



ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

MINIMUM REQUIREMENTS DECISION GUIDE

WORKSHEETS

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

– the Wilderness Act, 1964

Please refer to the accompanying MRDG [Instructions](#) for filling out this guide.

The spaces in the worksheets will expand as necessary as you enter your response.

The MRDG Instructions may be found at: <http://www.wilderness.net/mrdg/>

Project Title: **_Control of Leafy Spurge in Raven’s Eye WSA_**

Step 1: Determine if any administrative action is necessary.

Description: Describe the situation that may prompt action.
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Expanding populations of several state-listed noxious weeds have spread into the southern portion of the Raven’s Eye Wilderness (Recommended) within Craters of the Moon National Preserve (CRMO). The most problematic of the noxious weed species are leafy spurge and Rush skeletonweed. Only leafy spurge has been determined to have effective treatment methods available (CRMO Invasive Plan Management Plan, 2011). Small populations of leafy spurge are widely scattered both inside and to the south of the Raven’s Eye Wilderness (REW). Most of the populations consist of fewer than 100 individual plants. Within the REW only about two dozen individual populations occur but hundreds occur to the south of the REW. When in bloom, the plant is easily detected by its distinct yellowish-green flowers. The lands within the REW consist of sparsely vegetated (sagebrush steppe) lava fields but the terrain has an abundance of

small ridges and depressions (50-100') which hide some clusters of the plants from ground observers.

Leafy spurge is a deep rooted perennial herbaceous plant growing up to three feet tall and is notoriously difficult to control. Leafy Spurge is highly competitive plant, adapted to a variety of habitats allowing it to readily displace native vegetation.

To determine if administrative action is necessary, answer the questions listed in A - F on the following pages by answering Yes or No, and providing an explanation.

A. Options Outside of Wilderness

Is action necessary within wilderness?

Yes: ☐ No: ☒

Explain: The only effective action would have take place in wilderness since the noxious weeds are already within the 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 Section 4(c) prohibited uses? Cite law and section.

Yes: ☐ No: ☒

Explain: NA

C. Requirements of Other Legislation

Is action necessary to meet the requirements of other laws? Cite law and section.

Yes: ☐ No: ☒

Explain: The Idaho Noxious Weed law requires land owners to control noxious weeds on their property but this law is not legally applicable to federal lands.

D. Other Guidance

Is action necessary to conform to 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?

Yes: ☐ No: ☒

Explain: NPS Policies 2006 encourage elimination of exotic species where feasible but do not explicitly require action in all cases (Sec. 6.3.7, page 83). Keeping kipukas free of noxious weeds is listed as a “desired condition” in the CRMO Monument Management Plan (2006). The current state sponsored regional sage grouse conservation plan for the area identifies invasive weeds as one of the important threats to sage grouse and their habitat but these are not binding.

E. Wilderness Character

Is action necessary to preserve one or more of the qualities of wilderness character including: 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?

Untrammeled: Yes: ☐ No: ☒

Explain: While leafy spurge was introduced to North American by human actions, its subsequent expansion is not the result of any human effort to cultivate or spread it. Because of this, actions to remove of leafy spurge will create rather than eliminate a modern human control even if human actions initiated the circumstances which led to it being present in the REW.

Undeveloped: Yes: ☐ No: ☒

Explain: Removal of leafy spurge is not necessary to preserve or enhance the undeveloped character of the wilderness related to permanent improvements such as modern structures or operation of motorized equipment & mechanized equipment. Some types of action could negatively impact the undeveloped quality by using mechanized transport into the wilderness.

Natural: Yes: ☒ No: ☐

Explain: Action is necessary to maintain the natural conditions of the wilderness. Left untreated leafy spurge populations expand, crowding out and degrading native sagebrush steppe plant communities leading to impaired wildlife habitat.

Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation:

Yes: ☒ No: ☒

Explain: Actions to control Leafy spurge could impair solitude or unconfined recreation opportunities. However, if left unchecked the wide spread presence of this highly visible exotic plant would be a constant reminder to knowledgeable wilderness visitors of man's role in modifying the landscape via the introduction of invasive exotic species. Some action options being considered would negatively affect opportunities for solitude by short-term sight and sound of people.

Unique Attributes or Other Features that reflect the character of this wilderness:

Yes: ☐ No: ☒

Explain: This particular area of the REW lacks any unique attributes or features which are integral to the wilderness. Therefore these qualities do not apply to this situation.

F. Public Purposes

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

Recreational: Yes: ☐ No: ☒

Explain: Action is not required to protect recreational purposes, in part because recreational uses are currently minimal and in part because the plant does not preclude recreational purposes.

Scenic: Yes: ☒ No: ☐

Explain: A widespread and highly visible noxious weed, like leafy spurge, could degrade the natural scenic value of the area if no action is taken.

Scientific: Yes: ☒ No: ☐

Explain: The scientific value of the area is specifically noted in Proclamation 7373 which designated this area a national monument in 2000.

“These tracks of relict vegetation are remarkable bench-marks that aid in the scientific study of changes to vegetative communities from human activity...”

Educational: Yes: ☐ No: ☒

Explain: This particular area is remote and not used for educational programs or activities and action is not required to continue a use or initiate any planned educational purpose.

Conservation: Yes: ☒ No: ☐

Explain: In addition to the area’s wilderness qualities the area was added in the National Park System as a result of Proclamation 7373 and P.L. 107-213. The NPS Organic Act (1916) makes the conservation of wildlife a primary mandate of units of the National Park System. NPS Management Policies (2006) state that;

“Natural resources will be managed to preserve fundamental physical and biological processes, as well as individual species, features and plant and animal communities.”

Leafy spurge crowds out and degrades native plant communities leading to degraded wildlife habitat. Without action leafy spurge may spread to the north and east into valuable sage grouse habitat.

Historical: Yes: ☐ No: ☒

Explain: There are no historical features in the area which would require action to protect.

Step 1 Decision: Is any administrative action necessary in wilderness?

In reviewing the Step 1 questions in A - F above, note that not all answers have equal weight in the Step 1 Decision: A - C and E have first priority; F has second priority; D has third priority. See [Instructions](#) for details.

Yes: ☒ No: ☐

Explain: The primary justification for action is to prevent a relatively small number of small infestations on the edge of the wilderness from expanding into a large continuous infestation across the interior portions of the wilderness. At that point eradication or even containment would no longer be an option and the natural conditions of the wilderness could be degraded beyond repair.

Action would be in compliance NPS Management Policies (2006), the CRMO Monument Management Plan (2006) and CRMO Integrated Weed Management Plan (2011) to preserve and restore native plant communities where necessary. This would enhance the scenic, scientific and conservation public purposes of the wilderness.

The negative effects on untrammeled wilderness character by taking action are off-set by the benefits to natural conditions. Negative impacts on wilderness character (undeveloped, solitude or primitive recreation) would short-term.

If action is necessary, proceed to Step 2 to determine the minimum activity.

Step 2: Determine the minimum activity.

Please refer to the accompanying MRDG [Instructions](#) for information on identifying alternatives and an explanation of the effects criteria displayed below.

Description of Alternatives

For each alternative, describe what the action is, when the activity will take place, where the activity will take place, and what methods and techniques will be used. Detail the impacts to the qualities of wilderness character and other comparison criteria, including safety. Where mitigation is possible, include mitigation measures. In addition to describing the effects of the alternative, it may be useful to break down each alternative into its component parts and list in tabular form the impacts to each comparison criterion.

Alternative # 1 Use Herbicides to Treat Leafy Spurge_____

Description: Field crews using hand-pumped backpack sprayers would travel on foot, to and from (Component #1) mapped leafy spurge sites to treat LS plants with approved herbicides (Component #2) up to two times per year. After action condition is Component #3. No Section 4(c) prohibited uses are used.

Impacts to Wilderness Character:

Untrammelled – Negative impact on untrammelled WC by manipulation of the biophysical environment when selectively targeting an exotic plant species for removal (C#2). This impact would probably continue indefinitely although the number size of infestation sites is likely to decrease over time.

Undeveloped – No + or – impact by either component.

Natural – A positive impact on the natural condition by containing an aggressive exotic plant which left unchecked expands and alters native plant communities and wildlife habitat. Some level of negative impact could result from injury to some non-target native plants (C#2) although proper selection and spot application of herbicide should minimize this risk.

Solitude or Primitive and Unconfined Recreation – A short-term negative impact would occur to opportunities for solitude when field crews travel to and from the infestation sites up to twice a year (C#1). This impact would be of short duration (3-5 days per year), of limited geographic extent and be unlikely to affect many wilderness users since use of this area is very low. No impact on primitive or unconfined recreation by either component.

Unique Attributes or Other Features - No + or – impact by either component.

Impacts to other criteria:

Maintaining Traditional Skills – A positive impact from C#1 since traditional skills would be maintained by crews travelling on foot to all sites.

Special Provisions- No + or – impact by either component.

Economics and Timing Constraints – Component #1 is lower cost than any alternatives but will take longer. No difference for Component #2.

Impacts to safety of visitors and workers – Field crews are exposed to some risk when mixing herbicides and while hiking (tripping/falling) across lava flows while carrying full backpack sprayers. More risk associated with foot travel to more remote sites due to fatigue and longer response time if

injury occurs. Tripping potential is high but severity of injuries is relatively low. Safety risk to visitors is negligible due to very low public use of the area.

Impacts Comparison Tables

Wilderness Character

Untrameled

	positive impacts	negative impacts	
1 st component:	No impact	No impact	
2 nd component:	No impact	- Use of herbicide manipulates environment	
3 rd component:	No impact		
4 th component:			
TOTAL	NI	-	Untrameled Grand Total -

Undeveloped

	positive impacts	negative impacts	
1 st component:	No impact	No impact	
2 nd component:	No impact	No impact	
3 rd component:	No impact	No impact	
4 th component:			
TOTAL	NI	NI	Undeveloped Grand Total NI

Natural

	positive impacts	negative impacts	
1 st component:	No impact	No impact	
2 nd component:	+ Exotic weed contained	- Some non-target native plants harmed	
3 rd component:	+ Exotic weed contained		
4 th component:			
TOTAL	++	-	Natural Grand Total ++-

Solitude or Primitive and Unconfined Recreation

	positive impacts	negative impacts	
1 st component:	No impact	- Potential on Solitude	
2 nd component:	No impact	No impact	
3 rd component:	+ Fewer exotic plants	- Marker dye visible for 1-2 weeks after treatment	
4 th component:			
TOTAL	+	--	S or P&UR Grand Total +--

Unique Attributes or Other Features

	positive impacts	negative impacts	UA or OF Grand Total
1 st component:	No impact	No impact	
2 nd component:	No impact	No impact	
3 rd component:			
4 th component:			
TOTAL	NI	NI	NI

Other Criteria

Maintaining Traditional Skills

	actions with beneficial effects	actions with adverse effects	Traditional Skills Grand Total
1 st component:	+	No impact	
2 nd component:	No impact	No impact	
3 rd component:			
4 th component:			
TOTAL	+	NI	+

Special Provisions

	positive impacts	negative impacts	Special Provisions Grand Total
1 st component:	No impact	No impact	
2 nd component:	No impact	No impact	
3 rd component:			
4 th component:			
TOTAL	NI	NI	NI

Economics and Timing Constraints

	positive impacts	negative impacts	Economics & Timing Grand Total
1 st component:	+ foot travel inexpensive	- Foot travel requires > time	
2 nd component:	No impact	No impact	
3 rd component:			
4 th component:			
TOTAL			

Safety of Visitors and Workers

	positive impacts	negative impacts	Safety Grand Total
1 st component:	+ Tripping potential high but resulting injuries tend to be minor	- Remote sites > Risk to workers	
2 nd component:		- Some risk to workers mixing herbicide	
3 rd component:			
4 th component:			
TOTAL	+	--	+--

Alternative # 2 Use Herbicides & Aircraft to Treat Leafy Spurge_____

Description: A helicopter would be used one day each year to conduct aerial surveys to detect and map new sites. Remote sites located two miles or more from road access would be accessed by helicopter and treated with herbicide (Component #3). Field crews using hand-pumped backpack sprayers would travel on foot, to and from (Component #1) mapped leafy spurge sites less than two miles from roads to treat LS plants with approved herbicides (Component #2) up to two times per year. After action condition is (Component #4).

Landing of aircraft mechanized transport are 4(c) prohibited uses.

Impacts to Wilderness Character:

Untrammelled – Impacts same as Alternative 1 for Components #1, #2, and #3.

Undeveloped – No + or – impact by components #1 or #2. Component #3 (landing of aircraft) would have a short-term impact on this wilderness character.

Natural – Same impacts as Alternative 1. A positive impact on the natural condition by containing an aggressive exotic plant which left unchecked expands and alters native plant communities and wildlife habitat. Some level of negative impact could result from injury to some non-target native plants (C#2) although proper selection and spot application of herbicide should minimize this risk.

Solitude or Primitive and Unconfined Recreation – A short-term (1 day/year) negative impact on solitude would result from low flying aircraft survey for weed sites. A short-term negative impact would occur to opportunities for solitude when field crews travel to and from the infestation sites up to twice a year (C#1). This impact would be of short duration (3-5 days per year), of limited geographic extent and be unlikely to affect many wilderness users since use of this area is very low. No impact on primitive or unconfined recreation by any component.

Unique Attributes or Other Features - No + or – impact by any component.

Impacts to other criteria:

Maintaining Traditional Skills – A negative impact from C#3 since traditional skills would be less well maintained by crews not travelling on foot to more remote sites.

Special Provisions- No + or – impact by any component.

Economics and Timing Constraints – Component #3 is higher cost than simply relying on walking ground surveys but would take less time. No difference for Component #2.

Impacts to safety of visitors and workers – Field crews would still be exposed to some risk when mixing herbicides and while hiking (tripping/falling) across lava flows to less remote sites while carrying full backpack sprayers. Less risk would be associated with foot travel to more remote sites accessed by helicopter instead. Risks associated with low flying helicopter surveys and landing and take-offs from un-improved sites is higher. Accident probability is still low but the severity of accidents that do occur could be catastrophic. Safety risk to visitors is negligible due to very low public use of the area.

Impacts Comparison Tables

Wilderness Character

Untrammeled

	positive impacts	negative impacts	Untrammeled Grand Total
1 st component:	No impact	No impact	
2 nd component:	No impact	- Use of herbicide manipulates environment	
3 rd component:	No impact	No impact	
4 th component:	No impact	-Post Treatment effects	
TOTAL	NI	--	-

Undeveloped

	positive impacts	negative impacts	Undeveloped Grand Total
1 st component:	No impact	No impact	
2 nd component:	No impact	No impact	
3 rd component:	No impact	- Aircraft Landings	
4 th component:	No impact	No impact	
TOTAL	NI	-	-

Natural

	positive impacts	negative impacts	Natural Grand Total
1 st component:	No impact	No impact	
2 nd component:	+ Exotic weed contained	- Some non-target native plants harmed	
3 rd component:	+ Exotic weed contained	- Some non-target native plants harmed	
4 th component:	+ Exotic weed contained		
TOTAL	+++	-	+++-

Solitude or Primitive and Unconfined Recreation

	positive impacts	negative impacts	S or P&UR Grand Total
1 st component:	No impact	- Potential on Solitude	
2 nd component:	No impact	No impact	
3 rd component:	+ Fewer exotic plants	- Marker dye visible for 1-2 weeks after treatment - Sight & sound of Aircraft Overflights	
4 th component:	No impact	No impact	
TOTAL	+	---	+---

Unique Attributes or Other Features

	positive impacts	negative impacts	UA or OF Grand Total
1 st component:	No impact	No impact	
2 nd component:	No impact	No impact	
3 rd component:	No impact	No impact	
4 th component:	No impact	No impact	
TOTAL	NI	NI	NI

Other Criteria

Maintaining Traditional Skills

	actions with beneficial effects	actions with adverse effects	Traditional Skills Grand Total
1 st component:	+	No impact	
2 nd component:	No impact	No impact	
3 rd component:	No impact	- Less hiking	
4 th component:	No impact	No impact	
TOTAL	+	-	+-

Special Provisions

	positive impacts	negative impacts	Special Provisions Grand Total
1 st component:	No impact	No impact	
2 nd component:	No impact	No impact	
3 rd component:	No impact	No impact	
4 th component:	No impact	No impact	
TOTAL	NI	NI	NI

Economics and Timing Constraints

	positive impacts	negative impacts	Economics & Timing Grand Total
1 st component:	+ foot travel inexpensive	- Foot travel requires > time	
2 nd component:	No impact	No impact	
3 rd component:	+ Less time	- Greater Cost	
4 th component:	No impact	No impact	
TOTAL	++	--	++--

Safety of Visitors and Workers

	positive impacts	negative impacts	Safety Grand Total
1 st component:	+ Tripping potential high but resulting injuries tend to be minor	- Remote sites > Risk to workers	
2 nd component:	No impact	- Some risk to workers mixing herbicide	
3 rd component:	+ reduced risk of tripping injuries	- Increased risk of catastrophic accident	
4 th component:	No impact	No impact	
TOTAL	++	---	++---

Alternative # 3 No Action_____

Description: No actions would be taken to locate or control leafy spurge or other noxious weeds (Component #1). No 4(c) prohibited uses would occur.

Impacts to Wilderness Character:

Untrammeled – No + or – impacts.

Undeveloped – No + or – impacts.

Natural – A negative long-term and wide spread impact as leafy spurge expands in area.

Solitude or Primitive and Unconfined Recreation – No + or – impacts.

Unique Attributes or Other Features - No + or – impact.

Impacts to other criteria:

Maintaining Traditional Skills – A negative impact since traditional skills would be less well maintained by crews not travelling on foot to remote sites.

Special Provisions- No + or – impact.

Economics and Timing Constraints – + impact since doing nothing has zero cost.

Impacts to safety of visitors and workers – A positive impact since no accidents can occur if we do nothing.

Impacts Comparison Tables

Wilderness Character

Untrammeled

	positive impacts	negative impacts	
1 st component:	No impact	No impact	
2 nd component:			
3 rd component:			
4 th component:			
TOTAL	NI	NI	Untrammeled Grand Total NI

Undeveloped

	positive impacts	negative impacts	
1 st component:	No impact	No impact	
2 nd component:			
3 rd component:			
4 th component:			
TOTAL	NI	NI	Undeveloped Grand Total NI

Natural

	positive impacts	negative impacts	
1 st component:	+ No risk of non-target native plants harmed	- Degraded native plant communities and wildlife habitat	
2 nd component:			
3 rd component:			
4 th component:			
TOTAL	+	-	Natural Grand Total +-

Solitude or Primitive and Unconfined Recreation

	positive impacts	negative impacts	
1 st component:	No impact	No impact	
2 nd component:			
3 rd component:			
4 th component:			
TOTAL	NI	NI	S or P&UR Grand Total NI

Unique Attributes or Other Features

	positive impacts	negative impacts	UA or OF Grand Total
1 st component:	No impact	No impact	
2 nd component:			
3 rd component:			
4 th component:			
TOTAL	NI	NI	NI

Other Criteria

Maintaining Traditional Skills

	actions with beneficial effects	actions with adverse effects	Traditional Skills Grand Total
1 st component:	No impact	- Less need to maintain hiking cross-country navigation skills since nothing will be done.	
2 nd component:			
3 rd component:			
4 th component:			
TOTAL	NI	-	-

Special Provisions

	positive impacts	negative impacts	Special Provisions Grand Total
1 st component:	No impact	No impact	
2 nd component:			
3 rd component:			
4 th component:			
TOTAL	NI	NI	NI

Economics and Timing Constraints

	positive impacts	negative impacts	Economics & Timing Grand Total
1 st component:	+ No Costs	No impact	
2 nd component:			
3 rd component:			
4 th component:			
TOTAL	+	NI	+

Safety of Visitors and Workers

	positive impacts	negative impacts	Safety Grand Total
1 st component:	+ No risk of injury or accident	No impact	
2 nd component:			
3 rd component:			
4 th component:			
TOTAL	+		+

Alternatives Considered but Rejected from further Analysis

1. Manual treatment of leafy spurge by hand-pulling plants in lieu of herbicide use.

Hand pulling or other mechanical treatment of leafy spurge is not feasible due to the plant's deep roots and capacity to quickly sprout from any remaining root segments remaining in the ground.

2. Biological Control of leafy spurge.

Biological controls for leafy spurge do exist but they would not be effective in containing the spread of leafy spurge in this area. Biological controls are most effective where dense continuous infestations already exist. In these situations biological controls can reduce the density of LS plants but will not prevent its spread.

Comparison of Alternatives

It may be useful to compare each alternative's positive and negative impacts to each of the criteria in tabular form, keeping in mind the law's mandate to "preserve wilderness character."

	Alternative 1	Alternative 2	Alternative 3 No Action	
Untrammeled	-	--	NI	
Undeveloped	NI	-	NI	
Natural	++-	+++-	+-	
Solitude or Primitive and Unconfined Recreation	+--	+---	NI	
Unique / Other Features	NI	NI	NI	
WILDERNESS CHARACTER	+++----	++++-----	+-	

	Alternative A	Alternative B	Alternative C No Action	
Maintaining Traditional Skills	+	+	-	
Special Provisions	NI	NI	NI	
Economics & Timing	+-	++--	+	
OTHER CRITERIA SUMMARY	++-	+++--		

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

Safety Criterion

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 positive and negative impacts in terms of risks to the public and workers for each alternative here but avoid pre-selecting an alternative based on the safety criteria in this section.

Documentation:

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.

Step 2 Decision: What is the Minimum Activity?

Please refer to the accompanying MRDG [Instructions](#) before describing the selected alternative and describing the rationale for selection.

Selected alternative: Alternative 2 – Use Herbicides & Aircraft to Treat Leafy Spurge

Rationale for selecting this alternative (including safety criterion, if appropriate):

Use of the helicopter (over-flights and landings) results in slightly higher negatives for wilderness character (compared to Alternative 1 or 3) but these negative impacts are mostly short-term lasting only 3-4 days per year and of limited geographic extent. Continued short-term negative impacts are expected to continue for years but the duration should decline as fewer sites require treatment. Positive effects on the natural character of the wilderness would result if infestation sites are detected and treated while small and eradication of the spot infestation is feasible.

There are somewhat higher safety risks to workers based upon the potential severity of injury should an accident involving helicopter use occur. This risk is mitigated by the lower probability of an accident given the extensive safety precautions required to operate aircraft in this type of operation.

Overall, the decision is based upon the longer-term (or even permanent) and geographically extensive positive impacts to restoring and maintaining the natural character of the wilderness compared to the short-term and geographically limited negative impacts to the other wilderness characteristics (undeveloped, untrammeled and opportunities of solitude and primitive recreation). Limiting control measures to ground based efforts on foot are likely to result in many infestations escaping detection and treatment leading to the spread of leafy spurge and/or a prolonged effort which prolongs the negative impacts to undeveloped wilderness character and opportunities for solitude.

Monitoring and reporting requirements:

Duration of over-flights and number of actual helicopter landings will be documents annually.
Amount of herbicide use and area treated will be recorded annually.

Check any Wilderness Act Section 4(c) uses approved in this alternative:

- | | |
|--|---|
| ☒ mechanical transport | ☒ landing of aircraft |
| ☐ motorized equipment | ☐ temporary road |
| ☐ motor vehicles | ☐ structure |
| ☐ motorboats | ☐ installation |

Record and report any authorizations of Wilderness Act Section 4(c) uses according to agency policies or guidelines.

Follow agency policies for the following review and decision authorities:

Approvals	Signature	Name	Position	Date
Prepared by:		John K. Apel	Chief of Resources	6/6/12
Recommended:				
Recommended:				
Approved:			Superintendent	