FINAL ENVIRONMENTAL ASSESSMENT

#DOI-BLM-ID-I010-2014-0008-EA

FOR THE

Deer Parks Wildlife Mitigation Unit 2014 Projects and Restrictions

Jefferson and Madison County, Idaho

Prepared for:
Idaho Department of Fish and Game and
Bureau of Land Management, Upper Snake Field Office

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INTERMOUNTAIN AQUATICS INC.
ENVIRONMENTAL CONSULTING & HABITAT RESTORATION

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CHAPTER 1 INTRODUCTION

INTRODUCTION

The Deer Parks Complex currently includes three Wildlife Mitigation Units: Menan, Beaver Dick and Boyle segments. The Menan and Beaver Dick properties were acquired in 1997 and the Deer Parks (Boyle Ranch) property was acquired in 1999. The Bonneville Power Administration (BPA) provided funds to the Bureau of Land Management (BLM) to purchase the lands. The Deer Parks Complex properties, totaling 3,054 acres, are owned by the BLM and managed cooperatively with Idaho Department of Fish and Game (IDFG), and Shoshone-Bannock Tribes (SBT).

The properties that comprise the Deer Parks Wildlife Mitigation Unit (DPWMU) Complex were acquired for the purpose of partial mitigation for the loss of wildlife habitat caused by construction of the Palisades Project dam and reservoir. Using BPA funding, the wildlife mitigation units were acquired from willing sellers by the BLM, with the agreement that the IDFG and the SBT would cooperatively manage them. IDFG has primary management responsibility. Since the inception of DPWMU, BLM has purchased additional properties adjacent to the original mitigation lands to provide for additional wildlife habitat.

PURPOSE AND NEED

Purpose

The purpose of these activities within the DPWMU are to: increase the acreage of food plots to improve wildlife food sources; stabilize approximately 1,100 feet of the Main Snake River to protect food plots and the Butte-Market Lake Canal (Canal); increase non-motorized watercraft access to Butte Slough; and restrict certain public uses to conform to those restrictions already in place on IDFG-managed wildlife management areas (WMAs), such as non-motorized use only, restricting camping and campfires.

Need

The needs for the proposed action within the DPWMU are to: more efficiently irrigate and establish more food plots and shrub plantings for wildlife; stabilize a highly-erosive banks (approximately 1,100 feet) on the Main Snake River that threaten both Cook's Pasture and the Canal; construct a launch site on Butte Slough for non-motorized watercraft where none currently exist; and to control motorized vehicles and campers within the DPWMU.

LOCATION OF PROPOSED ACTION

The Boyle segment of the DPWMU is located along the mainstem Snake River in Jefferson and Madison County about three miles north of Menan, Idaho, and about 20 miles north of Idaho Falls, Idaho. The proposed projects are located in T5N R38E, Sections 4, 9, 16 and 17.

CONFORMANCE WITH APPLICABLE LAND USE PLAN

The Proposed Action has been determined to be in conformance with the terms and conditions of the applicable BLM Land Use Plans as required by 43 CFR 1610.5. The DPWMU is located in Jefferson and Madison County, Idaho, within the boundaries of BLM's Upper Snake Field Office. The Medicine Lodge Resource Management Plan (RMP), published in 1985, provides overall guidance for the management of natural resources on public lands. It reads as follows for management of recreation: "Trails and other means of public access would continue to be maintained and developed where necessary to enhance recreation opportunities and allow public use" (USDI-BLM, 1985; page 59). Also it states, "The Proposed Plan would provide for existing wildlife populations that occur in the area and for projected expansion in the populations" (USDI-BLM, 1985; page 43).

RELATIONSHIP TO STATUTES, REGULATIONS AND LOCAL PLANS

The Proposed Action is in accordance with the Title II of the Federal Land Policy and Management Act of 1976 as amended (43 U.S.C. 1712), the Fort Bridger Treaty of 1868 (15 Stat. 673), and the Idaho Department of Fish and Game's Deer Parks Wildlife Management Unit Management Plan for 2014-2023 (IDFG 2014).

SCOPING AND ISSUES PRESENT

IDFG presented WMA information at two public meetings (Idaho Falls and Rexburg) in February and March 2012, encouraging public comment at the meetings and on their online surveys. The survey was available to the public from February to December 2012, almost an entire year. IDFG sent over 600 emails to interested public and groups, and advertised in the Post Register newspaper (Idaho Falls) encouraging them to take part in the survey. Management concerns from IDFG staff included: maintaining active farming and flood irrigation on the DPWMU; protecting Cook's pasture food plots and the Butte-Market Lake Canal from further streambank erosion; and carrying public use management restrictions through the National Environmental Policy Act (NEPA) process. Public comment issue topics included: expanding and increasing the number of wildlife food plots; expanding the DPWMU by acquiring more land; controlling noxious weeds; increasing mule deer, elk and moose populations; providing boat access to Butte Slough (currently there is none); providing handicapped access; and taking actions to benefit all wildlife species, not just game species (IDFG 2014).

The results of the site-specific assessments indicate that not all of the resources considered are present or would be impacted by the alternatives (Table 1). Table 1 provides the rationale for those resources that are/are not impacted by the project.

Table 1 - Resources Considered in the Impact Analysis		
Resource	**Resource Status**	**Rationale**
Access	Present, Impacted	Improved access for non-motorized recreational use. Impacts are discussed under Recreational Use.
Air Quality	Present, Not Impacted	The implementation of the alternatives would not result in the production of emission or particulate matter above incidental levels.
Areas of Critical Environmental Concern (ACEC's)	Present, Impacted	Impacts are discussed under Areas of Critical Environmental Concern.
Cultural Resources	Not Present	A Class III Inventory was conducted for the proposed project areas. No cultural resources were identified. Therefore, the proposed projects will result in "no effect" on historic properties. The Idaho State Historic Preservation Office concurred with the determination of effect on May 23, 2104.
Economic and Social Values	Present, Not Impacted	The alternatives would not affect the area's economic and social values.
Environmental Justice	Not Present	None of the alternatives would result in disproportionally high and adverse impacts to low income or minority populations.
Existing and Potential Land Uses	Present, Impacted	The alternatives would only affect existing or potential land uses within the DPWMU with additional food plot acreages.
Fisheries	Present, Impacted	Impacts are discussed under Fisheries.
Floodplains	Present, Impacted	Impacts are discussed under Wetlands, Riparian Areas and Floodplains.
Forest Resources	Not Present	There are no Forest Resources within the project area.
Invasive, Non-Native Species	Present, Impacted	Ground disturbance would increase spread of weeds. The project area would be added to the Idaho Department of Fish and Game Deer Parks Wildlife Management Area weed control program. Impacts discussed under Invasive, Non-Native Species.

Table 1 - Resources Considered in the Impact Analysis		
Mineral Resources	Present, Not Impacted	Projects do not propose to disturb/remove mineral resources.
Migratory Birds	Present, Impacted	Impacts are disclosed under Migratory Birds.
Native American Religious Concerns	Not Present	There are no known ceremonial sites or resources associated with ceremonial practices in the project area.
Paleontological Resources	Not Present	There are no known paleontological resources located in the project area.
Prime and Unique Farmlands	Present, Impacted	There are areas considered to be prime if irrigated. The proposed action will cultivate food plots on these lands. Impacts discussed under Prime and Unique Farmlands.
Range Resources	Not Present	There are no allotments located in the project area.
Recreational Use	Present, Impacted	Impacts are disclosed under Recreational Use.
Soil Resources	Present, Impacted	Impacts are disclosed under Soils and Water Quality.
Threatened, Endangered, and Sensitive Plants	Not Present	All known data from the Upper Snake Field Office and the Idaho Conservation Data Center have been considered to identify any Threatened, Endangered, and Sensitive Plant species. There are no known occurrences of these plant species within the project area. Impacts are discussed under Threatened, Endangered, and Sensitive Species.
Threatened, Endangered, and Sensitive Animals	Present, Impacted	All known data from the Upper Snake Field Office and the Idaho Conservation Data Center have been considered to identify any Threatened, Endangered, and Sensitive Animal species. Yellow-billed Cuckoo and Wolverine have been observed within one mile of the project area. Impacts are discussed under Threatened, Endangered, and Sensitive Species.
Threatened, Endangered, and Sensitive Fish	Present, Impacted	Streambank bio-engineering work impacts Yellowstone cutthroat trout. Impacts discussed under Threatened, Endangered, and Sensitive Species.

Table 1 - Resources Considered in the Impact Analysis		
Tribal Treaty Rights and Interests	Present, Not Impacted	The alternatives would have no effect on the tribes' access to use the areas to exercise their treaty rights and would have no known effect on resources they use for traditional purposes.
Vegetation	Present, Impacted	Impacts are discussed under Vegetation.
Visual Resources	Present, Impacted	VRM Class III. Impacts are disclosed under Visual Resources.
Wastes, Hazardous and Solid	Not Present	There are no known hazardous wastes in the project area or hazardous wastes that would be generated from the proposed project.
Water Quality (Surface and Ground)	Present, Impacted	Impacts from cultivating fields, stabilizing banks and constructing launch site discussed under Soils and Water Quality.
Wetland and Riparian Areas	Present, Impacted	Impacts are disclosed under Wetlands, Riparian Areas and Floodplains.
Wild and Scenic Rivers	Not Present	There are no eligible Wild and Scenic Rivers within the project area.
Wild Horse and Burro HMAs	Not Present	There are no wild horse and burro HMAs in the region.
Wilderness	Not Present	There are no wilderness areas or WSAs within the proposed project area.
Wildlife Resources	Present, Impacted	Impacts are disclosed under Wildlife Resources.

CHAPTER 2 ALTERNATIVES

ALTERNATIVE A. NO ACTION

Under this alternative none of the six improvement projects or the restrictions discussed below in Alternative B would be implemented.

ALTERNATIVE B. PROPOSED ACTIONS

Under this alternative the six proposed projects within the Boyle segment of the DPWMU and the public use restrictions for the entire DPWMU would be implemented. Aggressive reclamation and control of weed species would occur in all disturbance areas to reduce spread and mitigate for any increases over the long-term in all project areas.

1. *Cook's Pasture Food Plots (Cook's).*

This pasture is on the western side of the WMU between the Butte & Market Lake Canal (Canal) and the Main Snake River. Fifteen acres of the 80 acres of previously irrigated crop land would be disked and irrigated using wheel-lines with existing on-site ground well (Water District 120 tag #A0007715). Equipment used for disking will be cleaned between fields when the previous field has weeds not present in the next field. All seed will be certified weed free. Field location: T5N R38E Sec 7 SE, T5N R37E Sec 18 NENE.

2. *Butte Slough Pasture Food Plots (Butte Slough).*

Fifteen acres of the previously cultivated pasture just north of the existing Butte Slough pivot would be disked and planted for wildlife food/habitat. Wetlands would not be disturbed. About 2,300 feet of buried mainline and two wheel lines will be installed from the existing irrigation pump using Canal water located to the south. Equipment used for disking will be cleaned between fields when the previous field has weeds not present in the next field. All seed will be certified weed free. Field location: T5N R38E Sec 9 W1/2.

3. *Gohr Field Irrigation well, Pump move, and Buried Mainline (Gohr Field).*

A new well would be drilled, electric power installed, pump moved from private residence to the new well (will transfer water rights from existing well Site tag # A0007717 to new well), and a new buried mainline/risers installed to more efficiently irrigate the Gohr Field. The field is west of county road 3600E (Twin Butte Rd) and NW of the new Menan Butte trail head. The new well/pump location would be able to irrigate 26 acres of previously irrigated crop land, compared to the 12 acres presently irrigated for wildlife food/habitat. Equipment used for disking will be cleaned between fields when the previous field has weeds not present in the next field. All seed will be certified weed free. Field location: T5N R38E Sec 4 S1/2.

4. *County Road Field Buried Mainline/risers (County Road).*

About 950 feet of buried mainline and 550 feet of buried mainline/risers would be installed to irrigate the triangular agricultural field to the southeast of the intersection of 3600 E (Twin Butte Rd) and Butte Rd. The buried mainline and water would come from the existing T&L irrigation pump (Site tag #A0007718) running north and then east through a culvert under county road 3600E (Twin Butte Rd). This would enable the irrigation of roughly 30 acres of previously irrigated crop land for wildlife food/habitat. Equipment used for disking will be cleaned between fields when the previous field has weeds not present in the next field. All seed will be certified weed free. Field location: T5N R38E Sec 9 SE, Sec 16 NE.

5. *Snake River Bio-engineered Bank Stabilization (Bio-engineered Bank).*

Located just west and north of Cook's Pasture, continued bank erosion has scoured out land such that the river is very close (90 feet) to the Canal. The WMU Manager has a draft bio-engineered bank stabilization project plan to stabilize 1,100 feet of bank upstream of the bend nearest the Canal. Stabilization here will protect the Cook's pasture agricultural ground and particularly the Canal. Stabilization work would consist of excavating out the east bank about 45 feet and maintaining the lower bank slopes at 4:1 and the upper bank slopes at 2:1. Rock placement is not planned for this section of bank. The lower bank would have erosion fabric placed down, staked and two rows of bio-logs (with Nebraska sedge [*Carex nebraskensis*], willow [*Salix* spp.] and water birch [*Betula occidentalis*] making up the bio-log) separated by two rows of deeply planted willow shrubs. The upper bank would have mesic shrubs planted with a small bench, which supports a row of cottonwood trees (*Populus trichocarpa*). The Canal Company would be responsible for protecting the Canal, but that is not part of this EA. Project location: T5N R38E Sec 7 NWSE.

6. *Butte Slough Road, Parking Area and Watercraft Launch Site (Boat Launch).*

This project would build approximately 800 feet of new dirt road west from county road 3600E (Twin Butte Rd) on an existing fence line to the east arm of Butte Slough. The road would be 12 feet wide, leveled from the existing sand buildup along the old fence line and topped with a course road-base rock mix if the sand base proved unstable. A parking area and non-motorized watercraft launch site would be cleared in the area of an old sand pit with a sand or gravel base. A very narrow launch ramp (10 feet) would be cut from the existing vegetation and sand, but no fill would be added to wetlands. The small parking area roughly 150 feet wide by 100 feet long would be located in an old sand pit. This will be leveled with a backhoe or similar small piece of construction equipment. Increased patrolling of the location by DPWMU staff would occur to make sure boats have been inspected though Idaho State Department of Agriculture's boat inspection program. Project location: T5N R38E Sec 9.

7. *Public Use Restrictions.*

Within the Deer Parks WMU, excluding the Main Snake River, and access roads to parking areas, the public would not be allowed: a) to camp, b) to set-off fireworks, c) to have fires; or d) to use motorized vehicles off of existing roads, including not allowing motorized watercraft on Butte Slough. These restrictions are consistent with the Deer Parks Wildlife Mitigation Unit Management Plan, revised in March of 2014.

All of the proposed projects covered in this EA (proposed actions #1-6) are within the Boyle segment; however, the public use restrictions (proposed action #7) apply to the entire 3,054 acre DPWMU.

CHAPTER 3 ENVIRONMENTAL ANALYSIS

GENERAL DESCRIPTION OF THE PROJECT AREA

The Boyle segment of the DPWMU is located along the Main Snake River in Jefferson and Madison County about three miles north of Menan, Idaho. The 2,602-acre property includes about two miles of river frontage, wetlands, shrub-steppe uplands, pasture and cropland. A paved county road is adjacent to the property. There is no levee system along the river in this reach and the low-lying portions of the property flood most years.

The affected environment section below contains a discussion of the existing conditions common to all the proposed ground disturbing actions, collectively referred to as "the Projects". The public access restrictions are primarily discussed under the Recreation section and are referred to as "the Restrictions". Only the resources that were identified as present and having the potential to be impacted are discussed below and projects with similar impacts are discussed collectively.

SCOPE OF THE CUMULATIVE EFFECTS ANALYSIS

The Council on Environmental Quality has defined a cumulative effect as the incremental impact of the proposed actions, considering all past, present and reasonably foreseeable future actions within a specified geographic area (40 CFR § 1508.7). For the Deer Parks WMU 2014 Projects and Restrictions Environmental Assessment (EA), the geographic extent is that of the foot print of the entire WMU. Resources identified in Table 1 as not present or impacted will not be analyzed for cumulative effects.

EXISTING CONDITIONS AND ENVIRONMENTAL EFFECTS ANALYSIS

Access

Access is discussed below under Recreation.

Areas of Critical Environmental Concern (ACECs)

Affected Environment

The projects are located in and adjacent to the Snake River ACEC. The following excerpt describes the constraints on activities within the ACEC (BLM 2009).

The Snake River ACEC covers approximately 88 mi of river on public lands and includes the South Fork of the Snake River (South Fork) from Palisades Dam to the confluence with the Henry's Fork of the Snake River (Henry's Fork), the Henry's Fork from the confluence to St. Anthony, Idaho, and the main stem of the Snake River (Main Snake) from the confluence south to Market Lake Canal below Lewisville Knolls.

The Snake River ACEC was designated through the Medicine Lodge RMP with the intent to recognize and conserve a unique cottonwood ecosystem, scenic values, bald eagle (*Haliaeetus*

leucocephalus) habitat, and other wildlife species and their habitats. The river flows through some of the most valuable terrestrial and aquatic wildlife habitat in Idaho.

Unique geologic features, wildlife, rare plants, and a cottonwood gallery forest make the ACEC an important ecological area. The South Fork from Palisades Dam to the confluence with the Henry's Fork is considered eligible under the National Wild and Scenic River System. Eligible segments are to be managed by the BLM to protect the identified outstandingly remarkable values while allowing for public use and enjoyment until these segments are determined either suitable or non-suitable for inclusion in the NWSRS.

In addition to providing irrigation for millions of acres of agricultural land, the Snake River is also an international draw for recreational opportunities, which provides an inflow of cash to local economies. In 2008, BLM finalized an EA and plan to revise the 1991 Snake River Activity/Operations Plan to ensure that the river is properly managed to prevent long-term damage or degradation of this high quality, yet fragile ecosystem (BLM 2008).

The South Fork has one of the most extensive cottonwood riparian–wetland ecosystems in North America and is one of the last well-developed ecosystems of this type in Idaho. The USFWS has identified this area as the highest quality cottonwood riparian zone in the western United States (BLM 2008). Wildlife that occupies the lands along the Snake River is a major concern. The extensive river banks and islands provide wintering habitat for bald eagles, elk, moose and mule deer, whitetail deer, and dozens of bird species. Much of the deer population remains year-round. The Snake River, particularly the South Fork, is a high-quality YCT fishery with brown, lake, and rainbow trout also present.

Current management actions and restrictions associated with the Snake River ACEC have been effective in preserving and protecting the cottonwood galleries and diverse wildlife habitats for which the area was designated.

Environmental Effects

Alternative A

Under the No Action Alternative, none of the improvements to ACEC values would be obtained. Existing unmanaged land uses would stay in place and the current status would not change.

Alternative B

The proposed Projects all comply with the conditions required for work to be completed in the ACEC. The Projects are designed to improve wildlife habitat and access to the Butte Slough, thus will have beneficial impacts on the values associated with the ACEC. The Projects would have no direct effect on cottonwood galleries associated with this ACEC. Indirect impacts would include improved wildlife habitats from proposed habitat improvements in the food plots.

Under Alternative B, the impacts to ACECs would be slightly more than Alternative A.

Cumulative Impacts

Cumulative effects on the resources associated with the Snake River Area of Critical Environmental Concern (ACEC) designations include surrounding activities such as development, livestock grazing, trails, OHV use, and other recreational uses. The cumulative impacts of the Projects to the ACEC, when added to the increment from other land use activities, would not have a measurable impact to the overall ACEC designation.

Existing and potential land uses

Affected Environment

The projects are located in an area where existing and potential land uses are focused on recreation, wildlife habitat, and agriculture. Land use rules placed on the area are detailed in the Deer Parks WMU 2014-2023 Management Plan (IDFG 2014). Below is an excerpt from the Management Plan, which outlines the historical and current land uses in the project area.

> The Deer Parks area has a rich history of human occupation. There is evidence of human occupation as early as the Paleo-Indian era (ca. 12,000-10,500 BP). The Menan Buttes were important landmarks for many early travelers in the area. Based on trapper diaries from the early 1800's, the area abounded with bison, elk, antelope, beaver, and other wildlife. The site of the Beaver Dick mitigation unit is simply shown as the 'Beaver Swamp' on early maps. The area northwest of Menan was called Deer Parks because the thick willows and cottonwoods supported large numbers of deer.
>
> The first settlers arrived in the Menan area in the 1870's. A portion of the Deer Parks mitigation unit was originally homesteaded in 1910 and used mainly for livestock pasture. Portions of the property around Butte Slough were used as a muskrat farm in the 1920's. It was acquired by the Boyle family in the 1930's and managed for crops and livestock. The Menan mitigation unit was homesteaded in 1917 and managed for pasture and crops. The Beaver Dick mitigation unit on the Henrys Fork has a slightly different history, tied closely to a trapper and hunting guide named 'Beaver' Dick Leigh. He lived on or very near this property in the 1870's. His Shoshone wife, Jenny Leigh (for whom Jenny Lake in Grand Teton National Park is named), and their six children all died in late 1876 of smallpox and are buried just north of this property. The land was used as livestock pasture for many years.
>
> The Teton Dam failure and flood in 1976 had a significant effect on all the Deer Parks Complex mitigation units. The floodwaters, which split and flowed both north and south of the Menan Buttes, completely inundated all the lands below the lava rims. Many shallow sloughs were filled with sediment, buildings destroyed, and the old railroad line was permanently damaged. The river also reached a very high flood stage in 1997, damaging portions of the Butte-Market Lake Canal, but otherwise causing little damage to the Deer Parks Complex properties.

Environmental Effects

Alternative A

Under the No Action Alternative A, no changes in existing or potential land use would occur. This would have fewer impacts than Alternative B.

Alternative B

The effects of the proposed Cook's Pasture Food Plots and Butte Slough Pasture Food Plots would change land use where currently no active management occurs beyond some periodic weed control and experimental restoration of native shrub habitats. The land use would change from unmanaged to actively-managed for the benefit of wildlife on 30 acres and 10 acres, respectively for Cook's and Butte Slough food plots.

The effects of the Butte Slough Road, Parking Area and Watercraft Launch Site (#6) would change land use from unmanaged and limited recreational access to more actively managed non-motorized recreation on Butte Slough. Specific effects of this action on access and recreation are discussed below in the Recreation section. Under Alternative B, the impacts to recreation would be slightly more than Alternative A. The other Projects have no effect on Existing and Potential Land uses.

Cumulative Impacts

Historically, a total of 748 acres were actively cultivated. Currently, 428 acres are under cultivation. The proposed Projects would add 30 acres of land to the number of cultivated acres, which is an increase of approximately 7% over current levels.

Fisheries

Affected Environment

Butte Slough does not tie into the Snake River. It is filled with water rights from the Butte-Market Lake canal. There is no outlet. Small minnows live in the slough year-round.

The main Snake River has Yellowstone Cutthroat Trout (*Oncorhynchus clarki bouvieri*), brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), blue headed sucker (*Catostomus discobolus*) and rainbow trout (*Oncorhynchus mykiss*). Yellowstone Cutthroat Trout (YCT) are discussed under Threatened, Endangered, and Sensitive Species.

Environmental Effects

Alternative A

The No Action Alternative would allow erosion of the streambank along the main Snake River to continue. Future hardening for erosion control might be required to protect the canal.

Alternative B

The only proposed Project that would have the potential to effect fisheries resources would be the Streambank bio-engineering project. This project would have a direct impact on fisheries where 1,100 linear feet of bank would be stabilized using natural materials and biological stabilization techniques. The potential impacts would include short-term increases in sediment, potential impacts to spawning beds adjacent to the project location, reduced macroinvertebrate production, and gill irritation for fish downstream of the project.

Cumulative Impacts

There are over 10,000 linear feet of active channel along the main Snake River within the DPWMU. Data is not available on the total amount of that section that is actively eroding. The cumulative effect of the Streambank bio-engineering project would stabilize approximately 10% of the river within the DPWMU.

Invasive Species

Affected Environment

The noxious and invasive species found on the DPWMU as follows: black henbane (*Hyoscyamus niger),* Canada thistle (*Cirsium arvense*), catchweed (*Asperugo procumbens*), field bindweed (*Convolvulus arvensis*), houndstongue (*Cynoglossum officinale*), knapweed species (*Centaurea* spp.), leafy spruge (*Euphorbia esula*), musk thistle (*Carduus* spp.), nightshades (*Solanum* spp.), poison hemlock (*Conium maculatum*), puncture vine (*Tribulus terrestris*), Russian knapweed (*Acroptilon repens*), Russian thistle (*Salsola tragus*), hoary cress (*Cardaria draba*), yellow toadflax (*Linaria vulgaris*), common reed (*Phragmites australis*), and cheatgrass (*Bromus tectorum*),

Additional Unwanted Invasive Non-native Weeds include: climbing nightshade (*Solanum dulcamara*), common cockleburr (*Xanthium strumarium*), burningbush (*Bassia scoparia*) quackgrass (*Elymus repens*), reed canarygrass (*Phalaris arundinacea*), Russian olive (*Elaeagnus angustifolia*), smooth brome (*Bromus inermis*), and pigweed (*Chenopodium album*).

The condition of the fields that would be cultivated is poor and weedy ruderal species are common, with a few stands of native grasses. The most common weedy and invasive species are musk thistle, Canada thistle, bull thistle, downy brome, Russian thistle, mustards, and smooth brome. In addition, Russian knapweed is found in the Butte Slough Pasture. Management will focus on keeping these species suppressed while incorporating annual plant food plots to benefit wildlife. Noxious and invasive weeds are routinely deposited on the bare banks in the area of proposed Bio-engineered Banks.

Quagga mussels and zebra mussels are currently not found anywhere in the DPWMU.

Environmental Effects

Alternative A

Current levels of invasive and non-native plant species would continue to be managed under the DPWMU weed management scenario. The invasive and non-native species currently found in the proposed Cook's and Butte Slough project locations that are not considered noxious would continue to be mostly unmanaged.

Alternative B

Short-term increases in invasive and non-native plants would occur in disturbance areas for all the Projects. Weeds in the Bio-engineered Banks area will be controlled before and after disturbance would occur, but there would be short-term increases during the establishment of native vegetation cover. The native vegetation planted would provide long-term invasive weed control and would minimize the establishment of new infestations in the future. This is in contrast to the No Action Alternative, where increased occurrence of infestations along eroded banks would continue. Aggressive reclamation and control of weed species would occur in all disturbance areas to reduce spread and mitigate for any increases over the long-term.

Increased boat access to Butte Slough at the Boat Launch would increase the potential for aquatic invasive species, such as quagga mussels (*Dreissena rostriformis bugensis*) and zebra mussels (*Dreissena polymorpha*). This would be mitigated by increased patrolling of the location by DPWMU staff to make sure boats have been inspected and also thought Idaho State Department of Agriculture's boat inspection program. Under Alternative B, the impacts related to invasive species would be slightly more than Alternative A.

Cumulative Impacts

The current extent of noxious and invasive species established on the DPWMU is not known, but weeds are managed with seasonal application of herbicides and mowing across the DPWMU. The majority of the non-native invasive weed control occurs along roads and in cultivated fields. Areas that were previously cultivated and are no longer in production are mostly weedy fields, because limited weed control was done before the land was acquired by the BLM and some fields were left fallow. Poor historical management led to increasing infestations, especially near roads and trails. The current management focus is on keeping infestations from expanding and controlling those infestations that can be accessed by vehicle across the DPWMU. Areas actively under cultivation have seasonal weed control using some herbicides, disking, and planting forage crops to minimize weed spread. The cumulative impacts of the pipeline projects would result in less than 1% increase in disturbance areas over the short-term. The disturbance areas would be actively managed under all proposed actions, thus non-native invasive plant species would be minimized. Aggressive reclamation of disturbance areas would eliminate long-term increases in noxious and invasive species.

Migratory Birds

Affected Environment

The primary migratory birds that have been observed in the project area are waterfowl and other waterbirds, raptors, and neo-tropical migratory birds. Several raptor nests have been observed in areas adjacent to the proposed project locations. The following list of resident and migratory birds represents the important species.

Species of Greatest Conservation Need in the Snake River Basalts.

Trumpeter Swan *Cygnus buccinator*a

Northern Pintail *Anas acuta*

Lesser Scaup *Aythya affinis*

Hooded Merganser *Lophodytes cucullatus*a

Greater Sage–Grouse *Centrocercus urophasianus*a

Western Grebe *Aechmophorus occidentalis*a

Clark's Grebe *Aechmophorus clarkii*a

American White Pelican *Pelecanus erythrorhynchos*a

Great Egret *Ardea alba*

Snowy Egret *Egretta thula*a

Cattle Egret *Bubulcus ibis*

Black–crowned Night–Heron *Nycticorax nycticorax*a

White–faced Ibis *Plegadis chihi*a

Bald Eagle *Haliaeetus leucocephalus*

Swainson's Hawk *Buteo swainsoni*

Ferruginous Hawk *Buteo regalis*

Merlin *Falco columbarius*

Peregrine Falcon *Falco peregrinus*

Sandhill Crane *Grus canadensis*

Black–necked Stilt *Himantopus mexicanus*

American Avocet *Recurvirostra americana*

Long–billed Curlew *Numenius americanus*

Wilson's Phalarope *Phalaropus tricolor*

Franklin's Gull *Larus pipixcan*

California Gull *Larus californicus*

Caspian Tern *Sterna caspia*

Forster's Tern *Sterna forsteri*

Black Tern *Chlidonias niger*

Yellow–billed Cuckoo *Coccyzus americanus*

Burrowing Owl *Athene cunicularia*

Short–eared Owl *Asio flammeus*

Lewis's Woodpecker *Melanerpes lewis*

Brewer's Sparrow *Spizella brewer*

Environmental Effects

Alternative A

Under the No Action Alternative, none of the improvements migratory bird habitat would be obtained. Existing unmanaged land uses would stay in place and the current status would not change.

Alternative B

The management of Cook's and Butte Slough Pasture Food Plots would increase food availability for migratory birds such as geese and swans during migration periods, especially the fall. Fresh water and moist soil areal extent would increase in the spring and summer from irrigation on 76 acres total for the Cook's, Butte Slough, Gohr, and County Road projects. All projects would be completed outside of the nesting season of migratory birds. Under Alternative B, the impacts to migratory birds would be slightly more than Alternative A.

Cumulative Impacts

The cumulative impacts of the proposed Projects would increase the amount of currently cultivated area by approximately 17%, thus having an increase in beneficial impacts on migratory birds by providing additional food sources. The 17% increase in disturbance area may have direct impacts on ground nesting migratory birds.

Prime and unique farmlands

Affected Environment

The proposed Projects are located in areas designated as prime and unique farmlands. Adjacent fields are actively managed for agricultural production and are classified as prime if irrigated. There are currently 428 acres being managed with cultivation and irrigation and these are classified as prime farmlands, which are in good condition. Historically 728 acres were under cultivation and irrigation and were classified as prime farmlands. The areas which were historically in production, but not currently under production, are in good to poor condition and mostly covered with ruderal and weedy species of plants.

Environmental Effects

Alternative A

Under the No Action Alternative, there would be no increases in acreage of land that is farmed in the DPWMU and this level would remain at 428 acres. This would have fewer beneficial impacts to prime and unique farmlands, as compared to Alternative B. Existing unmanaged land uses would stay in place and the current status would not change.

Alternative B

Under the Action Alternative (B), there would be an increase of 76 acres put into production as active prime farmland through increased water management ability through proposed irrigation upgrades. This would increase the total acreage of prime farmland to 504 acres. The Butte-Slough road and boat launch would not remove any prime or unique farmlands from production.

Cumulative Impacts

The historical prime agricultural lands total 748 acres and there are currently 428 acres under cultivation. The addition of 76 acres to cultivation represents an increase of the cumulative acreage under production and classified as prime farmland of 17%, as compared to the No Action Alternative.

Recreation

Affected Environment

Currently, the DPWMU has several trails and is used by recreationalists, photographers, and hunters. There are no good access points on Butte Slough for boats.

Environmental Effects

Alternative A

Under Alternative A, boat access to Butte Slough would not be developed; therefore, recreation opportunities associated with boat access to Butte Slough would not be obtained. Recreation use near Butte Slough would continue but would not likely increase by hundreds of people due to lack of access. The direct and indirect impacts to recreation opportunities under Alternative A would not be as prevalent compared to Alternative B.

Alternative B

The direct impacts of the proposed action would be an increase in recreation use on Butte slough. The indirect impacts of the proposed action would be the possible displacement of visitors who have accessed the slough by foot and were seeking solitude. Alternative B allows for greater recreation opportunities to the Butte Slough compared to Alterative A.

The public use restrictions would have the following effects:

1. Not allowing camping;
2. Allowing only non-motorized recreation (which would enhance the recreational experience for this WMU for users, by seeing more wildlife, and closer);
3. Increasing the recreational experience for Butte Slough non-motorized boat users.

Under the action alternative, all routes would be closed to motorized use, with the exception of IDFG administrative use of roads and routes. Horse riders would be affected by not hearing motorized vehicles and by seeing more wildlife, closer due to motorized use restriction. People could still access high use areas by foot, horseback, or mountain bike. Indirect effects might include more motorized use on adjacent public lands that do not have motorized use restrictions. The indirect noise impacts to recreational users would be lower due to closure for motorized use.

Cumulative Impacts

As populations increase in eastern Idaho, visitors would seek places to recreate. By providing an additional access location, visitor use would increase on the Butte slough. All routes across the WMU would be closed; therefore cumulative impacts of this action would be the same as the direct and indirect effects discussed above.

Soils and water quality

Affected Environment

The soil in the project area is Grassy Butte sandy loam, formed in wind-laid sandy deposits derived from mixed sources (NRCS 2014). Slope is 2-4%. Surface runoff is very slow and erosion hazard is slight. The hazard of wind erosion is very high and there is evidence of wind erosion/deposition actively occurring in some locations, especially at the location of the proposed Butte Slough access road. The previously cultivated fields that are not under active

irrigation are generally stable with a cover of weedy plant species that hold soils in place. Minimal active soil erosion by water has been observed, but areas with wind erosion and deposition are found, depending on soil moisture, throughout the area.

The condition of the soil is generally good in the proposed irrigation and cultivation areas, but soils in the location of the proposed road access to Butte Slough is affected by the historical deposition of wind-blown deposits along a historic fence line. The fence is no longer in place, but the pile of wind-blown deposits is approximately 4-6 feet high.

Environmental Effects

Alternative A

There would be no effects on soils from the No Action Alternative (A). Current soil wind erosion would continue at the location of the Boat Launch road and parking area. This alternative would have fewer short-term impacts on soil erosion than the action alternative, but long-term soil erosion by wind would still occur.

Alternative B

Soils wind erosion would increase slightly on a seasonal basis during active cultivation in fields. Soil wind erosion at the location of the proposed Butte Slough access road would be reduced through the placement of road base along the historic fence line wind-blown deposits. The soil type in the project area is not conducive to water erosion. Wind erosion would increase during construction, and stabilize after re-vegetation with dry site grass mix. (Grass mix for low precipitation sandy area: Snake River wheatgrass, Sandberg bluegrass, sand dropseed).

The Proposed Action would increase soil erosion during construction, but the clay in the road base would stabilize areas driven on in the future. The parking area would be sloped away from the slough to contain any potential contaminants from entering the slough.

A low fence would be placed around the parking area to keep motorized vehicles from driving onto adjacent areas.

The Proposed Actions could result in short-term erosion of wind borne materials and some material entering the slough where the launching area is established. Long-term effects from this alternative should stabilize as the road and parking lot soils compact.

Short-term, minor sediment impacts to water quality would also occur under the Bio-engineered bank project, especially during construction. These impacts would be mitigated through use of construction Best Management Practices (BMPs) designed to reduce erosion and runoff.

There will be no impacts to soils or water quality under the Gohr Field, Cook's Pasture, Butte Slough Pasture, County Road, or Public Use Restrictions projects.

Under Alternative B, the impacts to soils and water quality would be slightly greater than Alternative A.

Cumulative Impacts

As discussed above in the prime and unique farmlands section, the increase of 76 acres to cultivation and irrigation would result in a seasonal, short-term increase in wind erosion where lands are cultivated. This increase in areas prone to wind erosion would occur just after cultivation and the erosion hazard would go down quickly as irrigation is done and pasture crops are grown.

There are approximately five miles of dirt roads in the DPWMU and the proposed Butte Slough road improvements would add an additional 0.16 miles of road, thus reducing wind erosion in this area. The Cumulative impacts of this proposed action would add approximately 3% more miles of road resulting in a 3% decrease in areas prone to wind erosion for the Butte Slough access road, as compared to the No Action Alternative.

Threatened, Endangered and Sensitive Species

Affected Environment

Bald Eagles, a recovered species, are known to nest within the DPWMU. The eagles use cottonwood trees along the rivers as perches year round and a significant Bald Eagle winter roost area is located about one mile downstream from the Deer Parks Wildlife Mitigation Unit. Yellow-billed cuckoos have also been observed nesting within one mile of the proposed Projects and this species likely uses riparian habitats through the area (IDFG 2014b).

Ute ladies tresses (*Spiranthes diluvialis*), a threatened species, is found along the South Fork Snake River but the species has not been observed in the DPWMU. Trumpeter Swans, a sensitive species, winter in the area. The Peregrine Falcon, a sensitive species that was delisted in 1999, has been observed on the DPWMU.

An isolated observation of a Wolverine (*Gulo* gulo) was collected within one mile of the Projects on North Menan Butte in 2009. This individual was assumed to be a young dispersing animal and was later observed in Yellowstone National Park and Montana (IDFG 2014b). No other threatened, endangered or sensitive species are recorded for the Deer Parks Complex by the Conservation Data Center as of June 2014.

There is a population of Yellowstone Cutthroat Trout (YCT, *Oncorhynchus clarki bouvieri*) in the Main Snake River. These fish feed primarily on both terrestrial and aquatic insects and typically spawn in small tributaries of the Snake River. These fish have been observed in the main Snake River at the location of the proposed Streambank Bio-engineering project (IDFG 2014b).

Environmental Effects

Alternative A

Under the No Action Alternative, none of the bank stabilization along the Main Snake River would occur, thus erosion would continue.

Alternative B

The Streambank Bio-engineering project would require work along the banks of the main Snake River and would have a short-term direct impact on YCT in the vicinity of the proposed construction work. Impacts of this work would include temporary increases in sedimentation from construction disturbance along approximately 1,100 linear feet of river banks. The potential impacts would include short-term increases in sediment, potential impacts to spawning beds adjacent to the project location, reduced macroinvertebrate production, and gill irritation for fish downstream of the project. Long-term impacts to soils would be reduced after bio-engineering treatments are implemented and construction disturbance is reclaimed. Proposed vegetation enhancements at this location would indirectly benefit YCT in the future from increased streamside vegetation cover.

Impacts would be mitigated by use of erosion control best management practices (BMPs) during construction and through stabilization of the river banks gained from proposed work. Under Alternative B, the impacts to threatened, endangered, and sensitive species would be slightly more than Alternative A.

Cumulative Impacts

There are approximately 10,000 linear feet of streambanks in the DPWMU and none have been treated through streambank bioengineering methods, thus the project would affect approximately 10% of the streambanks within the cumulative impacts assessment area.

Vegetation

Affected Environment

The current vegetation in the Cook's, Butte Slough, Gohr, and County Road project areas is primarily ruderal species of forbs and grasses, because these areas have been historically disturbed by agricultural activities. The Boat Launch site also has ruderal species, but some wetland vegetation and Russian olive trees are found on and adjacent to the proposed launch site.

Environmental Effects

Alternative A

Without the construction of a road and parking area, agricultural workers will drive along the fields and add to soil erosion. Vegetation would remain the same annual grasses and forbs. Weed control would not receive the same amount of attention as it would if part of an annual roadside, parking area control program. Under Alternative A, the impacts to vegetative communities would be slightly higher than Alternative B.

Alternative B

The construction of the road and parking area would disturb the vegetation cover in the short-term and provide an opportunity for noxious weeds and other exotic species to invade and expand into the native vegetation. This problem would be reduced by including long-term weed control efforts

in the areas weed control program. Under Alternative B, the impacts to vegetative communities would be slightly lower than Alternative A by replacing annual grasses with native species. Under Alternative B, the impacts to vegetation would be slightly more than Alternative A.

Cumulative Impacts

Cumulative effects of agricultural work vehicles driving on field edges would be confined to an established road, decreasing erosion and make noxious weed control more effective. Once the road and parking area soil compacted, erosion would decrease and roadside vegetation would protect increase both the soils and watershed.

Cumulative effects of the launch site would decrease once construction was completed and the rock/gravel settled and compacted. Cumulative effects by watercraft landing at various sites along the shores of the slough would not impact overall sediment deposits, as the shores are protected by heavy reed and cattail vegetation. Without an outlet, the slough water will never reach the Snake River. The Butte Slough closure from March 1 to August 1 would allow vegetation to stabilize shorelines.

Visual resources

Affected Environment

The Projects are located in an area that is classified as Visual Resource Management Level III, which is designated to partially retain the existing character of the landscape. The level of change to the characteristic should be moderate. Management activities may attract attention, but should not dominate the view of the casual observer. Most of the projects are in the view shed of the very popular Menan Butte hike.

Environmental Effects

Alternative A

Under the No Action Alternative (A), the character of the landscape would not change.

Alternative B

The Projects are located in an area that is currently agricultural and natural in character. The proposed actions would create a slight change in visual character, where currently uncultivated areas would be put back into production. Under Alternative B, the direct impacts to visual resources would be slightly greater than Alternative A.

Cumulative Impacts

Historically, more of the DPWMU was cultivated for agricultural purposes with 748 acres in production at the peak of agricultural activity and 428 currently in production. The increase of 17% of agricultural land in production, as compared to the current situation under the No Action Alternative, would not have a slight cumulative impact on visual resources.

Wetlands, riparian areas and floodplains

Affected Environment

The Projects are located outside of wetlands and floodplains, but are adjacent to the floodplain wetlands and within the riparian corridor of the main Snake River, with the exception of the Bio-engineered bank which is located in the floodplain. The Boat Launch into Butte Slough would require the removal of wetland vegetation to access the water where cattails occupy an area measuring approximately 10-feet by 8-feet (0.002 acres). Hydric soils were observed in some areas adjacent to the proposed Cook's and Butte Slough Pasture Food Plots. Riparian vegetation, such as willows and cottonwoods, is found in the location of the Cook's and Butte Slough Pasture Food Plots.

Environmental Effects

Alternative A

Under the No Action Alternative (A), no impacts will occur on proposed food plots or fields, because water application to the fields is limited by lack of infrastructure.

Alternative B

No wetlands, riparian vegetation or floodplains would be directly impacted if the proposed Projects would be implemented, with the exception of 0.002 acres of cattails that would be removed for the boat launch and one acre of riparian-wetland vegetation that would be added in the floodplain with the Bio-engineered Stream Banks. Therefore, the Boat Launch and Bio-engineered bank projects would have minor short-term direct impacts to wetlands, riparian areas (Boat Launch only) and floodplain (Bio-engineered banks only). Indirect impacts to wetlands, riparian vegetation and floodplains would include increased human presence during cultivation and construction activities. Under Alternative B, the indirect impacts to wetlands, riparian areas, and floodplain resources would be slightly greater than Alternative A.

Cumulative Impacts

Historically, much of the DPWMU is comprised of wetlands, riparian areas and the floodplain of the main Snake River. The increase of 17% of agricultural land in production, as compared to the current situation under the No Action Alternative, would increase human disturbance adjacent to these resources. Additionally, the addition of one acre of wetland/riparian vegetation resulting from the proposed Bio-engineered stream banks would increase this type of vegetation <1%, as compared to the No Action Alternative.

Wildlife

Affected Environment

Wildlife habitat within the Project area is comprised primarily of native rangeland represented by tall sagebrush types of both basin and Wyoming big sagebrush. Wildlife species known to occur within and around the project area include small mammals such as cottontail rabbit, raccoon,

river otter, muskrats, porcupines, and skunks. A few resident mule deer utilize the adjacent agricultural fields, and winter on the Menan Buttes, but this area is not identified as crucial range. White-tailed deer use the areas as both summer and winter habitat. Coyotes are abundant, keeping the vole and fox populations under control. There are no catchable fish in the slough. Small minnows and native painted turtles are abundant in the slough waters.

Environmental Effects

Alternative A

Wildlife impacts would be generally the same as Alternative B below. Muskrat numbers would remain the same. If the surplus is not trapped and removed, they would migrate out of the slough as water levels drop. Big game harvest would not significantly change. Waterfowl harvest may be less over time, but dedicated waterfowl hunters already use every portion of the slough prior to the slough freezing over with ice.

Alternative B

The impacts of the Butte Slough Boat Launch, Parking Area, and Access Road would create more human traffic on the road and parking lot locations. The construction would displace individuals of small mammals and birds, but should not result in loss of bird reproductive success. The area affected by the parking area construction is not native habitat and would have a minimum impact on wildlife. Human disturbance associated with long-term use of the road and parking lot would displace some individuals during the nesting season. The long term human disturbance on wildlife in the slough area would increase and may have a slight adverse effect on nesting, but minimal nesting has been observed on the Butte Slough and human disturbance is not expected to increase significantly. Hunters already park at the head of the proposed road and walk through the area to hunt. Expected users are: photographers, trappers and waterfowl hunters. Seasonal restrictions on construction actions would mitigate for any impacts to these species. Under Alternative B, the impacts to wildlife would be slightly more than Alternative A.

Cumulative Impacts

Cumulative impacts to wildlife would increase over time as more hunters and trappers take advantage of the increased access to Butte Slough. More waterfowl may be harvested, muskrat populations could decrease. This would be beneficial to the muskrat population as muskrats are observed leaving the slough as early winter water levels drop and muskrat territories shrink. Excessive hunting or trapping pressure would be managed through harvest limits and season restrictions. Big game populations are accustomed to human activity and would not be affected. If present high hunter numbers and low harvest numbers are any indication, big game harvest would not increase significantly.

SUMMARY OF ENVIRONMENTAL EFFECTS

Any ground disturbance creates the possibility for introduction of weeds. Equipment brought in has the potential to transport seed if not properly maintained and washed. Pumping water out of a canal carries the potential to transport seed to new areas through seed dispersal. Irrigating areas not previously irrigated could allow weeds present in those areas to grow healthier

No significant short- or long-term, direct or indirect impacts are anticipated as a result of the proposed action Alternative B.

SUMMARY OF CUMULATIVE ENVIRONMENTAL EFFECTS

No significant cumulative impacts are anticipated as a result of the proposed action Alternative B.

CHAPTER 5 CONSULTATION AND COORDINATION

PERSONS AND AGENCIES CONSULTED:

Dan Kotansky, Arn Berglund, Deena Teel, Monica Zimmerman, Marissa Guenther, Brandy Janzen, and Devin Englestead from Bureau of Land Management (BLM) were consulted to inspect the project area and determine if there were any issues that would prevent the project from going though the National Environmental Protection Act (NEPA) process. Rob Cavallero, the IDFG Regional Wildlife Biologist was also consulted.

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(Preparer) Date (NEPA Reviewer) Date

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