DECISION RECORD
Welch Pilot Native Seed Production, Research, and Development
Environmental Assessment (EA), WY-070-EA14-272
Bureau of Land Management, Buffalo Field Office, Wyoming

DECISION. The BLM approves the Welch Pilot Native Seed Production, Research, and Development as described in Alternative B of the environmental assessment (EA), WY-070-EA14-272, incorporated here by reference.

Compliance. This decision complies with or supports:

- Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701); DOI Order 3310.
- Mineral Leasing Act of 1920 (MLA) (30 U.S.C. 181); including the Onshore Oil and Gas Orders.
- National Environmental Policy Act of 1969 (NEPA) (42 USC 4321).
- National Historic Preservation Act of 1966 (NHPA) (16 USC 470).
- Buffalo Resource Management Plan (RMP) 1985 and Amendments (1985, p28; 2001 errata p. 38).
- Buffalo and Powder River Basin Final Environmental Impact Statements (FEISs), 1985, 2003 (Appendix P. P-8) (2011).
- Welch Management Area Plan Environmental Assessment, WY-070-05-234.

BLM summarizes the details of the approval of Alternative B below. Alternative B represents the BLM proposed action.

Limitations.

1. If any cultural values (sites, features or artifacts) are observed during operation, they will be left intact and the Buffalo Field Manager notified. If human remains are noted, the procedures described in Appendix L of the PRB FEIS and ROD must be followed. Further discovery procedures are in Standard COA (General)(A)(1).

2. The BLM and any cooperating partners will use the existing two-track road to access the proposed seed plot. No surface disturbance will occur, the existing road will be used as is, and all vehicles will stay on the existing two-track road and will not deviate from it.

3. The existing two-track road may not be driven on during wet or muddy conditions.

4. The BLM will monitor the osprey nest to determine the extent of the bird's tolerance. Should the birds show agitation that may cause nest abandonment, BLM will delay operations to foster nesting success.

THE FINDING OF NO SIGNIFICANT IMPACT (FONSI). The proposal will have no significant impacts on the human environment, beyond those described in the PRB FEIS and Welch Management Area Plan EA, WY-070-05-234. There is no requirement for an EIS.

COMMENT OR NEW INFORMATION SUMMARY. BLM receive no updated or clarified policies during the pendency of developing the Welch Pilot Native Seed proposal or its NEPA analysis.

DECISION RATIONALE. I approve Welch Pilot Native Seed Production, Research, and Development based on the following:

1. BLM included mitigation measures to reduce environmental impacts while meeting the BLM's need. For a complete description of the mitigation measures see the EA.
2. There are no conflicts anticipated or demonstrated with current uses in the mitigation area.

3. This request conforms to the Buffalo RMP, specifically the Powder River Basin (PRB) Oil and Gas Project Record of Decision (ROD), pp. 12-14; WY-070-EA-13-137 Invasive Species Management EA.
4. Application of herbicide in the mitigation area will be implemented through the Sheridan County Weed and Pest District.
5. The selected alternative makes and implies no changes to access of public lands across private lands.
6. The combination of the BLM farmland and a water right provides the unique opportunity for the BFO to grow locally collected seed for research and development, primarily for reclamation and restoration projects. The produced seed would be used in trials, experiments, and also to rehabilitate and restore native plant communities within the Powder River Basin. Various wildlife species (i.e. mule deer, pronghorn antelope, elk, small mammals, and non-game birds) as well as the Greater Sage-Grouse, a candidate for protection under the Endangered Species Act, would benefit from restoration of lands with native seeds.

Administrative Review and Appeal Any affected party who is adversely affected by this decision has a right to appeal to the IBLA, in accordance with the provisions described in 43 CFR§ 4160.2. A person who wishes to appeal must file notice with the Field Manager, Bureau of Land Management, Buffalo Field Office, 1425 Fort Street, Buffalo, Wyoming, 82834, within 30 days of publication of the decision. The Notice of Appeal must identify the decision being appealed, and may include a statement of reasons for the appeal, the appellant shall file such a statement of reasons with the Interior Board of Land Appeals, Office of Hearings and Appeals, 801 North Quincy Street, Arlington, Virginia 22203, within 30 days after the notice of appeal was filed. The appellant shall serve a copy of the Notice of Appeal and any statement of reasons, written arguments, or briefs on each adverse party named in the decision from which the appeal is taken and on the Regional Solicitor, Rocky Mountain Region, U.S. Department of the Interior, P.O. Box 25007 D- 105, Denver Federal Center, Denver, Colorado 802225 not later than 15 days after filing the document. Service of the copy may be made by delivering the copy personally or by sending it by registered or certified mail, return receipt requested. Filing an appeal does not by itself stay the effectiveness of the final BLM decision. To request a stay of the final BLM decision pending appeal, see §4.471.

Field Manager: /s/ Duane W. Spencer Date: May 15, 2014

FINDING OF NO SIGNIFICANT IMPACT
Welch Pilot Native Seed Production, Research, and Development
Environmental Assessment (EA), WY-070-EA14-272
Bureau of Land Management, Buffalo Field Office, Wyoming

FINDING OF NO SIGNIFICANT IMPACT (FONSI). Based on the information in the EA, WY-070-EA14-272, which BLM incorporates here by reference; I find that: 1) the implementation of BLM proposal (BPS ID # 62830) Welch Ranch Native Seed Propagation, will not have significant environmental impacts beyond those addressed in the Buffalo Field Office (BFO) Final Environmental Impact Statement (FEIS) and Resource Management Plan (RMP) (1985, 2001, 2003, 2011), the Powder River Basin (PRB) FEIS, and the Buffalo Field Office's Invasive Species Management EA, WY-070-EA-13-137; and 2) BLM's proposal does not constitute a major federal action having a significant effect on the human environment. Thus, an EIS is not required. I base this finding on consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR 1508.27), with regard to the context and to the intensity of the impacts described in the EA, and Interior Department Order 3310.

CONTEXT. Vegetation treatments via native seed propagation in the PRB-area are a long-standing practice since Euro-American settlement when locals selected for species of economic or conservation values. The BFEIS, its 2001 update, and the PRB FEIS analyzed treatments to improve land and vegetation health in the PRB-area to sustain and improve the national, regional and local economies. The effects of the proposed action are not significant in the national, regional or local context.

INTENSITY. The implementation of Alternative B will result in beneficial effects in the forms of improving research, development, and eventual propagation of locally adapted native plants for use in habitat restoration for Greater Sage-Grouse (GSG) and other wildlife. There may be minor short-term effects such as minor erosion as a byproduct of cultivation and deer-proof fencing. Design features and mitigation measures minimize adverse environmental effects. The preferred alternative does not pose a significant risk to public health and safety. The geographic area of project does not contain unique characteristics identified in the 1985 RMP, 2003 (2011) PRB FEIS, or other legislative or regulatory processes. Research findings on the nature of the environmental effects are not highly controversial, highly uncertain, or involve unique or unknown risks. Alternative B does not establish a precedent for future actions with cumulatively significant effects. BLM used relevant scientific literature and professional expertise in preparing the EA. The scientific community is reasonably consistent with their conclusions on environmental effects of native seed development, propagation, and vegetative management treatments. There are no adverse effects anticipated to cultural or historical resources. The project area is clearly lacking wilderness characteristics because of an area road and farming. No species listed under the Endangered Species Act or their designated critical habitat will be adversely affected. The selected alternative will not have any anticipated effects that would threaten a violation of federal, state, or local law or requirements imposed for the protection of the environment.

Administrative Review and Appeal Any affected party who is adversely affected by this finding has a right to appeal to the IBLA, in accordance with the provisions described in 43 CFR§ 4160.2. A person who wishes to appeal must file notice with the Field Manager, Bureau of Land Management, Buffalo Field Office, 1425 Fort Street, Buffalo, Wyoming, 82834, within 30 days of publication of the finding. The Notice of Appeal must identify the finding being appealed, and may include a statement of reasons for the appeal, the appellant shall file such a statement of reasons with the Interior Board of Land Appeals, Office of Hearings and Appeals, 801 North Quincy Street, Arlington, Virginia 22203, within 30 days after the notice of appeal was filed. The appellant shall serve a copy of the Notice of Appeal and any statement of reasons, written arguments, or briefs on each adverse party named in the finding from which the appeal is taken and on the Regional Solicitor, Rocky Mountain Region, U.S. Department of the Interior, P.O. Box 25007 D- 105, Denver Federal Center, Denver, Colorado 802225 not later than 15 days

after filing the document. Service of the copy may be made by delivering the copy personally or by sending it by registered or certified mail, return receipt requested. Filing an appeal does not by itself stay the effectiveness of the final BLM finding. To request a stay of the final BLM finding pending appeal, see §4.471.

Field Manager: /s/ Duane W. Spencer Date: May 15, 2014

ENVIRONMENTAL ASSESSMENT (EA), WY-070-EA14-272
Welch Pilot Native Seed Production, Research, and Development
Bureau of Land Management, Buffalo Field Office, Wyoming

1. INTRODUCTION

1.1. Background

In a land exchange completed in 2004, the Bureau of Land Management (BLM) Buffalo Field Office (BFO) acquired 1,747 acres of land in exchange for federal minerals (coal) north of Sheridan, Wyoming. BLM addressed the land acquisition and disposition process in an Environmental Impact Statement (EIS) for land action, WYW 148816. The acquired land is in Sheridan County, north of Sheridan, Wyoming, and WY Highway 338 (Decker Highway) bisects the property at the Tongue River (A 1). The area is commonly called the Welch Ranch. In December 2005 the BLM and the Welch grazing lessee, entered into a cooperative farming agreement whereas a portion of Welch Ranch would be farmed for the production of hay. In the acquisition of the Welch Ranch, the BLM also acquired the ranch's water right to the Tongue River in the amount of 1.7 cfs or 3.37 ac-ft/days to irrigate up to 119 acres. The green hashed area shown on the map (Appendix 1 figure A 1). While the Welch Cooperative Farming Agreement states it is the lessee's responsibility to maintain these water rights, the BLM is proposing exercising a portion of this right to irrigate the plantings.

The combination of the BLM farmland and a water right provides the unique opportunity for the BFO to grow locally collected seed for research and development, primarily for range and wildlife reclamation and restoration projects. The produced seed would be used in trials, experiments, and also to rehabilitate and restore native plant communities in the Powder River Basin (PRB). Various wildlife species (i.e. mule deer, pronghorn antelope, elk, small mammals, and non-game birds) as well as the Greater Sage-Grouse, a candidate for protection under the Endangered Species Act, would benefit from restoration of lands with native seeds.

1.2. Need for the Proposed Action

BLM's need for this project is to determine whether, how, and under what conditions to support the Buffalo RMP and Amendments goals, objectives, and management actions for vegetation, range, visual resource, soils, and wildlife management (pp. 10, 16-20, 1985) (pp. 31, 33-38, 2001) (p. 9 Appendices A, E, and F, 2003); along with other RMP directives with allowing the BLM's or its contractors to conditionally make vegetation and habitat improvements on federal lands. Native seed production and management supports the RMP, the Federal Land Policy Management Act (FLPMA), other laws and regulations. Specifically, the proposal conforms to the RMP's goal: GM-1 Control noxious weeds on public surface lands.

1.3. Decision to be Made

The BLM will decide whether or not to approve the proposed native seed research and development project; and if so, under what terms and conditions.

1.4. Scoping and Issues

The proposed action was internally scoped for feasibility in the BLM and with the University of Wyoming's Sheridan Research and Extension Center.

Issues include:

Water right adjudication	Removal of hay ground	Herbicide
Osprey nest	Potential for historic properties	

2. PROPOSED PROJECT AND ALTERNATIVES

2.1. Alternative A – No Action

The no action alternative is to continue current use of the Welch Ranch, which includes production of alfalfa through a cooperative farming agreement in the project area, and not conduct the native seed research and development project.

2.2. Alternative B Proposed Action (Proposal)

The BLM proposes to initially cultivate one acre of land for native plant seed propagation. The seeding area would be in the eastern edge of the property (see Appendix 1 Figure A2), tucked to the side, minimizing disturbance to the existing haying operation. The use of local plant genotypes is preferable to the use of non-local genotypes or non-native species in restoration projects (Richards et al. 1998; Hufford and Mazer 2003); however, sources of local native plant genotypes are lacking. BLM will use land acquired from a land exchange and an existing water right. The BLM is currently developing an assistance agreement with a non-governmental partner.

The focus of the initial project is to test the viability of creating a native plant research and development facility on the Welch Ranch. Future years will focus on research and development of native plants for restoration activities as determined by the BLM. The BLM may require additional NEPA analysis in the future as we learn from this effort, develop assistance agreements and wish to expand; however, at this time we do not know what the future will be and cannot predict past this pilot effort.

Herbicide Application

In the spring of 2014 the Sheridan Weed and Pest District would apply a general herbicide to the seeding area to kill the existing vegetation. A general herbicide (Glyphosate) will be used according to the label. Application will be done with booms on an ATV or truck to avoid any drift and will be completed in one day. BLM completed a pesticide use proposal for the project, WYP070-14-003-P, incorporated here by reference.

Bed Preparation

The seed bed will be prepared with a small tractor to create furrows and a plow to place weed fabric and drip tape. This work is anticipated to take 1-2 days.

Fencing

As soon as the beds are prepped, a fence will be constructed. It is imperative that the fence be completed immediately after the weed barrier is placed to avoid deer hoof punctures. An eight foot high re-enforced woven wire fence will surround the planting plots. The fence will be supported through wooden braces and 10 ft T-posts, sunken 2 ft into the ground. The bottom 2.5 ft of the fence will use 3 ft poultry wire, sunken 0.5 feet into the ground. Next, 8’ woven wire designed to exclude deer will be installed with a 6” overlap of poultry wire on the bottom. Smooth wire will support the woven wire and poultry wire within the fence. Alternatively the BLM may use 8 foot high deer fence or substantially similar fencing options. Once 16ft gate will be placed on one of the corners of the enclosure, then fence construction is expected to take one week.

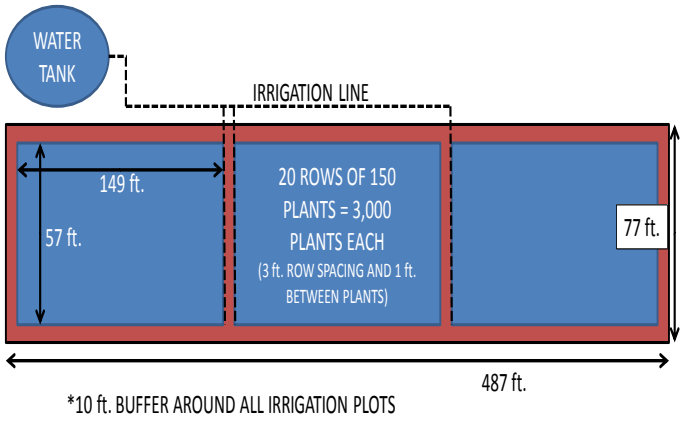
Planting

Within the one acre area there will be three 57 x 149 ft plots (20 rows of 150 plants = 3,000 plants) supporting 9,000 plants total (figure 1). Row spacing will be 3 ft and spacing in-between plants will be 1 ft. Surrounding each plot will be a 10 ft buffer, allowing room for a tractor. Plantings will be done by hand and are expected to take one week.

Seeds from local collections in support of the Seeds of Success program were cleaned in the Bend Seed Extractory and the Upper Colorado Plant Materials Center, then transferred to UW, Sheridan and are currently under cultivation in the UW greenhouse. Between mid-May and mid-June 2014, they will be transplanted to Welch Ranch. We anticipate collectable seed production in 2015. These plants should produce seed for 3-5 years (Cornforth et al. 2001).

In the first year of the project we will focus our propagation on collected grass species grown to tublings in the greenhouse and transplanted to the site. We expect bluebunch wheatgrass (*Pseudoroegneria spicata*), Indian rice grass (*Achnatherum hymenoides*), and green needlegrass (*Nassella viridula*). Bluebunch wheatgrass should produce 80-170 lbs /acre (Cornforth et al. 2001), Indian ricegrass should produce 100-200 lbs/acre (NRCS plant guide), and green needlegrass will produce 100-250 lbs./acre with our row spacing (Cornforth et al. 2001). These numbers may vary since they are based on production from seed while we intend to plant tubelings.

Figure 1: Planting Design



Irrigation
Plants will be irrigated through a drip irrigation system of 150 ft drip tapes attached to the irrigation header adjacent to the plots. Water will be pumped directly from the Tongue River adjacent to the planting area through a filter and into a storage tank. To maximize seed yield past what typically is produced on the range, plants would be irrigated over the growing season every week, or as soil moisture indicates. These irrigations would be fed by a storage tank and gravity feed a drip irrigation system.

Maintenance
Care for the facility will be primarily done with BLM staff, cooperators, contractors and volunteers. Weeds would be minimized with a plastic mulch cover. Staff would irrigate, weed, and harvest by hand the cultivated area. Harvested seeds would then be cleaned.

Conformance to the Land Use Plan and Other Environmental Assessments
This proposal does not diverge from the goals and objectives in the Buffalo Resource Management Plan (RMP), 1985, 2001, 2003, 2011.

3. AFFECTED ENVIRONMENT
See the Welch Management Area Plan EA,WY-070-05-234, to which this EA tiers.

3.1. Soils, Ecological Sites, and Vegetation

The project area is within the 171-Kishona Cambria complex, 0 to 3%t slopes mapping unit of the Soil Survey of Sheridan County Wyoming. The soils are deep to moderately deep (greater than 20 inch to bedrock), well drained and moderately permeable. Layers of the soil most influential to the plant community varies from 3 to 6 inches thick. These layers consist of the A horizon with very fine sandy loam, loam, or silt loam texture and may also include the upper few inches of the B horizon with sandy clay loam, silty clay loam or clay loam texture. Soil samples were collected at the 0-6, and 6-12 inch depths across the project area, and composited for fertility analysis at Inter-Mountain Lab in Sheridan Wyoming. Identified nutrient deficiencies, or soil chemistry issues will be mitigated at the time of planting. A complete description of these soils and their properties is in the Soil Survey of Sheridan County, Wyoming (U.S. Department of Agriculture, Natural Resources Conservation Service, 2011).

The plant community on public lands in the project area is in the 10- to 14-inch precipitation zone Northern Plains (NP) Major Land Resource Area (MLRA). The principle range/ecological site is Loamy. Vegetation commonly found on these sites includes western wheatgrass, bluebunch wheatgrass, needleandthread, green needlegrass, prairie Junegrass, threadleaf sedge, sandberg bluegrass, yarrow, asters, American vetch, tapertip hawksbeard, big sagebrush, birdfoot sagebrush and winterfat. Annual production ranges from 1,200 lbs./acre on a favorable year to 700 lbs./acre on an unfavorable year. Currently the project site is planted in alfalfa which dominates the site. Smooth brome, Russian thistle, cheatgrass (downy brome) and Japanese brome are present on the site but are a small component. Site elevation is 3520 feet. The average annual precipitation ranges from 10 to 14 inches with over one-half falling in April, May and June and less than one inch falling in each month of July, August, September, and October. The mean annual air temperature is about 45 degrees F. but ranges from 43 to 51 degrees F. The frost-free season is about 105 to 130 days.

3.2. Water Resources

The project area is in the Tongue River Drainage. The Tongue River runs northeast of the project area. The river flows from the Big Horn Mountains into Montana and is a tributary of the Yellowstone River. The reach that is near the project area is currently rated as impaired by the State of Wyoming. Currently the BLM holds a water right for use of water from the Tongue River for 1.7 cubic feet per second (cfs) to irrigate 119 acres.

3.3. Grazing

In 1985, BLM established 3 categories for allotments to identify areas where management was potentially needed, as well as to prioritize workloads and the use of range improvement funds. The categories classify allotments as Improve Existing Resource Conditions (I), Maintain Existing Resource Conditions (M), or Custodial Management (C). The project is in the Tongue River allotment which is a category "I" allotment. The allotment has been grazed for numerous years and is currently authorized for grazing from November 1 to April 30 for cattle. The total AUMs available for grazing on public lands in the allotment is 387 AUMs. The allotment is 100% BLM lands. Range improvements include fences, reservoirs and water wells. Because the livestock do not graze within the existing project area, no impacts are expected from either alternative. Therefore, impacts analysis for grazing is not carried forward.

3.4. Fish and Wildlife

3.4.1. Threatened, Endangered, Proposed, Candidate Species and Sensitive Species

3.4.1.1. Threatened and Endangered Species

An inquiry of the U.S. Fish & Wildlife Service (FWS) Information, Planning, and Conservation System (IPAC) on April 1, 2014 indicates that there are no species listed as threatened or endangered by the Endangered Species Act expected to occur at the project site.

3.4.1.2. Candidate Species - Greater Sage-Grouse

The nearest known Greater Sage-Grouse (GSG) lek is the Young's Creek Lek which is 3.5 miles to the northeast of the seed propagation area. This project site is in a "hay meadow" that is cultivated and may be used by GSG for feeding but is not considered GSG feeding, brooding, or nesting habitat.

3.4.1.3. Sensitive Species

A table of BLM sensitive species and their occurrence, as well as projects effects is in the Summary of Sensitive Species Habitat and Project Effects table in the project administrative record.

3.4.2.Migratory Birds

Bird monitoring surveys of the riparian habitat in the Welch Management Area have identified 76 species of migratory birds. Of these, the bald eagle, ferruginous hawk, and loggerhead shrike are BLM special status (sensitive) sensitive species. The FWS IPAC report indicates that 15 species of migratory birds of conservation concern potentially occur in the project area.

Table 3.1

US FWS Birds of Conservation Concern in the Welch Seed Propagation Project Area*	
American bittern (Botaurus lentiginosus)	Northern goshawk (Accipiter gentilis)**
Bald eagle (Haliaeetus leucocephalus)** +	Peregrine Falcon (Falco peregrinus)**
Brewer's Sparrow (Spizella breweri)**	Prairie Falcon (Falco mexicanus)
Ferruginous hawk (Buteo regalis)** +	Short-eared Owl (Asio flammeus)
Golden eagle (Aquila chrysaetos) +	Swainson's hawk (Buteo swainsoni)
Long-Billed curlew (Numenius americanus)**	Upland Sandpiper (Bartramia longicauda) +
McCown's Longspur (Calcarius mccownii)	Western Burrowing owl (Athene cunicularia hypugea)**
Mountain plover (Charadrius montanus)**	

* IPAC internet project report April 1, 2014. ** BLM Sensitive Species. + Observed in area.

3.5.3 Big Game

Big game known to occur in the Welch Management are; white-tailed deer, mule deer, pronghorn and black bear. Black Bear have been sighted on two occasions west of the Decker Highway. Observations of mule deer and pronghorn on the Welch Management Area have primarily been in the upland hill portion, but they could use the riparian hay meadow portions of the area. White-tailed deer use the proposed seed propagation area on a regular basis. Table 3.2 below indications the Wyoming Game & Fish Department's designated ranges and status for the three ungulate species (WGFD. 2012).

Table 3.2 Big Game Species, Seasonal Ranges, Herd Units, Population Objectives, and Population Estimates for Big Game Species Likely to Occur in the Welch Seeding Propagation Project Area

Species	Seasonal Range in Project Area	Herd Unit	WGFD Population Objective	% Above (+) or Below (-) Objective	WGFD Report Year
Mule Deer	Winter/yearlong	319 – Powder River	52,000	- 32.1%	2012
White-tailed deer	Yearlong	303 – Powder River	8,000	+108%	2012
Pronghorn	Yearlong	308 – Clearmont	3,000	+ 43%	2012

3.4.2 Raptors

The proposed seed project is 0.34 miles from an active osprey nest (BLM #13348). The access route to the project goes directly under the man-made nest structure. All other known raptor nests in the Welch Management Area are 0.5 miles or more from the project and its access.

3.5. Cultural

In accordance with Section 106 of the National Historic Preservation Act, BLM must consider impacts to historic properties (sites that are eligible for or listed on the National Register of Historic Places (NRHP)). For an overview of cultural resources that are found in BFO area, refer to the Draft Cultural Class I Regional Overview, Buffalo Field Office (BLM, 2010). A Class III (intensive) cultural resource inventory (BFO project no. 70130114) was performed to locate specific historic properties which may be impacted by the proposal. The following resources are in or near the proposal area. The area analyzed in this EA occurs on deep alluvial deposits. Alluvial deposits typically have a high potential for buried cultural resources, which are nearly impossible to locate during a Class III inventory (Ebert & Kohler 1988:123; Eckerle 2005:43). Buried archeological sites typically preserve artifacts, features and other materials *in situ* and are often evaluated as significant resources.

Cultural Resources Located In or Near the Project Area & NRHP Eligibility

Site #	Site Type	Eligibile	Site #	Site Type	Eligibile
48SH1842	Historic Site	Unevaluated	48SH1852	Prehistoric Site	Unevaluated

3.6. Visual Resources

The Welch Ranch is managed as Visual Resources Management (VRM) Class II. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should 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. A visual contrast rating was prepared for the project using observation points from WY Highway 338. Due to the numerous examples of cultural modification and fencelines currently existing in the immediate vicinity of the project area, the proposed action is in conformance with VRM Class II Objectives and this resource will not be discussed further.

3.7. Recreation

The majority of recreation resources at Welch are west of WY Highway 338. While some upland bird hunting may occur in the farming plot, the small size of the exclosure (1 acre) will not affect public access or recreational opportunities at Welch and this resource will not be discussed further.

4. ENVIRONMENTAL EFFECTS

This document only analyses the effects of the fencings, and irrigation. The effects of all other actions (planting, tilling, and herbicide treatment) are analyzed under the vegetation treatment EA, WY- 070-EA13-137, and are incorporated here by reference.

No Action Alternative.

The No Action alternative would continue alfalfa propagation at the proposed planting site.

Alternative B, Proposed Action

4.1. Soils, Ecological Sites, and Vegetation

4.1.1.Direct and Indirect Effects

The soils identified in the project area are well suited for the proposal with no adverse soil impacts anticipated. The NRCS rating class for the project area of "Not limited" indicates that the soil features are very favorable for the specified use. BLM can expect good performance and very low maintenance. Over less than 3 years some localized disturbance to soils would occur. This primarily includes soil compaction and soil loss due to erosion during tillage, planting, and fenceline construction where fence posts are installed and where vehicles travel to and from the project area. Additionally, vehicle travel to and from the project area for routine maintenance may disturb the soil resource but it should be minimal. Herbaceous vegetation particularly alfalfa, would be trampled by equipment during construction and planting; however, this disturbance would likely be short term as plants would recover after the first growing season following project implementation. Although some vegetation may be lost, the amount of

vegetation damaged and destroyed during project implementation would be difficult to measure. Additionally, vehicle travel to and from the project area for routine maintenance may disturb plant vegetation but it should be minimal. Localized ground disturbance would occur during fence construction and planting, and as a result could lead to establishment of noxious and invasive plants in the project area. However, because no known noxious weeds exist, invasive species are limited in the area, and there is a small amount of disturbance associated with the construction of the fence and planting, the potential for infestation is limited.

4.1.2. Cumulative Effects

The combination of the haying operation, recreation, and the proposed action could lead to varying impacts on soils and vegetation within the project area. Localized disturbance from a combination of these actions include increased soil compaction and erosion, loss of vegetation, and introduction of noxious and invasive plants. These localized disturbances include trails from recreationalist, and the use of haying equipment.

4.1.3. Mitigation Measures/ Residual Effects

When new noxious and invasive plant infestations are found in the project area, they will be treated using an integrated noxious and invasive plant management approach. The treatments will be in accordance with the 2013 vegetation treatment EA, WY- 070-EA13-137, incorporated here by reference. These treatments will minimize the risk of noxious and invasive plant infestations and expansion.

4.2. Water

4.2.1. Direct and Indirect Effects

BLM expects minimal impacts to water resources in the project area. The soil erosion from the localized disturbances of the fence and vehicle traffic may increase sediment load into the nearby Tongue River. The irrigation water right was accounted for by the Tongue River Irrigation District since before BLM acquired the land, but small amount of water pumped from the river for irrigation should have little to no impact on available water to other irrigators.

4.2.2. Cumulative Effects

Irrigation occurs at many points along the Tongue River. The impacts of using additional water should have no impact on the Tongue River. No other cumulative impacts are anticipated from the proposal.

4.2.3. Mitigation Measures/ Residual Effects

No Mitigation measures are needed.

4.3. Fish and Wildlife

4.3.1. Threatened, Endangered, Proposed, and Candidate Species

4.3.1.1. Threatened and Endangered Species

Ute Ladies'-tresses Orchid (ULT) is the only listed species requiring an effects determination (ESA Section 7 (2)). The proposed herbicide treatment will occur outside of the known species range in NE Wyoming and will occur on upland habitats. There will be no effect to ULT.

4.3.1.2. Candidate Species - Greater Sage-Grouse

4.3.1.2.1. Direct and Indirect Effects

There will be no direct impacts from the seed propagation project on GSG. The purpose of the project is to establish a native seed source to be used in reclamation of energy development in the PRB. The proposed action should benefit PRB GSG in the long-run.

4.3.1.2.2. Cumulative Effects

The 2012 population viability analysis for the NE Wyoming GSG found there remains a viable population of GSG in the PRB (Taylor et al. 2012). Threats from energy development and West Nile Virus (WNv) are impacting future viability (Taylor et al. 2012). The study indicated that effects from energy development, as measured by male lek attendance, are discernible out to a distance of 12.4 miles. The proposed action will not have any negative effects to add to existing threats to GSG in the PRB, but may contribute positively.

4.3.1.2.3. Mitigation Measures/ Residual Effects

No mitigation for GSG is necessary and there will be no residual impacts.

4.3.2. Migratory Birds

4.3.2.1. Direct and Indirect Impacts

Fence construction and seed bed preparation should be completed before nesting would occur. The plants and seed production will attract seed-eating birds in to feed. The fence will provide additional perches to both passerines and predators, beyond the fencing and trees already present.

4.3.2.2. Cumulative Effects

Impacts to migratory birds resulting from the proposed action, in addition to the traditional "haying", will be minimal.

4.3.2.3. Mitigation Measures / Residual Effects

No mitigation is recommended and there will be no residual effects.

4.3.3. Big Game

4.3.3.1. Direct and Indirect Effects

There will be a reduction of 1 acre of forage that will be available to big game during the life of the project. Additional acres may be added in the future. The fence will be of a design that will not pose a hazard to big game animals.

4.3.3.2. Cumulative Effects

Additional project impacts to big game animals from what is already present in the area will be minimal.

4.3.3.3. Mitigation Measures/ Residual Effects

No mitigation is recommended and there will be no residual effects.

4.3.4. Raptors

4.3.4.1. Direct and Indirect Effects

Ospreys occupying the nest at the access entrance may be disturbed as people enter and exit the project area. Osprey's responses to human disturbance are highly variable but are generally considered to be relatively tolerant of human activities and may accept ongoing activity that is present at the beginning of the nesting period (FWS 2000, Ruddock and Whitfield 2007 and Poole 1981). The osprey pair has successfully nested with the current haying operations occurring within 200 feet of the nest structure during the nesting season. The project area is further than the 0.25 mile buffer recommended by the FWS but access to the project is under the nest.

4.3.4.2. Cumulative Effects

The cumulative effects are within the analysis parameters and impacts described in the PRB FEIS. For details on expected cumulative impacts, refer to the PRB FEIS, p. 4-221 and p. 4-235.

4.3.4.3. Mitigation Measures

The osprey nest will be monitored by a biologist to determine the extent of tolerance. Should the birds show agitation that may cause nest abandonment, operations will be delayed until after nesting.
Mitigation measures considered but not selected:

1. Rerouting the access is not possible because there is no physical or legal access from the east. The Tongue River is 240 feet to the north of the nest and the soil is too boggy for vehicle access.
2. Moving the nest platform. The nest platform was constructed is at its current location in 2009 to give ospreys an alternative to their nest on the power-line.
3. Seasonal restrictions. The time period for seeding and cultivating overlaps Osprey breeding season.
4. Daily restriction. Would not be effective as birds would be disturbed any time of day.

4.3.4.4. Residual Effects

Monitoring the nest during operations is the only feasible mitigation. Even with the most careful monitoring there is a potential that the birds may abandon the nest.

4.4. Cultural

4.4.1. Direct and Indirect Effects

BLM policy states that a decision maker's first choice should be avoidance of historic properties (BLM Manual 8140.06(C)). If historic properties cannot be avoided, mitigation measures must be applied to resolve the adverse effect. No historic properties will be impacted by the proposed project. Following the State Protocol Between the Wyoming Bureau of Land Management State Director and The Wyoming State Historic Preservation Officer, Section VI(A)(1), the BLM notified the Wyoming State Historic Preservation Officer (SHPO) on April 15, 2014, that no historic properties exist in the area of potential effect (APE). If any cultural values (sites, features or artifacts) are observed during operation, they will be left intact and the Buffalo Field Manager notified. If human remains are noted, the procedures described in Appendix L of the PRB FEIS and ROD must be followed. Further discovery procedures are in Standard COA (General)(A)(1).

4.4.2. Cumulative Effects

Cultivation can disturb and impact deeply buried cultural resources. Vehicle traffic, including ATVs, can impact cultural sites by displacing surface artifacts. The area to be cultivated was cultivated in the past and is in an area of historic farming. The depth of disturbance (7 -8 inches for the plow and 10 inches for the fence posts) is within the existing disturbance caused by historic cultivation. If BLM decides to pursue additional native seed cultivation, alternative Class III inventory methods such as magnetometer or soil resistivity survey to discover deeply buried archaeological sites may need to be employed.

4.4.3. Mitigation Measures

If any cultural values (sites, features or artifacts) are observed during operation, they will be left intact and the Buffalo Field Manager notified. If human remains are noted, the procedures described in Appendix L of the PRB FEIS and ROD must be followed. Further discovery procedures are explained in Standard COA (General)(A)(1).

The BLM and any cooperating partners will use the existing two-track road to access the proposed seed plot. No surface disturbance will occur, the existing road will be used as is, and all vehicles are required to stay on the existing two-track road and will not deviate from it. The existing two-track road may not be driven on during wet or muddy conditions.

4.4.4. Residual Effects

During the seed plot preparation phase, there will be both BLM employees and cooperators crews working in the project area using light equipment without the presence of archaeological monitors. Based on the extent of work it is possible that unidentified cultural resources can be damaged. The increased

human presence associated with the seed plot preparation and planting phase can also lead to unauthorized collection of artifacts or vandalism of historic properties.

5. CONSULTATION/COORDINATION:

BLM Consulted or Coordinated with the Following on this Analysis

Contact	Organization
Valtcho Jeliazkov	UW Sheridan Research and Extension Center
Mary Hopkins	WY SHPO
Mike Helvey	Livestock Lessee

List of Preparers (BFO unless otherwise noted)

Position/Organization	Name	Position/Organization	Name
NRS/Team Lead	Bill Ostheimer	Assistant Field Manager	Chris Durham
Wildlife	Don Brewer, Chris Sheets	Archeologist	Ardeth Hahn
PRB Restoration	Janelle Gonzales	Hydrologist	Brent Sobotka
Vegetation, Ecological Sites, Range Management	Dustin Kavitz		

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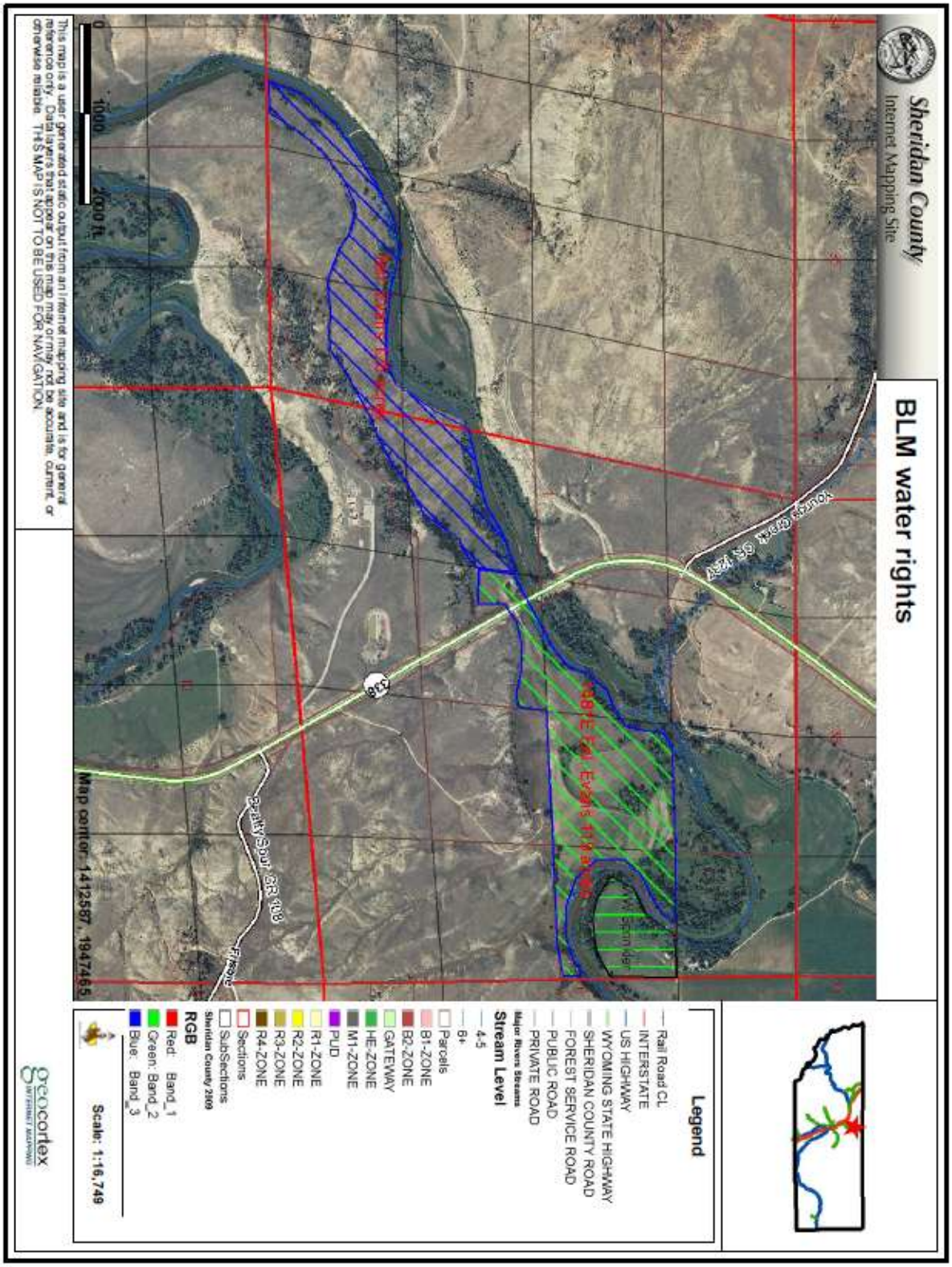
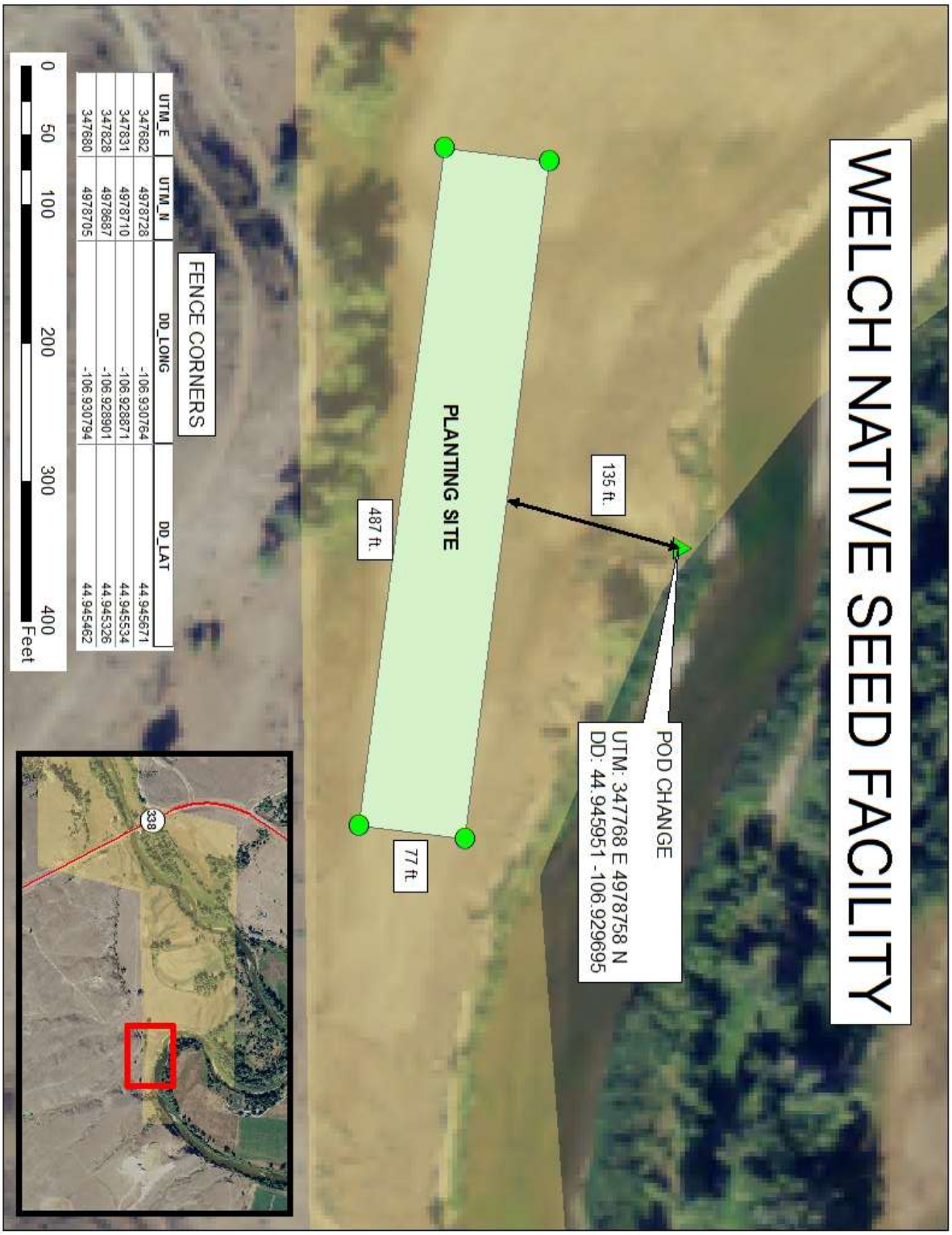
Appendix 1.

A1: Welch Management Area Map



A2: Proposed Cultivation Site Map



Proposed Planting Area Pictures:

View to the west

View to the east

View to the north

View to the south

Budget, FY2014

Budget:
FY 2014

Cost	Description	Price
UW Costs	Grow plants	$1,500.00
-	Disc Field	Awaiting Quote
-	Drip Line	Awaiting Quote
-	Weed Barrier	Awaiting Quote
-	Install Drip line/weed barrier	Awaiting Quote
NRCS Spray Field for Weeds	Spray, labor, transportation costs	$300.00
Irrigation system	Water Tank	$378.00
-	Diesel Water Pump	$400.00
-	Water Filter	$200.00
Diesel for pump	50 hrs. of fuel (4 hrs. every other week May-September, plus initial planting) 25 gallons	$100.00
Deer Fence (Tractor Supply Inc) 487 ft. x 57 ft.	10 ft. T posts (74)	$1,200.00
-	39 in x 330 ft woven wire fencing (8)	$1,440.00
-	36 in x 150 ft poultry wire (8)	$424.00
-	548 ft Smooth wire (3)	$45.00
-	6 in x 8 ft wood post (16) (for braces)	$256.00
-	8 in x 14 ft wood posts (13)	$300.00
Deer Fence Installation	80 worker-hrs. (2 people for 40 hrs.)	-
Spray Field for Weeds Labor	8 worker-hrs. (2 people for a half day)	-
Build Cultivation Plots	80 worker-hrs. (2 people for 40 hrs.)	-
Installation of Irrigation system labor	32 worker-hrs. (4 people for 1 day)	-
Planting seedlings and tilling labor	240 worker-hrs. (6 people for 5 days)	-
Care of cultivation site labor	160 worker-hrs. (2 people, 8 hrs. every other week for May-September)	-
Total Worker Hours =	592 worker-hrs. x $20.25	$11,988.00 or work day
	Total =	$6,5435.00 + Quotes

FY 2015 – FY 2026

Cost	Description	Price
Care of cultivation site labor	160 worker-hrs. (2 people, 8 hrs. every other week for May-September	$3,240.00
Diesel for pump	40 hrs. of fuel (4 hrs. every other week May-September) 20 gallons	$75.00
Possible Expansion	Grow more plants by UW Extension, clear more land	?
Possible Fence Construction	labor, materials- to keep out wildlife	?
Possible Seed Storage Expansion	Industrial size refrigerator or contract with PMC storage facility	?

Summary of Sensitive Species Habitat and Project Effects.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Amphibians				
Northern leopard frog (*Rana pipiens*)	Beaver ponds and cattail marshes from plains to montane zones.	NP	NI	Habitat not present.
Columbia spotted frog (*R*anus pretiosa)	Ponds, sloughs, small streams, and cattails in foothills and montane zones. Confined to headwaters of the S Tongue R drainage and tributaries.	NP	NI	The project area is outside the species' range, and the species is not expected to occur.
Fish				
Yellowstone cutthroat trout (*Oncoryhynchus clarki bouvieri*)	Cold-water rivers, creeks, beaver ponds, and large lakes in the Upper Tongue sub-watershed	NP	NI	The project area is outside the species' range, and the species is not expected to occur.
Birds				
Baird's sparrow (*Ammodramus bairdii*)	Shortgrass prairie and basin-prairie shrubland habitats; plowed and stubble fields; grazed pastures; dry lakebeds; and other sparse, bare, dry ground.	NS	NI	Baird's sparrows have not been reported nesting in Sheridan County. Migrants may occur.
Bald eagle (*Haliaeetus leucocephalus*)	Mature forest cover often within one mile of large water body with reliable prey source nearby.	K	MIIH	No known nests within 1 mile of the Project. Project disturbance will be at a low level but may cause minimal disturbance to eagles.
Brewer's sparrow (*Spizella breweri*)	Sagebrush shrubland	NP	NI	Project not in sage brush habitat
Ferruginous hawk (*Buteo regalis*)	Basin-prairie shrub, grasslands, rock outcrops	NS	MIIH	No documented nests occur within 0.5 miles of the project area. Foraging birds may impacted by dust, noise and human activities. Species may avoid the area.
Loggerhead shrike (*Lanius ludovicianus*)	Basin-prairie shrub, mountain-foothill shrub	S	MIIH	Some mountain-foothill shrub adjacent to project location.
Long-billed curlew (*Numenius americanus*)	Grasslands, plains, foothills, wet meadows	NS	NI	Habitat not present.
Mountain Plover (*Charadrius montanus*)	Short-grass prairie with slopes < 5%	NS	NI	Habitat not present
Northern goshawk (*Accipiter gentilis*)	Conifer and deciduous forests	NS	NI	Habitat not present. Birds may pass through.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Peregrine falcon (*Falco peregrinus*)	Cliffs	NS	NI	Habitat not present. Birds may pass through.
Sage sparrow (*Amphispiza billneata*)	Basin-prairie shrub, mountain-foothill shrub	NP	NI	Habitat not present.
Sage thrasher (*Oreoscoptes montanus*)	Basin-prairie shrub, mountain-foothill shrub	NP	NI	Habitat not present.
Trumpeter swan (*Cygnus buccinator*)	Lakes, ponds, rivers	NP	NI	Habitat not present.
Western Burrowing owl (*Athene cunicularia*)	Grasslands, basin-prairie shrub	NS (possible)	NI	Burrows may be present in surrounding area.
White-faced ibis (*Plegadis chihi*)	Marshes, wet meadows	NS	NI	Birds may stopover but are not likely to nest at project location.
Yellow-billed cuckoo (*Coccyzus americanus*)	Open woodlands, streamside willow and alder groves	S	NI	Project is in open field and should not disturb cuckoos in surrounding woodlands.
Mammals				
Black-tailed prairie dog (*Cynomys ludovicianus*)	Prairie habitats with deep, firm soils and slopes less than 10 degrees.	NP	NI	No colonies present at the project location at this time.
Fringed myotis (*Myotis thysanodes*)	Conifer forests, woodland chaparral, caves and mines	NS	MIIH	Suitable roosting habitat not present. Foraging individuals may be impacted by dust, noise, human activities, or fencing.
Long-eared myotis (*Myotis evotis*)	Conifer and deciduous forest, caves and mines	NS	MIIH	Suitable roosting habitat not present. Foraging individuals may be impacted by dust, noise, human activities, or fencing.
Spotted Bat (*Euderma maculatum*)	Prominent rock features in extreme, low desert habitats to high elevation forests.	NP	NI	Habitat not present.
Swift fox (*Vulpes velox*)	Grasslands	NS	NI	Red fox present may preclude swift fox from occupying the territory in the project vicinity.
Townsend's big-eared bat (*Corynorhinus townsendii*)	Caves and mines.	NS	NI	Foraging individuals may be impacted by dust, noise, human activities, or fencing.
Plants				

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Limber Pine (*Pinus flexilis*)	Mountains, associated with high elevation conifer species	NP	NI	Habitat not present.
Porter's sagebrush (*Artemisia porteri*)	Sparsely vegetated badlands of ashy or tufaceous mudstone and clay slopes 5300-6500 ft.	NP	NI	Habitat not present.
William's wafer parsnip (*Cymopterus williamsii*)	Open ridgetops and upper slopes with exposed limestone outcrops or rockslides, 6000-8300 ft.	NP	NI	Project area outside of species' range.

Presence
K - Known, documented observation within project area.
S - Habitat suitable and species suspected, to occur within the project area.
NS - Habitat suitable but species is not suspected to occur within the project area.
NP - Habitat not present and species unlikely to occur within the project area.

Project Effects

Project Effects
NI - No Impact.
MIIH - May Impact Individuals or Habitat, but will not likely contribute to a trend towards fFederal listing or a loss of viability to the population or species.
WIPV - Will Impact Individuals or Habitat with a consequence that the action may contribute to a trend towards fFederal listing or cause a loss of viability to the population or species.
BI - Beneficial Impact