

**DR, FONSI, and EA**

**for**

**Warren Bridge Area Cottonwood Reestablishment Project**

**Prepared by**

**Bureau of Land Management**

**Pinedale Field Office**

**Pinedale, Wyoming**

**DOI-BLM-WY-100-EA-10-559**



# **Decision Record**

**for**

## **Warren Bridge Area Cottonwood Reestablishment Project**

**Prepared by**

**Bureau of Land Management**

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## **Decision Record**

### **Warren Bridge Area Cottonwood Reestablishment Project**

#### **DOI-BLM-WY-100-EA-10-559**

##### **Introduction**

Currently, cottonwood tree stand communities have been depleted from the banks of the Upper Green River within and surrounding the proposed project area. A combination of the tie-hacking operations during the late 19<sup>th</sup> Century by Union Pacific Railroad along with current and past cattle foraging may have contributed to this decline. This project would be designed to attempt to create re-establishment of cottonwood tree stand communities within the identified project area. These areas will need to be individually fenced to prevent grazing from livestock, deer, elk, moose, and beaver on young newly planted cottonwood trees.

This effort is particularly important for bald eagles in the Greater Yellowstone ecosystem, which tend to disproportionately select cottonwood trees for nesting (Harmata and Oakleaf 1992). In addition, by rehabilitating cottonwood tree stand communities in the proposed project area, the Bureau of Land Management (BLM) would be potentially creating a greater vertical structure which in turn could provide a greater species richness and density of passerine birds (Rumble and Cobeille 2004).

Over the long-term this project would potentially provide important nesting, roosting, and foraging habitat to raptors and migrant songbirds and would also potentially provide a rich recreational experience to the BLM visitors. Wildlife viewing is often an important component to recreational walkers and hikers and this element of the Upper Green River Special Resource Management Area (SRMA) project could potentially bring back a component of wildlife viewing that has been lost since the late 19<sup>th</sup> Century.

The purpose of the action is to reestablish cottonwood tree stand communities within the proposed project area. This will be achieved by planting a variety of narrow-leaf cottonwood age classes of trees from seedling and sapling size up to 2-3' tall trees, both containered and bare root stock, in 3 to 4 identified locations along the Upper Green River within the WBRA.

The need for the action is cottonwood tree stand communities have been depleted from the banks of the Upper Green River within and surrounding the proposed project area.

##### **Compliance**

The Environmental Assessment (EA) is in conformance with the Pinedale Resource Management Plan (RMP) signed November 2008. This EA fulfills the National Environmental Policy Act (NEPA) of 1969 requirement for site-specific analysis. The Proposed Action is 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. These include consultation with the U.S. Fish and Wildlife Service (USFWS) regarding threatened and endangered species and consultation with the Wyoming State Historic Preservation Officer on cultural and historic resources.

### **Selected Alternative**

Alternative II the Proposed Action of EA# DOI-BLM-WY-100-EA-10-559 is selected. I have determined that the impacts of the Proposed Action with environmental protection measures presented and detailed in the EA, minimize environmental harm.

### **Finding of No Significant Impact**

Based on the analysis of potential environmental impacts detailed in the attached EA (DOI-BLM-WY-100-EA-10-559) and in accordance with NEPA and the Pinedale RMP Record of Decision (November 2008), I have determined that the impacts of the Proposed Action with environmental protection measures presented and detailed in the EA and this Decision Record are not significant per the definition of significance in 40 CFR 1508.27. Therefore, a Finding of No Significant Impact was determined for EA-100-EA10-303 and preparation of an environmental impact statement is not required.

### **Public Involvement**

The BLM decision-making process is conducted in accordance with the requirements of the Council on Environmental Quality (CEQ) regulations implementing NEPA, and the United States Department of Interior (USDI) and BLM policies and procedures implementing NEPA. NEPA and the associated regulatory and policy framework require federal agencies to involve the interested public in their decision-making.

This EA has been developed in consultation and coordination with state and local agency personnel.

### **Decision and Rationale**

Alternative II has been selected as it meets the purpose and need for the project as identified in the EA and is consistent with objectives and potential impacts analyzed in the EA and the RMP. The no action alternative is rejected because it does not meet the purpose and need for the action identified in the EA.

It is my decision to authorize the implementation of Alternative II as analyzed in the EA. Implementation of Alternative II is conditioned by the mitigation measures found on pages 20 and 21 of the EA.



4. ADVERSE PARTIES      Within 15 days after each document is filed, each adverse party named in the decision and the Regional Solicitor or Field Solicitor having jurisdiction over the State in which the appeal arose must be served with a copy of: (a) the Notice of Appeal, (b) the Statement of Reasons, and (c) any other documents filed (see 43 CFR 4.413). Service will be made upon the Associate Solicitor, Division of Energy and Resources, Washington D.C. 20240, instead of the Field or Regional Solicitor when appeals are taken from decisions of the Director (WO-100).
5. PROOF OF SERVICE      Within 15 days after any document is served on an adverse party, file proof of that service with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. This may consist of a certified or registered mail "Return Receipt Card" signed by the adverse party (see 43 CFR 3.301(c)(2)).

UNLESS THESE PROCEDURES ARE FOLLOWED, YOUR APPEAL WILL BE SUBJECT TO DISMISSAL (SEE 43 CFR 4.402). BE CERTAIN THAT ALL COMMUNICATIONS ARE IDENTIFIED BY SERIAL NUMBER OF THE CASE BEING APPEALED (WYW-172152/WYW-172153, WYW-172154, WYW-175423, WYW-176892, WYW-176893).

#### SUBPART 1821.2—OFFICE HOURS; TIME, AND PLACE FOR FILING

##### Sec. 1821.2-1(a)      Office Hours of State Office

State Offices and the Washington Office of the Bureau of Land Management are open to the public for the filing of documents and inspection of records during the hours specified in this paragraph on Monday through Friday of each week, with the exception of those days where the office may be closed because of a national holiday or Presidential or other administrative order. The hours during which the State Offices and the Washington Office are open to the public for inspection of records are from 10 a.m. to 4 p.m., standard time or daylight saving time, whichever is in effect at the city in which each office is located.

Sec. 1821.2-2(d)      Any document required or permitted to be filed under the regulations of this chapter, which is received in the State Office or the Washington Office, either in the mail or by personal delivery when the office is not open to the public shall be deemed to be filed as of the day and hour the office opens to the public.

Sec. 1821.2-2(e)      Any document required by law, regulation, or decision to be filed within a stated period, the last day of which falls on a day the State Office or the Washington Office is

officially closed, shall be deemed to be timely filed if it is received in the appropriate office on the next day the office is open to the public.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards.

1. The relative harm to the parties if the stay is granted or denied.
2. The likelihood of the appellant's success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted.
4. Whether the public interest favors granting the stay.



Shane DeForest  
Field Manager  
Pinedale Field Office

10-4-10

Date

**Finding of No Significant Impact**

**for**

**Warren Bridge Area Cottonwood Reestablishment Project**

**Prepared by**

**Bureau of Land Management**

**Pinedale Field Office**

**Pinedale, Wyoming**

**DOI-BLM-WY-100-EA-10-559**



**FINDING OF NO SIGNIFICANT IMPACT**  
**Bureau of Land Management**  
**Pinedale Field Office**

**EA Number:** DOI-BLM-WY-100-EA-10-559

**Proposed Action Title/Type:** Warren Bridge Area Cottonwood Reestablishment Project

**Location of Proposed Action:**

The project location area is about 20 to 28 miles driving distance from Pinedale, WY via United States Highway 191 and the Green River Access Road. The project area is located within the Warren Bridge Recreation Area (WBRA). The Green River Access Road will be the main access route to the project site. The turnoff is on the northeast side of US191, roughly 20 miles north of Pinedale, WY. The legal location of the project is T 36 N, R 111 W, S 1, 11, 14, 23, and 27 and T 35 N R 111 W, S 4 and 5.

**BACKGROUND**

Currently, cottonwood tree stand communities have been depleted from the banks of the Upper Green River within and surrounding the proposed project area. A combination of the tie-hacking operations during the late 19<sup>th</sup> Century by Union Pacific Railroad along with current and past cattle foraging may have contributed to this decline. This project would be designed to attempt to create re-establishment of cottonwood tree stand communities within the identified project area. These areas will need to be individually fenced to prevent grazing from livestock, deer, elk, moose, and beaver on young newly planted cottonwood trees.

This effort is particularly important for bald eagles in the Greater Yellowstone ecosystem, which tend to disproportionately select cottonwood trees for nesting (Harmata and Oakleaf 1992). In addition, by rehabilitating cottonwood tree stand communities in the proposed project area, the Bureau of Land Management (BLM) would be potentially creating a greater vertical structure which in turn could provide a greater species richness and density of passerine birds (Rumble and Cobeille 2004).

Over the long-term this project would potentially provide important nesting, roosting, and foraging habitat to raptors and migrant songbirds and would also potentially provide a rich recreational experience to the BLM visitors. Wildlife viewing is often an important component to recreational walkers and hikers and this element of the Upper Green River Special Resource Management Area (SRMA) project could potentially bring back a component of wildlife viewing that has been lost since the late 19<sup>th</sup> Century.

## **FINDING OF NO SIGNIFICANT IMPACT**

Based upon the information contained in the attached environmental assessment and all other information available to me, it is my determination that: (1) implementation of Alternative II the Proposed Action will not have significant environmental impacts beyond those already addressed in Pinedale RMP Final Environmental Impact Statement; (2) Alternative II the Proposed Action is in conformance with the RMP; and (3) Alternative II the Proposed Action does not constitute a major federal action having a significant effect on the human environment. Therefore, an environmental impact statement or a supplement to the existing environmental impact statement is not necessary and will not be prepared.

This finding is based on my consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR 1508.27), both with regard to the context and to the intensity of the impacts described in the EA or as articulated in the letters of comment.

### **Context**

The Project site is located within the Pinedale Field Office Resource Management Plan (RMP). This analysis tiers to the RMP Final Environmental Impact Statement. These documents are included in the analysis by reference.

### **Intensity**

I have considered the potential intensity/severity of the impacts anticipated from the Warren Bridge Area Cottonwood Reestablishment Project decision relative to each of the ten areas suggested for consideration by the CEQ. With regard to each:

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

The proposed action would impact resources as described in the EA. Those resources analyzed are: wildlife, threatened and endangered plants and animals, sensitive species, livestock, vegetation, invasive non-native species, riparian, recreation, visual resources, wild and scenic river, and cultural resources.

#### ***2. The degree to which the proposed action affects public health and safety.***

The proposed action is designed to have minimum impact or improvement on public health and safety. Transportation of equipment to the project location will be in conformance with state and federal laws.

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

Due to the high probability for encountering buried cultural material within the APE, monitoring the placement of containerized and bare root stock (large) trees by a professional archaeologist will be mandatory. If buried cultural material is inadvertently discovered during the tree placement in the specific locale work will be terminated until the cultural material can be scientifically removed. Following salvage work, scientific examination will require possible carbon 14 dating, lithic analysis, macrofloral/fauna studies and possible bone analysis. In some

instances, tree placement may be considered an adverse effect to eligible cultural properties and will have to be relocated to an adjacent area. Other direct effects that may be of concern is the eventual bioturbation of cultural material by the roots of the newly planted trees, this factor is outweighed by the benefit of new tree growth along the Upper Green River.

Indirect effects include trampling by wildlife and livestock that will be drawn to the newly planted trees and eventual shaded areas. Substantive vandalism/looting may also be expected due to an increased use of the area by the public.

The following Critical Elements of the Human Environment and Other Resource Issues are not present in the project area and are not affected: areas of critical environmental concern, environmental justice, farmlands (prime or unique), flood plains, Native American religious concerns, wilderness, wastes (hazardous or solid), and wild/scenic rivers.

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

No anticipated project specific effects are likely to be considered highly controversial.

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

Implementation of the proposed action would not pose highly uncertain, unique or unknown risks to the human environment. Project Design Features have been built into the proposed action to reduce or avoid any adverse effects to area resources.

***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 proposed action alternative would not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration. Any future actions would undergo the NEPA process.

***7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.***

This action in conjunction with past, present and reasonably foreseeable actions would generate both adverse and positive effects upon visitor experiences within the river corridor. Some visitors may view this action in conjunction with recent recreation improvements and land management practices as detrimental to their recreation experience. Other's visitors may believe this action adds long term value to the setting and recreation experience. Cumulative effects in relation to the overall visitor recreation experience will not be substantial.

South and west of the project area is the Pinedale Anticline Natural Gas Field. This field straddles the New Fork River for a 6 miles stretch going west to east and is bordered to the west by the Green River. These portions of the New Fork and Green Rivers have been found to contain highly valuable raptor nesting habitats, including bald eagle winter roosting habitats. Unfortunately due to several factors the raptors including bald eagles have had several inactive

nests along the rivers within and adjacent to the Pinedale Anticline. Over the next several decades the BLM is optimistic that this project will provide nesting, foraging, and roosting habitats to mitigate impacts along other stretches of the New Fork and Green Rivers. As well as reestablish historic cottonwood stands to the Upper Green River. In addition, migratory songbirds and many other species of wildlife will benefit from an additional food source, shade, and nesting habitat.

**8. *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 historic resources.***

Numerous fur trapper biographies mention the abundance of beaver in the Green River basin and the Upper Green River area proper is referenced by Bonneville, Walker, Fitzpatrick, Meek and the Astorians. Exploration, trapping, hunting and trapper's rendezvous took place in the vicinity for many years and are well documented in the aforementioned biographies. In the late 19<sup>th</sup> and early 20<sup>th</sup> centuries the westward expansion of the Union Pacific Railroad relied on local forests as a source of timber for railroad ties. "Tie-hacks" would harvest timbers from forests and stockpile them in river ways until spring runoff when river flows were high enough to carry logs to the town of Green River, Wyoming, for railroad use. This timbering led to loss of cover and scouring of the Upper Green River watershed.

The terrace along the Green River holds a high probability for buried cultural material. An extensive shovel testing plan was developed in order to verify site locations. As with many prehistoric site locales throughout Sublette County, surface artifacts have been collected for decades and surface manifestations are rare. For the Warren Bridge Area Cottonwood Reestablishment Project the most feasible method for developing a testing plan was to start with a walk through with the selected professional contracted archaeologist pointing out key areas needing testing. After this preliminary work the inventory and testing phase of the project was undertaken.

Numerous cultural sites were located, mostly subsurface. Very little surface manifestation of cultural significance was located. All terraces were shovel tested and these areas held significant, National Register Historic Places (NRHP) buried eligible cultural sites. Materials included pottery, stone tools and buried fire hearths.

Approximately 450 shovel tests were excavated within the Area of Potential Effect (APE). Most of which proved to be positive for holding buried cultural material. With this in mind during the placement of containered and bare root stock (large) trees monitoring by a professional archaeologist will be mandatory as outlined in Appendix 1 on the EA Cultural Monitoring, Protection and Discovery Plan for the Upper Green River Walking Trail and Reforestation ARRA project. No consultation with Native American tribes was necessary for this project.

**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.**

There are no known gray wolf dens within the project area; however due to the proximity of elk feedgrounds to the project area, there may be foraging wolves from time to time. There are no anticipated effects to the gray wolf from the project and this species will not be discussed further.

project area is not known to contain habitat for Canada lynx, grizzly bear, black-footed ferret, or mountain plover.

Greater sage-grouse may forage for insects occasionally along the banks of the Green River among the willows. There are plenty of places for sage-grouse to forage and access water outside of the excluded areas. The exclusion areas are between 1-3 miles away from the sage-grouse leks preventing a significant proportion of collisions from occurring. If sage-grouse are found to collide with these exclosures they will be marked with reflectors or more drastic measures such as removing the exclosure will occur if necessary. This project “*will not jeopardize the continued existence*” of sage-grouse.

The exclosures are going to be built in the fall outside of the yellow-billed cuckoo nesting season. If there are yellow-billed cuckoos in this area, the willow habitats will be largely not be excluded. The exclosures may provide additional protection from predators if the cuckoos chose to nest within them. The design of the exclosure should be large enough for cuckoos to pass through if necessary. If there are issues with cuckoos colliding or constriction the exclosure will be modified or removed. This project “*will not jeopardize the continued existence*” of the yellow-billed cuckoo.

*Ute Ladies'-tresses Orchid.*

Ute ladies'-tresses orchid (*Spiranthes diluvialis*) was listed as threatened in 1992. In Wyoming, Ute ladies'-tresses orchid have been located on old oxbows or flood plain terraces associated with small streams on sites that remain moist (meadow plant communities) throughout the summer, either due to seasonal flooding or sub-irrigation (Fertig, 2000). All four of the known populations in Wyoming occur in the eastern half of the state. Searches were conducted in western Wyoming (Jackson Hole, National Elk Refuge, and Green River Basin) during the 1990s (Fertig, 2000). There are no known occurrences of the Ute ladies'-tresses orchid within the project area. There is no habitat in the project area fitting the requirements of the plant. There are no anticipated effects to the Ute ladies'-tresses orchid from the project and this species will not be discussed further.

*Blowout Penstemon*

In Wyoming, blowout penstemon (*Penstemon haydenii*) is found on sandy blowouts and sand dunes in the early stages of plant development (Heidel et al., 2007). There are no known records of blowout penstemon in the or near the project area. There is no habitat in the project

area fitting the requirements of the plant. There are no anticipated effects to the blowout penstemon from the project and this species will not be discussed further.

**10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.**

The implementation of either of the action alternatives would not threaten a violation of Federal, State, or local law, or requirements imposed for the protection of the environment.



Shane DeForest  
Field Manager  
Pinedale Field Office

10-4-10

Date

**Environmental Assessment**

**for**

**Warren Bridge Area Cottonwood Reestablishment Project**

**Prepared by**

**Bureau of Land Management**

**Pinedale Field Office**

**Pinedale, Wyoming**

**DOI-BLM-WY-100-EA-10-559**



## **1.0 INTRODUCTION**

**Title:** Warren Bridge Area Cottonwood Reestablishment Project

**EA # DOI-BLM-WY-100-EA-10-559**

**Location:** The project location area is about 20 to 28 miles driving distance from Pinedale, WY via United States Highway 191 and the Green River Access Road. The project area is located within the Warren Bridge Recreation Area (WBRA). The Green River Access Road will be the main access route to the project site. The turnoff is on the northeast side of US191, roughly 20 miles north of Pinedale, WY. The legal location of the project is T 36 N, R 111 W, S 1, 11, 14, 23, and 27 and T 35 N R 111 W, S 4 and 5.

### **1.1 Background**

Currently, cottonwood tree stand communities have been depleted from the banks of the Upper Green River within and surrounding the proposed project area. A combination of the tie-hacking operations during the late 19<sup>th</sup> Century by Union Pacific Railroad along with current and past cattle foraging may have contributed to this decline. This project would be designed to attempt to create re-establishment of cottonwood tree stand communities within the identified project area. These areas will need to be individually fenced to prevent grazing from livestock, deer, elk, moose, and beaver on young newly planted cottonwood trees.

This effort is particularly important for bald eagles in the Greater Yellowstone ecosystem, which tend to disproportionately select cottonwood trees for nesting (Harmata and Oakleaf 1992). In addition, by rehabilitating cottonwood tree stand communities in the proposed project area, the Bureau of Land Management (BLM) would be potentially creating a greater vertical structure which in turn could provide a greater species richness and density of passerine birds (Rumble and Cobeille 2004).

Over the long-term this project would potentially provide important nesting, roosting, and foraging habitat to raptors and migrant songbirds and would also potentially provide a rich recreational experience to the BLM visitors. Wildlife viewing is often an important component to recreational walkers and hikers and this element of the Upper Green River Special Resource Management Area (SRMA) project could potentially bring back a component of wildlife viewing that has been lost since the late 19<sup>th</sup> Century.

### **1.2 Purpose and Need for the Proposed Action**

The purpose of the action is to reestablish cottonwood tree stand communities within the proposed project area. This will be achieved by planting a variety of narrow-leaf cottonwood age classes of trees from seedling and sapling size up to 2-3' tall trees, both containered and bare root stock, in 3 to 4 identified locations along the Upper Green River within the WBRA.

The need for the action is cottonwood tree stand communities have been depleted from the banks of the Upper Green River within and surrounding the proposed project area.

### **Decision to be Made:**

There are 2 decisions to be made:

First determine whether impacts of the action alternative are significant. If the impacts are significant, a NOI (notice of intent) to prepare an Environmental Impact Statement (EIS) will be prepared. If the impacts are not significant, a Finding of No Significant Impact (FONSI) will be prepared. If a FONSI is prepared, the second decision is to determine whether to authorize an alternative through a Decision Record (DR).

### **1.3 Relationship to Statutes, Regulations, Plans or Other Environmental Analyses.**

The Proposed Action is in conformance with the following land use plan and associated environmental analyses as required by 43 CFR 1610.5:

#### **Pinedale Resource Management Plan (RMP)/Record of Decision (ROD) (November 2008) –**

The Pinedale RMP directs management of public lands within the Pinedale Field Office (PFO), identifies objectives or goals for resources, and sets priorities for achieving these objectives and goals.

The RMP states on page 2-39, Objective 4 Action b of the 2.3.11 Vegetation Management section is to “Vegetation treatments will be designed to reduce erosion, protect Special Status Plant Species, enhance vegetation community and watershed health, increase forage production, and enhance wildlife habitats.”

The RMP states on page 2-52, Objective 8 of the 2.3.16 Wildlife and Fish Habitat Management section is to “Maintain raptor habitats and territories within the planning area to ensure long-term species sustainability and widely distributed functioning habitats in accordance with the MBTA.”

The RMP states on page 2-55, Management goal of the Wild and Scenic River Area in the 2.3.17 Special Designations and Management Areas section is to “Maintain or enhance the outstandingly remarkable scenic, recreation, fishery, ecological, and other values. Maintain the primitive, pristine, rugged, and unaltered character of the WSR units.”

### **Other Authorities**

This Environmental Assessment (EA) fulfills the National Environmental Policy Act (NEPA) of 1969 requirement for site-specific analysis. The Proposed Action is 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.

## **2.0 PROPOSED ACTION AND ALTERNATIVES**

### **2.1 Alternative I – No Action Alternative**

The cottonwood tree planting would not occur within the portion of the Upper Green River as described within the Proposed Action. The project area would remain devoid of cottonwood or other tree habitats for nesting and foraging bald eagles.

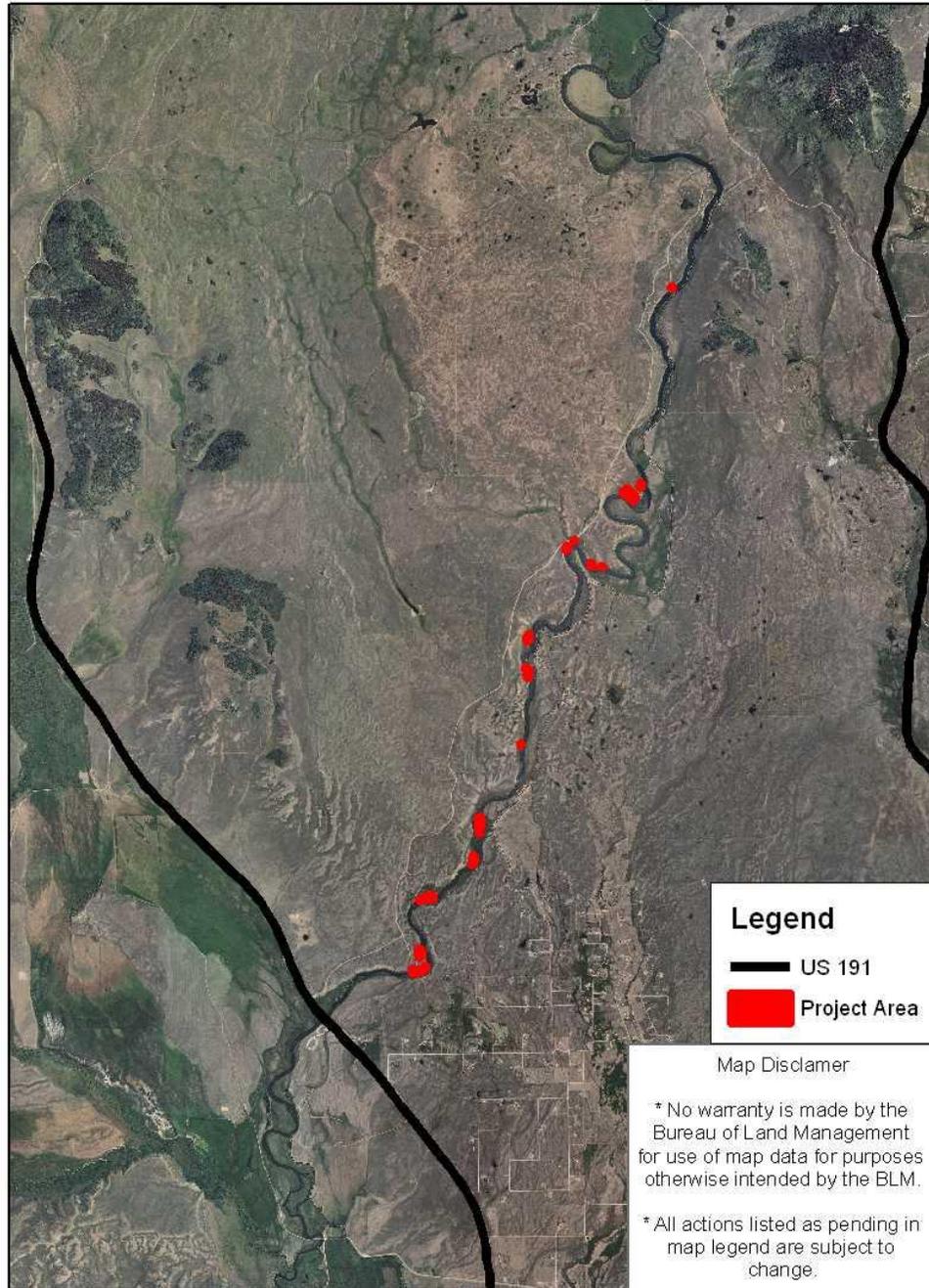
### **2.2 Alternative II – Proposed Action**

The BLM PFO proposes to plant a variety of narrow-leaf cottonwood age classes of trees from seedling and sapling size up to 2-3' tall trees in 3 to 4 identified locations along the Upper Green River within the proposed project area (Map 1). The trees would be planted by using a variety of implements depending on the size of the tree and the substrate type, i.e. tree spades for larger trees, shovels and posthole diggers for smaller trees and a backhoe for containered trees. The digging implement would also be dependent on whether the machine can or cannot physically get into the area due to weather or road conditions. The root-balls of the tree would be planted deep enough for the optimum chance to reach the ground water table, potentially increasing viability and chances for success of establishment. The trees would be planted within feasible stretches of BLM lands along the rivers' edges. Gaps between planting sites would be provided to allow wildlife and cattle opportunities to water and for stream crossing. The trees would also be fenced using a wildlife exclusion fence to prevent ungulates from grazing on the newly planted seedlings/saplings. There would be five fence exclosures associated with the identified tree planting efforts. Each exclosure is roughly 0.2 acre or less in size. The fence would be maintained by the BLM until the trees reach heights beyond grazing affects such as girdling. This tree planting would increase the amount of available habitat and tree suckering/stand development along these rivers within the proposed project area once the planted trees become established at the site. The BLM proposes the planting of approximately 100 to 300 cottonwood trees ranging in size from seedling to sapling to 2-3' tall (both containered and bare root stock) on BLM administered lands within the Upper Green River area of the WBRA.

Trees would be unloaded and stored until planting within the Warren Bridge Campground. Tree planting would tentatively began on October 05, 2010 and tentatively end on October 24, 2010. Tree planting would be done by the use of shovels and/or hand held battery-powered augers. Trees would be transported from planting site to planting site by means of pickup truck and/or ATV. In planting units where islands are to be planted, such as Camp Unit 7, the trees would be transported across the Green River by means of hand carrying (in areas where the water level is low enough for a person to safely walk across) and/or by means of aluminum boat, inflatable raft, or canoe (in areas where the water level is too high for a person to safely walk across). The Contractor would travel on existing roads and/or two-tracks within the project site to access planting areas. In areas where private land must be crossed to access a planting unit, such as Planting Unit East 1 & West 1, it would be the responsibility of the Contractor to gain permission and/or access across private lands to access the unit(s). No new roads would be constructed in the implementation of this project.

Map1. Project Area Map

## Warren Bridge Area Cottonwood Reestablishment Project



0 0.4 0.8 1.6 2.4 3.2 4 Miles



### **3.0 AFFECTED ENVIRONMENT**

**The following are not present or will not be affected and will not be further analyzed:**

Air Quality  
Areas of Critical Environmental Concern (ACEC)  
Environmental Justice  
Prime or Unique Farmlands  
Fire and Fuels  
Hazardous or Solid Wastes  
Paleontology  
Minerals  
Soils  
Wilderness Values

#### **3.1 Wildlife**

A wide diversity of wildlife inhabits the sagebrush steppe within the Warren Bridge Area Cottonwood Reestablishment Project area. Some of the sagebrush obligate species that are found in the area include: pronghorn antelope, mule deer, pygmy rabbit, sagebrush vole, sage thrasher, sage sparrow, brewer's sparrow, greater sage-grouse, and the sagebrush lizard.

Several species of raptor use the Warren Bridge Area Cottonwood Reestablishment Project area for feeding, breeding, and sheltering: bald eagles, osprey, sharp-shinned hawks, golden eagles, red-tailed hawks, ferruginous hawks, northern harriers, great horned owls, short eared owls, Swainson's hawks, American kestrels, and in dense forested areas goshawks.

The area also provides crucial winter range habitat for mule deer and moose and migration routes for pronghorn antelope and mule deer. This area provides important spring, summer, and fall habitats for mule deer, pronghorn antelope, and moose. The black butte elk feedground is within 0.65 miles of the project area and the Franz feedground is within 5 miles.

Bats that may forage and roost in the project area include: little brown bats, small footed myotis, long-legged myotis, long eared myotis, and fringe tailed bat.

Many migratory waterfowl and shorebirds inhabit the area from March-October. These species include the Canada goose, dabbling and diving ducks, and trumpeter swans.

Other mammals include coyote, red fox, raccoon, long-tailed weasel, mink, porcupine, opossum, and badger.

The fisheries in the area are rainbow, cutthroat, and brown trout. The fish habitat along the Warren Bridge Area Cottonwood Reestablishment Project area was negatively affected by tie-hacking operations and recently there has been an effort to enhance the fishery.

### Federally-listed threatened, endangered, proposed, Candidate and BLM Sensitive Species

There are no known gray wolf dens within the project area; however due to the proximity of elk feedgrounds to the project area, there may be foraging wolves from time to time. There are no anticipated effects to the gray wolf from the project and this species will not be discussed further.

There are three documented greater sage-grouse leks within 3 miles of the Upper Green River project area, which includes nesting and brood rearing habitats. Due to the high snow-load in this area, greater sage-grouse are hypothesized to have a localized migratory population. The project area is within sage-grouse core habitat.

There are willow communities in patches through project area which contains habitat for the yellow-billed cuckoo. The closest known observation of the cuckoo is within the Seedskaadee National Wildlife Refuge several miles west of the project area.

The project area is not known to contain habitat for Canada lynx, grizzly bear, black-footed ferret, or mountain plover.

### **3.2 Livestock Grazing**

The main portion of the project area falls along the upper Green River within the Buyer Horse Creek Individual Allotment (02038) at the north end and the Spade Individual Allotment (02072) at the middle and the south end. Cattle in both allotments graze the upland sagebrush-steppe vegetation and the riparian areas along the Green River as well as use the river as the main source of water. The project area crosses to the East-side of the Green River falling within the Northwest pasture of the 40-Rod Common Allotment (22002). However, the Canyon Irrigation Canal, running just upslope from the Green River on the east bank acts as an effective barrier to the permitted cattle of 40-Rod Common.

The 40-Rod Common Allotment contains 3,587 acres of BLM at 542 animal unit months (AUMs). Livestock use dates range from 5/18 through 6/27 for cattle and 6/15 through 9/1 for the horse permit. The allotment is split into four separate pastures: Northwest, Middle, South, and East pastures, though the Northwest Pasture will be the only one potentially affected by the proposed project.

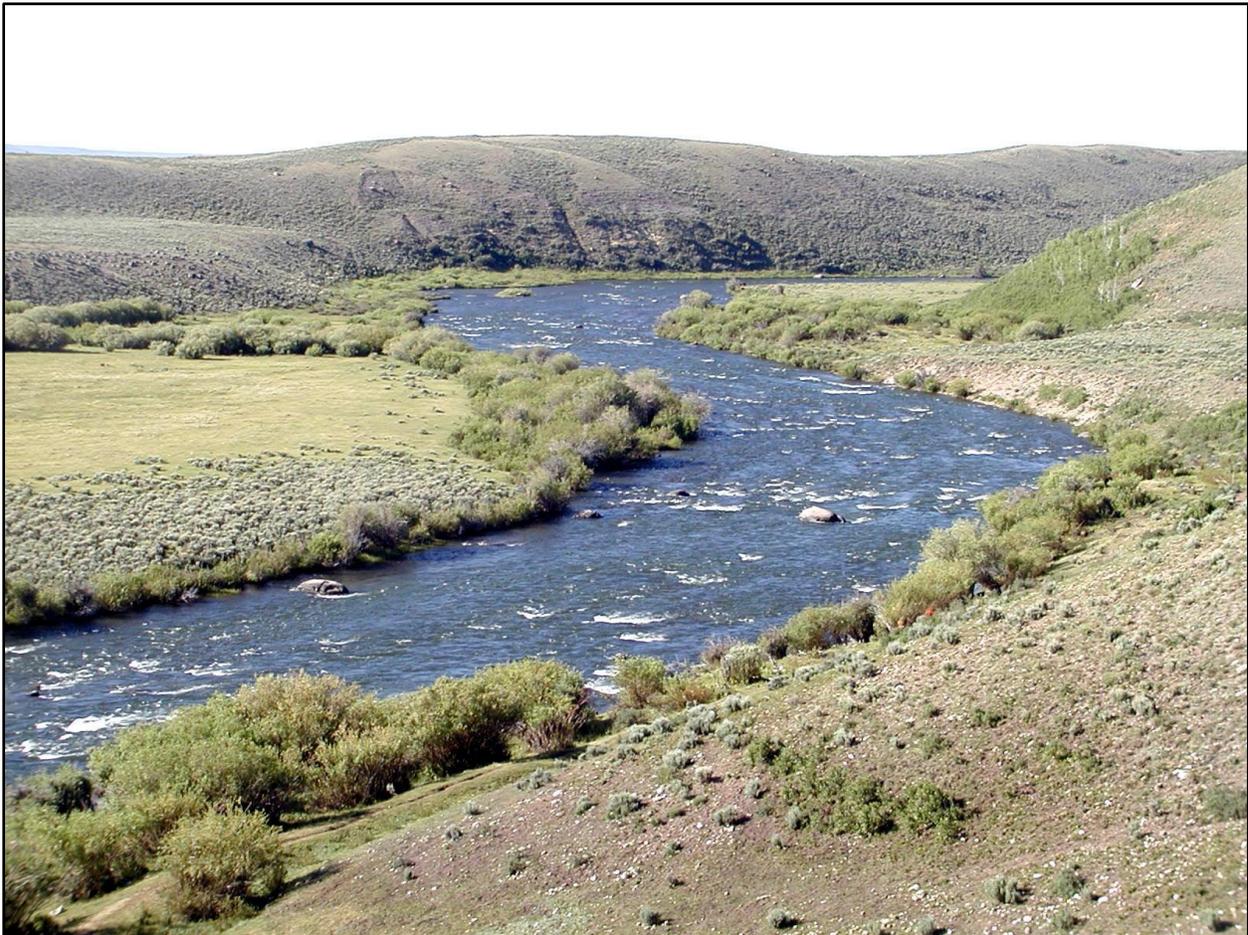
The Buyer Horse Creek Individual Allotment contains 1,726 acres of BLM at 351 AUMs, and 376 acres of private land at 67 AUMs. The allotment is typically stocked with yearling cattle from 5/27 through 7/11, though in recent years, the authorized permittee has grazed the cattle in the allotment for a shorter time period.

The Spade Individual Allotment contains 2,393 acres of BLM at 688 AUMs and 2,832 acres of private land at 916 AUMS. The allotment is broken up into three separate pastures of varying sizes: the upper "W Pasture" at 91% public land, the middle "Franz Pasture" at 10% public land, and the lower "Spade Pasture" at 43% public land. Both the W and Spade pastures border the Green River. The pastures within the allotment have been grazed by both yearling cattle and

cow/calf pairs and are permitted from 6/1 through 7/2, although use in the Franz Pasture (at 10% public land) is not restricted so long as over-utilization and deterioration of the Federal range does not occur.

### 3.3 Vegetation

The WBRA has been identified as suitable for the reestablishment of native narrow leaf cottonwood trees. The recreating public is naturally attracted to the river corridor and riparian areas. Today, large woody trees are nearly absent in the WBRA where this tree species may have formerly existed. The site is now dominated by almost bush like willow stand communities with a variety of grasses, forbs, and shrubs covering the understory, riparian areas, upland slopes, and adjacent drainage cuts (Picture 1).



Picture 1. Vegetation community along the Green River in the WBRA.

Ecological sites are along the Green River corridor, in two precipitation zones. The first precipitation zone is 10-14" and includes gravelly loam, clay loam, and sandy clay loam sites with grasses, forbs, and shrubs common to this type of precipitation zone in central and western Wyoming. The second zone is 15-19" and includes gravelly loam, clay loam, and sandy clay loam sites with scattered Aspen pockets and Wetland/Riparian sites with large to medium sized

woody vegetation (such as willows & water birch), grasses, forbs, and shrubs common to this type of precipitation zone in central and western Wyoming. Growth of native cool season plants begins around May 15<sup>th</sup> and continues until around August 15<sup>th</sup>.

Prevailing winds are from the southwest, and strong winds are less frequent than other areas of Wyoming. Occasional storms, however, can bring brief periods of high winds with gusts exceeding 50 mph.

Aspen stands in the project area are in very limited quantities. Existing stands found within the project area are in the very early stages of establishment and are isolated to side hill drainages. Years of continued browsing of young clones by livestock and wildlife have resulted in very small stand sizes.

Cottonwoods are a crucial vegetation component of the proposed project area. They are a key trees species used by eagles and raptors along river corridors for nesting and for perching. Given the present absence of large woody plant species such as cottonwood trees within the proposed project area it is quite possible that the decline of eagle and raptor use of the area for hunting and nesting would continue to decline.

In general, mountain big sagebrush conditions are poor to fair within the project area. The age structures of these plant communities are dominated by decadent and over-mature plants with moderate regeneration or recruitment. This is believed to be attributed primarily to historic livestock use, high wild ungulate populations (primarily elk), and past drought seasons.

#### Special Status Species

##### Threatened and Endangered Species

###### *Ute Ladies'-tresses Orchid.*

Ute ladies'-tresses orchid (*Spiranthes diluvialis*) was listed as threatened in 1992. In Wyoming, Ute ladies'-tresses orchid have been located on old oxbows or flood plain terraces associated with small streams on sites that remain moist (meadow plant communities) throughout the summer, either due to seasonal flooding or sub-irrigation (Fertig, 2000). All four of the known populations in Wyoming occur in the eastern half of the state. Searches were conducted in western Wyoming (Jackson Hole, National Elk Refuge, and Green River Basin) during the 1990s (Fertig, 2000). There are no known occurrences of the Ute ladies'-tresses orchid within the project area. There is no habitat in the project area fitting the requirements of the plant. There are no anticipated effects to the Ute ladies'-tresses orchid from the project and this species will not be discussed further.

###### *Blowout Penstemon*

In Wyoming, blowout penstemon (*Penstemon haydenii*) is found on sandy blowouts and sand dunes in the early stages of plant development (Heidel et al., 2007). There are no known records of blowout penstemon in the or near the project area. There is no habitat in the project area fitting the requirements of the plant. There are no anticipated effects to the blowout penstemon from the project and this species will not be discussed further.

### BLM Sensitive Plants

The BLM has indicated that the following special status plant species may occur within the Pinedale Resource Area and could occur if suitable habitats are present: meadow pussytoes, Trelease's milkvetch, cedar rim thistle, large-fruited bladderpod, beaver rim phlox, tufted twinpod, whitebark pine, and limber pine. There are no known occurrences of the BLM sensitive plants within the project area. There is no habitat in the project area fitting the requirements of the plants. There are no anticipated effects to these plants from the project and these species will not be discussed further.

### **3.4 Invasive Plant Species**

Many invasive plant species are classified as noxious weeds, are aggressive, and have the ability to dominate many sites with dramatic impacts to native plant communities. Noxious weeds are defined in Executive Order (EO) 13112 as those “species whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Weeds are often able to establish in areas following surface disturbance and are primarily present along roads, areas of oil and gas development, and in heavily grazed areas. According to the Wyoming Cooperative Agricultural Pest Survey (CAPS), there are 24 state-designated noxious weeds and four county-declared weeds in Sublette County. Current management includes annual monitoring and treatment of identified infestations. Canada thistle (*Cirsium arvense*) has been recorded in the project area. The extent of this species within the project area is not known at the present time.

### **3.5 Riparian Resources**

The project would take place within the floodplain of the Green River. A Proper Functioning Condition (PFC) assessment was conducted on this reach in 1997. The river was rated in proper functioning condition. The sinuosity and width/depth ratio have not recovered from historic tie hack operations which widened the channel. No deficiencies were noted in vegetation required for channel stability; however, the system was rated at the lower end of the vegetation succession scale, presumably due to the lack of trees and woody vegetation.

This section of the Green River is an important trout fishing stream. In the late 1990's, the Wyoming Game and Fish Department (WGFD) installed a number of logjam structures of large anchored logs and boulders to create resting habitat for trout. These structures were determined a success but were short-lived as fish habitat (Picture 2). Presently, most of them have captured so much sediment that the spaces between the logs are filled and provide habitat for establishment of woody species.



Picture 2. Logjam structure on the Green River in the WBRA.

### **3.6 Recreation**

The WBRA has been identified as suitable for the reestablishment of native narrow leaf cottonwood trees. The recreating public is naturally attracted to the river corridor and riparian areas. Today, large woody trees are nearly absent in the WBRA where this tree species may have formerly existed. The recreational values of trees and their reestablishment in the WBRA are many. For recreationists, large trees are appreciated for their shade and aesthetic beauty. Trees also provide habitat for a variety of wildlife most notably birds that use the trees for breeding, foraging and perching. Opportunities for observing the lifecycles and habits of birds are valued and sought out by campers, sports people and avid bird watchers. An additional indirect benefit to recreation dependant resources is the stabilization of soils adjacent to riparian areas. The BLM has committed substantial public investment in recreational facilities at the river access areas associated with riparian areas within the WBRA. The eventual establishment of large trees in the riparian corridor of the WBRA is a desirable natural element of the recreation setting.

The WBRA, formerly known as the Warren Bridge Public Fishing Access Area, is regionally popular to outdoor enthusiasts whom enjoy activities such as fishing, camping, river floating, hunting and wildlife watching (Picture 3 and 4). BLM records of recreational use of the WBRA do not predate the early 1960's, but it is certain that area sportsmen utilized this area before the existence of developed recreation sites. The WBRA is part of the Green River SRMA which encompasses public lands bordering about 120 miles of the Green and New Fork Rivers within the PFO. The WBRA comprises about 7,100 acres of lands bordering 11 miles of the Green River.



Picture 3 and 4. Recreational use on the Green River in the WBRA.

The stated recreation management goal from the Pinedale RMP, dated 10/2008 is: Provide substantial personal, community, economic, and environmental benefits to local residents and visitors through recreational uses of the public lands. The first management objective is: Maintain or enhance the health and viability of recreation-dependent natural resources and settings within the planning area. The management objective specific to the Green and New Fork Rivers SRMA is to manage each recreation zone to provide opportunities for the public to achieve targeted, high-quality recreation activities and experiences that produce significant benefits to the visiting public.

### **Site Description**

Twelve river access areas are more or less evenly distributed along the rivers' west side. These recreation areas are accessed via a well maintained gravel road located north of US Highway 191. Ten of the river access areas are developed and provide restrooms, camp sites, picnic tables and fire rings. Four constructed boat ramps within the WBRA provide for launching or taking out watercraft. Typically, non-motorized watercraft is used for fishing, scenic floating and or adventure activities. Drift boats, canoes and inflatable rafts are the most commonly used watercraft. Camping is allowed anywhere in the WBRA, but is concentrated at the developed river access sites. There is no fee for camping. The maximum stay limit is 14 days. The nearby Warren Bridge Campground located on US191 is a fee campground which provides potable water, day use area, and trash collection and waste dump services.

The WBRA is accessed year-round but mostly visited from early May through the end of October. Accumulated winter snow prevents motor vehicle access during the winter and early spring. A minor amount of cross country skiing and snowmobiling occurs. Visitor use is greatest from Memorial Day to Labor Day. Commercial, guided and private float fishing occurs predominately from mid-June through mid-August. Shoreline wade fishing is the most popular type of fishing and occurs along the entire river portion of SRMA, but most notably from the 12 river access areas.

A recently delineated hiking trail provides for non-motorized access along the entire length of the Green River within the WBRA. This route is signed and will be maintained to the minimum level necessary to blend in with the semi-developed a natural setting. Other than interpretive and regulatory signing, no other developments are planned for the WBRA in the foreseeable future.

### **Visitor Use Estimate and Trends**

The most recent visitor data are provided by a 2005 use and users survey for the WBRA. This survey indicated annual user days to be 4,782 or 57,384 user hours. There is no accurate number for total visits. The visitor survey indicated about 51% of the visitors was from Wyoming. Eighty-four percent of the visitors drove more than 50 miles one way to visit the WBRA and 25% of the visitors drove more than 750 miles one way. The most important motive for user visits was to *enjoy the view* and *be close to nature*. Open ended visitor comments included a desire to have shade trees at some camp sites. Use has increased during the past ten years based upon traffic counts and personal observations. Visitor use within the WBRA is expected to increase as more people move to the region and pursue less expensive local outdoor leisure activities

### **3.7 Visual Resources Management (VRM)**

**The VRM Objective for this area of the PFO is VRM Class II.**

**Class II Objective:** The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape will be low. Management activities may be seen but will not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The scenic quality of the river corridor is high. The general setting is natural with few human created intrusions. The landscape depicts a variety of color with water, vegetation and topography. The river typically flows through open country of low lying hills, river bench terraces and bluffs rising to 60 feet above the river. Frequent, glacial generated shallow potholes are distributed throughout the upland areas. The river in the lower half of the WBRA is confined to a narrow canyon with vegetated bluffs, known as the Narrows, rise to several hundred feet above the river. The riparian areas are primarily vegetated by willows, other shrubs and grasses. Sparsely dispersed within the canyon portion of the WBRA are fir, juniper and aspen trees.

Soil colors are predominately light tan to brown and moderately contrast with the various shades of green vegetation. As vegetation loses moisture during late summer, the predominately green color of grasses and shrubs tends to lighten in color and contrast less with the tan colored soils.

The human created features noticeable from the river are primitive boat ramps, restrooms, river access roads, occasional livestock fences and water diversion structures (rock weirs and head gates). An irrigation canal is visible adjacent to the river for several miles. The canal is prominently visible from the road; high bluffs and in some places the river. Except for the irrigation canal, these features are small in scale and generally blend well with the surrounding landscape.

### **3.8 Wild and Scenic Rivers**

The Green River within the WBRA was determined to be suitable for inclusion in the National Wild and Scenic Rivers (W&SR) System. The tentative classification of this W&SR unit is scenic. The management goal for the Green River Unit is to maintain or enhance the outstandingly remarkable scenic, recreation, fishery, ecological and other values. Maintain the primitive, pristine, rugged, and altered character of the W&SR unit. Management actions will consider the impacts to these values. Recreation developments and wildlife and range improvements are allowed if there are no substantial adverse effects to the natural-like appearance of the lands within the waterway corridor (Picture 5).



Picture 5. The Green River in the WBRA.

### **3.9 Cultural Resources**

Numerous fur trapper biographies mention the abundance of beaver in the Green River basin and the Upper Green River area proper is referenced by Bonneville, Walker, Fitzpatrick, Meek and the Astorians. Exploration, trapping, hunting and trapper's rendezvous took place in the vicinity for many years and are well documented in the aforementioned biographies. In the late 19<sup>th</sup> and early 20<sup>th</sup> centuries the westward expansion of the Union Pacific Railroad relied on local

forests as a source of timber for railroad ties. “Tie-hacks” would harvest timbers from forests and stockpile them in river ways until spring runoff when river flows were high enough to carry logs to the town of Green River, Wyoming, for railroad use. This timbering led to loss of cover and scouring of the Upper Green River watershed.

The terrace along the Green River holds a high probability for buried cultural material. An extensive shovel testing plan was developed in order to verify site locations. As with many prehistoric site locales throughout Sublette County, surface artifacts have been collected for decades and surface manifestations are rare. For the Warren Bridge Area Cottonwood Reestablishment Project the most feasible method for developing a testing plan was to start with a walk through with the selected professional contracted archaeologist pointing out key areas needing testing. After this preliminary work the inventory and testing phase of the project was undertaken.

Numerous cultural sites were located, mostly subsurface. Very little surface manifestation of cultural significance was located. All terraces were shovel tested and these areas held significant, National Register Historic Places (NRHP) buried eligible cultural sites. Materials included pottery (Figure 1), stone tools and buried fire hearths.

Approximately 450 shovel tests were excavated within the Area of Potential Effect (APE). Most of which proved to be positive for holding buried cultural material. With this in mind during the placement of containered and bare root stock (large) trees monitoring by a professional archaeologist will be mandatory as outlined in Appendix 1. Cultural Monitoring, Protection and Discovery Plan for the Upper Green River Walking Trail and Reforestation ARRA project. No consultation with Native American tribes was necessary for this project.



Figure 1. Rare punctated ceramic pottery located during this inventory

## **4.0 ENVIRONMENTAL EFFECTS**

### **Direct and Indirect Effects**

#### **4.1 Alternative I – No Action Alternative**

##### **4.1.1 Wildlife**

There would be no change in species diversity or population abundance in the Upper Green River ecosystem. There are few locations under BLM jurisdiction where such a Bald Eagle habitat rehabilitation project could occur. Our raptor monitoring efforts in the Green River ecosystem show a decrease in speciation along portions of the New Fork and Green Rivers that are highly disturbed within and near highly developed areas like the Pinedale Anticline Natural Gas Field.

##### **4.1.2 Livestock Grazing**

The Action Alternative would have no direct impact to livestock grazing.

##### **4.1.3 Vegetation**

The vegetation structure within the proposed project area would continue to evolve on its current trend possibly eliminating the presence of large woody plant species such as cottonwoods needed for eagle and raptor nesting and hunting habitat along the Warren Bridge stretch of the Green River for many years to come.

##### **4.1.4 Invasive Plant Species**

The continuation of current invasive plant management activities (early detection, rapid response, plus continuous monitoring) will ensure impacts from non-native invasive species are minimized.

##### **4.1.5 Riparian Resources**

There would be no change in the vegetation composition of the riparian community along the river. The reach would remain dominated by herbaceous plants and willows. No benefits in vegetation or structural diversity would be realized, and there would be no ongoing source of seeds and root sprouts to continue the cottonwood community into the future. There would be no protection of existing riparian vegetation from fences constructed to protect newly planted trees from browsing and beaver activity.

##### **4.1.6 Recreation**

The recreational setting would not change. The recreational benefits of large trees associated with shade, wildlife and soil stabilization would not be realized.

##### **4.1.7 Visual Resources**

There would be no direct impacts to visual resources. The addition of aesthetic enhancements generated by trees associated with landscape line, form and color would be forgone.

#### **4.1.8 Wild and Scenic Rivers**

This no action alternative would not adversely impact the eligibility or suitability of this segment of the Green River to be managed as a scenic river within the National Wild and Scenic River System.

#### **4.1.9 Cultural Resources**

The APE of the project has been thoroughly inventoried resulting in the location of many areas holding buried cultural material. With the no action alternative cultural resources will not be impacted.

### **4.2 Alternative II – Proposed Action**

#### **4.2.1 Wildlife**

The addition of cottonwood trees will provide nesting, roosting, and foraging sites for songbirds, raptors and importantly bald eagles. The enclosure fence will be composed of 4" box wire which will allow small birds to fly through the wire and large birds will be able to fly over it. The impacts of birds getting caught in this type of fence are unknown. Anecdotal evidence suggests that the medium does not bind around the birds to cause constriction or entrapment. If monitoring shows birds getting caught and perishing due to the fence, adjustments will be made or the fence will be taken down. Migratory birds should not have problems as they typically fly at higher elevations than where the fences will be placed. There are no effects to migratory waterfowl in migration or their nesting and foraging behaviors due to the presence of the.

Bats foraging for insects along the river will have no problem avoiding the fencing or flying above the wire to catch prey. If monitoring shows bat mortalities, then adjustments will be made to prevent further issues.

It is proposed to use wildlife enclosure fence to prevent the grazing and girdling of young cottonwood trees from wild and domestic ungulates in order to give the trees the greatest chance for success. This may alter migration crossings during the time the fence remains standing, which could be anywhere from 5-20 years depending on growth rates and drought conditions. The enclosure fences will not be permanent and they will be between 0.25 and 1 mile apart to allow migration across the rivers. The impacts of the fence will be insignificant to mule deer, pronghorn antelope, elk, and moose. There are long term benefits of shade and an added food source as the cottonwoods mature and produce seedlings naturally.

The fences are necessary to prevent other small mammals from foraging on the saplings and young trees. To prevent burrowing under or squeezing into the enclosures, chicken wire will be wrapped around the bottom few feet of the enclosure.

The enclosures will have no direct effect on fisheries. Once the trees have become established they will provide shade for fry.

### Federally-listed threatened, endangered, proposed, Candidate and BLM Sensitive Species

Greater sage-grouse may forage for insects occasionally along the banks of the Green River among the willows. There are plenty of places for sage-grouse to forage and access water outside of the excluded areas. The exclusion areas are between 1-3 miles away from the sage-grouse leks preventing a significant proportion of collisions from occurring. If sage-grouse are found to collide with these exclosures they will be marked with reflectors or more drastic measures such as removing the exclosure will occur if necessary. This project “*will not jeopardize the continued existence*” of sage-grouse.

The exclosures are going to be built in the fall outside of the yellow-billed cuckoo nesting season. If there are yellow-billed cuckoos in this area, the willow habitats will be largely not be excluded. The exclosures may provide additional protection from predators if the cuckoos chose to nest within them. The design of the exclosure should be large enough for cuckoos to pass through if necessary. If there are issues with cuckoos colliding or constriction the exclosure will be modified or removed. This project “*will not jeopardize the continued existence*” of the yellow-billed cuckoo.

#### **4.2.2 Livestock Grazing**

The Proposed Action would have minimal impact to livestock grazing on the Buyer Horse Creek Individual Allotment at the north end, the Spade Individual Allotment at the middle and the south end, and the 40-Rod Common Allotment at the southeast end. Only a few small-acreage (less than one acre each) exclosure fences are proposed in conjunction with the proposed project. These small fenced areas are designed for minimal impact to movement and migration of both livestock and wildlife. A decrease in permitted AUMs would not be anticipated with the small number/size of exclosures.

Once established, the cottonwood trees may provide good long-term shelter for animals in the area. Concern may be had for the survival planted trees in association with herbivory and trampling, though the use of the exclosure fences around areas of concern will ensure proper protection.

#### **4.2.3 Vegetation**

The impacts of tree planting are expected to be minimal and of short duration. During plant dormancy, the growing points of most vegetation are located near or below the ground surface and any minor disturbance to the plant tops above the ground surface from walking and vehicle traffic is anticipated to have a minimal impact over the short term (6 months to 1 year). Over the long term (1 to 2 years) disturbed vegetation is anticipated to recover and continue its growth cycle. As the newly planted trees become established and viable seed producing trees, they would contribute to the expansion of cottonwood trees within the project area, indirect long term effects would be noticeable.

There would be five fence exclosures associated with the identified tree planting efforts. These exclosures would be used in an attempt to protect the newly planted trees from being eaten or damaged by both large and small wildlife as well as livestock species. Each exclosure is

roughly 0.2 acre or less in size. Impacts associated with the identified fence construction are anticipated to be minor since the fence enclosures are small in size. The fence enclosures are temporary and would be removed when the trees are successfully established and functioning naturally within their new environment.

The fence enclosures would add a minor element of change to the landscape. However, these are temporary and small in scale when compared with the immediate visual foreground landscape. There would be maintenance costs associated with the repair of fence damaged by animals, snow and or ice. The long term maintenance costs are anticipated to be minor.

#### **4.2.4 Invasive Plant Species**

Due to the activities involved in planting the trees the invasion of some noxious weeds that are present throughout the project area is likely. Annual monitoring and treatment for these weeds are part of an agreement between BLM and the Sublette County Weed and Pest District. An invasive plant management plan will be developed if invasive plants species are found in these disturbed areas per the 2008 BLM WY Reclamation Policy.

Some annual weeds may invade but will serve as cover to protect soil and hold moisture for the trees to establish. The annual weeds are short term and will be out competed by native vegetation over time.

#### **4.2.5 Riparian Resources**

In the short term, some vegetation would be disturbed by digging, particularly for the planting of the larger trees. For the seedlings, only minimal holes are required and vegetation disturbance would be very slight. Vegetation in these areas will recover within the a few years. As this is a riparian site and not water limited, all vegetation recovery will be rapid compared to upland sites.

In the long term, planting of the cottonwood trees would provide important species and structural diversity in the riparian community. On a river of this size, the roots of the cottonwood trees would provide more protection to banks than the current scattered willow communities provide. Eventually, dying trees would fall into the channel providing habitat diversity for fish and diversifying the riparian habitats as well.

Construction of fences to protect some of the newly planted trees from browsing and beaver activity would also provide protection for existing riparian vegetation in those areas.

#### **4.2.6 Recreation**

The direct effects to recreation users would be minor. Tree planting would occur when visitation is very low. Indirect effects of tree establishment to recreation visitors would occur until trees become large enough to noticeably enhance the scenery. As trees become established and viable seed producing trees contribute to the expansion of cottonwood trees within the project area, indirect long term effects would be noticeable. The introduction of shade, increased wildlife diversity and enhanced variety of scenery would benefit the recreation setting. Personal, environmental and economic benefits would be realized as people visit the area and appreciate

the views and natural environment. Likewise, indirect long term impacts may occur as these natural enhancements may attract additional visitors or contribute to an increase in length of visitor stay; however any adverse affect to the physical, social or administrative setting for the WBRA would be negligible.

The five fence exclosures would exclude people as well as wildlife from access to small parcels of public land. Each exclosure is 0.2 acre or less in size. This impact to public use would be minor since the fence exclosures are small and spaced so as not to prevent access to the river shoreline or developed recreation areas. The fence exclosures are temporary and would be removed when no longer necessary.

There would be maintenance costs associated with the repair of fence damaged by animals, snow and or ice. The long term maintenance costs should be minor.

#### **4.2.7 Visual Resources**

Implementing the proposed action would in the short term add minor visual change to the landscape. The seedlings would not be noticeable to the casual observer. The majority of the trees (seedlings) would be planted outside of fence exclosures. Larger saplings would be visible within the fenced exclosures, but would blend in with native riparian willows and shrubs. After a growing season these trees would likely not be noticeable as different from the existing vegetation. With successful reestablishment, mature trees would attract the attention of the casual observer. As intended, mature trees would become a natural vegetation feature of the landscape.

In the short term, the wire and post fence exclosures would introduce new vertical and horizontal lines to the characteristic landscape. The form of the fence would be noticeable in the foreground by the casual observer when viewed within several hundred yards of the fenced plantings. The enclosed riparian vegetation would partially screen the fence. The existing vegetation would substantially reduce the contrast of the fence. With the protection of vegetation from browsing, the vegetation growth is expected to be considerable. This expanded growth, would further screen the fence exclosures. After four to eight years of growth, the fence would not likely be noticeable to the casual observer except within the immediate vicinity of the plantings. As the trees mature, the fences would be removed. With successful tree establishment, the trees would blend in with the characteristic landscape. The VRM Class II management objectives would be maintained and over time the scenic quality enhanced.

#### **4.2.8 Wild and Scenic Rivers**

This project would not adversely impact the eligibility or suitability of this segment of the Green River to be managed as a scenic river within the National Wild and Scenic River System. The fence exclosures would add a minor element of change to the landscape. The fences are temporary and small in scale when compared with the immediate visual foreground landscape.

#### **4.2.9 Cultural Resources**

Due to the high probability for encountering buried cultural material within the APE, monitoring the placement of containerized and bare root stock (large) trees by a professional archaeologist will be mandatory. If buried cultural material is inadvertently discovered during the tree placement in the specific locale work will be terminated until the cultural material can be scientifically removed. Following salvage work, scientific examination will require possible carbon 14 dating, lithic analysis, macrofloral/fauna studies and possible bone analysis. In some instances, tree placement may be considered an adverse effect to eligible cultural properties and will have to be relocated to an adjacent area. Other direct effects that may be of concern is the eventual bioturbation of cultural material by the roots of the newly planted trees, this factor is outweighed by the benefit of new tree growth along the Upper Green River.

Indirect effects include trampling by wildlife and livestock that will be drawn to the newly planted trees and eventual shaded areas. Substantive vandalism/looting may also be expected due to an increased use of the area by the public.

#### **4.3 Cumulative Effects**

This action in conjunction with past, present and reasonably foreseeable actions would generate both adverse and positive effects upon visitor experiences within the river corridor. Some visitors may view this action in conjunction with recent recreation improvements and land management practices as detrimental to their recreation experience. Other's visitors may believe this action adds long term value to the setting and recreation experience. Cumulative effects in relation to the overall visitor recreation experience will not be substantial.

South and west of the project area is the Pinedale Anticline Natural Gas Field. This field straddles the New Fork River for a 6 miles stretch going west to east and is bordered to the west by the Green River. These portions of the New Fork and Green Rivers have been found to contain highly valuable raptor nesting habitats, including bald eagle winter roosting habitats. Unfortunately due to several factors the raptors including bald eagles have had several inactive nests along the rivers within and adjacent to the Pinedale Anticline. Over the next several decades the BLM is optimistic that this project will provide nesting, foraging, and roosting habitats to mitigate impacts along other stretches of the New Fork and Green Rivers. As well as reestablish historic cottonwood stands to the Upper Green River. In addition, migratory songbirds and many other species of wildlife will benefit from an additional food source, shade, and nesting habitat.

#### **4.4 Mitigation Measures Considered**

The fence enclosures are small (less than 0.2 acre each) and spaced so as not to impede visitor use of the area.

The larger trees are protected by fences from damage by livestock, wildlife and humans.

Reduce or eliminate visual intrusion created by the fence enclosures. The temporary fences would be removed as the trees mature and are no longer vulnerable to damage by livestock or wildlife. If tree reestablishment is unsuccessful the fence enclosures would be removed.

The cost of fence maintenance would be shared by the recreation and wildlife management programs.

In the event of future cultural discoveries costs for further excavation, sampling and dating of materials will be adequately covered.

If any cultural values are discovered during project implementation, they would be left intact and the BLM's authorized officer notified. The authorized officer would conduct an evaluation of the cultural values to establish suitable mitigation or salvage.

No new roads would be constructed.

## 5.0 AGENCIES CONSULTED

Wyoming Game and Fish Department

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## **Appendix 1**

### **Cultural Monitoring, Protection and Discovery Plan for the Upper Green River Walking Trail and Reforestation ARRA project**

Archaeological resources and human remains are protected under a number of Federal statutes including, but not limited to, the National Historic Preservation Act (NHPA), the National Environmental Policy Act (NEPA), the Archaeological Resource Protection Act (ARPA), the Native American Graves Repatriation Act (NAGPRA), and American Indian Religious Freedom Act (AIRFA). All care must be taken by the Bureau of Land Management (BLM) Pinedale Field Office (PFO) with multiple development projects in the Pinedale District to adhere to the mandates of this legislation regarding the protection of cultural resources within the Area of Potential Effect (APE).

Class III inventories of Upper Green River walking trail and reforestation project rights-of-way (ROW) and APEs have been carried out prior to construction and all sites available for visual inspection and those located during extensive shovel testing are presumed to have been identified and documented. However, the potential still exists for previously unknown cultural resources to be encountered during construction, reclamation, or maintenance associated with most development projects. Such discoveries should be limited in number and will almost exclusively be limited to subsurface finds of cultural deposits. Some sites that were once visible have been buried or obscured by natural depositional processes in some areas, and by agricultural or other human activities in others. Such sites are not available for visual surficial inspection; therefore, they are not within the scope of pedestrian inventory.

Unanticipated discoveries may fall into two categories depending on the nature of the cultural materials found. The first category includes archaeological materials such as artifacts and features (e.g., hearths, pit structures, remains of dwellings). The second category consists of human remains. All personnel involved in construction, construction zone rehabilitation, operation, and maintenance projects will be instructed on site avoidance and protection measures, including information on the statutes protecting cultural resources.

#### **Monitoring**

Avoidance will occur at all NRHP-eligible sites within the APE of the Upper Green River trails and Reforestation Projects where large burlapped and balled trees will be planted with the exception of one site (48SU7195) where up to 1,000 saplings will be planted. Monitoring will be done by PFO cultural specialists. Resources discovered during preconstruction or construction monitoring activities will be treated in accordance with an approved Treatment Plan. The applicant activities in the area of the discovery will be halted until the applicant is notified by the BLM-PFO that mitigation is complete and activities can resume. All cultural resource monitoring activities will be conducted by qualified BLM archaeologists. Cultural resource monitors are empowered to halt all construction activities in the vicinity of the discovery situation.

## **Protection Plan**

The BLM-PFO will implement the following Cultural Resource Protection Plan for identified cultural resource properties within the project APE. All identified NRHP-eligible sites within the APE of the Upper Green River Trail and Reforestation projects will not be planted with large burlap and balled trees. One eligible site (48SU7195) will have up to 1,000 saplings planted within and surrounding the site boundary.

No barrier fencing will be incorporated into this project other than the elk proof fences surrounding some of the planting areas which contain no known cultural material.

## **Discovery Plan**

### **Archaeological Resources**

Where a discovery is made, the construction foreman, the quality assurance/quality control (QA/QC) or compliance monitoring personnel, will direct construction away from the immediate vicinity of the discovery (a minimum 300-foot buffer on either side of the discovery location will be established), protect the discovery, and will contact the appropriate BLM-PFO personnel. As stated earlier, all large ball and burlapped tree plantings will be monitored by qualified BLM cultural specialists. The agency, in turn, will notify the State Historic Preservation Office (SHPO), and other parties as appropriate, for all discoveries. In the event that construction personnel detect any signs of a potential discovery, work in the immediate vicinity will cease or be directed away from the location while the BLM Authorized Officer (AO) is notified. Work will not resume in the area of discovery until such time as authorized by the AO, after the appropriate authorization from the Pinedale BLM AO.

Discovery situations will be handled in an expedited and respectful manner, so as to not interfere with the construction schedule any more than is necessary. In all discovery situations, construction work will be redirected away from the discovery, or halted by the BLM-PFO's designated official (e.g., Environmental/Compliance Monitor) at the discovery location for a period of time adequate to assess the nature of the discovery and to determine the necessary course of action as determined by the BLM. Any redirection or halting of work activities will be to provide for data recovery and personnel safety. The BLM will complete a Discovery Form or other acceptable documentation to assess and document a discovery each time construction is redirected.

### ***Discovery of Small, Simple Features***

If the discovery consists of a small, simple feature, such as a hearth, work will cease in the location and construction will be redirected from the location. The BLM archaeologists will collect ancillary samples from the feature fill for determination of age and subsistence data. Feature plans and profiles will be drawn and the feature will be photographed. Work will not resume in the area of discovery until such time as authorized by the BLM-PFO.

The BLM archaeologist will take the necessary time to complete any excavation or sample removal in a cost effective manner. Adequate time will be provided to insure complete and thorough work.

The appropriate BLM-PFO official may determine that some small, simple features are not, or that some feature types appear with such frequency that collection of detailed data might become redundant. In such cases no further work would be required beyond collecting ancillary samples from the feature fill for determination of age and subsistence data, drawing feature plans and profiles, and taking photographs. Once this determination has been made and the appropriate data has been collected, construction will be allowed to proceed immediately in the location of the discovery.

If the feature is evaluated as significant and designated for excavation by the BLM-PFO in consultation with SHPO, a Mitigation Plan will be developed by the BLM archaeologist within a period of two to five working days of notification of the discovery. SHPO will have the option to participate in consultation within these time frames. This Mitigation Plan will be linked to the approved data recovery plan(s) for the overall research design for the project. The Mitigation Plan will include a schedule for excavation.

In some cases, the discovery/feature may be unavoidable and in the direct path of construction. Under these circumstances, mitigative excavation will proceed immediately upon plan approval from the PFO in consultation with the. In circumstances where construction schedules allow, full excavation of discoveries/features may be possible before construction resumes. Where placement of construction activities can occur without immediate impact to the discovery, or where excavation of the portions of the discovery in the path construction has been completed, full implementation of the Mitigation Plan for the discovery may be deferred until construction in the vicinity has been completed. To ensure avoidance of project impacts, the discovery must be secured and protected against damage until the applicable consultation and treatment measures are implemented.

Subject to construction scheduling and the onset of inclement weather, treatment activities outside the immediate construction corridor may be deferred until the following field season. Under no circumstances will completion of treatment be deferred more than one field season. The project proponent shall be responsible for protecting the historic properties from construction impact until such time that any deferred treatments have been completed. Treatment may include, but is not limited to, site excavation.

### ***Discovery of Large, Complex Features or Sites***

In discovery situations where large, complex features (e.g., with multiple hearths, pithouse features or rock alignments) are discovered, construction will be delayed or redirected by the BLM around the discovery until the BLM as lead agency, and the Wyoming SHPO are notified and are able to evaluate the significance of the discovery in consultation. Datum points (bridge spikes with ¼" pvc sheath) will be established outside the construction zone near the discovery to permit easy relocation of the discovery/feature. The appropriate assigned marking will be used to identify and avoid the location until the appropriate level of treatment is completed. These datum points may be left in place after construction unless the discovery has been completely removed. Cultural resources that are determined to represent complex features or sites will be mitigated for adverse impacts following a BLM and Wyoming SHPO approved cultural resource data recovery plan.

## **Human Remains**

Human remains and associated artifacts may be discovered during construction, reclamation, or maintenance. If human remains are discovered under any circumstances, they will be secured and protected until such time as appropriate disposition has been determined in accordance with applicable local, state, and Federal statutes. Construction activities in the immediate vicinity of the discovery will cease immediately on direction of BLM-PFO, but may continue elsewhere in the APE. Immediately upon discovery the BLM archaeologist, in accordance with the procedures outlined below, will secure the location with appropriate security and avoidance measures. It may be necessary for the project proponent to provide 24-hour, on-site security for NAGPRA-associated discoveries or for other discoveries as determined by the BLM-PFO.

Specific procedures to be followed will depend on the ownership status of the lands where the human remains and associated artifacts are discovered. In all cases, the BLM-PFO Archaeologist and/or the BLM AO will be notified immediately by phone or in person, followed by written notification of any discoveries of human remains, associated and unassociated funerary objects, sacred objects, or objects of cultural patrimony.

Where possible, the BLM-PFO will develop a discovery plan under NAGPRA plans with potentially affected Tribes, in accordance with the specific requirements of the Act. In the absence of a discovery plan, the BLM will meet the requirements of NAGPRA for all inadvertent discoveries and discovery situations under NAGPRA on a case by case basis in accordance with 43CFR10. The BLM archaeologist will write an action plan for each case. In accordance with 43CFR10, construction may resume at the location 30 calendar days after certification by the notified Federal agency. The federal agency will be notified via written confirmation of the inadvertent discovery, if the resumption is otherwise lawful [43CFR10.4 (d, e)]. Therefore, all reasonable measures will be taken to resolve any issues regarding affiliation and disposition of discovered remains within this 30 day period.