miles to allow access for an excavator. .	The only feasible access to the mining claim would require building a temporary road.
A windstorm has blown down trees which are blocking maintained trails. Approximately 47 miles of trail are currently blocked limiting access to 32% of the wilderness.	Chainsaws would be the quickest tool for clearing the downed trees.
There is a lack of information available to biologists about a wildlife species that has the potential for listing under the ESA.	A helicopter should be used to survey the population because all other methods would take too long.
Fire has altered approximately 600 acres of wildlife habitat important for elk winter range. Elk winter range has been severely limited by development outside the wilderness causing a decline in populations.	Re-seeding of the burned area using a helicopter is needed to maintain wildlife habitat. Seeding using hand crews is not possible due to limited budgets.

A trail bridge has washed out. The bridge serves a main line trail used by visitors and outfitter-guides to access approximately 20% of the wilderness. Alternatives to access this portion of the wilderness would add 18 miles to the travel route.	There is a need to replace the washed out trail bridge. A helicopter is needed to fly in a replacement bridge and would be the most cost effective and safest tool for the job.
Riverbank erosion is destabilizing a pioneer cabin listed on the National Historic Register. The erosion has accelerated due to a change in river flow due to fallen beetle killed trees.	Construction of rock gabions has been proposed to stop erosion.
There is a lack of information on air quality in the Class I wilderness airshed. The effects of poor air quality are suspected as a cause for the decline of a threatened plant species.	An air quality monitoring station is needed for monitoring and must be installed in the wilderness.
Invasive plant species are present in the wilderness along the Clear Creek, Blue Lake, and Windy Pass Trails. The trails are the most popular access routes to the lake basin area of the wilderness and are used by both recreation livestock users and hikers.	A motorized herbicide sprayer is the most efficient tool to treat invasive plants.

Answer each of the following questions with "Yes" or "No," and explain your answer. If one of the questions is not applicable to the proposal, answer "No" and explain why it is not applicable.

Remember that in Step 1, the analysis is about whether or not there is a **need** to take action and not about specific proposed activities or techniques. (For example, in Step 1, evaluate whether or not **any** action should be taken to treat non-native invasive species and **not** whether motorized equipment, mechanical transport, or herbicides are part of the treatment activity. The specific alternatives for implementing a decision to treat non-native species and the positive and negative impacts of each action will be described and evaluated in Step 2.)

A. Options Outside of Wilderness

Is action necessary within wilderness?

Determine if action can only be taken inside wilderness by identifying and describing any options outside of wilderness and whether the options are possible or impossible.

Examples of administrative action that might be explored outside wilderness include:

- Putting up nest boxes or conducting wildlife surveys outside wilderness boundaries.
- Surveying visitors about user conflicts at the trailhead or visitor center, rather than on the trail or at their wilderness campsite.
- Locating trail destination and distance signs at trailheads outside wilderness (unless already determined by agency policy).
- Locating monitoring or other administrative structures outside wilderness.

B. Valid Existing Rights or Special Provisions of Wilderness Legislation

Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that allows or requires consideration of the prohibited uses found in Section 4(c) of the Wilderness Act?

If there is special provision language, whether in the Wilderness Act of 1964 or subsequent designation legislation, consideration of some actions may be required even though they would otherwise be prohibited. Often these provisions are associated with maintenance of dams and water storage facilities with motorized equipment or mechanical transport; control of fire, insects, or disease; or access to private lands, monitoring equipment, or communications installations.

Identify any valid existing rights or special provision in wilderness legislation and cite the law and section; or if there are none, state that none exist. Examine the special provision and describe whether the law says that a specific action "shall" be taken or that an action "may" be taken. Remember that legislative history (i.e. Congressional committee reports) is useful background information that should be considered but it does not have the same requirement for implementation as direction contained in law. Examples of special provisions in other legislation include:

- Existence of public use cabins and subsistence use and access in wilderness (Alaska National Interest Lands Conservation Act of 1980, P.L. 96-487, Sec. 1315(c)).

- Use of motorboats of ten horsepower or less in the Okefenokee Wilderness (Wilderness Act of 1964, P.L. 88-577, Sec. 4(d)(1); Okefenokee Wilderness Act of 1974, P.L. 93-430, Sec.2).

Valid existing rights are granted only by provisions in law. These may include rights associated with mining, water, rights-of-way, or access to non-federal lands inside wilderness. An example is a claimant who made a discovery of a valuable mineral deposit before the date of withdrawal (specified in the law that designated the area) and has complied with validity and filing requirements. The claimant has a right to access and extract the mineral deposit but this right does not invalidate the need to determine the minimum requirement before any of the prohibited uses found in Section 4(c) of the Wilderness Act are approved.

Some valid existing rights or provisions of special legislation may be satisfied by an option outside wilderness. Such possibilities would likely reduce impacts to the wilderness resource and character and should be explored.

C. Requirements of Other Legislation

Is action necessary to meet the requirements of other laws?

Laws that do not directly address wilderness (such as the Endangered Species Act or National Historic Preservation Act) may influence the need for actions in wilderness. In some instances, the administrator is asked to satisfy the requirements of multiple laws. For example:

- Recovery of an endangered species dependent on wilderness ecosystems (Endangered Species Act).
- Management of a site listed on the National Register of Historic Places (National Historic Preservation Act).

Identify and cite applicable provisions of other laws and describe any conflicts between the provisions of other laws and the Wilderness Act or enabling legislation for your area. If no other laws are applicable, state that there are no requirements.

Apparent conflicts between the Wilderness Act and other legislation may require innovative approaches and not all apparent conflicts are genuine. No law over-rides another law (unless specifically stated in the superseding law). The requirements of all applicable laws must be met.

D. Other Guidance

Is action necessary to implement direction contained in agency policy, unit and wilderness management plans, species recovery plans, or agreements with tribal, state, and local governments or other federal agencies?

Describe any applicable guidance for the situation or project. Carefully consider the context and requirements of the policy, plan or agreement. Plans developed using a NEPA analysis are decisions that provide stronger guidance than plans developed with less public or interdisciplinary involvement.

Policy, NEPA decisions, or existing plans sometimes provide programmatic guidance that an action is necessary, but fail to specify how that action is to be implemented. In these cases an MRA is needed to confirm that action is needed for this specific problem and to identify the

minimum required action, method, or tool to be used. Examples of relevant guidance could include:

- A programmatic NEPA decision to treat invasive weeds is contained in a unit level plan that included wilderness but the plan does not address the method of treatment.
- The need for trail bridges, fords, or in-stream structures has been addressed in a listed fish species recovery plan. The plan does not dictate the type of structure, method of construction, or tools required or the specific locations for the crossings.

Even if relevant programmatic decisions have already been made that satisfy Step 1 of the MRDG, both Step 1 and Step 2 should be completed to confirm that action is necessary in wilderness and to determine the minimum administrative activity.

E. Wilderness Character

Is action necessary to preserve one or more of the qualities of wilderness character: **Untrammeled; Undeveloped; Natural; Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation; or Unique Attributes or Other Features** that reflect the character of this wilderness area?

Explain how taking action in wilderness is necessary to preserve wilderness character.

The primary mandate of the Wilderness Act is to preserve wilderness character. Section 2(a) directs us to manage wilderness areas:

“...in such manner as will leave them unimpaired for future use as wilderness, and so as to provide for the protection of these areas, ***the preservation of their wilderness character...***” (emphasis added).

Similar direction is repeated in Section 4(b):

“Except as otherwise provided in this Act, ***each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area*** and shall so administer such area for such other purposes for which it may have been established as also ***to preserve its wilderness character***” (emphasis added).

Additional information is provided below and in the Wilderness Character toolbox (www.wilderness.net/toolboxes/).

Four major, statutorily required qualities of wilderness character are mentioned in Section 2(c) of the Wilderness Act. These are:

Untrammeled – In wilderness, the “earth and its community of life” are essentially unhindered and free from modern human control or manipulation, “in contrast with those areas where man and his own works dominate the landscape.” This quality is important because it helps insure that wilderness is managed with the utmost humility and restraint, respecting the autonomy of nature that allows a place to be wild and free.

This quality is degraded by modern human activities or actions that control or manipulate the components or processes of ecological systems inside the wilderness. Examples include suppression of natural fire or managing vegetation and wildlife, even though the manipulation may be for a “good” purpose, such as eliminating a non-native species. When manipulating the natural process in a wilderness, taking action contradicts the Untrammeled quality.

Undeveloped – Wilderness retains its "primeval character and influence," and is essentially "without permanent improvements" or modern human occupation. Preserving this quality keeps areas free from "expanding settlement and growing mechanization" and "with the imprint of man's work substantially unnoticeable" as required by the Wilderness Act.

This quality is degraded by the presence of structures, installations, habitations, and by the use of motor vehicles, motorized equipment, or mechanical transport that increases people's ability to occupy or modify the environment. Examples include communication sites, monitoring installations, administrative cabins, trail bridges, helicopter landings, and the use of chain saws, pumps, motor vehicles, motor boats, etc. This quality is preserved by eliminating or limiting the developments or use of equipment that causes the degradation.

Natural – A wilderness area is to be "protected and managed so as to preserve its natural conditions." Wilderness ecological systems are substantially free from the effects of modern civilization. Preserving this quality ensures that indigenous species, patterns and ecological processes are protected and allows us to understand and learn from natural features.

This quality is affected by intended or unintended effects of modern civilization on the ecological systems inside the wilderness since the area was designated. Examples of degradation of this quality include the results of suppressing natural fire, or allowing non-native invasive species to become established or expand. Examples of preservation of this quality may include the effects from allowing natural fire, successful treatment of non-native invasive species, and the restoration of native species.

Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation – The Wilderness Act defines wilderness as having "outstanding opportunities for solitude or a primitive and unconfined type of recreation." This quality is about the *opportunity* for people to experience wilderness; it is not directly about visitor experiences *per se*. The opportunities provided by wilderness include the chance to experience primitive recreation, natural sights and sounds, solitude, freedom, risk, the physical and mental challenges of self-discovery and self-reliance, and to use traditional skills free from the constraints of modern culture.

This quality is impacted by settings that reduce or improve these opportunities. Generally, examples of degradation include management actions that cause (by action or inaction) loss of opportunities due to crowding or too many visitor encounters (impacting solitude), facilities or other signs of modern civilization (impacting primitive recreation), and excessive restrictions on visitor behavior (impacting unconfined recreation). Some management actions may be found to be necessary to preserve one or more of the other qualities even though this quality would be degraded. (For example: fire grates, toilets, trail bridges, and designated campsites degrade this quality but may be necessary to preserve the Natural quality). And, because this quality has three sub-parts, the effects are not always straight forward. Designated campsites negatively impact unconfined recreation while positively impact solitude. For an even more complex example, if a trail bridge has washed out, rebuilding it may allow more visitors to access an area and degrade opportunities for solitude for some visitors able to cross the stream without a bridge (as well as negatively impact their opportunity for primitive recreation by reducing the challenge of crossing a bridgeless stream). However, primitive recreation opportunities may be preserved for others who could not access the area without a bridge.

In Step 1, evaluate the situation against each sub-part of this quality (solitude, primitive recreation, unconfined recreation) to determine if there is a need for action.

Some projects may cause short-term degradation but may also lead to long-term preservation. For example, a project to restore highly impacted campsites restricts opportunities for visitors to enter or use areas closed for revegetation but may also help preserve future opportunities for a wilderness visitor experience as native vegetation is restored. This type of specific effect should be described in the alternatives and evaluated in Step 2.

Unique Attributes or Other Features -- In addition to the four required qualities of wilderness listed above, the Wilderness Act says these areas “may also contain ecological, geological, or other features of scientific, educational, scenic, or historical use” that reflect the character of this wilderness. Some of these unique features, such as the presence of threatened and endangered species, are also part of the Natural quality of a wilderness and could be evaluated for effects to that quality unless the specific species or habitat is unique to the wilderness area. Other components, however, such as the presence of important geologic features, cultural resources, historical sites, paleontological localities, or any features not in one of the other four qualities do not fit easily into one of the four statutory qualities. While many different types of features could be included, the intent is to include those that are significant or integral to the wilderness and that are decision factors that represent the unique characteristics and special features of this wilderness. Features mentioned in wilderness enabling legislation would likely qualify. The Unique Features that are present must be just as rigorously protected as the other qualities of wilderness character, however, and so you should account for these separately in this section of the MRDG.

The description of wilderness character qualities found above is not comprehensive. For a detailed discussion of wilderness character refer to:

U.S. Forest Service Rocky Mountain Research Station, General Technical Report, RMRS-GTR-151: [Monitoring Selected Conditions Related to Wilderness Character: A National Framework](#).

U.S. Forest Service Rocky Mountain Research Station, General Technical Report, RMRS-GTR-212: [Keeping It Wild: An Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System](#).

As you become increasing familiar with wilderness character, you will realize that taking action often positively impacts one or more qualities of wilderness character while simultaneously negatively impacting others. But keep in mind that at this point in the analysis you are determining **if** any action is necessary, **not** looking at impacts from taking action (that analysis comes in Step 2, if you decide at the end of Step 1 that some action must be taken). For example, let's look at an analysis of whether taking action to control an infestation of non-native invasive weeds is necessary to preserve one or more of the qualities of wilderness character:

Untrammeled: Action is not necessary to preserve this quality. *(In fact, if taken, would impair the Untrammeled quality because the action, even if necessary, is an intentional human caused manipulation of “the earth and its community of life.” But you'd note that in looking at the alternatives in Step 2, not here.)*

Undeveloped: Action is not necessary to preserve this quality. *(There would be no impacts to the Undeveloped quality from taking action unless motorized equipment or mechanical transport is to be used as part of treatment activities. Again, you would assess the effects of implementing specific alternatives in Step 2.)*

Natural: Action may be necessary to preserve this quality if native species can be restored.

Outstanding opportunities for solitude or a primitive and unconfined type of recreation: Taking action would make only a slight contribution to preservation of this quality when

compared to the need for action to preserve the Natural quality. Any enhancement of opportunities for primitive recreation that result from weed eradication is because of the long term contribution to protecting or restoring the natural quality. *(Keep in mind that the potential loss of opportunities for solitude or primitive recreation due to workers using motorized sprayers or other methods may be an impairment of this quality but would be analyzed by each specific alternative in Step 2.)*

Unique Attributes or Other Features that reflect the character of this wilderness: It is likely that there is little or no need for action to preserve any “optional” value not already accounted for in the Natural quality.

F. The Public Purposes of Wilderness

Is action necessary to be consistent with one or more of the public purposes for wilderness (as stated in Section 4(b) of the Wilderness Act): ***“recreational, scenic, scientific, educational, conservation, and historical use”***?

Identify which of the public purposes are applicable to the situation and describe whether it is necessary to take action to be consistent with that public purpose.

Section 4 (b) of the Wilderness Act provides direction for management of the public purposes:

“Except as otherwise provided in this Act, each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area and shall so administer such area for such other purposes for which it may have been established as also to preserve its wilderness character. **Except as otherwise provided in this Act, wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use.**” [emphasis added]

In this direction, the law clearly gives preference to other mandates -- most importantly the requirement to “preserve wilderness character.” This means that while the public purposes help define and restrict what wilderness is, how it is to be managed, and how visitors and others may use wilderness, they do not take precedent over preservation of each area’s wilderness character (which is the primary mandate of the Wilderness Act.) As an example, a proposal to modify wilderness for the purposes of improving wildlife habitat might seem to be consistent with the Conservation public purpose, but if the management action would impair one or more of the qualities of wilderness character (i.e. Untrammeled, Undeveloped, or Natural) it must be carefully considered and may not be necessary.

For use in preparation of the MRDG, the public purposes are defined as follows:

Recreational – Wilderness is designated, in part, to provide for recreation opportunities that allow visitors to experience wilderness ***as wilderness***. This public purpose is related to the direction for administration of wilderness areas Section 2 (a) “...and these shall be administered for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness...” The Recreational public purpose is also supported by the definition of wilderness found in Section 2 (c) “...has outstanding opportunities for solitude or a primitive and unconfined type of recreation...”

A management action is consistent with the Recreational public purpose, and may be necessary, if the action will contribute to providing opportunities for visitors to experience wilderness. A management action is not necessary if it impairs these opportunities. The need

to accommodate visitor use does not over-ride the mandate to preserve the qualities of wilderness character.

For example, is it necessary to take action where a trail bridge has washed out to be consistent with the Recreational public purpose? The Recreational public purpose may include providing access to and within wilderness via a managed trail system. A trail system could include a ford, or other type of crossing -- which are alternatives to be evaluated in Step 2. For Step 1, determine if **any** action is necessary to mitigate the washout and support the recreational use public purpose based on management objectives, typical use of the trail, access to the wilderness, biophysical concerns, etc.

Another example is the question of whether restoration of a historic cabin, to facilitate a cabin rental program in wilderness, is consistent with the Recreational public purpose. A cabin rental program is not consistent with the Recreational public purpose of wilderness for two reasons. First, a cabin maintained for rental to visitors is not part of the definition of wilderness found in the Wilderness Act which includes “undeveloped Federal land... without permanent improvements.” Second, Section 4(c) of the Wilderness Act allows structures to be maintained in wilderness only if they are the minimum necessary for administrative purposes. In this example, there is no need to take action to support the Recreational public purpose.

Scenic – The Scenic public purpose of wilderness is the visual experience provided by the natural features of wilderness (vegetation, geology, water, etc.) obtained by visitors inside wilderness or as seen by others outside wilderness. This public purpose is closely related to the Natural, Undeveloped, and Opportunities for Solitude or Primitive and Unconfined Recreation qualities of wilderness character. It is also related to the Wilderness Act Section 2 (c) definition of wilderness and direction for management, “...which is protected and managed so as to preserve its natural conditions.” In addition, Section 2 (c) lists “scenic” as a value that may be found in wilderness.

It may be necessary to take management action to be consistent with the Scenic public purpose when there is a need to protect or restore natural conditions and, therefore, the scenic value of wilderness. An action is not needed and is inconsistent if it impairs the natural scenery of wilderness (e.g., modern human structures or installations).

Natural events (such as fires, floods, mudslides, and insect or disease infestations) are not a negative impact to the Scenic public purpose. The Scenic public purpose does not include the view from the wilderness to other lands nor would it justify cutting trees (an impairment of the Untrammeled and Natural qualities) inside wilderness to provide a view point along a trail.

For example, taking action to suppress a wildfire is not consistent with the Scenic public purpose. Preserving the Natural quality of wilderness character includes the effects of natural events such as fire.

Also, there is no need to take action to be consistent with the Scenic public purpose to improve communications within or outside wilderness (i.e. a proposal to add a new installation such as a communication site), even if it is well camouflaged by paint and design.

Scientific – The Wilderness Act, in Section 2 (a) includes “...gathering and dissemination of information regarding their use and enjoyment” as part of the necessary administration of the area. In addition, Section 2 (c) lists “scientific” as one of several values that may be found in wilderness.

A management action is consistent with the Scientific public purpose, and may be necessary, when an opportunity for research or other scientific activity is needed for the benefit of wilderness. This public purpose does not require that all proposals for research or scientific activities in wilderness be implemented. Instead, this purpose recognizes the value of research and scientific activities that are necessary for wilderness management or that have a significant value for society and, in certain unique circumstances, can only be accomplished in wilderness, even if it involves a use prohibited by Section 4(c) of the Wilderness Act. An action which does not directly support the Scientific public purpose nonetheless may be allowed if it does not involve a prohibited use or otherwise degrade wilderness character.

For example, is a proposal to monitor air quality in wilderness consistent with the Scientific public purpose? The Scientific public purpose includes gathering information about the effects of outside forces (i.e. air pollution) on wilderness. If a suitable location outside wilderness cannot be found, and if the information to be gathered is needed to preserve wilderness character, monitoring in wilderness may be evaluated to determine if it is the minimum necessary action to meet management objectives for the management of the wilderness. In addition, air quality monitoring may also be consistent with the Conservation public purpose if the information gathered can be used to ensure preservation of the Natural quality of wilderness character.

Educational -- The Educational public purpose of wilderness is the benefit to the American people that is provided through learning about wilderness and understanding the role of wilderness ecosystems and visitor opportunities in the broader social and biophysical landscapes. The Wilderness Act, in Section 2 (c) includes “educational” as a value that may be found in wilderness.

A management action is consistent with the Educational public purpose, and may be necessary, if opportunities for education about the wilderness resource (either in general, or for a unique, specific element) are recognized and necessary to meet management objectives that preserve wilderness character. Activities such as interpretation inside wilderness (e.g. signs) or marketing that encourages use of specific locations for recreation opportunities is inconsistent with the Educational public purpose and could impair the preservation of wilderness character if opportunities for solitude or a primitive and unconfined type of recreation are compromised.

For example, a proposal to interpret the benefits of wilderness and potential adverse effects on wilderness related to climate change is consistent with the Educational public purpose. This could be accomplished through contacts with visitors by wilderness rangers, by placing interpretive signs at trailheads, by providing information at visitor centers or local offices, by creating web pages, or by other means that don’t conflict with preserving the qualities of wilderness character inside wilderness.

Conservation – The Conservation public purpose is closely related to both the Natural and Untrammeled qualities of wilderness character. The Wilderness Act in Section 2 (c) defines wilderness as a place “...where the earth and its community of life are untrammeled by man...” and that is “...protected and managed so as to preserve its natural conditions...” Also in Section 2 (c), the Wilderness Act, includes “ecological” as one of the values that may be found in wilderness. These definitions and terms are consistent with the common definition of conservation which is to save or protect.

A management action is consistent with the Conservation public purpose, and may be necessary, when actions benefit the natural conditions and the natural function of ecological processes in wilderness through protection or restoration. Not all biophysical management or restoration actions are consistent with the Conservation public purpose.

For example, a proposal to alter existing habitat in wilderness to help prevent listing of a wildlife species may or may not be consistent with the Conservation public purpose. It may be consistent if the action would help restore natural conditions that have been impaired by modern human activity to within the Historic Range of Variability (HRV).

If the action to alter existing habitat would create conditions outside the HRV, it would be inconsistent with the Conservation public purpose (and possibly degrade the Natural quality of wilderness character). However, compliance with the Endangered Species Act may still require this or other actions to be considered and possibly implemented. In these cases the proposed action may need to be revised to minimize the use of motorized equipment, installations, structures, etc.

Historical – The Historical public purpose of wilderness is represented by the historic and pre-historic sites, artifacts, structures, or other cultural landscapes that may be within the areas and by the human activities that once occurred there. Section 2 (c) lists “historical” as one of several values that may be found in wilderness.

A visitor to wilderness, or anyone learning about wilderness, becomes aware of or benefits from the associations between past human activities or influences and the wilderness. There may be a need for management action that is consistent with the Historical public purpose if there is a need for protection of cultural resources. But the Historical public purpose does not mean that every structure must be preserved or restored or that every past use of wilderness must continue.

For example, consider the same issue about restoration of a historic cabin that is described for the Recreational public purpose above. Restoring a historic cabin is not necessarily consistent with the Historic public purpose of wilderness because Section 4(c) of the Wilderness Act allows structures to be maintained in wilderness only if they are the minimum necessary for wilderness purposes. Restoration will depend in part upon the structure's eligibility for the National Register of Historic Places. And even then, restoration may not be appropriate as the National Historic Preservation Act allows for other types of preservation as may be appropriate to other values -- in this case, preserving wilderness character. Options that should be analyzed include documentation and natural deterioration and removal to a site outside wilderness. Visitors to the wilderness, or anyone learning about the wilderness, can benefit from the associations between past human activities represented by this cabin without restoration of the structure. Options for public interpretation and education include an interpretive sign or poster at the trailhead, information or displays at the visitor center or local office, a page on the unit website, etc.

Step 1 Decision: Is any administrative action necessary?

Evaluate the responses made to all questions in Step 1, determine whether there is a need to proceed to Step 2 and describe the rationale for this determination.

In making the determination, fully consider the responses to all the questions in Step 1 but prioritize compliance with the Wilderness Act and the provisions of other laws (questions A., B., C., and E.). Second priority is given to question F, since the Public Purposes are subject to the clause "Except as otherwise provided in this Act..." (i.e., the directive to preserve wilderness character as addressed in question E). Third priority is given to question D, since policies,

plans, and agreements do not override the legal requirements used as the basis of the other questions.

If the responses indicate negative impacts to the wilderness resource and impairment of wilderness character, document whether there is sufficient reason to proceed to Step 2.

In rare instances, it is possible that at this point more information will be needed to determine if administrative action is needed. It may be useful to continue with Step 2 to evaluate the benefits and effects of alternatives to help determine if any administrative action is necessary. But in general, if you can't answer questions A-F, you need to do more work before deciding if any action is necessary.

Step 2: Determine the minimum activity.

Description of Alternatives

For each alternative, describe what the action is in terms of methods and techniques that will be used, when the activity will take place, where the activity will take place, the necessary mitigation measures, and the general effects to the biophysical and social components of the wilderness resource and the qualities of wilderness character.

Identify and describe a full range of feasible alternatives, including, as applicable:

- No Action
- No Section 4(c) prohibited uses
- Minimal Section 4(c) prohibited uses (e.g. a combination of motorized and non-motorized methods or tools)
- Proposed Section 4(c) prohibited uses

The level of detail required in the description of alternatives and effects varies by the complexity of the activity. For some projects, it may be necessary to reference agency policy, standards, or guidelines for construction of facilities and structures, safety, etc. A “No Action” alternative could be included to help confirm that action in wilderness is necessary and to facilitate a comprehensive comparison of effects useful for a subsequent NEPA analysis.

Action alternatives which are not feasible to implement should be identified along with the reasons why they were not fully considered. Valid reasons for deciding that an alternative is not feasible should be limited to: 1) actions that are impossible to accomplish by any means, 2) actions that are possible to accomplish but implementation would cause significantly greater negative impacts to wilderness character or, 3) actions that would cause a significant safety risk to workers or the public which cannot be mitigated. Alternatives should not be eliminated from full consideration simply because implementation would take more time or money, or because the skills or equipment needed are not readily available on the local unit. For example, use of a helicopter may cost more than widening an existing trail to serve as a temporary road but if both alternatives are feasible they should be fully evaluated regardless of cost.

Include necessary mitigation measures for the various activities, methods, and tools that could be used. This is particularly important when describing the effects to the biophysical or social components of the wilderness resource from workers traveling or camping in the wilderness.

Include an explanation of how the impacts can be mitigated: through employee training; location of work areas, campsites and travel routes; project timing; temporary closures; or other actions. Also include any seasonal timing requirements or identified need for urgency based on protection of wilderness character or worker safety.

Describe the alternatives to highlight their differences. For instance, if *all* alternatives contain an identical action component and mitigation, evaluate it separately as an action common to all alternatives and do not include it in the comparison tables described below.

Compare the potential effects of each alternative on the wilderness resource and the qualities of wilderness character by describing the impacts of implementation using the criteria below. Other criteria could be developed as needed. **Use the criteria for comparing the impacts of each applicable phase, or component, of the activity including design, construction, management, accessing the site, removal, or restoration as necessary.**

Apply the comparison criteria to each alternative being considered by replicating the Alternative Description page from Step 2 and use the Alternative Comparison Criteria to describe the effects of implementing each alternative. A "No Impact" response should be entered where it is applicable.

Alternative Comparison Criteria

Wilderness Character

In Step 1, you used the qualities of wilderness character as priority criteria for determining that some type of action is necessary in wilderness. Here in Step 2, describe the positive or negative impacts **of each alternative** on the preservation of wilderness character in terms of the five qualities listed below. Identify both short-term and long-term impacts where necessary. If there are any impacts to the Public Purposes that aren't automatically included in the impacts to Wilderness Character, address each in its corresponding quality of Wilderness Character, as shown in the following table.

<i>Public Purpose</i>	<i>corresponding quality of Wilderness Character</i>
recreational	Solitude or Primitive and Unconfined Recreation
scenic	Natural or Solitude or Primitive and Unconfined Recreation
scientific	any except Untrammeled, as appropriate
educational	Unique Attributes or Other Features
conservation	Natural
historical	Unique Attributes or Other Features

Untrammeled

Identify how this quality is positively impacted where a trammeling is reduced or eliminated, or is negatively impacted where trammeling increases. Discuss the degree to which the components or processes of ecological systems are intentionally controlled, manipulated, or hindered by the proposed actions.

Any manipulation of the biophysical environment -- even for "good" reasons (e.g., controlling weeds) -- has a negative impact to this quality. A proposal which does not manipulate the biophysical environment has no impact on this quality. The only way a positive effect to this quality could be registered is if the proposal would stop a current manipulation of the biophysical environment.

Typically, the impacts to the Untrammeled quality are those that are broader in scale or impact to ecological systems -- such as the impacts from weed treatment or prescribed fire. For other projects where the intent is not to manipulate "the earth and its community of life," such as placing a monitoring installation, the impacts are confined to a small area or are temporary and would have only a very small and insignificant impact on the Untrammeled quality. In this case, simply state that there is an insignificant impact here and, if appropriate, include these impacts in a discussion of the Natural quality.

Undeveloped

Describe the positive or negative impacts to this quality in terms of how "the imprint of man's work will remain substantially unnoticeable" and wilderness will continue to be in contrast to other areas of "growing mechanization." Include the effects of the use of any motorized equipment or mechanical transport, or the continued presence, addition, or removal of any structures or installations on maintaining the Undeveloped quality of wilderness character.

Any placement of a structure or installation, or any use of motorized equipment, mechanical transport, or other prohibitions listed in Section 4(c) of the Wilderness Act would constitute a negative impact to this quality. An alternative which uses none of these prohibitions would have no impact on this quality. An alternative which removes a structure or installation, or otherwise stops a prohibited use, would have a positive effect on this quality. Note that when a proposal is broken down into phases or components, more than one effect to this quality may be registered. For instance, an alternative to remove a bridge by flying it out with a helicopter would both improve (by removing the structure) and degrade (by using an aircraft) this quality.

Natural

Describe the potential positive or negative impacts to this quality in terms of protection, impairment, or restoration of natural conditions (i.e. air, water, soil, wildlife, fish, plants, etc.) including endangered, threatened, or rare species, natural biological diversity, and self-regulating ecosystems.

Include, where applicable, a discussion of the effects related to protecting natural conditions within the regional landscape (i.e. insects, disease, non-native species, wildlife migration corridors, etc.).

There are positive impacts to this quality if the alternative would improve natural conditions, negative impacts if the alternative would degrade natural conditions, and no impact if the alternative would have no effect on natural conditions. Note that in some instances, an alternative might have both positive and negative impacts. For instance, providing artificial water to aid in the recovery of a T&E species would be a positive impact (if the species increased) to this quality and also a negative impact because of the effects to other species due to an unnatural water source. (Of course, this alternative would have impacts to other qualities as well.)

Solitude or Primitive and Unconfined Recreation

Identify how opportunities for visitors to experience solitude or a primitive and unconfined type of recreation will be protected or impaired.

Describe the impacts to this quality that will be noticeable to the visitor and that could affect their experience in wilderness. Include negative impacts to visitors from the use of motorized equipment, mechanical transport, landing of aircraft, structures, or installations and positive impacts from actions that preserve opportunities. If necessary, describe the positive or negative impacts separately for each sub-part of this quality: Solitude, Primitive Recreation, and Unconfined Recreation.

An alternative which decreases solitude, creates infrastructure that diminishes primitive recreation, or applies new management restrictions (either temporary or permanent) that "confine" recreation would have a negative impact on this quality. An alternative which increases solitude, removes infrastructure that diminishes primitive recreation, or removes a management restriction would have a positive impact on this quality. One alternative could produce multiple impacts to this quality. For instance, an alternative for the removal of an unnecessary bridge with a helicopter might likely: negatively impact solitude because of the effects of the noise of the helicopter on visitors along its flight path, positively impact primitive recreation by the removal of the unnecessary bridge, and negatively impact unconfined recreation by closing the immediate area during helicopter operations.

Unique Attributes or Other Features

Identify any values or characteristics of this wilderness (i.e. "ecological, geological, or other features of scientific, educational, scenic, or historical value") that are not accounted for in the above qualities, and describe the effects to these unique features. Heritage and cultural resources including historic sites, and paleontological localities are also included here.

An alternative that degrades any of these unique features would be a negative impact to this quality. An alternative that improves them would have a positive impact on this quality. Or, the alternative may have no impact on this quality either from simply not degrading the quality, or because there are no unique attributes or other features impacted by the proposal.

Other Criteria

Maintaining Traditional Skills

Explain whether and how the alternative helps maintain proficiency in the use of primitive and traditional skills, non-motorized tools, and non-mechanical travel methods.

Special Provisions

Explain how the special provisions (grazing, mining, water developments, access to non-federal land, etc.) identified in the Wilderness Act (Sections 4 and 5) or subsequent legislation, are affected by the alternative. Include mitigation measures to minimize effects to these special provisions.

Economics and Timing Constraints

Costs – Describe the costs for implementation of the alternative. Be sure to include the costs of training, contractors, detailers, volunteers, and equipment needed.

Duration – Describe the time needed to implement the alternative.

Timing Constraints - Explain how each alternative satisfies any significant timing requirements or identified need for urgency based on protection of wilderness character or worker safety. For example, it may be necessary to time implementation to avoid a critical bird nesting season or high water levels in streams.

Note - While administrative activities should always be accomplished with economic efficiency, neither the cost nor the time required for implementation can be primary factors in allowing uses that would otherwise be prohibited. Identify and describe the costs, and time required for each alternative and the effects here but avoid pre-selecting a preferred alternative based on this criteria.

Safety of Visitors and Workers

Describe any safety concerns associated with implementing the alternative on visitors or workers including agency personnel, volunteers, and/or contractors. Identify which hazards can be mitigated and which hazards cannot be mitigated. Describe how mitigation might be achieved through providing information to the public and temporary area closures or through worker training, the use of protective equipment, or other requirements.

Identify the degree of risk for each alternative after considering both the rate of occurrence and severity of reported injuries. Base the determination of the safety risks

of implementing an alternative on adequate supporting evidence (i.e. agency accident data, project specific Job Hazard Analysis, agency specific guidelines, or other documentation).

To make later comparison between alternatives easier and clearer, it may be useful to present these impacts of each alternative in tabular form, as shown on the MRDG [Worksheets](#). It is important to keep in mind that these tables are a tool that should not replace thoughtful narratives.

To do so, first break down the alternative into the phases or components of the actions you've discussed. Pay particular attention to those components that will differ between alternatives. Those components will be duplicated in the left-hand column of each criterion's table in every alternative. In the example below, alternatives have been developed to remove a crashed aircraft from a wilderness. In this example, the components for comparison of effects are:

method of accessing site
method of cutting up wreckage
method of removing wreckage

In addition, each alternative should also include an component that compares conditions to each of the comparison criteria after the proposed action would be completed. This is particularly useful if analyzing a No Action alternative, or if several different results might satisfy the need for action. In the example of alternatives for removing a crashed aircraft, we'd look at:

conditions after removal

Next, brief narratives explaining the positive or negative impacts to the comparison criterion for each component should be entered in the appropriate column. Include those negative impacts from your description of each alternative which cannot be totally mitigated. While not all impacts have the same severity, any significantly different magnitude of impact should be explicitly reflected in the narrative, rather than in these tables. In many cases, an alternative will receive both a plus (+) and a minus (-), or more than one plus or minus for any one criterion. For instance:

- one component has a negative impact to a criterion while another component has a positive impact to the same criterion (see the example below -- the Economics and Timing Constraints criterion)
- one component may have multiple scores, for example, from differing impacts to solitude, primitive recreation, and unconfined recreation (see the example below -- the Solitude or Primitive and Unconfined Recreation criterion)

Add up the number of positive impacts (+) and negative impacts (-) and combine them in the "Grand Total" for each criterion. If there are none, enter NI (for No Impact).

Below is an example from an alternative in which a helicopter is used for all transport, but cutting up the wreckage is unnecessary. (Among the other likely alternatives that would be analyzed would be one where the helicopter is used only for carrying out the crash debris and others in which the wreckage would be cut up by non-motorized tools or by motorized tools to be packed out on horses.)

Alternative A: All Helicopter

Wilderness Character Untrammelled

	positive impacts	negative impacts	Untrammelled Grand Total
1 st component:	no impact	no impact	

method of access to site			
2 nd component: method of cutting up wreck	no impact	no impact	
3 rd component: method of removing wreck	no impact	no impact	
4 th component: conditions after removal	no impact	no impact	
TOTAL	NI	NI	NI

Undeveloped

	positive impacts	negative impacts	
1 st component: method of access to site		Use of helicopter is a 4(c) prohibition that degrades Undeveloped.	
2 nd component: method of cutting up wreck	no impact ¹	no impact	
3 rd component: method of removing wreck		Use of helicopter is a 4(c) prohibition that degrades Undeveloped.	
4 th component: conditions after removal	no impact ²	no impact	
TOTAL		- -	Undeveloped Grand Total - -

¹ Note that using traditional, non-motorized tools (or no tools) does not make the wilderness less developed (which would be a positive impact), it merely keeps the wilderness from becoming more developed (a negative impact).

² While the wreck is evidence of humans, but since its "purpose" has no relation to increasing the ability of humans to occupy or modify the wilderness environment, it should not be considered a development. Therefore, the Undeveloped quality is not improved after the wreck's removal.

Natural

	positive impacts	negative impacts	
1 st component: method of access to site	no impact	no impact ³	
2 nd component: method of cutting up wreck	no impact	no impact	
3 rd component: method of removing wreck	no impact	no impact	
4 th component: conditions after removal	Removing debris and contaminants will result in substantial, local improvement.		
TOTAL	+		Natural Grand Total +

³ Impacts that can be *completely* mitigated (in this case, use of helicopters disturbing bighorn lambing could be mitigated by a timing constraint), should not be listed here, but discussed in the narrative. Impacts that *cannot* be completely mitigated should be accounted for in these tables and the mitigation discussed in the narrative.

Solitude or Primitive and Unconfined Recreation

	positive impacts	negative impacts	
1 st component: method of access to site		Use of helicopter degrades solitude for short term over wide area in wilderness.	
2 nd component: method of cutting up wreck	no impact	no impact	
3 rd component: method of removing wreck		Use of helicopter degrades solitude for short term over wide area in wilderness. Area will have to be closed during sling-loading of debris. ⁴	
4 th component: conditions after removal	Removal of debris will result improve opportunities for solitude by removing reminders of modern technology	no impact	
TOTAL	+	- - -	S or P&UR Grand Total + / - - -

⁴ Note that this component has two negative impacts -- one to Solitude and one to Unconfined Recreation.

Unique Attributes or Other Features

	positive impacts	negative impacts	UA or OF Grand Total
1 st component: method of access to site	no impact	no impact	
2 nd component: method of cutting up wreck	no impact	no impact	
3 rd component: method of removing wreck	no impact	no impact	
4 th component: conditions after removal	Wreck is in culturally sensitive area; removal returns area to appropriate condition		
TOTAL	+		+

Other Comparison Criteria

Maintaining Traditional Skills

	positive impacts	negative impacts	Traditional Skills Grand Total
1 st component: method of access to site		Helicopter reinforces use of aircraft, further eroding traditional skills	
2 nd component: method of cutting up wreck	no impact	no impact	
3 rd component: method of removing wreck		Helicopter reinforces use of aircraft, further eroding traditional skills	
4 th component: conditions after removal	no impact	no impact	
TOTAL		--	--

Special Provisions

	positive impacts	negative impacts	Special Provisions Grand Total
1 st component: method of access to site	no impact	no impact	
2 nd component: method of cutting up wreck	no impact	no impact	
3 rd component: method of removing wreck	no impact	no impact	
4 th component: conditions after removal	no impact	no impact	
TOTAL	NI	NI	NI

Economics and Timing Constraints⁴

	positive impacts	negative impacts	Economics & Timing Grand Total
1 st component: method of access to site		Helicopter expensive (~\$3000 for this phase)	
2 nd component: method of cutting up wreck	Since wreck will not be cut up, time is saved here		
3 rd component: method of removing wreck		Helicopter expensive (~\$8000 for this phase)	
4 th component: conditions after removal	no impact	no impact	
TOTAL	+	--	+ / --

Safety of Visitors and Workers

	positive impacts	negative impacts	Safety Grand Total
1 st component: method of access to site		Danger from helicopter use can only be partially mitigated because of the severity of consequences if there is an accident	
2 nd component: method of cutting up wreck	no impact	no impact	
3 rd component:		Danger from helicopter use can only be	

method of removing wreck		partially mitigated because of severity of consequences if there is an accident	
4 th component: conditions after removal	Area safer for visitors after removal of human-caused danger		
TOTAL	+	--	

Comparison of Alternatives

It may be useful to compare the alternatives in tabular format, carrying forward the scores of positive and negative impacts from each alternative's analysis, as shown above.

The overall impact of an alternative can be roughly approximated by tallying the plusses and minuses. As you are mandated by the Wilderness Act to “preserve wilderness character,” and this is the most important criteria for wilderness, the impacts to the qualities of wilderness character are tabulated first. Below, Alternative A is filled out from our hypothetical example:

	Alternative A All Helicopter	Alternative B	Alternative C	No Action
Untrammeled	NI			
Undeveloped	--			
Natural	+			
Solitude or Primitive & Unconfined Recreation	+ / - - -			
Unique / Other Features	+			
WILDERNESS CHARACTER	+ + + / - - - - -			

In some cases the impacts of two or more alternatives to the qualities of wilderness character will be equal. Comparison of the other criteria can help decide which of these alternatives is preferable.

	Alternative A All Helicopter	Alternative B	Alternative C	No Action
Maintaining Traditional Skills	--			
Special Provisions	NI			
Economics and Timing Constraints	+ / - -			
OTHER CRITERIA SUMMARY	+ / - - - -			

When these results are combined with those from the Wilderness Character ratings, one alternative usually rises as the preferable activity.

Because safe working conditions -- and keeping visitors safe from human-caused dangers in the wilderness -- are a priority in all decisions and actions, you will also want to compare the various alternatives using the Safety criterion. This table should reflect all the safety risks which cannot be mitigated through training, use of protective equipment, and implementation of required safety procedures.

	Alternative A All Helicopter	Alternative B	Alternative C	No Action
SAFETY (visitors & workers)	+ / - -			

The comparison tables are intended as tools to help guide your decision but they may not accurately represent every situation. In some cases the comparison table format using a single + or – for each component's impact may be misleading. For example, it could be argued that a small amount of trammeling caused by a crew treating weeds while they are still a small and manageable infestation is insignificant when compared to the adverse effect on the natural quality of not treating a fast spreading, non-native invasive species that could potentially change the entire wilderness ecosystem. In that case, of course, you will already have decided in Step 1 that action is necessary to preserve the Natural quality. In other instances, however, you may have to use the comparison table for general comparison of the alternatives but note the significance of the positive or negative impacts to each criterion in the Rationale for the Decision section.

Safety Criterion Discussion

Occasionally, safety concerns can legitimately dictate choosing one alternative which degrades wilderness character (or other criteria) more than an otherwise preferable alternative. In that case, describe the benefits and adverse effects in terms of risks to both the public and workers for each alternative here but avoid pre-selecting an alternative based on the safety criteria in this section.

To support the evaluation of alternatives, provide an analysis, reference, or documentation and avoid assumptions about risks and the potential for accidents. This documentation can take the form of agency accident-rate data tracking occurrences and severity; a project-specific job hazard analysis; research literature; or other specific agency guidelines.

In evaluating the risks of implementing each alternative be sure to consider all the relevant information. Often the rate of occurrence of an accident is different than the severity of the reported injuries. For example, a recent study of Forest Service accident statistics for clearing trails with saws indicated that the rate of occurrence for cross-cut saws was lower than for chain saws and that the severity of accidents caused by using chain saws is very high. When evaluating the safety risks of an alternative, be sure to consider all of the factors involved and avoid common assumptions as to which action is safer.

Step 2 Decision: What is the minimum activity?

Select the alternative that represents the minimum requirements necessary to administer the areas as wilderness and **describe the rationale** for selecting it.

The selected alternative must conform to all applicable laws. Explain why the use of motorized equipment, mechanical transportation, structures, or installations is the minimum necessary requirement for the administration of the area as wilderness by briefly describing the benefits or adverse effects to the qualities of wilderness character and other legal requirements.

The selected alternative must also meet agency policy. Cite the specific criteria, direction, standard, or guideline that applies and explain how the alternative complies.

The rationale should demonstrate that the decision is clearly a result of objective evaluation of the alternatives and not the result of an inappropriate bias or justification of an alternative or method for non-wilderness reasons.

If your selection is based at least in part on the Safety criterion, be sure to explain the rationale and include or reference supporting analysis or documentation. This analysis should explain why the use of motorized equipment or other prohibited uses is necessary because to do otherwise would cause increased risks to workers or visitors that cannot be satisfactorily mitigated through training, use of personal protective equipment (PPE), or other requirements to alleviate the safety risk.

Avoid selecting an alternative based primarily on costs and the amount of time needed for implementation. While administrative activities should always be accomplished with economic efficiency, both law and agency policy directs us away from considering either the cost or the time required for implementation as the over-riding factors for administrative use of otherwise prohibited activities. The Wilderness Act provides only the following as legal basis for approving use of any of the Section 4(c) prohibited uses:

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

List any monitoring or reporting requirements to meet agency policy or guidelines.

Track and report the number and type of authorizations by checking the box for each Section 4(c) use that is included in the selected alternative. Your agency may require additional reports.

Approvals

Depending on agency policy, include the signatures of the administrator who has the authority to approve Section 4(c) prohibited uses or other restricted activities included in the decision, and sign the MRDG. Check your agency policy and consult with your regional or state wilderness program managers to determine the proper procedures.

Note – The MRDG is not a substitute for a NEPA analysis and decision where one is required.