Finding of No Significant Impact

Four Bear Aspen Enhancement and Fuels Reduction

WY-020-EA11-44

Cody Field Office, Wind River/ Bighorn Basin District, Wyoming

August 2011

FINDING OF NO SIGNIFICANT IMPACT

Four Bear Aspen Enhancement and Fuels Reduction

DOI-BLM-WY-WR02-2011-44-EA

INTRODUCTION: The Cody, Wyoming Bureau of Land Management (BLM) Field Office proposes to implement a vegetation treatment on the east slope of the Absaroka Mountains in the Four Bear Creek Drainage (T48N, R103W, Sec 31, SW¼NE¼, W½SE¼, SE¼NW¼, and Lot 2). The project involves stimulating aspen growth and vigor, fuels reduction, erosion control, and stream restoration on approximately 200 acres of aspen and mixed conifer forest. The objectives of the proposal are to increase aspen growth and vigor, reduce hazardous fuels, and to improve and maintain wildlife habitat. There would be no new permanent road construction associated with this proposal. All impacts would be mitigated and monitored.

FINDING OF NO SIGNIFICANT IMPACT:

Based upon a review of the Environmental Assessment and the supporting documents, I have determined that the project is not a major federal action and will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. This finding is based on the context and intensity of the project as described. In addition, no environmental effects meet the definition of significance in context or intensity as defined in 40 CFR 1508.27 and do not exceed those effects described in the Cody Resource Management Plan, Final Environmental Impact Statement, and Record of Decision, signed November 8, 1990, for these reasons an environmental impact statement is not needed.

Context:

The Action would occur within the Cody Field Office boundaries and would have local impacts on the resources similar to and within the scope of those described and considered within the Cody Resource Management Plan, Final Environmental Impact Statement, and Record of Decision, signed November 8, 1990. The project is a site-specific action directly involving the Four Bear drainage on the south-eastern slope of Carter Mountain and west of the Four Bear Oil field (Cody Field Office Administrative Unit).

Intensity:

The following discussion is organized around the Ten Significance Criteria described in 40 CFR 1508.27 and incorporated into resources and issues considered (includes supplemental authorities Appendix 1 H-1790-1) and supplemental Instruction Memorandum, Acts, regulations and Executive Orders.

The following have been considered in evaluating intensity for this proposal:

1. **Impacts may be both beneficial and adverse.**

   Impacts would be beneficial as it would decrease the likelihood of a catastrophic fire in this area and may also generate new stands of aspen trees where decadent standing dead trees are the current situation. Adverse impacts may consist of the fact that some small mammals that make these decadent trees their nesting sites and home would be lost.

2. **The degree to which the selected alternative will affect public health or safety.**

   There would be very little effect to public health and safety should the proposed project be approved. However, if the action were not to be approved standing dead trees in this multitude can cause a public safety hazard in the form of wildfire.

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

   Four Bear, is an extremely important ecosystem. It lies on a south-east facing slope of the Absaroka Mountains just south of the Greybull headwaters and Carter Mountain Critical Environmental Concern (ACEC). The Four Bear Oil field and other oil and gas exploration lies primarily to the north of the project area, is relatively very old with the first well having been spudded by the Honolulu Corporation on Jun 28, 1928.

   The area where the proposed project lies would be in the juxtaposition between US Forest Service lands (only 1 mile away) and the Four Bear Oil field (approximately 4 miles).

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

   The proposed project would not be controversial. The proposal would be to enhance an aspen stand and to clear out an area where lodgepole pine has encroached upon a normally aspen-type niche. If it hadn't been for fire suppression in the past, decadent stands such as these may not be standing. Sapling aspens cannot compete with the overgrowth due to the lack of sunlight. The proposed project would allow for opening the canopy.

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

   The proposed project would not have unknown risks to the human environment or possible uncertain effects.

6. **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 BLM has successfully implemented many of these types of projects in different scale and size. Fuels reduction and vegetation treatments would be one of our primary focuses for the fire, range, forestry and wildlife programs. The proposed project does not establish a precedent for future actions nor does it represent a decision in principle about future considerations.

7. **Whether the action is related to other actions with individually insignificant but cumulatively significant impacts – which include connected actions regardless of land ownership.**

   The proposed action would be related to other aspen enhancement and lodgepole pine removal projects that may be occurring on State land at or near the same time. It is not known when the State would be allowing the similar type project in the area, but the BLM has been informed that they (State) plan on this kind of project as well, in order to improve the aspen stands on State land.

8. **The degree to which the action may adversely affect districts, sites, highways, structures, or other 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.**

   There would be no impact to any National Register eligible cultural resource sites. The proposed project would be designed to avoid any known National Register eligible sites, and stipulations, best management practices, and monitoring would be in place in the case of discovery situations.

9. **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, or the degree to which the action may adversely affect: 1) a proposed to be listed endangered or threatened species or its habitat, or 2) a species on BLM's sensitive species list.**

   While the project area would be in Grizzly bear, migratory bird, and raptor habitat, the proposed project would be designed with appropriate timing/seasonal and wildlife stipulations so there would be a no effect situation. Early conversations with the Level 1 team gave the BLM wildlife biologist a verbal agreement.

10. **Whether the action threatens a violation of a federal, state, local, or tribal law, regulation or policy imposed for the protection of the environment, where non-federal requirements are consistent with federal requirements.**

    The proposed project would abide by all federal, state, and local laws. Tribal laws do not apply at this locale unless a discovery which may involve Tribal individuals comes to fruition. Should a discover situation occur, stipulations, best management practices, and monitoring are outlined as part of the proposed project's design.

Fred McDonald — 8/30/11

Fred McDonald
Acting Cody Field Manager

Date

Decision Record

Four Bear Aspen Enhancement and Fuels Reduction

WY-020-EA11-44

Cody Field Office, Wind River/ Bighorn Basin District, Wyoming

August 2011

DECISION RECORD

Four Bear Aspen Enhancement and Fuels Reduction

DOI-BLM-WY-WR0-2011-44-EA

AUTHORITIES:

The authority for this decision is contained in 43 CFR § 5000,to protect the resources of Forestry Management on public lands. The National Environmental Policy Act (NEPA) of 1969, requirement for site-specific analysis has been met. The Proposed Action and No Action are in accordance with 43 Code of Federal Regulations (CFR) 1610.5-3(a); Federal Land Policy and Management Act (FLPMA) of 1976, as amended; Taylor Grazing Act of 1934; Endangered Species Act (ESA) of 1983, as amended; The Clean Air Act as amended; Clean Water Act of 1977; National Historic Preservation Act (NHPA), as amended; Migratory Bird Treaty Act (MBTA) of 1918, as amended; and the Wyoming Standards for Healthy Rangelands and Guidelines for Livestock Grazing, August 12, 1997. All pertinent statutory requirements applicable to this proposal were considered.

PUBLIC INVOLVEMENT:

August 1, 2001 this proposed project was entered into the Wyoming State BLM NEPA online Register at the following web address: http://www.wy.blm.gov/nepa/search/index.php. This website is constantly being updated with new projects the BLM is proposing and is writing NEPA documents or DNAs. This online Register stands to serve as public notification of a pending project for public notification, per 43 CFR§ 1501.4.

PLAN CONFORMANCE AND CONSISTENCY:

Pursuant to 40 Code of Federal Regulations (CFR) 1502.21 and 1508.28, this environmental assessment (EA) tiers to and incorporates by reference the information and analysis contained in the Cody Resource Management Plan, Final Environmental Impact Statement and Record of Decision (ROD), November 11, 1990.

The Cody Resource Management Plan, Record of Decision (ROD), signed November 8, 1990, page 10 states, "All forestlands outside the Rattlesnake Mountain area will be managed to enhance or maintain other resources or resource uses such as….livestock grazing, wildlife, watershed, and scenic values."

The proposed action meets the statutes, policy, and planning criteria described in the Vegetative Treatment on BLM Lands in Thirteen States, Final EIS of May 1991.

This action also allows us to follow the mandate set down by Congress to the Secretaries of Agriculture and Interior which ordered the Agencies to develop a comprehensive strategy for Reducing Wildfire Risk to Communities and the Environment. This initiative has subsequently become known as the National Fire Plan

ALTERNATIVES CONSIDERED:

PROPOSED ACTION – ALTERNATIVE A

The proposed action divides the project area into three units. Units 1 and 2 consist of approximately 35 acres total of commercial fuels reduction, and aspen restoration via commercial conifer removal. Unit 3 encompasses approximately 25 acres of noncommercial aspen restoration

Units 1 and 2 – Aspen restoration and fuels reduction with commercial conifer removal:

All merchantable conifer snags, except those reserved for wildlife habitat, and live conifer trees infested with live beetle larvae would be salvaged. The commercial harvest area consists of 2 units totaling approximately 35 acres total. There are approximately 30 trees per acre that are not infested with live beetle larvae. These tend to be the younger age classes, and would be retained to provide cover for wildlife and for visual aesthetics, except within aspen clones. Within the aspen clones, all conifers would be removed or girdled regardless of whether they are infested.

Units 3a and 3b – Aspen restoration without commercial conifer removal:

All live conifers within or shading aspen clones would be felled in a jackstraw manner to inhibit ungulate access, or girdled to leave a standing snag for wildlife use, and left in place. Units 3a and 3b total 25 acres. If excessive browsing occurs, these units may be temporarily fenced for five to eight years to protect the regeneration from livestock and big game animals. The aspen would regenerate from suckering. The treatments would occur from August 15 through the end of March. Some conifer species may regenerate naturally. Conifer regeneration may be removed to favor aspen regeneration

NO ACTION – ALTERNATIVE B

This alternative requires the Contract not be awarded or that it not be conducted at all. The present vegetation community would be left intact. In the absence of disturbance, the size and vigor of the aspen would gradually decline due to succession as conifer species eventually dominate the site.

SELECTED ALTERNATIVE:

It is my decision to implement **Alternative A -- the Proposed Action**, analyzed in the Four Bear Aspen Enhancement and Fuels Reduction Environmental Assessment, as defined in - **DOI-BLM-WY-020-2011-44-EA.**

RATIONALE FOR DECISION:

Needed aspen regeneration in areas of decadent stands of encroached lodgepole and years of fires suppression have created dangerous fuels conditions. Regeneration of aspen stands allows for new food for many species and cover for migratory birds, raptors, and an overall healthier forest. . It would also provide better forage for livestock

My decision to approve the Four Bear Aspen Enhancement and Fuels Reduction is based on the following:

It implements a decision listed on page 10 in the Cody ROD which mandates the Cody Field Office to enhance and maintain Forestland for other resources such as livestock grazing, wildlife, watershed, and scenic values.

This action also allows us to follow the mandate set down by Congress to the Secretaries of Agriculture and Interior which ordered the Agencies to develop a comprehensive strategy for Reducing Wildfire Risk to Communities and the Environment. This initiative has subsequently become known as the National Fire Plan and it directs BLM to:

1. Improve Prevention and Suppression
2. Reduce Hazardous Fuels
3. Restore Fire Adapted Ecosystems
4. Promote Community Assistance

Decision Factors for Alternative Selection:

MONITORING & MITIGATION

General/Miscellaneous

Ungulate browsing will be monitored at all treatment sites, and if levels of browsing occur that prevent establishment of aspen regeneration, these sites will be temporarily fenced for 5 to 8 years. A temporary fence may be constructed if cattle or wildlife browsing keeps the site from recovering.

Photo point monitoring will be used at all treatment sites to evaluate aspen response. This will occur in the spring after winter moose, elk, and/or cattle browsing, for 5 years following treatment.

All log skidding and hauling on roads and skid trails will be restricted to weather conditions that do not accelerate the movement of water or soil, i.e. dry and or frozen soils. After treatment, all skid trails will be rehabilitated and water barred.

All treatment activities, with the exception of prescribed fire, will be restricted during big game parturition periods; April 15 - May 31, to avoid potential disturbance to elk calving areas. Prescribed fire treatments may occur from August 15 through May 15.

The units will be harvested during the fall and/or winter over dry or frozen conditions to minimize soil movement and disturbance. Following use, bare soil areas will be rehabilitated and water barred.

Gates will be left open or closed as found upon arrival. Fencelines disturbed by this operation will be returned to their original or better condition.

Jackpot burning or broadcast burning would be completed prior to March 1st in the spring or during the late fall season after November 1st.

Harvest operations and timber hauling will be allowed from August 15th to March 31st.

The time period for the completion of the implementation of the contracted aspen enhancement and / or conifer removal-will be two years starting from the date the contract is made and entered into between the BLM and the Cooperator.

Extensions of this time period will be considered if extenuating circumstances beyond the Cooperator's control occur. This would mitigate the amount of time wildlife and recreationists are temporarily displaced from the area.

All Whitebark pine and limber pine trees, dead or alive, will be retained as leave trees, as well as additional marked wildlife trees and nest trees.

Invasive Species

Noxious weed problems will be handled in the following manner:

The project area will be surveyed for noxious weed problems before any activity and weeds will be treated (if accessible) prior to activity on the contract

Reestablish desired vegetation on all disturbed soil such as roads or skid trails.

Coordination with the BLM will occur if there is to be any use of chemical treatments on weeds in the project area.

Certified weed-free straw will be used as mulch.

Remove weed seed sources from adjacent sites or from the access route that may contaminate the project area before the project is undertaken.

Equipment and vehicles will be cleaned prior to entering public land as they could introduce weeds.

Cultural Resources

A Class III cultural resource inventory has been completed per section 106 of the National Historic Preservation Act prior to the authorization of this project. If any cultural values are observed during operations on this project, they will be left intact and the BLM Field Office Manager notified. The Field Office Manager will conduct an evaluation of the cultural values to establish suitable mitigation or salvage.

The proposed project is an "Undertaking" as defined in the National Historic Preservation Act, as amended. The project area has been surveyed for the presence of cultural resources. A Class III inventory of the area of potential effects, following the Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (48FR190), has been conducted for this undertaking. Project's pre-design mitigation efforts have resulted in avoidance of all known Historic Properties.

Historic sites and prehistoric sites with architecture, if they occur, are easily noticed by inexperienced personnel. When noticed these sites will be avoided. Any questions concerning whether a place or item is a site or should be avoided will be directed at the Cody Field Office Archaeologist. The Field Office Archaeologist will then visit the site and determine subsequent actions, if any.

According to Section VI. A. of the Wyoming State Protocol between the Wyoming BLM State Director and the Wyoming State Historic Preservation Officer a No Historic Properties Affected determination of effect will result from proposed undertaking.

Cultural Resources, Standard Stipulation

The operator/holder/BLM is responsible for informing all persons associated with this project that they may be subject to prosecution for knowingly damaging, altering, excavating or removing any archaeological, historical, or vertebrate fossil objects or site. If archaeological, historical, Native American, or vertebrate fossil materials are discovered, the operator/holder/BLM is to suspend all operations that further disturb such materials and immediately contact the Authorized Officer. Operations are not to resume until written authorization to proceed is issued by the Authorized Officer (AO).

The authorized officer will evaluate, or will have evaluated, such discoveries not later than five working days after being notified, and will determine what action shall be taken with respect to such discoveries. The decision as to the appropriate measures to mitigate adverse effects to significant cultural or paleontological resources will be made by the authorized officer after consulting with the holder.

The operator/holder/BLM is responsible for the cost of any investigations necessary for the evaluation, and any mitigation measures required by the Authorized Officer. The AO will provide technical and procedural guidelines for the conduct of evaluation and mitigation. Upon verification from the AO that the required evaluation and/or mitigation have been completed, the operator will be allowed to resume operations.

Native American Resources

The area under consideration contains no known areas or locations of religious or cultural concern to Native Americans. If such areas are subsequently identified or become known through the Native American notification or consultation process they would be considered during the implementation phase. The BLM would take no action that would adversely affect these areas or locations without consultation with the appropriate Native Americans.

Human Remains

If human remains are discovered or suspected the holder shall suspend operations immediately, physically guard the area, and notify BLM immediately.

Wildlife

Jackpot burning or broadcast burning would be completed prior to March 1st in the spring or during the late fall season after November 1st.

If during operations a raptor nest is found, the wildlife biologist for the BLM will be notified and the nest tree protected and buffered

Conditions of Operation Stipulation for Grizzly bears.

To minimize potential for conflict situations with grizzly bears the following conditions will be required for operations to complete this pre-commercial thinning project:

BLM would be notified immediately if grizzly bears or signs of recent grizzly bear occupation of the thinning treatment area or operating campsites or staging areas are observed by contractors or persons responsible for the project work.

All human and prepared livestock and pet food, beverages, garbage, cooking grease, condiments, and other odorous substances must be stored, handled, and disposed of in such a manner as to make it totally unavailable to bears at night and during the day when unattended.
Unavailable means stored in an approved bear resistant container, stored in a closed vehicle constructed of solid non-pliable material or suspended at least 10 feet clear of the ground at all points and 4 feet horizontally from any supporting All foods or attractant substances should be properly stored so they are unavailable to bears at all times other than during use.

All contractor employees or persons responsible for work or support camp operations associated with completion of this thinning project should have canisters of bear deterrent pepper spray with at least 10% active ingredient available for use in the event of an encounter with bears.
These pepper spray containers should be kept available for use in close proximity to any employee or person during work periods and kept at identified locations at all camp or staging areas where foods or beverages are used. Proper instructions on how to operate and use these deterrent sprays should be provided for all persons that may work in situations where bear encounters are possible.

Grizzly bear impacts will be lessened by applying a seasonal restriction, which will allow operations and timber hauling harvest from August 15th to March 31. The ½ mile constructed temporary road will be reclaimed in the Four Bear project area after project completion.

Appeal Language:

This decision may be appealed by any adversely affected party to the Interior Board of Land Appeals, in accordance with the regulations contained in 43 CFR, Part 5003, Administrative Remedies. Protests of this Decision must be filed within fifteen (15) days after the first date of publication of this notice. The Protest shall contain a written statement of reasons for protestation the Decision. As interpreted by BLM, the regulations do not authorize the acceptance of protests in any form other than a written hard copy that is delivered to the physical address of the advertising BLM office. Protests received by email or FAX will not be considered.

Any party who is adversely affected by this decision has a right to appeal to the Interior Boar of Land Appeals, in accordance with the provisions described in 43 CFR § 4.410. A person who wishes to appeal must file notice with the Field Manager, Bureau of Land Management, Cody Field Office, 1002 Blackburn Street, Cody, Wyoming, 82414, within fifteen (15) days of publication of the decision. The notice of appeal must identify the decision appealed and may include a statement of reasons.

Fred McDonald — 8/30/11

Fred McDonald
Acting Cody Field Manager

Date

Environmental Assessment

Four Bear Aspen Enhancement and Fuels Reduction

WY-020-EA11-44

Cody Field Office, Wind River/ Bighorn Basin District, Wyoming

August 2011

NATIONAL SYSTEM OF PUBLIC LANDS

"The BLM's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands."

BLM/WY/PL-11/051+2810

Four Bear Aspen Enhancement and Fuels Reduction
WY-020-EA11-44

CHAPTER 1
INTRODUCTION AND NEED FOR THE PROPOSED ACTION

INTRODUCTION

The Cody, Wyoming BLM Field Office proposes to implement a vegetation treatment on the east slope of the Absaroka Mountains in the Four Bear Creek Drainage (T48N, R103W, Sec 31, SW¼NE¼, W½SE¼, SE¼NW¼, and Lot 2). The project involves stimulating aspen growth and vigor, fuels reduction, erosion control, and stream restoration on approximately 200 acres of aspen and mixed conifer forest. The objectives of the proposal are to increase aspen growth and vigor, reduce hazardous fuels, and to improve and maintain wildlife habitat. There would be no new permanent road construction associated with this proposal. All proposed impacts would be mitigated and monitored.

PURPOSE AND NEED FOR THE PROPOSED ACTION

The Cody Field Office proposes to implement a vegetation treatment on the east slope of the Absaroka Mountains consistent with the Cody Record of Decision and Approved Resource Management Plan dated November 8, 1990.

The objectives of the proposal are to (1) increase the growth and vigor of aspen, (2) in areas between aspen clones, to regenerate a beetle-killed stand of Englemann spruce and lodgepole pine, and maintain a healthy forested stand, (3) reduce hazardous fuels, (4) salvage merchantable material that may otherwise be lost due to wildfire, and (5) improve and maintain wildlife habitat and watershed quality.

The project area for the forest vegetation treatments consists of approximately 60 acres of beetle killed spruce, and currently beetle-infested lodgepole pine, with decadent aspen components scattered throughout. The aspen clones are shaded by live and dead conifers, thus reducing vigorous aspen suckering.

Quaking aspen is a small but critical component of the forested lands on the east slope of the Absaroka Mountains. All of the proposed units within the project area have aspen components in or near them. Aspen provides both forage and cover for diverse and sometimes unique bird and mammal species. A benefit of healthy aspen stands is their ability to act as natural fuel breaks when wildland fires occur. Aspen stands are a subclimax, early seral deciduous woodland type that occurs in response to natural or human-caused disturbance.

Aspen suckers sprout most vigorously following disturbance. Aspen sprouts have access to relatively large amounts of stored carbohydrates, allowing them to grow quickly and providing them with a competitive advantage over trees that reproduce by seeds. The majority of aspen sprouting occurs during the first three to six years after a disturbance which contributes to the formation of even-aged stands. Multiple age classes can occur when older stands begin to die and the canopy opens, stimulating the production of new suckers.

The sexual reproduction of aspen in the Rocky Mountain West is extremely rare. Some experts speculate that proper conditions of seedling establishment may exist at intervals of 200 – 400 years. Therefore, when aspen is lost from the landscape it may not reestablish from seed in management-relevant time scales.

Due to past and present management practices, including fire suppression and the removal of fine fuels by cattle grazing, natural disturbances such as wildfire have not occurred in the cyclic fashion they historically did.

As a result, most aspen stands on the east slope of the Absaroka Mountains, including those in Four Bear Creek, are remnant stands severely encroached by conifers.

When conifers encroach into aspen stands, the soil pH drops and soil becomes more acidic. This change in soil pH makes the soil more suitable for conifer growth than for aspen growth. Aspen is intolerant of shade, and reproduces through root suckering.

Mature stems transport auxin to the root system, which inhibits suckering. Therefore, a disturbance which kills some or all of the mature stems, removes conifers, and decreases shade, is often necessary to induce suckering and to maintain vigorous growth.

Management treatments and project design features relating to forestland management activities and vegetation manipulation are presented in the Cody Record of Decision and Approved Resource Management Plan on pages 10, 95, and 96. All mitigation measures adopted in the Decision Records are incorporated as additional project design features.

The project area is part of a large spruce beetle epidemic that has completed its cycle, resulting in several thousand acres of dead stands of mature spruce in the area. The spruce beetle population has since returned to endemic levels.

The mountain pine beetle infestation is smaller, more recent, and continues to spread. The spruce and mountain pine beetles are native bark beetles that usually select dense, mature stands that have been weakened by stress. The largest trees in the stand are usually selected first. Large, mature trees usually have thicker phloem, the food of developing larvae, and maintain higher moisture levels during larval development than smaller trees. Their primary defense mechanism against beetle attack is to exude large amounts of pitch at each entrance hole to expel, drown, or discourage the invading beetle. Stressed trees produce less pitch, and therefore are more susceptible to a successful attack. Previous beetle outbreaks in the area have shown that as mature stands approach a density of 150 ft^2 per acre and 120 years of age, the large tree size, the stress from competition for water and other resources, and the age-associated decrease in vigor predispose these stands to successful beetle attacks.

Some beetle populations, including those in the Four Bear drainage, may have been influenced by human management practices over the past century. Historically, beetle outbreaks were small natural disturbances that acted as a natural thinning mechanism within conifer stands. However, due to the removal of fine fuels by cattle grazing combined with intensive fire suppression, some other natural disturbances such as low intensity fires have not occurred in the cyclic fashion they historically did. As a result, conifer stands on the east slope of the Absaroka Mountains, including those in the Four Bear drainage, have stocking levels much higher than they did during natural fire regimes. The higher stocking levels increase competition for resources such as water and nutrients, thus increasing the stress of the stands during periods of drought or other occurrences. The increased stress then increases the susceptibility of these stands to widespread, intense beetle attacks.

Infestations negatively affect recreation and aesthetics, water and watershed management, and the even flow and sustained yield of timber resources. Downfall following infestations hampers access and use by big game. The mortality from the beetle infestation creates an extremely high wildfire hazard due to excessive amounts of dead, dry fuel and red needles. The chance for an uncharacteristic, high intensity wildfire is increasing each year as more trees die and fall down. Such a wildfire would be expensive, dangerous, and difficult to control.

CONFORMANCE WITH BLM LAND USE PLAN(S)

The principal law directing management of public lands administered by BLM is the Federal Land Policy and Management Act of 1976. The decisions in the Cody Resource Management Plan, RMP provide general management direction and allocation of uses and resources on the public lands in that area.
Congress mandated the Secretaries of Agriculture and Interior to develop a comprehensive strategy for Reducing Wildfire Risk to Communities and the Environment. This initiative has subsequently become known as the National Fire Plan and it directs BLM to:

1. Improve Prevention and Suppression
2. Reduce Hazardous Fuels
3. Restore Fire Adapted Ecosystems
4. Promote Community Assistance

The proposed action meets the statutes, policy, and planning criteria described in the Vegetative Treatment on BLM Lands in Thirteen States, Final EIS of May 1991.

RELATIONSHIPS TO STATUTES, REGULATIONS, AND OTHER PLANS

This EA is tiered to, and incorporates by reference, the Cody Record of Decision and Approved Resource Management Plan, Absaroka Front Habitat Management Plan of 1988, and the National Fire Plan. These documents are located at the Cody BLM Field Office

This proposed action conforms to the Record of Decision and Approved Resource Management Plan for the Cody Resource Area dated November 8, 1990. Planning and management decisions specific to forest and woodland management are found on page 13 of this document.

CHAPTER 2

DESCRIPTION OF ALTERNATIVES

INTRODUCTION

This EA focuses on the Proposed and No Action alternatives. The No Action alternative is considered and analyzed to provide a baseline for comparison of the impacts of the proposed action.

PROPOSED ACTION – ALTERNATIVE A

The proposed action divides the project area into three units. Units 1 and 2 consist of approximately 35 acres total of commercial fuels reduction, and aspen restoration via commercial conifer removal. Unit 3 encompasses approximately 25 acres of noncommercial aspen restoration.

Proposed actions common to all units:

The treatment of these mixed conifer and aspen stands would focus on long-term resistance and resilience to disease, insects, and fire, through salvage and regeneration, and also would focus on increasing aspen growth and vigor.

Prior to treatment, the area would be surveyed for goshawks and other high priority species by a biologist, and habitat for these species would be either protected or enhanced depending on the wildlife species identified during a field season survey. Important snags used by cavity dwelling wildlife would be left as wildlife leave trees, including all Whitebark and limber pine snags, and raptor nest trees.

It is anticipated there would be vigorous aspen response following the treatment. This would provide beneficial effects of regeneration of habitat and forage for wildlife species and re-establishing ground cover to limit erosion and soil movement. The aspen regeneration would be monitored following the treatment, and if browsing exceeds or severely inhibits growth, some clones may be temporarily fenced until established.

After treatment, aspen regeneration response would be monitored and evaluated for up to 5 years, and possibly fenced if ungulate browsing may be inhibiting aspen regeneration and release.

The treatment of these mixed conifer stands would focus on increasing aspen growth and vigor, as well as long-term stand resistance and resilience to disease, insects, and fire.

A Class III cultural resource inventory for the proposed project area was conducted in the summer and fall of 2010, by BLM, CYFO. The inventory identified one historic property, site 48PA3258, a historic animal trapping site. The resource occurs near the southern most boundary of the proposal, and the project would be re-designed for avoidance.

Additionally, aspen restoration without commercial conifer removal requiring no surface disturbance was subject to reconnaissance survey and literature review to determine if perishable, fires sensitive, cultural resources were present. If present, the project would be re-designed to avoid impacts.

Invasive species would be monitored and controlled by BLM personnel. Disturbance to known noxious weeds sites would be avoided if possible. Where avoidance would not be possible, reseeding might be necessary after chemical treatment, particularly in shallow soiled sites with little vegetative ground cover.

Following the treatment, known noxious weed areas would be treated until these sites are no longer a threat, and treatment areas would be inventoried for new or unknown noxious weed sites. Monitoring and chemical applications within the project area would continue according to the Bighorn Basin Weed Management Plan.

The BLM reserves the right to modify or have modified that portion of the project on public land if the changes have been analyzed by the NEPA process and the BLM Field Office Manager determines that it interferes with other uses or resource values.

Units 1 and 2 – Aspen restoration and fuels reduction with commercial conifer removal:

All merchantable conifer snags, except those reserved for wildlife habitat, and live conifer trees infested with live beetle larvae would be salvaged. The commercial harvest area consists of 2 units totaling approximately 35 acres total. There are approximately 30 trees per acre that are not infested with live beetle larvae.
These tend to be the younger age classes, and would be retained to provide cover for wildlife and for visual aesthetics, except within aspen clones. Within the aspen clones, all conifers would be removed or girdled regardless of whether they are infested.

Treatment areas may be temporarily fenced from livestock and big game animals for 5 to 8 years to provide for aspen regeneration and establishment.

Some areas within the unit boundary are expected to have little or no aspen response. These areas would have selective trees marked, or designated by description, to retain wildlife hiding cover and create travel corridors for big game.

Approximately 250 mbf within Units 1 and 2 would be harvested by a contracted commercial operator using ground based equipment, most likely hand held chainsaws and / or a track mounted feller buncher, and rubber tired skidders. Skid trail and landing locations would be designated or approved by the sale administrator.
The time period for the completion of the implementation of the contracted commercial aspen enhancement would be two years starting from the date a contract is made and entered into between the BLM and the Purchaser. Extensions of this time period would be considered if extenuating circumstances beyond the Purchaser's control occur.

The units would be harvested from August 15th through the end of March, during dry or frozen soil conditions, until the termination of the contract. Bare soil areas created by roads, skid trails, and burned areas would be rehabilitated and water barred as needed.

Slash would be piled inside the project area. The slash piles would be allowed to cure and treated with fire from August 15 through May 15. Prescribed fire operations and objectives would be covered under the project Burn Plan. The slash piles would be burned during later winters. Skid trail locations would be designated or approved by the Contract Officer (COR). There would be areas of bare soil exposed to wind and water erosion on roads, skid trails, and burned spots following use for about a year, until vegetation growth occurs. The units would be harvested during dry or frozen soil conditions to minimize soil movement and disturbance. Following use, bare soil created by skid trails and burned piles would probably not need to be re-seeded as this area contains a thick layer of duff full of native seed sources. Roads and other man-made features would be rehabilitated, and water barred as needed. It is estimated that there would be approximately ½ mile of disturbance from temporary road construction, ½ mile of disturbance from skid trails, and ½ acre disturbed by slash piles.

The existing access road would be used for hauling. There would be approximately ½ mile of temporary haul road constructed on BLM and State of Wyoming administered land associated with this project. The average slope where the road construction would take place is 10%. The slopes within the project area average 10%. The road and skid trails would be water barred if necessary, and closed following treatment. If road conditions are unsuitable for hauling during the winter, the logs may be decked and hauled the following summer. The proposed road location is shown on the attached map. There would be no public vehicle access to the project area, or the proposed temporary haul road.

There have been adequate levels of natural regeneration nearby in the past following previous harvesting operations. However, it may be necessary to plant in some areas to obtain the desired stocking level or species composition. The need to plant would be based on regeneration surveys, and planting decisions would be evaluated at a later date. These decisions would be documented in the project file.

Skid trail locations would be designated or approved by the contract administrator. There would be bare soil areas exposed to wind and water erosion on roads, skid trails, and burned spots following use for about a year, until vegetation growth occurs. The units would be harvested during dry or frozen soil conditions to minimize soil movement and disturbance. Following use, bare soil created by skid trails and burned piles would be rehabilitated and water barred. New logging roads on BLM would be re-contoured and rocks put in place to match the surrounding slope so a new road would not be open for public use.

The time period for the completion of the implementation of the contracted commercial aspen enhancement and / or conifer removal would be two years starting from the date the contract is made and entered into between the BLM and the Cooperator. Extensions of this time period would be considered if extenuating circumstances beyond the Cooperator's control occur.

Units 3a and 3b – Aspen restoration without commercial conifer removal:

All live conifers within or shading aspen clones would be felled in a jackstraw manner to inhibit ungulate access, or girdled to leave a standing snag for wildlife use, and left in place. Units 3a and 3b total 25 acres. If excessive browsing occurs, these units may be temporarily fenced for five to eight years to protect the regeneration from livestock and big game animals. The aspen would regenerate from suckering. The treatments would occur from August 15 through the end of March. Some conifer species may regenerate naturally. Conifer regeneration may be removed to favor aspen regeneration.

All live conifers in Units 3a and 3b would be felled using hand held chainsaws in a jackstraw manner, or girdled to leave a standing snag for wildlife use. The work would be done by Government employees, Cooperators, and / or Service Contractors. The timeframe for completion of Units 3a and 3b is dependent on budget and workload constraints, and could span from 1 to 10 years, from August 15th through the end of March, each year.

NO ACTION – ALTERNATIVE B

This alternative requires the Contract not be awarded or that it not be conducted at all. The present vegetation community would be left intact. In the absence of disturbance, the size and vigor of the aspen would gradually decline due to succession as conifer species eventually dominate the site.

SCOPING, PUBLIC INVOLVEMENT, AND ISSUES

Internal scoping was completed by an Inter-disciplinary Team (IDT), of Cody and Worland BLM resource specialists, in August, 2009. During that process, the ID Team identified resources and issues that will be analyzed in this EA. Members of the public can review the Cody Field Office NEPA register and request information on any project shown on the list.

Notice to the public that this document was being prepared was provided through the Wyoming State Office NEPA register, at: http://www.wy.blm.gov/nepa/search/index.php. Members of the public could review the Wyoming BLM NEPA register and request information on any project shown on the list.

The Cody Field Office initiated consultation with the Wyoming State Historic Preservation Officer (SHPO) regarding cultural resources in 2010.

The BLM wildlife biologist spoke in generalities about this project before the annual level one meeting with the Wyoming Game and Fish, in October of 2010.

CHAPTERS 3 & 4
AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

Chapter 3 of this document discusses the existing situation of resources determined by an Inter-disciplinary team which may be affected by either the proposed action or the no action (Chapter 2). Chapter 4 further describes the impacts which the proposed project or no action could have on those same resources. In the following sections, the resource is presented with the Chapter 3 discussion, and immediately following the Chapter 4 discussion is presented.

Below, are presented the resources identified by the inter-disciplinary team as those resources which may be impacted or of concern as a result of this proposed project:

Table 1.

Resources Analyzed in this EA
Air Quality
Cultural Resources
Invasive, Nonnative Species
Threatened or Endangered
Species (No Effect)
Water,
Drinking / Ground / Quality
Wetlands / Riparian Zones
Environmental Justice
Wilderness

GENERAL SETTING

The Cody Field Office is located in the north central portion of Wyoming. The proposed project area would be located on the Four Bear Creek and Greybull River drainages, along the south-western edge of the Bighorn Basin in the Absaroka Mountain Foothills.

3.1 WILDLIFE

AFFECTED ENVIRONMENT – Wildlife

The treatment area provides seasonal habitat for numerous passerines, small mammals, predators, elk, moose, and mule deer, with concentrations of elk occurring in the winter, and spring during calving. The area provides seasonal habitat for blue grouse and black bear. Grizzly bear and grey wolf also inhabit the area seasonally. Grizzly bear use is highest during the spring and late fall, while most wolf occurrence is primarily during the winter.
The project area is not within a Lynx Analysis Unit. There are no other known threatened or endangered, or BLM sensitive, animal or plant species within the proposed project area.

Snowshoe hare habitat appears to be modified beneficially by moose, elk, and deer in this area. Browsing on the coniferous understory encourages lateral branching producing cover and forage for snowshoe hare especially during the winter. The mountain shrub and aspen community also supplements the habitat suitability for snowshoe hare, which borders the timber sale.

The spruce beetle epidemic has decreased the over-story and has reduced the biological productivity in the short term. As conifer regeneration continues these sites will benefit from the spruce beetle disturbance by a new generation of Engelmann spruce and sub-alpine fir.

The treatment areas are not a part of any lynx analysis unit, however, the presence of snowshoe hare and vegetative structure in these areas makes it suitable lynx habitat.

The treatment area contains year around habitat for elk, mule deer, and moose. It is considered crucial winter range for these species. Generally, the timber stands have deeper snow and are not very accessible but they do provide thermal cover and shelter for game species during winter months and are important parturition areas for ungulate species during spring. There have been documented sightings of grizzly bear in the area, but the numbers of bear using this area is likely low. There are signs of snowshoe hare using the area so it could provide potential habitat for Lynx. There have been no documented occurrences of Lynx in the area. Wolves have been observed in the general area and are likely to utilize the timber stands because of the presence of prey species. The forested habitat also serves as good nesting and foraging habitat for many species of birds. Accipiter raptor species like goshawks, cooper's hawks, and merlins could nest in the area, but no nesting sites have been identified at the present time. Timber harvest activities would occur after nesting periods and protective buffers would be left around any identified nesting sites. The area supports many species of migratory birds during the spring and summer months. Most migratory bird species would not be in the area during the fall and winter periods proposed for timber harvest. Although it is unknown whether any blue or spruce grouse occupy the area, suitable habitat does exist.

There are no known threatened or endangered plant species within the project area and no known populations of sensitive plant species.

Incidental Grizzly bear occurrences have been observed in Four Bear drainage. Data suggests no den sites would be located in or around the proposed project area. Documented Grizzly occurrence would be sparse, and usually only occurs in the spring when bears are actively seeking out green vegetation. In recent years, Grizzly occurrence in the fall may have increased, possibly due to result of severe drought conditions at higher elevations. Usually by mid-June most Grizzlies would have moved up onto the neighboring Shoshone National Forest for the summer, following green-up as it progresses to higher elevations.

Wolf occurrences within the proposed project area have remained consistent for the past 8 years. Significant numbers of wolf and wolf track sightings have occurred primarily only during the winters, since the winter of 2001/2002, apparently attracted to wintering concentrations of elk within the area. The proposed project area, and access routes are within crucial elk winter range.

Habitats in the proposed treatment area could potentially provide habitat for Canada lynx. The Proposed treatment unit would be approximately .5 miles outside the Wood River Lynx Analysis Unit (LAU). This LAU is large at 168,450 acres, and incorporates primarily USFS lands

The BLM proposed project area would be outside the LAU but may be approximately 90% suitable habitat and exceeds the requirement of 30% minimum suitable lynx habitat within the lynx analysis unit, where if less than 30%, no further reduction of suitable conditions shall occur as a result of vegetation management activities by federal agencies (Canada Lynx Conservation Strategy). The boundaries were delineated directly from suitable vegetative types of spruce/fir, aspen, riparian and pine communities.

3.2 WILDLIFE

Proposed Action – Alternative A– Environmental Consequences

There would be an increase in forage production in the form of grasses, forbs and aspen sprouts in the treatment units where there would be the potential to regenerate aspen. If protective fencing was found to be necessary, fenced units would be temporarily unavailable to wildlife, for 5 to 8 years. After initial aspen sprouts have released above browsing height fences would be removed and subsequent sprouts, grass and forbs would be available. More diverse plant species and stages of vegetative growth would occur after treatment.

Over time the health and vigor of treated aspen stands would be enhanced resulting in increased forage, hiding cover, and avian nesting/foraging habitat. Also, restored aspen stands would provide fuel breaks for timber wildfire control.

The disturbance caused by the actual logging, hauling and cutting operations could result in short term stress and displacement of wildlife within the Four Bear Creek drainage. Elk, deer, and moose would be expected to move out of the area during treatment activity and return once treatment would be completed. The scope and size of the treatment disturbance should not limit wildlife use of the neighboring habitat, nor the treatment habitats once completed.

The timing of this proposed project would avoid the spring when Grizzly bear are most prevalent in the area. Also, all contract workers associated with this project would be required to follow BLM *Conditions of Operation Stipulations for Grizzly bear,* (see Mitigation and Monitoring Section, Chapter 6). If Grizzly bear would be within the project area during implementation, disturbance caused by the cutting and logging operations would likely displace bears to neighboring undisturbed drainages, where they would find resources for survival and since the project is relatively small the displacement would have "No Effect" on Grizzly bear. Aspen enhancement should prove beneficial, particularly during spring and early summer with increased forbs and herbaceous components within the aspen understory.

Wolf occurrence within the proposed project area has remained consistent for the past 8 years. Significant numbers of wolf and wolf track sightings have occurred primarily during the winters, since the winter of 2001/2002, apparently attracted to wintering concentrations of elk within the area. The proposed project area, and access routes are within crucial elk winter range. This project would enhance an important component of big game habitat and should enhance the long term maintenance of the big game populations within the area.

This proposed project should not jeopardize the continued existence of wolf populations within the project area or the larger Yellowstone ecosystem.

Aspen sites are presently encroached with conifers and exhibit little to no aspen regeneration. These aspen sites could potentially provide snowshoe hare and lynx foraging habitat if treated.

Aspen enhancement and regeneration efforts are recommended conservation strategies cited within the Canada Lynx Conservation Assessment Strategy dated January of 2000.

The proposed treatment may constitute short term disturbance within, and subsequent long term enhancement of Canadian lynx habitat. The proposed project would convert marginal lynx foraging habitat (snowshoe hare habitat); characterized as late successional over story of lodge pole pine, and Engelmann spruce with a minor component of mature aspen trees, with little to no regeneration of aspen or conifers to an early successional aspen stand dominated by young aspen sprouts, and subsequent conifer regeneration. This treatment would restore the aspen stands and release them from conifer encroachment, increasing aspen presence on the landscape and improving habitat for snowshoe hare. Given the anticipated long term benefits of this proposed treatment, and that the treatment unit is not within a LAU, impacts from this action would have No Effect on Canada lynx or lynx habitat.

Ute Ladies Tresses may occupy mid elevation riparian areas. Mid elevation riparian areas may be present in the project area. However, no documented occurrences of the Ute's Ladies Tresses n the Bighorn Basin have been found. If this plant is found, all work would stop in the immediate vicinity of the plant and consultation with USFWS would be initiated. The timing of project work would limit disturbance to riparian areas and there would be No Effect on Ute's Ladies Tresses.

If during operations a raptor nest would be found, work would immediately stop and the Authorized Officer would be immediately notified at the Cody Field Office. A BLM wildlife biologist would be notified and further instructions would be dependent on the Authorized Officers' instructions; the nest tree would be protected, buffered, and the area surveyed, as per standard stipulations.

No Action – Alternative B – Environmental Consequences - Wildlife

Over time, as these aspen sites may be slowly crowded out and production decreases, species using and dependant on these aspen communities for forage, cover, or nesting habitat would likely suspend use of these areas in search for more suitable habitat. Given the small size (60 acres total) of the proposed treatment area, the impact to wildlife populations would likely be minimal (No effect). However, wildlife stipulation would be strictly adhered to if the project proceeds.

3.2 Grazing Management

Affected Environment

The allotment is grazed by allotment number GR4901501 and is located 15 miles west of Meeteetese, Wyoming in Park County. The allotment is administered by the BLM and falls into the 10-14" precipitation zone and ranges in elevation from 6,500 to 10,300 feet. The following table is a breakdown of surface ownership:

Allotment Number/Name	BLM Acres	State Acres	Other Federal	Deeded Acres
02532 Pitchfork	5,929	30,361		25,191

The categorization, average stocking level and Public AUM's for the allotment is as follows:

Allotment Number/Name	Category	Actual Stocking Rates BLM/AUM	Suggested Stocking Rates per Ecological Site Guides	Public AUM's
*02532 Pitchfork	Maintain	4.7acres/AUM	1.5 acres/AUM	1,245

*This is suggested stocking rate for cattle under continuous season long grazing under normal climatic conditions for a loamy rangeland site in a 10-14 inch precipitation zone in fair ecological condition.
These ecological site guides are for the Major Land Resource Area #32 (Northern Intermountain Desertic Basins), published by the Natural Resource Conservation Service (NRCS) in 2008.

Proposed Action Alternative A - Environmental Consequences – Grazing Management

Forage would increase in the treatment areas (Units 1, 2, 3a, and 3b) with enhanced grasses, forbs, and aspen production. The treatment areas may be fenced from livestock and wildlife use for a period of 5 to 8 years to provide for aspen regeneration and establishment, if livestock and browsing by wildlife prove to be problematic for the regrowth of new aspen. Public land within the grazing allotment would be is stocked at approximately 8 acres per AUM, therefore any fencing would temporarily defer use of AUMs associated with the treatment area. After fences would be removed, however a long-term increase in forage would be anticipated as a result of enhanced recovery and longevity of new aspen stands.

No Action Alternative B Environmental Consequences – Grazing Management

Continued encroachment of conifers into aspen sites lead to the decrease of herbaceous and forb understory communities. In the absence of disturbance, eventually most understory vegetation would be shaded out, except for shade tolerant grasses and forbs. The forest floor would consist of conifer needle duff. The AUM's within the proposed project area would continue to decrease, or stay the same.

3.3 Forest Vegetation Management

Affected Environment

The project area receives about 12 to 15" of precipitation per year, most of which is in the form of snow during the winter. The soils are a 15 – 19 inch loamy range site, and the potential plant community includes forest composed of Englemann spruce, Douglas fir, lodgepole pine, subalpine fir and quaking aspen, with understory species such as Columbia needlegrass, spike fescue, bluebunch wheatgrass, and likely smaller portions of mountain brome, slender wheatgrass, big bluegrass, western wheatgrass, needle-and-thread grass, prairie junegrass, sandberg bluegrass, phlox, pussytoes, chickweed, yarrow, aster, larkspur, lupine, big sage, and rabbitbrush.

Proposed Action Alternative A Environmental Consequences – Forest Vegetation Management

There may be a delay in conifer saw log production within the treatment sites where conifer regeneration would be cut, and aspen would be propagated. Conifer encroachment into these sites (Units 1-2 and 3-3b) would be anticipated within 40 to 50 years if an additional disturbance does not occur. Both structural and species diversity would be enhanced as a result of this proposal.

Aspen stands (Units 3-3b) would increase in size and vigor. There would be an increase in aspen components and a decrease in conifer component.

There could be some increase in the spread of noxious weeds within the project boundaries. However, stipulations attached to the Contract, would stipulate that invasive non-native species would need to be sprayed, hand-pulled, or otherwise taken out of this landscape within the next year should they be found after this project implementation was completed.

No Action Alternative B Environmental Consequences – Forest Vegetation Management

Sawn log timber production would likely increase as conifers within the treatment sites continue to grow and take over aspen sites. Structural and species diversity would decrease. In the absence of disturbance, aspen and lodgepole pine would decrease, and Englemann spruce would increase and dominate the stand.

3.4 Soils and Watershed

Affected Environment

The soils within the treatment area reflect the high mountain environment, and volcanic and sedimentary parent materials over which they formed. Soils are well drained and are generally moderately deep to deep. Surface textures are loamy often modified with gravel, cobble, and channery rock fragments. The surface layer (A horizon) can be greater than 20 inches thick and is dark and rich in organic matter. Clay content can increase with depth being expressed as an argillic horizon. Vegetation cover and litter protect the soil from the erosive forces of overland flow and rain drop impact.

Proposed Action Alternative A Environmental Consequences – Soils and Watershed

Aspen are deciduous trees and deciduous-type forest floors receive much more light than that of a typical coniferous forest. This additional light and soil warming would allow for an understory, typically of grasses and forbs. The production of grasses and forbs would increase following treatment to open up the canopy, possibly, improving upland vegetation which may improve overall soil and watershed function.

Immediately following treatment, the soil surface would be somewhat susceptible to runoff and erosion, due in part to the surface disturbance resulting from the treatments but also from naturally occurring bare ground in locations long deprived of sunlight. Bare areas and disturbed areas would be limited in size and extent; runoff and erosion would not be extensive with no off site impacts. Grasses and forbs could re-establish within one to two years following the treatment. There may be some soil compaction along roads and skid trails; given the limited extent of this project, any resulting soil compaction would be limited in extent and duration.

The additional light and soil warming caused by the removal of snags would allow for an enhanced understory, typically grass and forbs. Improvement in upland vegetation would generally improve the overall soil and watershed function. Litter (residual vegetation) could help increase water infiltration into the soil and reduce the potential for overland flow of water on upland sites. Overall watershed function may be expected to improve on sites where vegetation cover and litter are currently below potential.

Although the units would be harvested during dry or frozen soil conditions to minimize soil movement and disturbance, there would be bare soil areas exposed to wind and water erosion on roads, skid trails, and burned spots for about a year, until vegetation growth occurs. Following use, bare soil areas would be rehabilitated and water barred.

The relatively small area of disturbance for areas where the logs would be stacked and slash piles would be placed may not be very susceptible to water erosion. Skid trails and roads due to their linear extent would naturally more susceptible to water erosion, however, the gentle slopes common to the project area would reduce this hazard.

The pH values of the soil are expected to increase slightly due to the beetle-caused mortality and mechanical removal of the conifers, thus making the site more suitable for aspen growth.

No Action Alternative B Environmental Consequences – Soils and Watershed

Under the "No Action" alternative soil resources would be unaffected and conditions would remain the same. In the event of wildfire associated with continued high fuel loading, there could be substantial erosion on the site(s) and a high potential for loss of soil resources.

3.5 Socioeconomic

Affected Environment – Socioeconomic

The local economy is sustained mainly from tourism, recreation, livestock grazing, farming, oil and gas extraction, mining, and timber harvest.

Historically, BLM timber has represented about 5% of all sawtimber harvested in the resource area, and the value of timber harvested from BLM-administered lands amounts from 1% to 3% of the direct output revenue from the total forestry sector in Park County, according to the Cody Resource Management Plan dated November 8, 1990.

Proposed Action Alternative –A Environmental Consequences - Socioeconomic

The treatment would be expected to increase the overall quality of wildlife habitat. This could potentially have a positive impact on the local economy by increasing use of the area by wildlife, and by hunters and wildlife viewers.

The current level of livestock grazing would be maintained in the grazing allotment, but anticipated increases in herbaceous and forb production should result within the treatment units.

The treatment would benefit the local economy by offering the sale of some of the forest products to be removed from the project area, and enhanced revenue would be anticipated.

No Action Alternative – B Environmental Consequences - Socioeconomics

No action could potentially have a slight impact on the local economy by decreasing the use of the area by wildlife, and subsequently decreasing the use of the area by hunters and wildlife viewers.

It is anticipated that herbaceous and forb production would decline as conifer canopy cover increases and shades the area. The local economy would not benefit from the sale of forest products at this time. Enhanced timber harvest revenue could be anticipated in the future as the noncommercial aspen reverts to commercial conifer species.

3.6 Noxious Weeds

Affected Environment

Just south of the proposed project area lies the small but fully developed Four Bear Oil field. Pipelines, access roads, pits, power lines, and many other ancillary construction-types structures associated with oil fields have long since been placed in the area. Invasive non-native weed seed would have spread from this old oil field years ago, along with human and livestock activity.

Noxious weed surveys, including invasive and non-native species have been completed in or adjacent to the grazing allotment by the Rangeland Specialist in charge of the particular grazing allotments. These surveys indicate that the following state listed noxious weeds occur in the proposed project area:

Table 2

Common Name
white top
Canada thistle
salt cedar
Russian olive
Russian knapweed
black henbane
bull thistle

Proposed Action A - Environmental Consequences – Noxious Weeds

Activities associated with timber harvest operations such as construction or maintenance of skid trails, haul roads, loading docks, and prescribed burning, may introduce or propagate noxious weeds. Mitigation or best management practices to control or minimize the spread of noxious weeds on public land may include good livestock grazing practices, maintaining sound ecological condition, and not deteriorating the watershed from further noxious weed or other pest invasion. Some other mitigation measures to deter invasive non-native plants may include the use of certified weed-free products on public lands, monitoring of range improvement projects during and after construction and maintenance sites for the presence of noxious weeds, and continued weed inventory and treatment practices.

The project area would continue to be monitored for the presence of noxious weeds, as per the Bighorn Basin Weed Management Plan, and treatment methods for any existing or new noxious weed infestations located would be evaluated on a site specific basis for the next 3-5 years.

No Action Alternative - B Environmental Consequences - Noxious Weeds

Invasive non-native plant species already exist in the proposed project area, as per Table 2. The No Action alternative may keep further spread of these weeds in the proposed project area from happening. However, should a the aspen stands and the rest be lost to fire due to unhealthy closed canopy and beetle kill, any leftover weed seed in the ground/duff would have purchase and may outcompete any native plant that would vie for life.

3.7 Recreation

Affected Environment – Recreation and Visual Resource Management (VRM)

The federal lands within the proposed project area are available and accessible for public use. Hunting, horseback riding, all-terrain vehicle use, hiking, and wildlife viewing would be the primary recreation uses on these public lands.

The land lies within a VRM Class IV area. The objective of this Class would be to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high in a VRM Class IV area, and management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements. It is not anticipated that the proposed action would dominate the view or be the major focus of viewer attention, for a long period of time.

Proposed Action Alternative A- Environmental Consequences – Recreation and Visual Resource Management

Impacts to recreation management from the proposed action would be negligible. During times of treatments, recreational use in the area occurs with use consisting of hiking, camping, driving for pleasure, wildlife viewing, hunting, sightseeing, and general dispersed recreation. During treatment activities, conflicts between treatments and visitors may occur which may temporarily displace users to alternative areas. Post-treatment areas may displace users to alternative areas due to the seemingly unnatural appearance. These impacts would be short term.

Long term affects to recreation would be beneficial to the recreational physical settings by enhancing the naturalness, vegetative health, and enhanced wildlife habitat.

Impacts to visual resources from the proposed action would be negligible. Temporary contrasts of the basic elements of form, line, color, and texture against the natural surrounding elements would be evident to the casual observer. These contrasting elements would be temporary and may be very subordinate against the surrounding environment after a full cycle of seasons. Short term impacts would be visual contrasts during treatment activities, but would not dominate the landscape. Long term affects would benefit the scenic quality by enhancing the vegetative component.

No Action Alternative B - Environmental Consequences – Recreation and Visual Resource Management

There would be no immediate impacts to recreation resources from an No Action Alternative. Long term impacts of the no action alternative would not improve the recreational settings due to the degrading resources which greatly contribute to the recreational activities in this area. The most tangible indicator of such degrading resources would be observed through wildlife activity as they defer to more suitable habitats. Due to the small scale of the project, impacts would negligible to recreational resources.

Under the "No Action" alternative, visual resources would be gradually impacted over time as conifers encroach upon the site(s) and the aspen die out. This would contribute to the loss of the landscapes contrasting visual elements, which are often created by aspen stands in forested and sagebrush landscapes. Also, the continued presence of hazardous fuels on the site would maintain the risk of wildfire that could significantly alter the local and surrounding landscape character.

There would be no contrast of the basic elements of form, line, color, and texture against the surrounding elements in the no-action alternative. The casual observer would not be distracted from the natural elements of the encroaching conifers due to the naturalness of the elements. Impacts to visual resources under this alternative would be negligible.

3.8 Cultural and Native American Resources

Affected Environment - Cultural and Native American Resources

Cultural resource studies indicate that the Big Horn Basin has been occupied for at least 12,000 years and cultural resource sites should be anticipated within specific project areas. Due to the potential to affect historic properties, the project was evaluated by a cultural resource specialist prior to implementation of the project.

Proposed Action Alternative A - Environmental Consequences – Cultural and Native American Resources

As the project has been re-designed to avoid historic property, 48PA3258, no impact to significant cultural resources would be anticipated. Current potential impacts to cultural resources on the east slope of the Absaroka Mountains include unauthorized collection of surface artifacts and looting of buried materials.
Increased presence in the project area to support and maintain commercial harvesting activities may result in an indirect opportunity for additional unauthorized collection of surficial artifacts and looting.

The area under consideration has no known or identified areas or locations of religious or cultural concern to Native Americans. No traditional gathering areas have been reported near the current proposal.

If any areas or locations of traditional gathering areas, or religious or of cultural concern to Native Americana are subsequently identified or become known through Native American notification or consultation process they would be considered during the implementation phase. BLM would take no action that would adversely affect these areas or locations without consultation with the appropriate Native Americans.

No Action Alternative B - Environmental Consequences – Cultural and Native American Resources

Under the "No Action" alternative no surface disturbing activities would be authorized and therefore impacts to cultural and Native Americans resources would not occur. Current potential impacts to cultural resources on the east slope of the Absaroka Mountains include unauthorized collection of surficial artifacts and looting of buried materials. Potential impacts from these unauthorized activities would remain at current levels under the "No Action" alternative.

No impacts to Native American Religious concern would occur under the No Action alternative, as BLM would take no action that would adversely affect these areas or locations without consultation with the appropriate Native Americans.

CHAPTER 4
CUMULATIVE IMPACTS

No cumulative impacts were identified for soils or cultural resources. The State of Wyoming adjacent to the project area is also treating approximately 35 acres in a manner similar to the proposed action. They would be using the same road for transportation, and likely would use the same Cooperator. Given the rapidly deteriorating condition of the material, few additional commercial operations near the project area are expected within the next decade.

The proposed action alternative would cumulatively reduce the fuel loading throughout the area by the removal of dead woody debris in addition to the fuels reduction occurring on other project areas on state and federal land. The cumulative impacts of treating the project area along with the surrounding state and federal land projects on a large-scale basis would result in improved wildlife habitat through long-term increases in hiding and thermal cover as the project areas naturally regenerate.
These projects would improve long distance wildlife migration corridors for wildlife passing through the area by improving feed, thermal, and hiding cover, and removing obstacles such as downed snags that hamper wildlife movement. The aspen stands would decrease the potential for the spread of wildfire to other areas by creating natural fuel breaks. Wildfire spread would be further reduced by the removal of downed woody fuels.

Although the adjacent State of Wyoming is treating approximately 35 acres, some areas that are not accessible to equipment due to terrain, soils, or administration will remain untreated. Untreated areas have heavy fuel loading of dead and dry material.

Failure to implement the proposed action would add to the aggregate amount of fuel loading throughout the area, thus raising the likelihood of increased size and spread of a catastrophic fire. Such a fire would increase erosion and decrease wildlife habitat diversity, and would be difficult, dangerous, and expensive to control.

CHAPTER 5
UNAVOIDABLE IMPACTS

Within treatment areas, burned areas, roads, and skid trails would have bare soil areas that would be exposed to wind and water erosion until plant growth occurs. The majority of these disturbed areas would likely rehabilitate within 2 to 3 years. However, there would likely be some small areas where aspen response and regeneration would not occur. These areas would likely regenerate into lodgepole pine stands; this regeneration would likely dominate these sites within 15 years.

CHAPTER 6
MITIGATION AND MONITORING

General/Miscellaneous

Ungulate browsing will be monitored at all treatment sites, and if levels of browsing occur that prevent establishment of aspen regeneration, these sites will be temporarily fenced for 5 to 8 years. A temporary fence may be constructed if cattle or wildlife browsing keeps the site from recovering.

Photo point monitoring will be used at all treatment sites to evaluate aspen response. This will occur in the spring after winter moose, elk, and/or cattle browsing, for 5 years following treatment.

All log skidding and hauling on roads and skid trails will be restricted to weather conditions that do not accelerate the movement of water or soil, i.e. dry and or frozen soils. After treatment, all skid trails will be rehabilitated, and water barred.

All treatment activities, with the exception of prescribed fire, will be restricted during big game parturition periods; April 15 - May 31, to avoid potential disturbance to elk calving areas. Prescribed fire treatments may occur from August 15 through May 15.

The units will be harvested during the fall and/or winter over dry or frozen conditions to minimize soil movement and disturbance. Following use, bare soil areas will be rehabilitated and water barred.

Gates will be left open or closed as found upon arrival. Fencelines disturbed by this operation will be returned to their original or better condition.

Jackpot burning or broadcast burning would be completed prior to March 1st in the spring or during the late fall season after November 1st.

Harvest operations and timber hauling will be allowed from August 15th to March 31st.

The time period for the completion of the implementation of the contracted aspen enhancement and / or conifer removal-will be two years starting from the date the contract is made and entered into between the BLM and the Cooperator.
Extensions of this time period will be considered if extenuating circumstances beyond the Cooperator's control occur. This would mitigate the amount of time wildlife and recreationists are temporarily displaced from the area.

All Whitebark pine and limber pine trees, dead or alive, will be retained as leave trees, as well as additional marked wildlife trees and nest trees.

Invasive Species

Noxious weed problems will be handled in the following manner:

The project area will be surveyed for noxious weed problems before any activity and weeds will be treated (if accessible) prior to activity on the contract

Reestablish desired vegetation on all disturbed soil such as roads or skid trails.

Coordination with the BLM will occur if there is to be any use of chemical treatments on weeds in the project area.

Certified weed-free straw will be used as mulch.

Remove weed seed sources from adjacent sites or from the access route that may contaminate the project area before the project is undertaken.

Equipment and vehicles will be cleaned prior to entering public land as they could introduce weeds.

Cultural Resources

A Class III cultural resource inventory has been completed per section 106 of the National Historic Preservation Act prior to the authorization of this project. If any cultural values are observed during operations on this project, they will be left intact and the BLM Field Office Manager notified. The Field Office Manager will conduct an evaluation of the cultural values to establish suitable mitigation or salvage.

The proposed project is an "Undertaking" as defined in the National Historic Preservation Act, as amended. The project area has been surveyed for the presence of cultural resources. A Class III inventory of the area of potential effects, following the Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (48FR190), has been conducted for this undertaking. Project's pre-design mitigation efforts have resulted in avoidance of all known Historic Properties.

Historic sites and prehistoric sites with architecture, if they occur, are easily noticed by inexperienced personnel. When noticed these sites will be avoided. Any questions concerning whether a place or item is a site or should be avoided will be directed at the Cody Field Office Archaeologist. The Field Office Archaeologist will then visit the site and determine subsequent actions, if any.

According to Section VI. A. of the Wyoming State Protocol between the Wyoming BLM State Director and the Wyoming State Historic Preservation Officer a No Historic Properties Affected determination of effect will result from proposed undertaking.

Cultural Resources, Standard Stipulation

The operator/holder/BLM is responsible for informing all persons associated with this project that they may be subject to prosecution for knowingly damaging, altering, excavating or removing any archaeological, historical, or vertebrate fossil objects or site. If archaeological, historical, Native American, or vertebrate fossil materials are discovered, the operator/holder/BLM is to suspend all operations that further disturb such materials and immediately contact the Authorized Officer. Operations are not to resume until written authorization to proceed is issued by the Authorized Officer (AO).

The authorized officer will evaluate, or will have evaluated, such discoveries not later than five working days after being notified, and will determine what action shall be taken with respect to such discoveries. The decision as to the appropriate measures to mitigate adverse effects to significant cultural or paleontological resources will be made by the authorized officer after consulting with the holder.

The operator/holder/BLM is responsible for the cost of any investigations necessary for the evaluation, and any mitigation measures required by the Authorized Officer. The AO will provide technical and procedural guidelines for the conduct of evaluation and mitigation. Upon verification from the AO that the required evaluation and/or mitigation have been completed, the operator will be allowed to resume operations.

Native American Resources

The area under consideration contains no known areas or locations of religious or cultural concern to Native Americans. If such areas are subsequently identified or become known through the Native American notification or consultation process they would be considered during the implementation phase. The BLM would take no action that would adversely affect these areas or locations without consultation with the appropriate Native Americans.

Human Remains

If human remains are discovered or suspected the holder shall suspend operations immediately, physically guard the area, and notify BLM immediately.

Wildlife

Jackpot burning or broadcast burning would be completed prior to March 1st in the spring or during the late fall season after November 1st.

If during operations a raptor nest is found, the wildlife biologist for the BLM will be notified and the nest tree protected and buffered

Conditions of Operation Stipulation for Grizzly bears.

To minimize potential for conflict situations with grizzly bears the following conditions will be required for operations to complete this pre-commercial thinning project:

BLM would be notified immediately if grizzly bears or signs of recent grizzly bear occupation of the thinning treatment area or operating campsites or staging areas are observed by contractors or persons responsible for the project work.

All human and prepared livestock and pet food, beverages, garbage, cooking grease, condiments, and other odorous substances must be stored, handled, and disposed of in such a manner as to make it totally unavailable to bears at night and during the day when unattended.

Unavailable means stored in an approved bear resistant container, stored in a closed vehicle constructed of solid non-pliable material or suspended at least 10 feet clear of the ground at all points and 4 feet horizontally from any supporting All foods or attractant substances should be properly stored so they are unavailable to bears at all times other than during use.

All contractor employees or persons responsible for work or support camp operations associated with completion of this thinning project should have canisters of bear deterrent pepper spray with at least 10% active ingredient available for use in the event of an encounter with bears.
These pepper spray containers should be kept available for use in close proximity to any employee or person during work periods and kept at identified locations at all camp or staging areas where foods or beverages are used. Proper instructions on how to operate and use these deterrent sprays should be provided for all persons that may work in situations where bear encounters are possible.

Grizzly bear impacts will be lessened by applying a seasonal restriction, which will allow operations and timber hauling harvest from August 15th to March 31. The ½ mile constructed temporary road will be reclaimed in the Four Bear project area after project completion.

CHAPTER 7
PERSONS, GROUPS, AND AGENCIES CONSULTED

Even though BLM has concluded that there would be no environmental impacts from the proposed action, consultation and coordination may still be required by other laws and regulations.

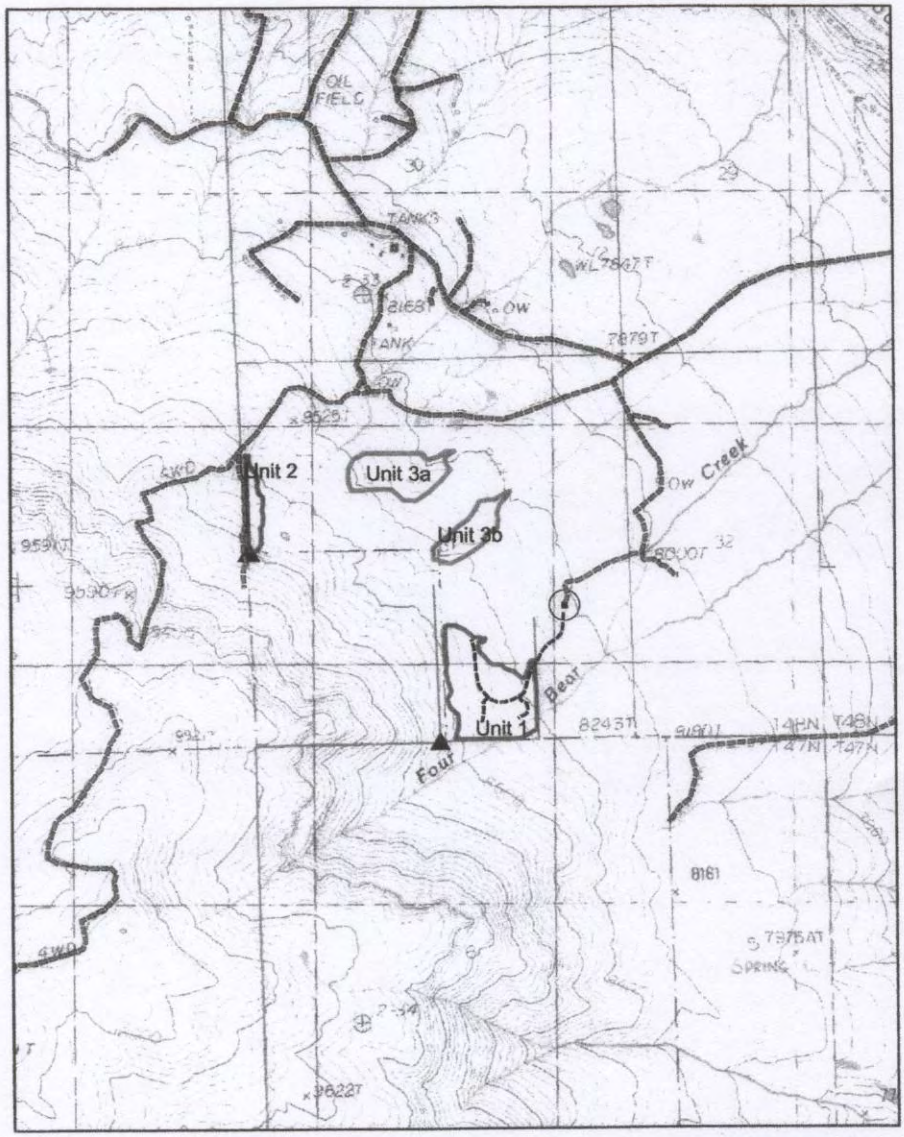
During preparation of the EA, the public was notified of the proposed action by posting on the Wyoming Internet Homepage. Public notification of the project was given and comments could have been accepted at any time. Zero persons have contacted the BLM in response to the notice. The process used to involve the public also included posting on the Cody web site for 30 day public review.

The Cody Field Office coordinates and interacts with other federal, state, county, and local agencies on a continuing basis concerning vegetation treatment activities. The following persons have reviewed or have been contacted in regard to this proposed action and assessment:

Paul Morency	Forestry (private and State lands), WSF
Jerry Altermatt	Wyoming Game & Fish, Cody Office
Jared Dalebout	Hydrologist / Watershed – Worland District Office, BLM
Jim Gates	Forester –Worland District Office, BLM
Steve Kiracofe	Soil Scientist / Hazmat Specialist – Worland District Office, BLM
Kierson Crume	Archaeologist – Cody Field Office, BLM
Destin Harrell	Wildlife Biologist – Cody Field Office, BLM
Shirley Bye- Jech	Recreation Specialist – Cody Field Office, BLM
Jack Mononi	Lead Natural Resource Specialist – Cody Field Office, BLM
Mike Wengert	Natural Resource Specialist – Cody Field Office, BLM
Ann Perkins	Planning & Environmental Coordinator – Cody Field Office, BLM
Bryan McKenzie	Rangeland Management Specialist – Cody Field Office, BLM

Four Bear Aspen Enhancement and Fuels Reduction

T 48 N, R 103 W, Sec 31



▲ Found corners

⊙ Old timber sale landing from a previous sale

Proposed new temporary roads - flagged with orange

Existing Roads

Proposed aspen enhancement without commercial removal

Proposed aspen enhancement and fuels reduction with commercial removal

0 0.05 0.1 0.2 0.3 0.4 Miles

N

SURFACE

- Bureau of Land Management
- Forest Service
- Private
- State