



**National Park Service
U.S. Department of the Interior
Little Bighorn Battlefield National Monument
Crow Agency, Montana**

Finding Of No Significant Impact Fire Management Plan

Background

Little Bighorn Battlefield National Monument (LIBI) is located in southeast Montana, 65 miles south of Billings, Montana, and 73 miles north of Sheridan, Wyoming (see EA, figure 1). The Monument contains 765.34 acres, in two separate holdings, located within the exterior boundaries of the Crow Indian Reservation. Little Bighorn Battlefield National Monument preserves in perpetuity the natural and cultural resources of the site of the Battle of the Little Bighorn, fought June 25 and 26, 1876. An Indian Memorial dedicated on June 25, 2003 honors Indian participation in the battle. The memorial's theme, "Peace Through Unity," promotes peace, unity, and friendship among all the tribes that fought at the battle as well as others who visit the living memorial. The Monument also includes Custer National Cemetery, which memorializes and commemorates casualties and veterans of the Indian Wars (including U.S. Indian scouts and Buffalo Soldiers), Spanish American War, World War I, World War II, Korean War, and the war in Vietnam.

In compliance with the National Environmental Policy Act of 1969 (NEPA), the National Park Service (NPS) prepared an environmental assessment (EA) to examine alternatives and environmental impacts associated with the proposed new Fire Management Plan (FMP) for LIBI. The fire management program at LIBI is supported by the fire staff at Yellowstone National Park, and has an FMP which was signed in 2005. The FMP has been reviewed and updated annually.

A new FMP and supporting EA is necessary for these reasons:

- The NPS has directed discontinued use of the Healthy Forest Initiative categorical exclusion (HFI CE). Since the HFI CE was the supporting NEPA document for the LIBI FMP, a new NEPA document and FMP are required by NPS policy.

- A need to incorporate current interpretation of federal fire policy, and associated terminology.
- A need to incorporate the most recent scientific and technological advances pertaining to fire management.

In accordance with NEPA, the NPS prepared an Environmental Assessment/Assessment of Effect (EA/AEF) for the FMP to provide for public involvement in the planning process, and to examine alternatives and their potential impacts on the environment. Two alternatives were examined: Alternative A (No Action) and Alternative B (NPS Preferred). Topics of concern that were identified during scoping and evaluated in the EA/AEF include: cultural resources, including archeological resources, cultural landscapes, historic structures, and ethnographic resources; vegetation; special status species; wildlife; air quality; visitor use and experience; health and safety; and park operations.

After a thorough review of fire management objectives, potential impacts of the alternatives, consideration of public comment, and after consultation with the culturally-affiliated tribes, the Crow Tribal Historic Preservation Officer (THPO), and the U.S. Fish and Wildlife Service (USFWS), Alternative B (NPS Preferred) has been selected for implementation. Alternative B is consistent with Federal policy, which prioritizes public health and safety, protecting at-risk communities and infrastructure, managing for natural historic fire regimes, protecting sensitive resources, and collaborating with other agencies and stakeholders.

FIRE MANAGEMENT PLAN OBJECTIVES:

- Ensure the safety of NPS staff, visitors, and surrounding community.
- Preserve the cultural landscape through the use of fire management tools.
- Conduct ecosystem maintenance and restoration, including the human environment, provided it does not conflict with the cultural landscape.
- Facilitate reciprocal fire management activities through cooperative agreements with partners.

This document records: 1) a Finding of No Significant Impact as required by the National Environmental Policy Act of 1969, as amended; and 2) a determination of no impairment as required by the NPS Organic Act of 1916. The non-impairment finding can be found in the appendix to this finding of no significant impact.

Selected Action

Under Alternative B (NPS Preferred), a FMP will be finalized to guide suppression responses to unplanned fire ignitions. The FMP will also provide options for manual fuel reduction projects to reduce the intensity and risk of wildland fires and describe options for the use of prescribed fire to protect the cultural landscape. Prescribed fire could also be

used for restoration and maintenance of localized ecosystems. Unplanned wildland fires will be suppressed with the use of minimum impact suppression tactics (MIST).

Mitigation Measures

Please see the list of potential mitigation measures/best management practices located immediately after the signature page of this FONSI. These measures and practices will be applied to lessen adverse effects from wildland fire and fuels management projects to NPS resources.

Alternatives Considered

Two alternatives were evaluated in the EA, including Alternative A, the no action alternative, and Alternative B, the NPS preferred alternative.

Alternative A (No Action). The EA/AEF evaluated Alternative A (No Action) in addition to Alternative B (NPS Preferred). Under Alternative A (No Action), Little Bighorn Battlefield National Monument would not have an approved Fire Management Plan, and would not be in compliance with NPS directives (NPS RM 18) that require park units to have fire management plans in place if there is existing burnable vegetation. Response to unplanned fire ignitions would be full and immediate suppression. No manual or prescribed fuel reduction for ecosystem maintenance and restoration would be considered or allowed under this alternative.

Alternatives Eliminated From Further Consideration. Other options for managing fire through the reduction of fuel loads in the Monument include using biological agents, chemical controls, and mechanical means (vehicular) of fuel reduction. These methods were dismissed for the following reasons:

- The use of biological agents to control nonnative vegetation (heavy contributors to excess fuels) was considered but dismissed from this analysis, because it was considered in the Invasive Plant Management Plan (NPS 2011b). LIBI will utilize biological agents to control nonnative vegetation under the Invasive Plant Management Plan.
- Chemical application to control nonnative vegetation was considered but dismissed from this analysis, because it was evaluated in the Invasive Plant Management Plan (NPS 2011b). LIBI will implement chemical applications to control nonnative vegetation under the Invasive Plant Management Plan.
- Mechanical fuel reduction utilizing tracked or wheeled vehicles used to reduce vegetation was considered but dismissed because of the potential impact to cultural resources in the Monument. Vehicular travel is restricted at the Monument to avoid inadvertent impacts to cultural resources.

Environmentally Preferable Alternative

According to the CEQ regulations implementing NEPA (43 CFR 46.30), the environmentally preferable alternative is the alternative "that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluation what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative."

Alternative B, Fire Management with Fuels Reduction and Prescribed Fire, is the environmentally preferable alternative for these reasons:

- Fuels reduction projects (manual work, and prescribed fire) will be planned and implemented to protect sensitive resources from the effects of wildland fire.
- Manual fuel reduction and prescribed fire will be planned and implemented to maintain, and if necessary to restore, ecosystems within the boundaries of the Little Bighorn Battlefield National Monument.
- Potential short-term adverse impacts are outweighed by the long-term beneficial impacts to the grassland ecosystem, and the ability to protect sensitive cultural and natural resources and the human environment during unplanned wildland fires.

For these reasons, Alternative B causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources, thereby making it the environmentally preferable alternative.

Why The Selected Action Will Not Have A Significant Effect On The Human Environment

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse. A significant effect may exist even if the agency believes that on balance the effect will be beneficial

The EA/AEF analyzed potential impacts of Alternative B (NPS Preferred) on all topics identified during internal and public scoping. There were no major impacts, either beneficial or adverse. There would be long-term beneficial impacts for most impact topics as fuels reduction objectives are met. Most adverse impacts would be negligible to minor and short term, while a few adverse impacts would be negligible to moderate and long-term. The impacts from suppressing wildfires have the greatest potential for adverse impacts to resources. Reducing fuels adjacent to sensitive resources will reduce fire

severity, and fire will be excluded from the immediate site as necessary to protect the resource. Resources of specific concern include cultural landscapes, archeological resources, ethnographic resources, historic structures, and special status species. An extensive list of mitigation measures can be found after the signature page of this FONSI. Not all of the mitigation measures will be applied in all situations; the measures that will reduce or negate adverse impacts to resources will be applied to the greatest extent possible without compromising public, employee, and firefighter health and safety. Appropriate mitigation measures will be incorporated in planned projects; responses to unplanned wildland fire ignitions will include appropriate mitigation measures when possible.

The degree to which the proposed action affects public health or safety

Public health and safety is a primary concern of the preferred alternative. Reduction of wildland fire intensity by implementing planned fuel reduction projects will enhance the protection of life and property. Potential fuel reduction projects pose very little threat to visitors and adjacent residents, or staff. Planned manual fuel reduction projects and/or prescribed burns could minimize the frequency and intensity of unplanned wildland fire by reducing fuels, therefore resulting in long-term beneficial effects to health and safety.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas

The Little Bighorn Battlefield National Monument preserves the natural and cultural resources of the site of the Battle of the Little Bighorn, fought in 1876, between the U.S. Cavalry, and allied Lakota Sioux, Cheyenne, and Arapaho people. This NPS unit provides visitors with a greater understanding of those events which lead up to the battle, the encounter itself, and the various effects the encounter had on the two cultures involved. The Indian Memorial was dedicated in 2003, and honors Native American participation in the battle. In addition, Custer National Cemetery, located within the Monument, memorializes and commemorates veterans of U.S. wars.

Wildland fire has long played a natural role in the northern high plains environment. The Monument vegetation is dominated by grassland prairie and shrub steppe, and fire is an integral natural process that shapes the landscape, scenic character, and historic setting. These types of vegetation are important elements of the cultural landscape and ethnographic resources; planned manual fuel reduction and prescribed burns will consider both beneficial and adverse effects to Monument resources.

Implementation of Alternative B would not cause significant effects on historic or cultural resources. Prime farmlands, wetlands, wild and scenic rivers, and/or ecologically critical

areas do not occur within the Monument and therefore these would not be affected by implementation of the preferable alternative.

The degree to which effects on the quality of the human environment are likely to be highly controversial

Alternative B is consistent with accepted fire management strategies that are currently employed at other NPS units, adjacent tribal lands, and other adjacent Federal lands. Based upon public and agency involvement in the planning process and comments received during scoping efforts and on the EA/AEF, Alternative B is not highly controversial, nor is it expected to have future controversial effects on the quality of the human environment.

The degree to which the possible effects on the quality on the human environment are highly uncertain or involve unique or unknown risks

Unplanned wildland fires pose some inherent risk to the human environment. Impacts from unplanned wildland fires were assessed in the EA, and no major impacts were identified. No additional unique or unknown risks to the human environment were identified during the public involvement process.

The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration

The proposed fire management strategies and activities under Alternative B are widely accepted under Federal fire management and NPS policies. Implementing the preferred alternative neither establishes NPS precedent for future actions with significant effects nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant, but cumulatively significant impacts

No significant cumulative effects were identified in the EA/AEF.

The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources

No known district, site, structure, or object listed or eligible to be listed on the National Register of Historic Places would be adversely affected, as defined in 36 CRF 800, by implementing Alternative B.

The Environmental Consequences section of the EA/AEF analyzed effects of implementing the proposed Fire Management Plan. The NPS concludes that actions taken under the proposed FMP will have *No Adverse Effect on Historic Properties*, including

archaeological resources, cultural landscapes, historic buildings, and ethnographic resources. Crow Tribal Historic Preservation Officer concurrence with the determination of *No Adverse Effect on Historic Properties* was received on March 07, 2013.

The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973

The Fish and Wildlife Service's Montana Ecological Services Field Office in Helena, Montana has acknowledged the NPS determination that the selected alternative would have no effect on the endangered black footed ferret (*Mustela nigripes*), and would not jeopardize the continued existence of candidate species greater sage-grouse (*Centrocercus urophasianus*) and Sprague's pipit (*Anthus spragueii*). The Ecological Service Field Office's acknowledgement is based on project location and review of the proposed action and conservation measures to minimize impacts to candidate species. The informal consultation implementing the Endangered Species Act was concluded in a memo of concurrence from the Field Supervisor of the Montana Ecological Services Field Office to the Superintendent of the Little Bighorn Battlefield National Monument on June 17, 2013.

Whether the action threatens a violation of Federal, state, or local law or requirements imposed for the protection of the environment

The actions proposed by the FMP violate no federal, state, or local environmental protection laws.

Public Involvement and Native American Consultation

The environmental assessment was made available for public review and comment from August 6, 2012 to September 7, 2012. To notify the public of this review period, a letter was mailed to stakeholders, Native American Tribes, elected officials, government agencies and other organizations, and interested parties, on August 6, 2012. Copies of this Environmental Assessment were available for public review at the several locations: the Little Bighorn Visitor Center, the Big Horn County Library, the Little Bighorn College Library, and was posted on the NPS PEPC webpage at <http://parkplanning.nps.gov/libi>. A total of four responses were received. Two of the responses clearly state a position in support of Alternative B (NPS Preferred). One of the responses includes corrections and clarifications that are included in the Errata Sheets. The final letter of response includes substantive comments that address the analysis of the affects from the fire management plan to the special status species. These concerns result in no changes to the text of the

environmental assessment but are addressed in the Errata Sheets attached to this FONSI. The FONSI and Errata Sheets will be provided to all commenters.

Conclusion

As described above, the preferred alternative does not constitute an action meeting the criteria that normally require preparation of an environmental impact statement (EIS). The preferred alternative will not have a significant effect on the human environment.

Environmental impacts that could occur are limited in context and intensity, with generally adverse impacts that range from localized to widespread, short- to long-term, and negligible to moderate. There are no unmitigated adverse effects on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Recommended:

Denice Swanke

Denice Swanke

Superintendent, Little Bighorn Battlefield National Monument

02 July 2013

Date

Approved:

John Wessels

John Wessels

Regional Director, Intermountain Region

7/8/13

Date

APPLICABLE MITIGATION MEASURES / BEST MANAGEMENT PRACTICES

The following mitigation measures would minimize adverse impacts that may result from implementing either of the alternatives. The measures are organized by resource topic, although some overlap occurs. The evaluation of impacts in Chapter 3 of the FMP EA takes these mitigation measures into account.

GENERAL

- Use fire management staff and resource advisors to continuously educate fire crews on the appropriate method of protection of natural and cultural resources during suppression, prescribed fire, and hazardous fuel reduction treatments.
- Choose the methods based on fire behavior and type of resource to be protected.
- Do not initiate any operation until all personnel involved have received a safety briefing describing known hazards and mitigation actions, current fire season conditions, and current and predicted fire weather and behavior.

VEGETATION AND SOIL

- Park vehicles in designated areas and have crews walk to project sites to avoid resource damage.
- Do not drive vehicles off pavement or gravel roads without the superintendent's approval.
- Prepare a fire rehabilitation plan and implement it as soon as possible after a fire is out. Return fire lines to as near original condition as possible using existing materials.
- Use protective tactics in areas identified as being sensitive for natural resources.
- Use wetlines in lieu of handline construction if adequate water and pumps are available.
- Keep fire lines to the minimum width necessary to stop the fire's spread and to allow backfiring or a safe blackline to be created. Whenever possible, use natural or built barriers (such as roads and trails) to avoid unnecessary fire line construction.
- Minimize tree felling. If appropriate, flush-cut stumps to the ground and cover during the rehabilitation phase. During rehabilitation efforts, the bevel technique, which faces the cut away from view, or flush-cutting of stumps is preferred.
- Use sprinklers, soaker nozzles, or fogger nozzles during mop-up of fire incidents. Avoid boring and hydraulic action.
- Include rehabilitation of handlines during fire mop-up. Return vegetation to the handline to help prevent erosion.
- Begin efforts to rehabilitate the direct impacts of fire suppression activities as soon as possible, at times even before the fire is declared out.

- Scatter debris such as cut trees, limbs, and brush produced by manual thinning actions. Do not leave debris in piles.
- Rehabilitate all fire lines, spike camps, or other disturbances inside the national monument to maintain a natural appearance.
- Replace organic materials to assist in natural vegetation regeneration.
- Scatter native seed-bearing plants cut along fire lines as mulch to provide a source of indigenous seed for bare soil areas.
- Only seed burned areas with indigenous stock. Seed only when necessary.
- Monitor for occurrences and establishment of invasive vegetation following fuels treatments and suppression activities.
- Use fiber erosion logs, particularly in steep areas, to minimize future channeling of runoff, prevent erosion of disturbed soils, and direct runoff toward areas of natural vegetative filters.
- Schedule prescribed fires based on the priority of resource objectives. Treatment priorities should be based on soil productivity and potential, desired plant community composition, and site preparation and treatment costs.
- Use central refueling stations with ground protection for refueling equipment such as chain saws and brush cutters to minimize chances of gasoline or oil spills.

WATER RESOURCES

- Do not burn slash in locations where surface water could be affected.
- Use water drops instead of fire retardant chemicals.
- Leave a mosaic of vegetation adjacent to streams in prescribed burn areas to minimize the potential for erosion from runoff after a fire event. Plan each burn to retain small areas of unburned islands throughout the burn area to help stabilize soil and reduce runoff in steep areas.
- Do not burn piles of slash within 100 feet of riparian areas. If riparian areas are within or adjacent to the prescribed burn unit, fireline the piles or scatter them prior to burning.
- Do not use drip-torch fuel within 50 feet of a riparian area.
- Refuel all equipment least 150 feet from water sources. If portable pumps are used near water sources, employ a fuel containment system at all times.
- Use central refueling stations with ground protection for refueling equipment such as chain saws and brush cutters to minimize chances of gasoline or oil spills.
- Do not transport water between 5th-level hydrologic unit watersheds unless in an emergency (life or structure loss). If water is transported, contact national monument staff to determine if aquatic invasive species might have been transported. If so, develop and implement a monitoring plan.
- Have national monument staff inspect and confirm decontamination of any equipment that is or previously has been used in an area known or suspected to

contain aquatic invasive species. Decontamination should consist of the following:

- First drain all water from the equipment and compartments. Clean the equipment of all mud, plants, debris, or animals.
- Dry the equipment for five days during the summer (June, July and August); 18 days during the spring (March, April, and May) and fall (September, October, and November); or three days during the winter (December, January, and February) when temperatures are at or below freezing.
- Use a high-pressure (3,500 pounds per square inch) hot water (140 degrees Fahrenheit) pressure washer to thoroughly wash equipment and flush all compartments that may hold water.

AIR QUALITY

- Schedule planned fires in the spring, if possible, when inversions are unlikely, and conduct burning when visitation levels are low.
- Use smoke management techniques that are based on computer models to determine smoke dispersion prior to prescribed burns.
- Postpone prescribed fire plans when conditions are unfavorable for smoke dispersion and air quality standards would be threatened.
- Implement air quality plans in conformance with state standards.
- Use current and predicted weather forecasts along with test fires to determine smoke dispersal.
- Visually monitor smoke dispersal on a continuous basis at set intervals during the performance of all prescribed burns. Extinguish the prescribed burn if air quality standards are exceeded or smoke creates a hazard or nuisance, especially in or near smoke-sensitive areas.
- When prescribed fires are conducted, notify the state of Montana, local communities that may experience smoke, national monument staff, concessionaires, and visitors.
- Limit the number of acres and amount of fuel burned as noted in prescribed fire plans.
- Select timing and method of ignition to limit effects on air quality.
- Burn during optimal fuel moisture conditions to limit effects on air quality.
- The use of prescribed fire would include increased communication, cooperation, and coordination with adjacent agencies and landowners to limit the number of fires occurring simultaneously.
- Prescribed fire plans would be developed for each prescribed fire. Appropriate signs would be posted if smoke would affect roads or designated visitor areas

(such as visitor centers or trails) and the appropriate authorities would be contacted regarding other measures to limit smoke or decreased visibility.

HEALTH AND SAFETY

- Consider temporarily closing parts of the national monument to visitors as a safety precaution. This decision would be made by the superintendent or the superintendent's designee.
- When a burn is conducted, place warning signs, such as "Smoke on Road" along all maintained roads.
- Provide a flagman and pilot cars when visibility is less than twice the braking distance required for the posted speed limit.
- When human life or property is not threatened, maximize the use of natural or man-made barriers for fire lines even if this requires adjusting the burn area size.

SPECIAL STATUS SPECIES

- Avoid treatments in known habitats of special status species that are not fire-adapted.
- Where treatments in or near special status species are needed, design the activity to minimize the effect. For example, use manual treatments, which provide the greatest control; haul away slash; and/or conduct treatments outside the nesting season.
- Prescribed fire would only be used at sites where listed plants or animals are known to benefit from burning. Otherwise, fire would be excluded, either from certain areas or during certain times to prevent damage to listed plant or wildlife species habitat values.
- Prescribed fire would not be used where species or plant communities would likely respond with an increase in weed species or where sensitive resources were present.

CULTURAL RESOURCES

- Avoid historical structures and archeological sites whenever possible.
- Flag known sites for avoidance during implementation.
- Educate fire treatment personnel about known locations and the cultural resources in general.
- Minimize ground disturbance when possible.
- Do not install fire control lines through cultural sites or near important cultural structures.
- Locate and isolate sites that are vulnerable to fire or to human activities associated with fire activity.

- Remove heavy fuels that could cause long-duration heating.
- If feasible, temporarily remove cultural materials.
- Brief fire crews about the need to protect any cultural resources encountered.
- Implement cultural resource protection measures under the supervision of a qualified cultural resource specialist.
- Use protective tactics in areas identified by the cultural resource specialist as having archeological or historical cultural significance.
- Protect historic structures from wildland fire by maintaining the existing defensible space around each, appropriate to the cultural landscape.

ERRATA SHEETS
FIRE MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT/
ASSESSMENT OF EFFECT
LITTLE BIGHORN BATTLEFIELD NATIONAL MONUMENT

Substantive comments to the Little Bighorn Battlefield National Monument Environmental Assessment/Assessment of Effect centered on one topic: Special Status Species.

TEXT CHANGES

1. Page 4, second paragraph, beginning with "Protect cultural and natural resources." (Purpose of the Action section) – this sentence should be the fourth bullet above this paragraph, and should appear this way:
 - Protect cultural and natural resources.

Management Policies 2006 (NPS 2006) requires analysis of potential effects to determine whether actions would impair park resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.
2. Page 5, first (partial) paragraph, between full sentences three and four (Need for the Action section) – insert this sentence:

"The current Fire Management Plan (FMP) Environmental Assessment/Assessment of Effect (EA/AEF) is programmatic in nature. Project-specific NEPA compliance will be completed via memo-to-files, categorical exclusions, or environmental assessments; if an environmental impact statement is necessary, the FMP would be reviewed."

This change is included to clarify the intent of the EA/AEF.
3. Page 5, second paragraph, first sentence (Need for the Action section) – replace the first sentence with these sentences:

"The new Fire Management Plan (FMP) is a separate document from this Environmental Assessment/Assessment of Effect (EA/AEF). The FMP will be completed and signed by the superintendent after the EA/AEF decision document is signed by the NPS Intermountain Regional Director. The FMP will incorporate the latest fire management science as well as meet evolving NPS policies and guidance."

This change is included to clarify the process for completing the EA/AEF and the FMP.

4. Page 19, lines 21-23 (Vegetation and Soil section) – replace with this sentence:
“Keep fire lines to the minimum width necessary to stop the fire’s spread and to allow backfiring or a safe blackline to be created. Whenever possible, use natural or built barriers (such as roads and trails) to avoid unnecessary fire line construction.”

This change is included to clarify “barriers.”

5. Page 21, lines 22-25 (Air Quality section) – replace with this sentence:
“Prescribed fire plans would be developed for each prescribed fire. Appropriate signs would be posted if smoke would affect roads or designated visitor areas (such as visitor centers or trails) and the appropriate authorities would be contacted regarding other measures to limit smoke or decreased visibility.”

This change is included to clarify “designated visitor areas;” the Monument has no campgrounds.

6. Page 21, lines 33-34 (Health and Safety section) – replace with this sentence:
“When human life or property is not threatened, maximize the use of natural or man-made barriers for fire lines even if this requires adjusting the burn area size.”

This change is included to clarify “barriers.”

7. Page 62, Table 3: Special Status Species with the Potential to Occur at Little Bighorn Battlefield National Monument, Birds (Special Status Species impact topic, Affected Environment section) – This row should be added to Table 3, in the Birds section:

“greater sage-grouse; *Centrocercus urophasianus*; FC, MTSC; Sagebrush shrubland; http://fieldguide.mt.gov/detail_ABNLC12010.aspx”

This species was added for analysis; please also see additions to analysis under Alternative A and Alternative B.

8. Page 65, after the fourth complete paragraph (Special Status Species impact topic, Alternative A analysis, Sagebrush Steppe Habitat section) – add this paragraph between the fourth and fifth paragraphs (this will be the second paragraph under the Sagebrush Steppe Habitat section):

“The greater sage-grouse, a candidate species for listing as threatened or endangered by the USFWS, is considered a transient species at Little Bighorn Battlefield National Monument. There is little likelihood of affecting breeding or

nesting activities for the species, and fire management actions such as mechanical thinning or prescribed fire would only have potential to affect birds passing through the Monument. Any greater sage-grouse occurring near fire management activities would have the ability to fly away with little or no effect. As a result, there would be negligible adverse affects on the greater sage-grouse associated with fire management actions under alternatives A and B. Changes in vegetation communities, negligible to minor in themselves, would not affect the greater sage-grouse, because the species is not reliant on the habitats in the Monument. These potential impacts would equate with a "*may affect, not likely to adversely affect*" determination with respect to Section 7 of the Endangered Species Act."

This paragraph was added to both the Alternative A and Alternative B analyses to consider affects to the greater sage-grouse.

9. Page 67, after paragraph five (Special Status Species impact topic, Alternative B analysis, Sagebrush Steppe Habitat section) – add this paragraph between the fifth and sixth paragraphs (this will be the second paragraph under the Sagebrush Steppe Habitat section):

"The greater sage-grouse, a candidate species for listing as threatened or endangered by the USFWS, is considered a transient species at Little Bighorn Battlefield National Monument. There is little likelihood of affecting breeding or nesting activities for the species, and fire management actions such as mechanical thinning or prescribed fire would only have potential to affect birds passing through the Monument. Any greater sage-grouse occurring near fire management activities would have the ability to fly away with little or no effect. As a result, there would be negligible adverse affects on the greater sage-grouse associated with fire management actions under alternatives A and B. Changes in vegetation communities, negligible to minor in themselves, would not affect the greater sage-grouse, because the species is not reliant on the habitats in the Monument. These potential impacts would equate with a "*may affect, not likely to adversely affect*" determination with respect to Section 7 of the Endangered Species Act."

This paragraph was added to both the Alternative A and Alternative B analyses to consider affects to the greater sage-grouse.

10. Page 67, paragraph five Sagebrush Steppe Habitat, sentence five (Special Status Species, Alternative B, Sagebrush Steppe Habitat section) – This sentence should be moved from the Sagebrush Steppe Habitat section, to the Grassland Habitat Species section, immediately above:

"In particular, this approach to manual thinning would enable technicians to identify and avoid Sprague's pipit nests and minimize potential adverse effect to this federal candidate species."

This sentence is moved because Sprague's pipit is a grassland species, not sagebrush steppe species. This species is correctly identified as a grassland habitat species in Table 3: Special Status Species with the Potential to Occur at Little Bighorn Battlefield National Monument on page 62.

11. Page 86, third paragraph, Prescribed Fire Method, sentence two (Health and Safety, Alternative B, Prescribed Fire Method section) – replace the second sentence with this sentence:

"Prescribed fires would be conducted by trained (National Wildfire Coordinating Group qualifications) personnel such as staff from Yellowstone National Park and/or other qualified people."

This change is included so that the NPS is not limited to using resources only from Yellowstone National Park or other nearby NPS units.

12. Page 87, first paragraph, last sentence (Park Operations, Affected Environment section) – replace the last sentence with this sentence:

"Additionally, Apsaalooke Tours and Western National Parks Association operate within the Monument and offer daily guided tours seasonally and operate the bookstore, respectively."

This change clarifies that WNPA is a cooperator, not a concession operation.

13. Page 92, fourth paragraph, sentence three (Scoping Process and Public Involvement; Native American Consultation section) – replace the third sentence with this sentence:

"One response to the scoping letters sent at project inception was received from the Oglala Sioux Tribe; however, all associated tribes will continue to be kept informed about the status of the environmental assessment."

This change is included so that the NPS acknowledges the response received from the Oglala Sioux Tribe.

SUBSTANTIVE COMMENTS

Special Status Species

Comment: "As discussed in our April 9 memo, transient greater sage-grouse (*Centrocercus urophasianus*) occurrences have been recorded within and adjacent to the Monument's boundaries. Although these observations may be of individuals moving

through the area, the effects of the proposed fire management plan on this species should be analyzed and incorporated in the effects analysis for Special Status Species."

Response: Please refer to the errata information (7 – 9), above. The National Park Service has added text to the analyses to address this transient species at Little Bighorn Battlefield National Monument. Implementation of the Fire Management Plan for Little Bighorn Battlefield National Monument "may affect, (will) not likely to adversely affect" individuals of the greater sage-grouse species.

Comment: The approach used to analyze the effects of the proposed fire management plan for Special Status Species was to group species "... based upon their general or preferred habitat associations." While this is a valid strategy, the effects analysis for Special Status Species failed to incorporate the interrelationships of this approach with the effects analysis for Vegetation. For example, the vegetation analysis on page 57 states that "... fire suppression allows grasses, including invasive species such as cheatgrass, to proliferate as a substrate in big sagebrush communities." As a result, such conversion may shorten the fire return interval to approximately 5 years. Whereas, the impacts of alternative A, on sagebrush steppe habitat (page 65, Special Status Species) focuses on the direct effects of specific fire suppression techniques, and fails to recognize the indirect effects that were determined in the vegetative analysis on page 57. Such indirect effects may have implications for greater sage-grouse. Similarly, the Special Status Species analysis for Alternative B did not evaluate the different strategies for the prescribed fire method in silver sagebrush communities versus Wyoming big sagebrush communities. We ask that the Special Status Species effects analysis be revised to incorporate the indirect effects and subtle nuances of the proposed fire management plan that are identified in the analysis for Vegetation."

Response: Because the environmental assessment does not include a separate impact topic specifically addressing ecosystem effects and changes, impacts at the ecosystem level can be inferred from the separate analyses of vegetation, wildlife, and special status species, among others. The negligible to minor changes in vegetative structure (both in species composition and areal extent) associated with potential changes in fire return interval would not result in any impacts greater than negligible, especially for transient species such as the greater sage-grouse. Regarding the different strategies for the use of prescribed fire in silver sage versus Wyoming big sagebrush habitats, the analysis of prescribed fire would only apply to silver sage because prescribed burning would not be used in Wyoming big sagebrush habitat. This environmental assessment was prepared as a "programmatic level" document; additional analyses will be considered on the project-specific level.

Comment: Finally, within the Special Status Species analysis, Sprague's pipits (*Anthus spragueii*) are initially identified correctly as a grassland habitat species, and are analyzed as such for Alternative A. However, in Alternative B, they are incorrectly analyzed as part of the sagebrush steppe habitat group. We also recognize that the analysis determined there would be "minor effects" for this species. In the effects definitions on page 63, minor effects equates with a "may affect but is not likely to adversely affect" determination under the ESA. As such, please identify the conservation measures within the proposed fire management plan that would be implemented to minimize negative effects to Sprague's pipets."

Response: Sprague's pipit was incorrectly associated with sagebrush steppe habitats rather than grasslands in the analyses for alternative B. Please refer to the errata information (10), above.

Appendix A – Non-Impairment Finding

National Park Service's *Management Policies, 2006* require analysis of potential effects to determine whether or not actions will impair NPS resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.

However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within park, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may, but does not necessarily, constitute an impairment. An impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park; or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to pursue or restore the integrity of park resources or values and it cannot be further mitigated.

The park resources and values that are subject to the no-impairment standard include:

- The park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural

- landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- Appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- The park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefits and inspiration provided to the American people by the national park system; and
- Any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. The NPS's threshold for considering whether there could be an impairment is based on whether an action will have significant effects.

Impairment findings are not necessary for visitor use and experience, socioeconomics, public health and safety, environmental justice, land use, and park operations, because impairment findings relates back to park resources and values, and these impact areas are not generally considered park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values. After dismissing the above topics, topics remaining to be evaluated for impairment include archeological resources, cultural landscapes, historic structures, ethnographic resources, vegetation, special status species, wildlife, and air quality.

Fundamental resources and values for the Monument are identified in the 1995 *Final General Management Plan and Development Concept Plans, Custer Battlefield National Monument* (1986, updated 1995). According to the General Management plan document, the impact topics listed above are considered necessary to fulfill specific purposes identified in the legislative history of the Monument, and/or are included in the GMP itself.

- **Archeological Resources** The entire Monument is an archeological site because it contains artifacts that can continue to yield new information about the battle. Known discrete locations within the Monument include the Seventh Cavalry horse cemetery on Last Stand Hill, the defense perimeter, field hospital location, military equipment disposal area, and rifle pits, as well as prehistoric sites and isolated projectile points. The preferred alternative includes fuel reduction projects designed to protect the archeological resources without disturbing the ground surface. As a result of fuel reduction projects, the intensity of wildland fires will most likely be reduced in and

around known archeological sites. Planned projects will result in negligible adverse effects to archeological resources, while wildland fire may have negligible to minor, short-term adverse effects to archeological resources. Long-term beneficial impacts will also result from planned fuel reduction projects. Because the preferred alternative will result in only negligible to minor, long-term adverse effects to the Monument's archeological resources, there will be no impairment to archeological resources.

- **Cultural Landscapes** Little Bighorn Battlefield National Monument is comprised of two distinctly different landscape character areas: the historic battlefield of June 25 – 26, 1876, and the Custer National Cemetery. The historic battlefield, made up of two separate units, was deemed to retain its integrity as representative of the natural landscape on the dates of battle, overlain with memorial elements. The national cemetery also retains its integrity as a designed cultural landscape representative of the U.S. War Department ownership of the site, which ended in 1940. The preferred alternative includes fuel reduction projects designed to protect the landscape elements throughout the Monument. As a result of fuel reduction projects, the intensity of wildland fires will most likely be reduced in and around the landscape elements. Planned projects will result in negligible adverse effects to cultural landscapes, while wildland fire may have negligible to minor, short-term adverse effects to cultural landscapes. Long-term beneficial impacts will also result from planned fuel reduction projects. Because the preferred alternative will result in only negligible to minor, short-term adverse effects to the Monument's cultural landscapes, there will be no impairment to cultural landscapes.
- **Historic Structures** The Monument contains historic structures directly related to the 1876 Battle of the Little Bighorn (earthen rifle pits), and historic monuments, and marble headstones placed later on the battlefield. Several more monuments were installed throughout the Monument. There are also several historic structures within the national cemetery, and several smaller scale historic structures are found in the national cemetery. A cemetery flagpole and iron gates at the cemetery entrances are also considered historic structures. The preferred alternative involves planned fuel reduction projects to protect these structures in the event of a wildland fire. Planned projects will result in negligible adverse effects to historic structures, while wildland fire may have negligible to moderate adverse impacts to historic structures. Long-term beneficial impacts will also result from planned fuel reduction projects. Because the preferred alternative will result in negligible to moderate, long-term, adverse effects to the Monument's historic structures, there will be no impairment to historic structures.

- Ethnographic Resources** The Monument has important ties to 17 historically associated tribes involved in the battle. None of the Native American dead were buried on the battlefield after the battle; instead, their bodies were removed from the battle site and laid to rest in tipis, on scaffolds, or in rock crevices in the Little Bighorn Valley. Native American casualty sites were identified on the battlefield and were marked by stone cairns erected within a few years after the battle, based on oral tradition. More recently, those cairns were replaced with red granite markers. Certain plant species found in the Monument also possess ethnographic importance. Anglo-American cultural traditions at Little Bighorn Battlefield National Monument include commemorations at the battlefield and in the national cemetery. The preferred alternative involves planned fuel reduction projects to protect these ethnographic resources in the event of a wildland fire. Planned projects will result in negligible adverse effects to ethnographic resources, while wildland fire may have negligible to minor, short-term adverse impacts to ethnographic resources. Long-term beneficial impacts will also result from planned fuel reduction projects. Because the preferred alternative will result in only negligible to minor, short-term adverse impacts to the Monument's ethnographic resources, there will be no impairment to ethnographic resources.
- Vegetation** Two vegetation community types found in the Monument include northern mixed grass prairie and sagebrush-dominated shrub steppe. Cottonwood and sedge riparian areas also exist along the Little Bighorn River. Additionally, approximately 51 species of nonnative plants occur in the Monument. The preferred alternative involves planned fuel reduction projects intended to reduce the intensity of any wildland fire. Planned projects, including prescribed burning, will result in negligible to moderate, short-term adverse effects to vegetation, and wildland fire may have negligible to moderate, long-term adverse effects to vegetation. Long-term and short-term beneficial impacts will also result from planned fuel reduction projects, including prescribed burning. Because the preferred alternative will result in negligible to moderate, short- and long-term adverse impacts to the Monument's vegetation, there will be no impairment to vegetation.
- Special Status Species** The special status species observed in the Monument were broadly grouped by similarities in their general or preferred habitat associations. The three habitats include riparian areas, grasslands, and sagebrush shrub lands. There is no designated or proposed critical habitat for any federally listed species in Little Bighorn Battlefield National Monument. The preferred alternative involves planned fuel reduction projects intended to maintain the vegetation ecosystem, and to reduce the intensity of any wildland fire. Planned projects will result in negligible to minor, short-term adverse effects to special status species, and wildland fire may have

negligible to moderate, short-term adverse effects to special status species. Because the preferred alternative will result in negligible to moderate, short-term adverse impacts to the Monument's special status species, there will be no impairment to special status species.

- **Wildlife** A variety of large and small mammals, reptiles, amphibians, fish, and birds have been recorded in the Monument. The preferred alternative involves planned fuel reduction projects intended to maintain the vegetation ecosystem, and to reduce the intensity of any wildland fire. Planned projects will result in negligible to minor, short-term adverse effects to wildlife, while wildland fire may have negligible to moderate, short-term adverse effect to wildlife. Short-term beneficial impacts to wildlife habitat and food may result from the planned fuel reduction projects. Because the preferred alternative will result in negligible to minor, short-term adverse impacts to the Monument's wildlife, there will be no impairment to wildlife.
- **Air Quality** Little Bighorn Battlefield National Monument is a class II air quality area. The preferred alternative involves planned fuel reduction projects intended to reduce the intensity of any wildland fire. Planned projects, including prescribed burning, will result in negligible to minor, short-term adverse effects to air quality, while wildland fire may have negligible to moderate, short-term adverse effect to air quality. Some minor beneficial impacts may result from reducing fuels, and suppressing wildland fire. Because the preferred alternative will result in negligible to moderate, short-term adverse impacts to the Monument's air quality, there will be no impairment to air quality.

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, and the results of public involvement activities, it is the Superintendent's professional judgment that there will be no impairment of park resources and values from implementation of the preferred alternative.