



Deer Parks Wildlife Mitigation Unit



Photo by Paul Faulkner, 2013

Management Plan
2014

Upper Snake Region



Deer Parks Wildlife Mitigation Unit

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**2014 – 2023 Management Plan
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Idaho Department of Fish and Game
Upper Snake Region
4279 Commerce Circle
Idaho Falls, Idaho 83401

Prepared By:
Paul Faulkner
Habitat Biologist, Cartier District

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Executive Summary

Idaho Department of Fish and Game (Department) manages 32 Wildlife Management Areas (WMAs). Researchers from the University of Idaho and The Nature Conservancy evaluated the value of Idaho's WMAs to wildlife. They found the WMA network, created to support game species, "potentially conserves many other aspects of Idaho's ecological diversity, may provide habitat for more than 98% of Idaho's wildlife, and complements other protected areas in the state" (Karl et al. 2005). Surveys and monitoring work conducted by Department biologists on Upper Snake Region WMAs confirms their value to big game, nongame, and many at-risk species identified in Idaho's State Wildlife Action Plan. In many cases WMAs provide the principal habitat for at-risk species in the Upper Snake Region.

Wildlife Management Areas often abut other protected lands such as National Forests, Bureau of Land Management (BLM) lands, or private lands protected by conservation easement. Due to the wildlife-focused management, WMAs often serve as highly productive core areas of the landscapes in which they exist. Management of these areas involves a combination of restoring and maintaining important natural habitats to contribute to landscape-level habitat function (e.g., sage-steppe, slough wetlands) and creating hyper-productive habitats (e.g., food plots, impounded wetlands) to enhance the carrying capacity for certain wildlife species.

Wildlife Management Area management plans strive to direct management that upholds these values. They may also be bounded by legislative and/or funding mandates, Department species plans, the State Wildlife Action Plan, conservation partner objectives, national wildlife conservation strategies and plans (federal and non-government organizations) and especially the Department's own strategic plan, *The Compass*. Priorities, Management Directions, Performance Targets, and Strategies have been developed to be as consistent as possible with all of these documents and to capture the broader conservation values already provided by WMAs and ensure these values are protected and enhanced.

The Department's Upper Snake Region manages seven Wildlife Management Areas (WMAs) that collectively comprise about 85,000 acres of land. The management focus is to maintain highly functional wildlife habitat and provide wildlife-based recreation. These areas include:

- Tex Creek WMA in Bonneville County, a crucial wintering area for the region's deer and elk
- Market Lake and Mud Lake WMAs, two deep marsh units that are vital waterbird migratory stopover and production areas in Jefferson County
- Chilly Slough Wetland Conservation Area (WCA), a protected complex of wet meadow and wetland habitats in Custer County
- Cartier Slough WMA, a natural wetlands associated with a slough channel of the Henrys Fork River in Madison County
- Deer Parks Complex Wildlife Mitigation Units (WMU), managed cooperatively with the BLM and Shoshone-Bannock Tribes (SBT) to restore and protect highly functional habitats along the Snake River in Jefferson and Madison counties

- Sand Creek WMA (including the Chester Segment), a mosaic of deep-water and shallow wetlands, wet meadow, marsh, and sagebrush-steppe habitats in Fremont County that provide winter refuge for mule deer, elk, and moose from surrounding high-elevation public lands including Yellowstone National Park

Examples of at-risk species partially dependent on Upper Snake Region WMAs include: Ute ladies' tresses orchid, St. Anthony sand dunes tiger beetle, northern leopard frog, greater sage-grouse, Columbian sharp-tailed grouse, sandhill crane, trumpeter swan, lesser scaup, northern pintail, white-faced ibis, long-billed curlew, and yellow-billed cuckoo.

All regional wildlife areas (WMAs, WMUs, and WCAs) are funded through a combination of hunting license dollars, appropriations from federal excise taxes derived from the sale of ammunition and firearms, and funding provided by the Bonneville Power Administration (BPA) and Bureau of Reclamation to mitigate habitat loss from construction of various dams in the region. Hunters pay a large portion of the management tab, and they are rewarded with habitat management areas that sustain many of the region's big game herds and provide consistent waterfowl and upland game bird production and hunting opportunities. Non-hunters, who value the varied benefits provided by the Upper Snake Region's WMAs, also benefit from the broad ranging conservation values associated with Department WMAs.

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 BLM, with the agreement that the Department and the SBT would cooperatively manage them. The Department has primary management responsibility. Since the inception of DPWMU, BLM has purchased additional properties adjacent to the original mitigation lands to provide additional wildlife habitat.

This document provides direction in the form of goals, objectives, and strategies for the management of DPWMU. The direction of DPWMU was determined after a series of public meetings. Issues pertaining to DPWMU were identified by the public and the Department. These issues were developed into goals, objectives, and strategies consistent with the Department Strategic Plan, *The Compass*. A draft version of these goals and strategies was offered for public inspection and comment in March 2013. Additional comments were received through user surveys handed out on the WMU.

This plan will serve as a guide for current and future managers in planning where to direct efforts and resources for maximum wildlife benefit, public enjoyment, and efficient operation. As new information and technology becomes available, and as more property is acquired, strategies may be modified to most effectively reach the goals and objectives in this plan. All goals, objectives, and strategies are dependent on adequate funding, personnel, compliance with federal regulations, and public support.

Management Program Table development is based on Conservation Targets chosen to benefit a large number of species using DPWMU and surrounding areas. Conservation targets give

direction to management goals and procedures that will restore, maintain, or improve habitats on the WMU and surrounding areas. The performance targets and strategies will guide managers on how to accomplish this.

Migratory Waterbird habitat management will involve stop-over habitat that provides foraging areas for birds to acquire that needed energy to complete migrations or to survive harsh winter conditions. These food sources benefit many other species on the WMU.

Given the high species value of migratory waterbirds (waterbirds, shorebirds, and waterfowl), particularly of priority species such as northern pintail, white-faced ibis, lesser scaup, sandhill crane, trumpeter swan, etc., wetland restoration and conservation partnerships are very achievable.

River Riparian management provides direction for management of cottonwood groves, riparian shrubs, and the vegetation understory essential to many species utilizing DPWMU. Ultimately, restoration of this habitat will enable expansion of sensitive species, such as yellow-billed cuckoo birds.

The DPWMU's conservation target management practices will provide benefits to a large number of species utilizing DPWMU and surrounding areas. Species that will not benefit have been identified as requiring additional information for management direction.

Sage-steppe management provides directions for sagebrush areas that benefit those species dependent on this icon of the west. As greater sage-grouse populations decrease in the western states, management of sage-steppe habitats becomes increasingly important.

Introduction

This management plan is designed to provide broad guidance for the long-term management of Deer Parks Wildlife Mitigation Unit (DPWMU). It replaces an earlier management plan written in 2001. This updated plan was completed during 2012 and 2013 with extensive public input. This plan is tiered off other Department plans and policies summarized below.

- State Wildlife Action Plan (2005)
- Statewide management plans for:
 - waterfowl (1991)
 - upland game (1991)
 - mule deer (2010)
 - white-tailed deer (2005)
 - elk (2014)
 - moose (1991)
 - furbearer (1991)
- Statewide big game depredation management plan (1988)
- Conservation Plan for the Greater Sage-grouse in Idaho (2006)
- Policy for Avian and Mammalian Predation Management (2000)

Other plans this document uses, is part of, or references include:

- North American Waterfowl Management Plan (2012)
- Intermountain West Waterbird Conservation Plan (2006)
- U.S. Shorebird Conservation Plan (2001)
- Intermountain West Regional Shorebird Plan (2000)
- Partners in Flight Tri-National Vision for Landbird Conservation
- Idaho Partners in Flight: Idaho Bird Conservation Plan (2000)
- Idaho's Invasive Species Plan (2012)

Department Mission

All wildlife, including all wild animals, wild birds, and fish, within the state of Idaho, is hereby declared to be the property of the state of Idaho. It shall be preserved, protected, perpetuated, and managed. It shall be only captured or taken at such times or places, under such conditions, or by such means, or in such manner, as will preserve, protect, and perpetuate such wildlife, and provide for the citizens of this state and, as by law permitted to others, continued supplies of such wildlife for hunting, fishing and trapping (Idaho Code Section 36-103).

Department Strategic Goals

The Department's 2005 Strategic Plan, *The Compass*, is the primary guiding document for all other Department plans and outlines four goals for the Department:

- Fish, Wildlife and Habitat: Sustain Idaho's fish and wildlife and the habitats upon which they depend.
- Fish and Wildlife Recreation: Meet the demand for fish and wildlife recreation.
- Working With Others: Improve public understanding of and involvement in fish and wildlife management.
- Management Support: Enhance the capacity of the Department to manage fish and wildlife and serve the public.

The 2014 Wildlife Management Area (WMA) plans describe the management direction for each of the 32 WMAs the Department manages to help accomplish these goals. The specific *Compass* goals and objectives relevant to WMA management are included in Appendix I.

Statewide WMA Vision

Our WMAs are managed to provide and showcase important habitat for all wildlife and to offer high quality, wildlife-based public recreation.

Deer Parks WMU Vision

The vision of the Deer Parks Complex is to sustain an ecosystem that supports an abundant, productive, and diverse community of naturally reproducing fish and wildlife by protecting and restoring natural ecological functions, habitats, and biological diversity.

Duration of Plan

This plan provides broad, long-term management of DPWMU and has a 10-year life span. It will be evaluated at five years to determine if adjustments are needed. The plan will be modified as needed to accommodate changing conditions and goals and to incorporate available advancements in management knowledge and techniques.

Other Considerations

All strategies proposed in this plan are bound by the contractual agreements between cooperating agencies, the mission of DPWMU, and all applicable Department species management plans and policies. Issues and strategies that are inconsistent with the mission were not considered. In addition, the implementation of all strategies will be subject to available funding, personnel, and safety considerations.

Area Description and Current Status

Land Use

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 1800s, 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 1870s. 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 1920s. It was acquired by the Boyle family in the 1930s 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 1870s. 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.

Geology

The eastern Snake River Plain is northeast trending lowland underlain by rhyolitic volcanic rock with a thin layer of basalt less than two million years old covering the surface. The confluence of the South and Henrys Fork of the Snake River is dominated by the presence of the twin cones of the Menan Buttes. The buttes were formed as basaltic lava erupted through water-saturated fluvial gravel of the Snake River during late Pleistocene time. The larger North Menan Butte rises nearly 800 feet above the river, while the South Butte rises nearly 450 feet. Both buttes are elongate to the northeast suggestive of the prevailing wind direction.

Soils

Soils found on the Deer Parks Complex include loams, clay loams, sandy loams, rock outcrop complexes, and xeric torrifluvents. They range from coarse to fine textured and from very poorly

to very well drained. They are generally found on level to nearly level terrain. The soils range from moderately to highly productive, especially when irrigated.

Climate

Jefferson and Madison counties have a typical mid-latitude, semiarid climate. Summers are warm and dry, and winters are cold with periods of warmer weather. Winds persistently blow from the southwest, especially in the spring. The mean temperature ranges from 16.1° F in January to 68.3° F in July. The growing season averages 119 days but ranges from 80 to 160 days. During the growing season, nights are cool, days are warm and relative humidity is often only 25 to 30% by late afternoon. The first frosts often occur by mid-September. Annual precipitation averages about eight inches with the greatest amount of precipitation usually occurring in May and June. Seasonal snowfall is highly variable.

Geographic Location

The Deer Parks Complex is located along and near the Snake River and Henrys Fork Snake River about 20 miles north of Idaho Falls, Idaho, in Jefferson and Madison counties. The mitigation units lie in the Snake River Plain at an elevation of 4,790 feet on the Snake River. Most of the terrain has gentle relief and slopes gradually away from the river, rising to about 4,830 feet. An exception to the otherwise gentle topography is the North Menan Butte, which rises nearly 800 feet above the surrounding landscape and is partially within the Deer Parks mitigation unit.

The Deer Parks Complex currently includes three Wildlife Mitigation Units (WMU) (Figure 1). 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 BLM to purchase the lands. The Deer Parks Complex properties are owned by the BLM and managed cooperatively with the Department and Shoshone-Bannock Tribes (SBT).

The Boyle segment of the DPWMU is located along the mainstem Snake River in Jefferson 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 Menan segment is located along the mainstem Snake River in Jefferson County adjacent to the Deer Parks unit. The 142-acre property includes river frontage, wetlands, former pasture, and former cropland and floods most years.

The Beaver Dick segment is located along the Henrys Fork Snake River in Madison County about five miles west of Rexburg, Idaho. The 310-acre property includes one mile of river frontage, wetlands, and former pasture. It also floods most years.

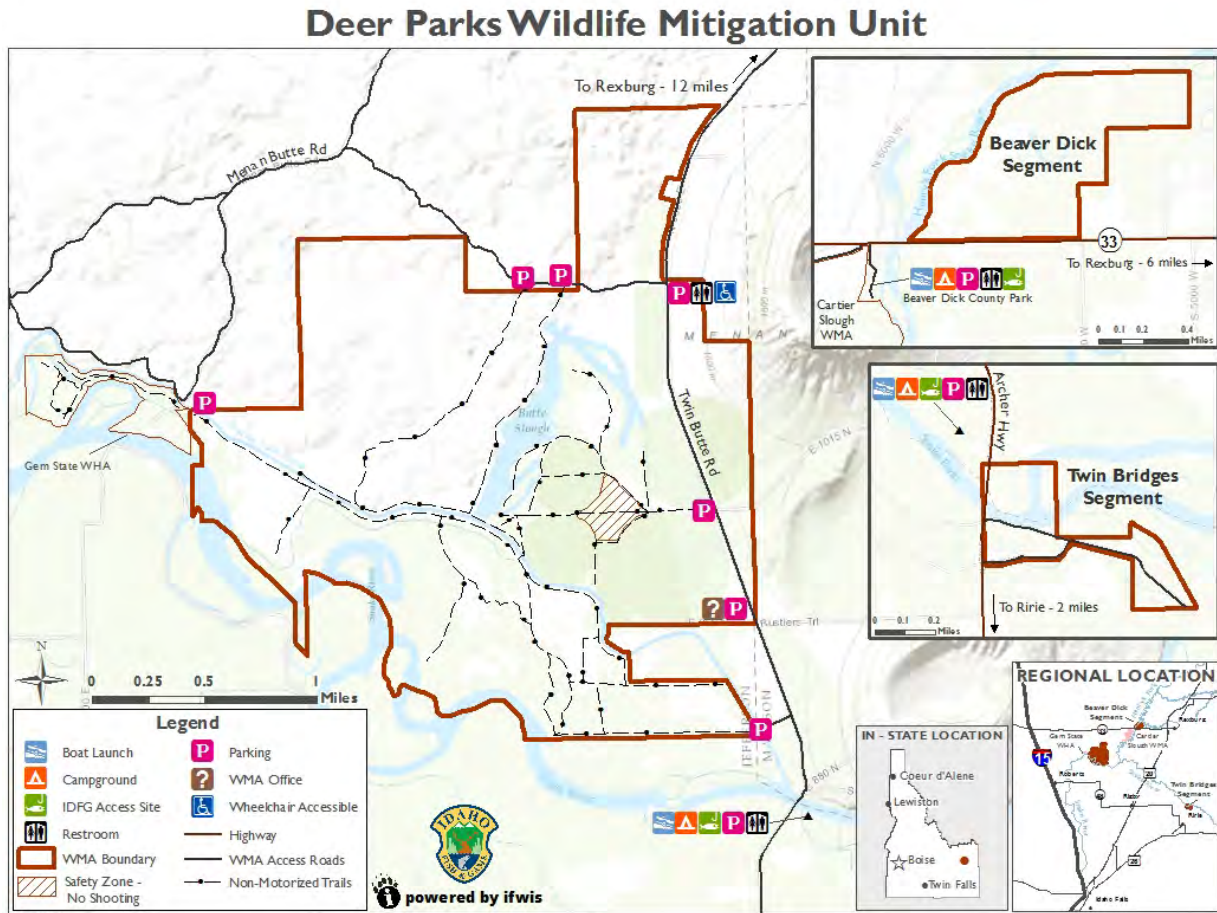


Figure1. Map of Deer Parks Wildlife Mitigation Unit.

Vegetation

Shrub-steppe uplands are dominated by big sagebrush (*Artemisia tridentata* ssp. *tridentata* and *wyomingensis*), with patches of threetip sagebrush (*Artemisia tripartita*) interspersed. Common understory grasses are needle-and-thread (*Hesperostipa comata*), bluebunch wheatgrass (*Pseudoroegneria spicata*), and Sandberg bluegrass (*Poa secunda*).

Riverine floodplain habitat occurs along the Henrys Fork and Snake rivers. Riparian narrowleaf cottonwood (*Populus angustifolia*) forest and scrub-shrub wetlands characterize the floodplain. Noxious and undesirable invasive weeds (e.g., Canada thistle, *Cirsium arvense*) are widespread, as well as scattered Russian olive (*Elaeagnus angustifolia*), but are actively controlled. The understory of narrowleaf cottonwood forest is often characterized by dense redosier dogwood (*Cornus sericea*). Scrub-shrub wetlands are patchy but widely distributed, often with an overstory of coyote willow (*Salix exigua*) and understory of reed canarygrass (*Phalaris arundinacea*). Black hawthorn (*Crataegus douglasii*), western snowberry (*Symphoricarpos occidentalis*), and Woods' rose (*Rosa woodsii*) are also common.

Extensive areas of emergent wetland are present. Low-lying areas are seasonally wet, some with alkaline soils supporting black greasewood (*Sarcobatus vermiculatus*), alkali sacaton (*Sporobolus airoides*), and other alkaline meadow species. Mesic and alkaline meadows are diverse, dominated redtop (*Agrostis stolonifera*), woolly sedge (*Carex pellita*), clustered field sedge (*Carex praegracilis*), saltgrass (*Distichlis spicata*), foxtail barley (*Hordeum jubatum*), alkali scratchgrass (*Muhlenbergia asperifolia*), Baltic rush (*Juncus balticus*), Kentucky bluegrass (*Poa pratensis*), and western wheatgrass (*Pascopyrum smithii*). Meadows and openings in the forested and scrub-shrub wetlands are potential habitat for Ute ladies'-tresses (*Spiranthes diluvialis*), a threatened plant species. Emergent marshes dominated by bulrush (*Schoenoplectus* spp.) and cattail (*Typha latifolia*) are found in semi-permanently flooded areas. Old pastures characterized by introduced forage grasses such as smooth brome (*Bromus inermis*) and quackgrass (*Elymus repens*) also occur.

Developments

Many developments have occurred over the past 20 years. Fences have been removed, new fencing has been constructed, old buildings have been removed, pipe racks constructed and irrigation pipe stored on these racks, miscellaneous equipment parts and other junk cleaned up. A headquarters facility has been developed. Hundreds of shrubs have been hand and machine planted.

Management Issues

Upper Snake Region habitat staff presented information on the WMAs in the Upper Snake Region and the preparation of the 2014 WMA plans at two big game season setting public meetings in February and March of 2012. These meetings were held in Idaho Falls and Rexburg. We created displays highlighting the WMAs, the planning process, and management issues that we had identified prior to the meetings. We encouraged the attendees to give us written comments regarding management of the WMAs and any issues they felt that we need to address in our future management. We directed attendees to the online survey available on the Department website (described below) and provided a form at the meetings for written comments.

Throughout 2012 (Feb-Dec), an online survey form was available on the Department website. The survey allowed participants to answer questions and provide feedback on WMA management statewide and the management of specific WMAs. Upper Snake Region habitat staff sent over 600 emails to neighbors, cooperators, legislators, sportsmen's groups, land management agencies, and concerned citizens inviting them to take the online survey. A news release was issued in the Idaho Falls newspaper inviting the public to take the online survey.

Additionally, DPWMU staff conducted on-site surveys from November 2012 – January 2013. These paper surveys included similar questions to the online survey and provided an opportunity for users to suggest ways to improve management of the WMU. Surveys were delivered to users in person, left on the windshield of unattended vehicles (with a self-addressed stamped envelope for return), and were handed out opportunistically by DPWMU staff. A cover letter included with the survey described the survey's purpose and that completed and returned surveys would be entered in a drawing for a \$100 gift card to a local sporting goods retailer.

We received 51 online surveys specific to DPWMU and 22 on-site paper surveys from DPWMU users during 2012-2013. Of these completed surveys, 36 (49%) included suggestions for improved management of DPWMU.

In addition to management issues identified by the public during these survey processes, Department staff also identified management issues specific to DPWMU. The following is a list of all DPWMU management issues identified by members of the public or Department staff. The issues identified by the public were grouped, based on similarity, into three general categories: Habitat Management, Wildlife Management, and Public Use Management. Similar comments were then combined to form management issue statements under each category. In the section below, we summarize each management issue and discuss some potential management options on DPWMU.

Issues Identified by the Public

Habitat Management (59% of public comments)

1. Improve or restore more habitat on DPWMU (9 comments).

Discussion: Four of the respondents wanted more food plots for doves and turkey. Two wanted to manage more for plant diversity in the agricultural fields, two wanted to manage for more native vegetation and one wanted to continue the agricultural fields as they are.

Maintaining or increasing high quality wildlife habitat is the primary, mitigation-directed goal for DPWMU personnel. We plant food plots to enhance winter feed for big game, upland game, and waterfowl. These also support large populations of blackbirds, doves, and neo-tropical songbirds. The agricultural fields are managed through a sharecrop agreement in which the sharecropper has a choice of small grains, corn, or alfalfa to plant. His choices are based on making a profit for his operation and we do not try to manage this. The DPWMU's share is taken in grain left standing for the above wildlife. The alfalfa fields provide important forage for both mule and white-tailed deer. Whenever possible, we plant native vegetation. The east Horkley field is planted into native species. Native species are much harder to establish. In many cases, we use non-native species that mimic native plants to increase stand success in areas that are traditionally difficult to establish. This area is very dry with sandy to loam soils and without irrigation, it is extremely difficult to establish permanent cover.

2. Deer Parks WMU should be expanded through land acquisitions (28 comments).

Discussion: We are gratified to see that the public strongly supports the expansion of DPWMU. The Department has an active land acquisition program for the entire state. Priority purchases are determined each year. Dependent on funding, acquisitions are acquired in priority order. The properties that comprise the Deer Parks Complex (Figure 1) were acquired by BLM using BPA funding for the purpose of partial mitigation for the loss of wildlife habitat caused by construction of the Palisades Project dam and reservoir. Since the first purchase of the Menan and Beaver Dick parcels, additional purchases have been made to enlarge DPWMU. The most recent purchase is the Raymond property. This 50-acre piece was surrounded by DPWMU ground and fits in with the current management.

We will continue to seek opportunities to add to DPWMU as we recognize that as large as the WMU currently is, it is still not large enough to provide secure habitat for all target wildlife during the varied seasonal extremes in eastern Idaho, particularly in the face of the expansion of Idaho Falls and its neighboring communities.

3. Improve noxious weed control on DPWMU (5 comments).

Discussion: Noxious weed management is a significant part of the overall habitat management of DPWMU. Four seasonal technicians spend a large portion of their time actively treating noxious weeds with chemical, mechanical, and biological control methods.

The DPWMU manager is an active participant in the local Cooperative Weed Management Areas, participating in weed control efforts on neighboring federal lands, and work with neighboring private landowners to prevent the spread of noxious weeds onto the WMU. We continue trying new methods of weed control, attempting to balance the use of chemicals with non-chemical methods. Noxious weed in some areas have been controlled while new infestations appear in other areas. Weather also plays an important role in controlling weeds. There are years when it appears there are more weeds at the end of the growing season, even after extensive weed control efforts all during the growing season. We are glad that the public recognizes the threat to wildlife habitat presented by noxious weeds and will continue to aggressively treat noxious weeds with an Integrated Weed Management approach.

Wildlife Management (25% of public comments)

1. Increase mule deer, moose and elk numbers (4 comments).

Discussion: There are multiple factors that affect population growth and decline in mule deer, moose, and elk populations, but the availability of year-round, high quality habitat is typically the most important. Deer Parks WMU was originally created to mitigate for mule deer range lost due to the construction and inundation of Palisades Dam. Providing high quality mule deer habitat remains a priority. Some mule deer utilize DPWMU for spring fawning and rearing. The DPWMU's mule deer move to one of the two Menan Buttes for the winter, utilizing the WMU for foraging. The mule deer hunting season was changed in 2010 to a limited controlled hunt to increase mule deer numbers in the 63A hunt area. At the same time, white-tailed deer permits were liberalized, in part to relieve pressure on mule deer. Moose utilize DPWMU throughout the year. Moose numbers are controlled by hunting permit numbers. In recent years, a declining harvest has caused the Department to reduce permit numbers. Elk have utilized DPWMU in the past, but have not been seen for the last four years. Quality habitat is available for all the above species and many of the strategies identified in the management program of this plan will help to optimize habitat for these species on DPWMU.

2. Manage DPWMU to benefit all native wildlife species, not just game species (1 comment).

Discussion: Deer Parks WMU was created and is mandated to provide high quality habitat for the following target species: bald eagle, mule deer, Canada goose, mallard duck, mink, yellow warbler, and black-capped chickadee. Therefore, these species will remain priorities for DPWMU management. Fortunately, these species have varied habitat needs that overlap the habitat needs of many other native wildlife species. Additionally, the Conservation Target approach used to develop this plan has helped us better identify the needs of Species of Greatest Conservation Need (SGCN) and plan accordingly. The DPWMU Management Program outlined in the following section considers the needs of a wide variety of native wildlife species, identifies species that have habitat needs that are not being addressed under the Conservation Target management system, and identifies monitoring or management actions to address these needs.

3. Increase game bird numbers and species for hunting (6 comments).

Discussion: As one of the few areas with wild pheasants, hunting pressure has increased as word spreads within the bird hunting community. We strive to improve nesting and brood-rearing habitat for all ground nesting birds, but frequent flooding of prime nesting habitat causes severe egg/chick losses. Turkeys have increased along the Snake River corridor and a small population is nesting on DPWMU. Because DPWMU is owned by BLM, the release of introduced species is prohibited.

4. Make big game hunting on DPWMU to archery only (2 comments).

Discussion: Archery only for big game hunt unit 63A has been presented to the public in the past. It was determined that this was one of the few areas that offered hunters the ability to use non-traditional muzzleloaders. The DPWMU's non-motorized access decreases this small hunter population even more. There has been little public support for this option.

5. Reduce predation, particularly wolf predation, on big game (3 comments).

Discussion: Population management designed to influence regional predator-prey dynamics is outside the scope of this specific WMU management plan. However, each big game species, including the apex predatory species (i.e., wolf, black bear, and mountain lion), have species-specific management plans that address predation management. Additionally, the Department has the "Policy for Avian and Mammalian Predation Management" that describes the Department's policy on predation management and the process utilized to develop predation management plans for specific areas. With regard to wolf management specifically, DPWMU is in the Southern Idaho wolf management zone which currently has a liberal harvest season (Aug 30 – Mar 31, two wolf tags per person) and no overall zone harvest limit. That said, there have been no verified wolf or mountain lion sightings on DPWMU since its purchase. It is very likely both of these predators travel the Snake River corridor and have or will at some time pass through DPWMU. Young black bears have been observed on DPWMU, but no established populations have been verified.

6. Require the use of non-leaded shot for all bird hunting on DPWMU (1 comment).

Discussion: Non-leaded shot for all bird hunting has been discussed for all Department management areas. A study was conducted by the Idaho Falls chapter of Idaho Master Naturalists in 2010 to determine current lead densities on Market Lake WMA. Results indicate that lead densities in upland areas that are subject to intense pen-reared pheasant hunting have almost reached the threshold where further restrictions on shot type would be warranted. Deer Parks WMU does not release pen-reared pheasants, so pressure and hunting numbers are lower and dispersed over a larger area. But if other Wildlife Management Areas start to require non-lead shot, DPWMU will seriously look at this requirement.

Public Use Management

1. Allow more/less motorized vehicle access on DPWMU (8 comments).

Discussion: Of the eight comments, four wanted more motorized access and four wanted to maintain non-motorized access. The vision of the Deer Parks Complex is to sustain an ecosystem that supports an abundant, productive and diverse community of naturally reproducing fish and wildlife by protecting and restoring natural ecological functions, habitats and biological diversity. Motorized vehicle use does not fit in with this vision. An indication of the negative effects of motorized vehicles is very obvious along the road directly north of DPWMU. These roads are used by a large number of recreationists. Damage to the resource is very obvious. Enforcement is very difficult with today's budgets. Limiting access on DPWMU to non-motorized travel not only alleviates resource damage, but enhances user experiences. For instance, 82% of users respond that they use DPWMU for non-consumptive uses sometime during the year; wildlife watching, horseback riding, hiking, dog walking, mountain biking, and being outside.

2. Provide better maps, signage, and boundary marking of DPWMU (2 comments).

Discussion: Two new kiosks have been constructed within the last three years. Efforts are being made to make them more user friendly and provide more information about DPWMU. New maps are now available at the kiosks or the Regional office in Idaho Falls.

3. Provide boat access to Butte slough (3 comments).

Discussion: An access road and non-motorized boat launch area plan has been developed for access to Butte slough. A National Environmental Policy Act (NEPA) application has been completed and is being processed by BLM at the present time.

4. Provide handicapped access (1 comment).

Discussion: Handicapped access has been discussed in previous plans. Deer Parks WMU is similar to other Federal lands; handicapped access allows users to hunt with the aid of motor vehicles. It does not allow them to drive closed roads. The question always arises: how do you control or enforce this option? Does the handicapped user get to take friends along? If the user requires assistance to retrieve downed game, are the assistants allowed to drive in? If the handicapped user drives in with a multi-seated vehicle, can he carry passengers in closed areas? We will continue the non-motorized vehicle use on DPWMU for all visitors.

5. Provide a foot bridge over the east end of the slough (1 comment).

Discussion: This option has been considered and would be feasible if situated over a section of the slough that is not too far across. The closest area that meets this criterion is close enough to another access road that it would be a very negligible difference in walking distance.

6. Increase enforcement (3 comments).

Discussion: Our enforcement personnel cover very large districts and target areas with large numbers of hunters. We will coordinate efforts better with BLM and the Jefferson County sheriff's office and communicate management goals to local conservation officers to improve compliance.

Public Comments on Draft Plans

In April 2014, the draft WMA plans were made available to the public for comment. The comment period closed on June 10, 2014. Deer Parks WMU received input on the draft plan from a total of two individuals. Both strongly agreed with the way the plan was written. None of the commenters had additional comments.

The Department received one comment from Idaho Conservation League. They were concerned with ensuring that each WMA plan considered the landscape in which it resides and non-consumptive wildlife uses. They had no comments specific to DPWMU. Significant portions of all WMA plans are dedicated to landscape scale planning. In fact, each focal species/habitat selected has an associated landscape. The DPWMU plan also incorporates wildlife viewing as a priority recreational pursuit. We believe that we have addressed these two issues very clearly.

Issues Identified by the Department

1. Maintaining flood irrigation on the DPWMU. This includes maintaining active farming.

Discussion: Sprinkler irrigation and flood irrigation on DPWMU provide high quality foraging resources for breeding and migratory bird species as well as local wildlife species. Flood irrigation provides a high quality surrogate habitat, mimicking shallow flooded wetlands. Some of the agricultural producers surrounding DPWMU have transitioned to sprinkler irrigation. This transition has led to a decrease in the productivity of many agricultural fields for wildlife. The management program in this plan identifies flood irrigation practices as beneficial to wildlife offers strategies to maintain and increase acres under this kind of management on DPWMU as well as on the landscape.

2. Understanding and maintaining and/or improving DPWMU's role in songbird migration.

Discussion: The maintenance of river riparian habitat (i.e., dense shrub/tree stands with cottonwood overstory, establishment of berry producing shrubs, and other similar habitats) is critical for numerous wildlife species, particularly breeding and migrating songbirds and raptors. Research done at the Camas National Wildlife Refuge, Market Lake WMA, and Mud Lake WMA (Carlisle et al. 2008) indicates that these habitats are vitally important for many migrating songbird species. Deer Parks WMU management program strategies include increasing berry producing shrubs, reestablishing cottonwoods in historical areas, and food

plot plantings. Maintaining river riparian areas is a high priority on DPWMU itself and at the landscape level.

3. Pursue methods to maintain and improve wildlife habitat on private and public lands in the Deer Parks area. This includes initiating habitat improvements now to ensure habitat continuity into the future.

Discussion: Changes in land uses and farming techniques has led to a decrease in the types, amounts and values of wildlife habitat in the Deer Parks area. The habitat types that have changed are widely variable. The following is a list of types of habitats that have been lost or altered in the Deer Parks area over time and the impacts to wildlife species.

- Flood Irrigated Agricultural Fields and Pasture Lands – Flood irrigation in the Deer Parks area traditionally provided high quality foraging resources for breeding and migratory bird species as well as local wildlife species. Over time, many of the agricultural producers have transitioned to sprinkler irrigation. This transition has led to a decrease in the productivity of many agricultural fields for wildlife.
- Sagebrush-Steppe – The loss of functional sagebrush steppe habitat in the area has impacted numerous wildlife species. Lands to the north of DPWMU have historically provided habitat to many sagebrush obligate species such as greater sage-grouse, pronghorn, sage sparrow, and other species. Gradually, agricultural conversion of sagebrush stands to crops, prescribed burning, wildfire, herbicide thinning treatments, and over-grazing has reduced the amount and quality of the sagebrush habitat. Protection of the remaining sagebrush stands and enhancement of disturbed stands needs to be a priority for conservation partners in this area.

4. Low waterfowl production on DPWMU is a concern as nesting cover, brood rearing, and foraging habitat is available.

Discussion: No waterfowl nests were found on recent nest searches. Large areas were covered without success. Few broods are found on counts conducted annually. With abundant habitat, there should be numerous nests and broods being produced. There are numerous predators observed on DPWMU. There are a large number of raccoons, skunks, crows, and magpies. Development of a predator management plan will be investigated to see if it could increase waterfowl production.

5. Major river bank erosion is threatening the western portion of Cooks Pasture and the Butte/Market Lake irrigation canal.

Discussion: Over the past twenty years, these banks have eroded almost 500 feet closer to the canal. Recently, the main Snake River channel changed course and the main water flow does not travel past these banks. But a major flood event could change the channel back any year. A bio-engineered bank stabilization project has been designed to stabilize these river banks. Federal permits and funding are lacking at this time.

6. Deer Park WMU's Management Plan includes management restrictions that will require following NEPA processes.

Discussion: The Department will work with BLM personnel to bring these restrictions into NEPA compliance.

Deer Parks WMU Management Programs

The Department is responsible for the preservation, protection, perpetuation, and management of all wildlife, fish, and plants in Idaho. Wildlife Management Areas and WMUs allow the Department to directly affect habitat to maximize suitability for species in key areas. Management to restore and maintain important natural habitats, and create hyper-productive habitats to enhance carrying capacity for selected wildlife species remains a key strategy on DPWMU. However, the most pervasive threats to WMA/WMU ecological integrity, such as noxious weeds, rural residential/commercial development, increased water diversion, and conflicting land uses on public lands, likely come from outside their boundaries. Therefore, WMA/WMU managers must recognize and create opportunities to participate in collaborative conservation and management programs with adjacent landowners, enabling broader influence to maintain the ecological functions that sustain WMA/WMU-dependent wildlife.

An effective way to enable a broader influence over the future of DPWMU is through the use of focal species management. According to Noss et al. (1999), focal species are those used by planners and managers to determine the appropriate size and configuration of conservation areas. Conservation of species within landscapes used for other enterprises such as forestry, recreation, agriculture, grazing, and commercial development requires managers to determine the composition, quantity, and configuration of landscape elements required to meet the needs of the species present (Lambeck 1997). Since it is impractical to identify key landscape elements for all species dependent on DPWMU, a carefully selected suite of focal species can act as a surrogate for the conservation of many species.

Identifying landscape-scale species priorities, across ownership boundaries comprehensively addresses wildlife-related issues on the DPWMU and creates a platform for conservation partnerships in the surrounding landscape. This step is also crucial for increasing the likelihood that WMA/WMU functions are resilient to inevitable changes in their associated landscapes. The following six-step process was used to create the DPWMU management program described in this plan. Each of these steps is described in detail on the ensuing pages.

- 1) Summary of Management Priorities
- 2) Focal Species Assessment
- 3) Selection of Conservation Targets
- 4) Coverage Assessment of Selected Conservation Targets
- 5) Spatial Delineation of Conservation Target Landscapes
- 6) Creation of Management Program Table

Summary of Management Priorities

Taking the biological and funding resources of DPWMU into consideration, in concert with the foundational priorities of DPWMU and statewide Department priorities, the Department developed the following list of broad-scale DPWMU Management Priorities.

Deer Parks WMU Management Priorities:

1. Wetland Habitat
2. River Riparian Habitat
3. Shrub-steppe Habitat
4. Farm Management

Focal Species Assessment

This section of the DPWMU Plan is an assessment of various conservation priority fish and wildlife species on the DPWMU and Snake River watershed in order to identify focal species to guide management. Table 1 evaluates taxa that are either flagship species (Groves 2003) and/or at-risk species identified by the Department in the Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005) and key federal agencies.

Flagship species are popular, charismatic species that serve as symbols and catalysts to motivate conservation awareness, support, and action (Heywood 1995). Flagship species often represent a landscape or ecosystem (e.g., South Fork Snake River watershed or desert foothills ecotone), a threat (e.g., habitat loss or climate change), organization (e.g., state government or non-government organization) or geographic region (e.g., protected area, Department Region or state; Veríssimo et al. 2009).

A principal limitation of the flagship species concept is that by focusing limited management resources on culturally and economically important species, more vulnerable species may receive less or no attention (Simberloff 1998). To overcome this limitation, we are explicitly considering a wide variety of at-risk species (Groves 2003); yielding a more comprehensive assessment that includes culturally and economically important species (e.g., mule deer and moose) along with formally designated conservation priorities (e.g., bald eagle and yellow-billed cuckoo).

Categories of at-risk vertebrate species considered in this assessment are: 1) species designated as Idaho SGCN; 2) species designated as Sensitive by Region 4 (Intermountain Region) of the U.S. Forest Service (USFS); and 3) species designated as Sensitive by the Idaho State Office of the BLM.

The Idaho SGCN list was developed as part of the Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005). The Comprehensive Wildlife Conservation Strategy document is now referred to as the State Wildlife Action Plan (SWAP). This name will be used throughout the rest of this document. In 2001, the U.S. Congress appropriated federal funds through the State Wildlife Grants program to help meet the need for conservation of all fish and wildlife. Along with this new funding came the responsibility of each state to develop a SWAP. Idaho's plan serves to coordinate the efforts of all partners working toward conservation of wildlife and wildlife habitats across the state. The Department coordinated this effort in compliance with its legal mandate to protect and manage all of the state's fish and wildlife resources (IDFG 2005). The SWAP does not distinguish between game and nongame species in its assessment of conservation need and is Idaho's seminal document identifying species at-risk.

Although the Idaho SWAP SGCN includes most of the special status species identified by land management agencies in Idaho, some species not listed as SGCN are considered priorities by other agencies. The confluence of the Henrys Fork and South Fork Snake River watershed, including DPWMU, is a mosaic of land ownerships including private lands, BLM lands, and lands managed by the Department. The BLM is a key partner in this landscape as their management actions directly influence ecological function on DPWMU. To maximize coordination, communication, and partnership opportunity, we include both USFS and BLM Sensitive Species in our biodiversity assessment.

United States Forest Service Sensitive Species are animal species identified by the Intermountain Regional Forester for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. The Forest Service Manual (FSM 2670.22) directs the development of sensitive species lists. This designation applies only on USFS-administered lands.

Bureau of Land Management Sensitive Species are designated by State Directors in cooperation with the State fish and wildlife agency (BLM manual 6840). The Idaho State BLM Office updated these designations in 2003. The sensitive species designation is normally used for species that occur on BLM public lands and for which BLM has the capability to significantly affect the conservation status of the species through management.

Information on species status, occurrence, beneficial management/conservation actions and threats were derived through consultation with the Department Regional Habitat, Fisheries and Wildlife staff; occurrence records in the Department's Idaho Fish and Wildlife Information System database; consultation with various BLM and USFS species lists, and species summaries provided in the Idaho SWAP.

Suitability of assessed species as a focal species were estimated by Upper Snake Regional Habitat and Diversity staff based on descriptions in Groves (2003) and USFWS (2005). Potentially suitable focal species may include species with one or more of the following five characteristics:

- *Species with high conservation need,*
- *Species or habitats that are representative of a broader group of species sharing the same or similar conservation needs,*
- *Species with a high level of current program effort,*
- *Species with potential to stimulate partnerships, and*
- *Species with a high likelihood that factors affecting status can realistically be addressed (USFWS 2005).*

Table 1. Status of flagship and special status species on Deer Parks WMU, including their potential suitability as a focal species for management.

Species	Status Designation(s)	Occurrence Context in Deer Parks WMU Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Deer Parks WMU
Mammals					
Idaho Pocket Gopher (<i>Thomomys idahoensis</i>)	SGCN,G4, S3	Undocumented on DPWMU. Presence is possible based on available habitat.	Population distribution in Idaho has limited documentation. However, loss of shrub-steppe and grassland habitats in the range of this species is likely a factor affecting conservation.	The primary recommended actions in Idaho's SWAP are documenting population distribution and initiating efforts to better document habitat associations.	<i>Unsuitable as a focal species.</i> Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Moose (<i>Alces alces</i>)	Flagship	Moose are commonly found across DPWMU, but exact densities are unknown. Movement along the river corridor is frequent and populations cross the river at will.	Development on the River Corridor poses the greatest threat to this population as well as vehicle collisions. Harvest numbers are well managed.	Protection of river corridors as natural areas would benefit this population of moose the most. Agricultural crops offer a large portion of their diet. Retaining the dense willow and dogwood stands greatly enhances winter habitat.	<i>Potentially suitable as a focal species.</i> Moose are a relatively abundant animal on DPWMU and are dependent on habitats that are representative of a broader group of species sharing the same or similar conservation needs.
Mule Deer (<i>Odocoileus hemionus</i>)	DPWMU Management Plan Target Species	Deer Parks WMU is important winter range for mule deer. In recent years DPWMU and the immediate vicinity has provided winter habitat for approximately 50 - 100 mule deer.	Protect and expand existing winter range; work collaboratively with BLM to maintain thriving mule deer herds on the landscape. Provide technical assistance to private landowners to expand tolerance and available habitat on private lands.	Rural residential development on the North and South Menan Butte. Increasing intolerance of deer feeding around local residences during critical winter months. Harassment by local pets.	<i>Potentially Suitable as a focal species.</i> Mule deer are a target species and a foundational priority for the creation of DPWMU. Mule deer are a culturally and economically important wildlife species in eastern Idaho and are a species with a good potential for developing conservation partnerships.
Myotis Guild	SGCN; BLM Sensitive	Long-eared myotis (<i>Myotis evotis</i>), Long-legged myotis (<i>Myotis volans</i>), western small-footed myotis (<i>Myotis ciliolabrum</i>), Yuma myotis (<i>Myotis yumanensis</i>). Western small-footed myotis known to hibernate in lava tube caves on the adjacent Sand Creek Desert. Also, potential roosts for other Myotis spp. within the Sand Creek desert and adjacent forest lands outside DPWMU boundary. Deer Parks WMU likely provides good migration-staging habitat and summer foraging habitat for a variety of bat species.	Low reproductive potential. Roost sites tend to be colonial, and may be limiting in some areas; habitat use rates and, at the population level, survival and recruitment rates likely track aerial insect prey availability. Accessible surface water also likely affects local distribution and abundance.	Minimize broad-spectrum insect control activities that reduce prey base. Where possible, document natural roosting habitat such as cliffs. Create day and night roosting habitat through installation of bat boxes. Deploy escapement devices on troughs and water tanks, and develop natural and artificial pooled water sources. Track with ongoing efforts of the East Idaho Bat Working Group to identify opportunities to mitigate bat mortalities from wind energy development.	<i>Unsuitable as a focal species.</i> Unknown scope of occurrence and composition of guild on DPWMU. Most prevalent threats are not likely to be addressed by DPWMU management.
Townsend's Big-eared bat (<i>Corynorhinus townsendii</i>)	BLM Sensitive, SGCN	Regionally important hibernacula and roosts within the Sand Creek desert outside the DPWMU boundary. Deer Parks WMU likely provides good migration-staging habitat and summer foraging habitat for Townsend's big-eared bat.	The primary issue facing this species is disturbance and destruction of roost sites through mine closures, renewed mining, recreational caving, and other roost-disturbing activities.	Document state population trends. Protect/restore year-round roosting options by working with land managers. These activities are currently being undertaken by the East Idaho Bat Monitoring Initiative of the Idaho Bat Working Group.	<i>Unsuitable as a focal species.</i> Limited information on distribution in the project area. Unknown distribution limits potential management feedback. Townsend's big-eared bat primary use of DPWMU is likely foraging over wetland areas, therefore, most prevalent threats are not likely to be addressed by DPWMU management.
White-tailed Deer (<i>Odocoileus virginianus</i>)		White-tailed deer are common on DPWMU throughout the year.	Vehicle collisions	Agricultural crops provide this population with a large portion of its forage. Retain the corn and grain food plots on DPWMU	<i>Potentially suitable as a focal species.</i> White-tailed deer are a relatively abundant animal on DPWMU and are dependent on habitats that are representative of a broader group of species sharing the same or similar conservation needs.

Species	Status Designation(s)	Occurrence Context in Deer Parks WMU Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Deer Parks WMU
Pygmy Rabbit (<i>Brachylagus idahoensis</i>)	G4,S2	Deer Parks WMU has potentially suitable habitat but no documented occurrences (IDFG 2005).	Fragmentation of sagebrush habitats	Retain dense sagebrush stands	<i>Unsuitable as a focal species.</i> Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Birds					
Bald Eagle (<i>Haliaeetus leucocapillus</i>)	SGCN BLM Type 1, SGCN, USFS R4 Sensitive, G4, S3B, S4N	Deer Parks WMU is important breeding and wintering range for bald eagles on the South Forks of the Snake River. The DPWMU's cottonwood grove complexes provide important nesting habitat and wintering waterfowl provide an important winter food source.	Conflicts with sportsmen who perceive eagles as a threat to local fish populations. Rural residential development in cottonwood/river bottom habitat. Loss of natural high water events that provide bare mineral soil necessary for cottonwood seed germination.	Protect existing breeding and winter range; work collaboratively with BLM to maintain adequate security; provide technical assistance to private landowners to reduce the likelihood of cottonwood grove destruction, provide technical assistance to county planning and zoning staffs to minimize loss or degradation of habitat.	<i>Potentially Suitable as a focal species.</i> Bald Eagles require large habitats for breeding and open waterways for foraging.
Breeding Waterfowl Guild	Mitigation species for DPWMU	Canada goose, mallard, gadwall, northern pintail, green-winged teal, blue-winged teal, cinnamon teal, American widgeon, northern shoveler, wood duck.	Loss of suitable nesting habitat by grazing, willow encroachment, and predation.	If grazing is allowed, it should be conducted after nesting has been completed. Willow encroachment should be monitored and controlled in critical areas if needed. If predation becomes a problem, initiate a control program.	<i>Unsuitable as a focal species.</i> Brood surveys show low waterfowl production on DPWMU. Reasons are unknown, but more research is needed to find out why.
Brewer's Blackbird (<i>Euphagus cyanocephalus</i>)	Type 5	A resident in the Deer Parks Slough area.	Poisons used to control starlings and blackbirds feeding in stockyards.	Grain and corn left standing for migrating and wintering wildlife on DPWMU benefits wintering blackbirds.	<i>Unsuitable as a focal species.</i> On BLM watch list, but too common to make a good focal species.
Brewer's Sparrow (<i>Spizella breweri</i>)	BLM Type 3, SGCN, IWJV,G5, S3B	The sage steppe habitats on DPWMU and adjacent to it, support good densities of Brewer' sparrows.	Loss of sage steppe habitat through fire, mowing or development.	Enhance and protect the sage steppe habitats on DPWMU and across the region.	<i>Unsuitable as a focal species.</i> Lack of large expanses of sage steppe habitat on DPWMU itself would preclude this bird as a focal species.
Burrowing Owl (<i>Athene cunicularia</i>)	SGCN	Known to occur in the vicinity of DPWMU during the breeding season.	Burrowing Owls breed in open, well-drained grasslands, prairies, farmlands, steppes, and may have some association with irrigated agriculture. In Idaho, burrowing owls typically use burrows excavated by badgers. Loss of nesting habitat through urbanization and agricultural conversion is a serious threat throughout Idaho. Pesticides are a potentially significant threat to this species as it often nests close to agricultural fields.	Many of the recommended conservation actions in Idaho's SWAP relate to statewide population assessments or monitoring to better understand threats. However, management that identifies nesting areas, limits human disturbance in known nesting areas and reduces exposure to pesticides will benefit nesting Burrowing Owls.	<i>Unsuitable as a focal species.</i> Occurrence context on DPWMU does not reflect main threats to the population. Also, limited occurrence on DPWMU limits potential management feedback.
Calliope hummingbird (<i>Selasphorus calliope</i>)	BLM Sensitive	Calliope hummingbird nesting habitat exists on DPWMU within aspen, montane shrub, montane riparian and spring habitats. However, nesting is not documented.	Any activities that threaten the quality and extent of aspen, montane shrublands and montane riparian habitats and their associated blooming forb communities are likely detrimental to calliope hummingbird.	Manage montane areas to maintain a multi-age mosaic of deciduous woodlands (willows and aspen), coniferous forest, montane shrubs, and forest openings and meadows that support flowering forbs. Manage for productive forb-rich, flowering meadows (Dobkin 1994, Hutto and Young 1999).	<i>Unsuitable as a focal species.</i> Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Ferruginous Hawk (<i>Buteo regalis</i>)	BLM Type 3, SGCN, IWJV	The sage/steppe uplands on DPWMU and adjacent landscape offer good quality nesting/foraging habitat for this hawk. There is a perennially active nest near the north boundary of the WMU.	Ferruginous hawks nest close to the ground and are susceptible to human disturbance. Population declines have been attributed to the negative effects of cultivation, grazing, poisoning, and controlling small mammals,	Primary conservation actions include maintaining prey populations (ground squirrels, etc.), and mitigating development impacts from recreation, urbanization, infrastructure and wind energy development.	<i>Unsuitable as a focal species.</i> Limited and seasonal occurrence on DPWMU limits potential management feedback at the focal species scale.

Species	Status Designation(s)	Occurrence Context in Deer Parks WMU Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Deer Parks WMU
			mining, and fire in nesting habitats. A more recent concern is the development of wind farms, where hawks can potentially collide with turbines during spring and fall migration.		
Greater Sage-grouse (<i>Centrocercus urophasianus</i>)	BLM Sensitive, SGCN, USFS Sensitive, ESA Candidate	Sage-steppe portions of DPWMU provide suitable habitat for Greater Sage-grouse. 2012 and 2013 surveys of historical leks on BLM ground between Market Lake WMA and DPWMU south of Hwy 32 did not find any lek activity. There are active leks north of Hwy 32. DPWMU is identified as "Important" sage-grouse habitat in the Governor's plan and in BLM's Preliminary Priority Habitat (PPH).	Loss, degradation, and fragmentation of sagebrush habitat are the major threats to the greater sage-grouse in Idaho. Habitat degradation factors include alteration of historical fire regimes, conversion of sagebrush habitat, water developments, use of herbicides and pesticides, invasive species, urbanization, energy development, mineral extraction, and recreation.	Identify, protect, and maintain existing sagebrush seasonal habitats particularly breeding and winter habitats. Identify new lek/breeding habitats in the DPWMU vicinity. Where possible, restore damaged and lost sage-steppe habitat. Manage projects to significantly reduce fragmentation of existing sagebrush habitats and to reduce human disturbance. Continue to monitor the leks near DPWMU.	Unsuitable as a focal species. Sage-grouse have a high conservation need and are representative of a group of species sharing similar conservation needs. They have a high level of current Department program effort and are a species with potential to stimulate partnerships. However, sage-grouse numbers on and around DPWMU are suppressed, making management changes difficult to measure.
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	SGCN; IWJV	Lewis's Woodpecker habitat exists on DPWMU within open forests and riparian groves. However, nesting has not been documented. This species is nomadic; therefore, suitable breeding habitat may be unoccupied in some years.	Forest management practices have promoted forests that support high densities of small diameter trees, which are unsuitable for this species. These birds rely on large snags in relatively open habitats. In general, a reduction of large snags in breeding habitats may limit reproduction.	Actions that result in open forests with large snags and a well-developed understory will likely benefit this species. Supporting forest management that strives to maintain fire as a (prescribed or natural) mechanism for forest succession is beneficial.	Unsuitable as a focal species. Nomadic ecology makes population monitoring difficult. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	BLM type 3,	Loggerhead Shrikes are seen occasionally on DPWMU.	Loss of grassland habitat, degradation and loss of nesting trees/shrubs within grasslands, degradation of foraging habitat due to overgrazing, low reproductive success due to reductions in prey base (grasshoppers and beetles) due to pesticides.	Protect or restore grassland habitat with scattered trees or shrubs. Avoid overgrazing by livestock and minimize use of pesticides to control grasshoppers (Wiggins 2005).	Unsuitable as a focal species. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Long-billed Curlew (<i>Numenius americanus</i>)	BLM Type 5, SGCN, IWJV, G5, S2B	Long-billed Curlews are uncommon on DPWMU. No nesting has been documented.	The greatest threat to Long-billed Curlew in Idaho is loss of habitat. Conversion of grasslands to croplands, residential development, and increasing recreational use has resulted in losses of suitable habitat in Idaho.	Identify potential curlew nesting and brood-rearing areas on DPWMU and vicinity. Protect nesting areas from human disturbance from approximately mid-April to mid-June.	Unsuitable as a focal species. Limited information on distribution in the project area. Unknown distribution limits potential management feedback.
Merlin (<i>Falco columbarius</i>)	G5, S2B, S2N	Merlins are rare on DPWMU.	Loss of nesting sites. Competition with other raptors.	Provide nesting boxes. Maintain Cottonwood and other large trees that provide cavities for nesting.	Unsuitable as a focal species. Limited information on distribution in the project area.
Migratory and Foraging Waterbird Guild	SGCN; IWJV	Deer Parks is an important component to the larger Mud Lake WMA/Market Lake WMA waterbird breeding complex. Deer Parks WMU has some waterbird breeding (mostly waterfowl), but its primary importance in the larger landscape may be as foraging and transitional habitat. Deer Parks WMU provides transitional habitat for many Idaho waterbirds, SGCNs including: Common Loon, Northern Pintail, Lesser Scaup, Barrow's Goldeneye, Hooded Merganser, Clark's	Deer Parks WMU provides some foraging areas for white-faced ibis and foraging habitat may be a limiting factor for the persistence of this species. Deer Parks WMU also provides state protected shallow wetland habitat which provides good natural spring migration foraging habitat that complements managed food plots at DPWMU.	Better characterize the importance of DPWMU to the transitional waterbird and foraging guild by quantifying occurrence/use during ice free periods on inland sloughs and the Henrys Fork of the Snake River. Explore opportunities for improving foraging habitat with plantings and moist soil management.	Potentially Suitable as a focal species. Deer Parks WMU supports foraging habitat for a variety of SGCN waterbird species.

Species	Status Designation(s)	Occurrence Context in Deer Parks WMU Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Deer Parks WMU
		Grebe, Red-necked Grebe, American White Pelican, Great Egret, Snowy Egret, Cattle Egret, Black-Crowned Night Heron, American Avocet, Wilson's Phalarope, Franklin's Gull, California Gull, Caspian Tern, Forster's Tern, Black Tern, Black-Necked Stilt, Spotted Sandpiper.			
Northern Goshawk (<i>Accipiter gentilis</i>)	SGCN, USFS Sensitive, BLM Sensitive	Goshawk nesting has not been documented on DPWMU. Current CTNF management recommendations for northern goshawk include identifying a foraging area around documented nests (approximately 6,000 acres). Therefore, DPWMU likely provides foraging habitat for goshawks nesting on adjacent federal lands.	Goshawks are considered sensitive to large-scale changes to forested habitats associated with timber harvesting, livestock grazing, fire suppression, and drought (Reynolds et al. 1992).	Work with CTNF biologists to update local status of nesting goshawks in the DPWMU landscape. Maintain forested habitat on the margins of DPWMU in a variety of vegetation structure stages. This will provide quality habitat for goshawk prey species and enhance foraging opportunities for goshawks (See Reynolds et al. 1992 for specific recommendations).	Unsuitable as a focal species. Management recommendations for northern goshawk are considered a good surrogate for managing forest species diversity (Reynolds et al. 1992). However, there is limited information on current utilization of DPWMU habitats by goshawks potentially nesting on DPWMU or on adjacent federal lands.
Peregrine Falcon (<i>Falco peregrinus anatum</i>)	BLM Type 3, SGCN, USFS R4 Sensitive, G4T4, S2B	Peregrine Falcons are rare on DPWMU.	Loss of habitat, particularly at cliff nest sites or adjacent wetlands, is a key threat to Peregrine Falcons. Disturbance at nest sites during breeding is also a threat to this species.	Deer Parks WMU and the surrounding area have very limited natural nesting habitat for peregrines. The WMU and surrounding habitats provide an abundant prey base for peregrines. DPWMU and local area use by peregrines is poorly understood.	Unsuitable as a focal species. Limited information on use of DPWMU by peregrines limits the potential value of management feedback.
Prairie Falcon (<i>Falco mexicanus</i>)	BLM Sensitive	Prairie Falcons are frequently seen on DPWMU preying on the large bird populations. No nesting has been documented on the WMU.	Habitat loss from rural-residential development and large-scale agricultural development adversely impacts prairie falcons particularly in areas where ground squirrels are important forage species. Human disturbance is a frequent cause of nest failure.	Management that minimizes disturbance near cliff nesting areas will benefit breeding prairie falcons and other raptors. Enhancement/maintenance of steppe and grassland habitats (and activities that benefit ground squirrels, rodents and small upland birds) will benefit foraging prairie falcons.	Potentially suitable as a focal species. Breeding prairie falcons can be a valuable indicator of human disturbance, particularly from recreation and management activities. Suitability as a focal species could be enhanced by treating as a guild with other raptors nesting on DPWMU.
Sage Sparrow (<i>Artemiospiza belli</i>)	BLM Sensitive, IWJV	DPWMU has suitable breeding habitat but their occurrence is poorly documented.	Degradation and fragmentation of sagebrush habitat are the major threats to the sage sparrow in Idaho. Habitat degradation factors include alteration of historical fire regimes, conversion of sagebrush habitat, water developments, use of herbicides and pesticides, invasive species, urbanization, energy development, mineral extraction, and recreation.	Identify, protect, and maintain existing intact sagebrush habitats. Where possible, restore damaged and lost sage-steppe habitat. Manage projects to significantly reduce fragmentation of existing sagebrush habitats and to reduce human disturbance.	Unsuitable as a focal species. Poor documentation of use on DPWMU.
Sandhill Crane (<i>Grus canadensis</i>)	SGCN, IWJV, G5, S3B	Deer Parks WMU provides important breeding and migrational stop over habitat for the Sandhill Cranes in the Rocky Mountain Population (RMP).	Greatest threat to RMP cranes is loss of migration-staging habitat. However, loss and degradation of wetland/riparian breeding habitat is also an issue.	Protect and restore wetland/riparian habitat for breeding sandhill cranes. Document breeding locations on the WMU, including nesting brooding locations.	Unsuitable as a focal species. Occurrence context on DPWMU does not reflect main threats to the population. Lack of knowledge limits potential management feedback.
Short-eared Owl (<i>Asio flammeus</i>)	BLM Type 5, SGCN, G5, S4	Suitable breeding and foraging habitat is present on DPWMU and immediate vicinity. Short-eared Owls are common breeders in this landscape. Species is known to be nomadic; therefore additional suitable habitat may be unoccupied in some years.	As ground-nesters (often in loose colonies), the short-eared owl is particularly vulnerable to habitat loss and degradation, and human disturbance. Residential, commercial, transportation, utility, and agricultural development of suitable nesting habitats are key factors in local short-eared owl	This species benefits from any actions or projects that protect, enhance, or restore potentially suitable foraging and breeding habitats. Projects designed to benefit other grassland and shrub-steppe species (e.g., greater sage-grouse, mule deer) also will benefit short-eared owls. Monitoring for use	Unsuitable as a focal species. Nomadic ecology makes population monitoring difficult. Limited information on distribution in the project area. Unknown distribution limits potential management feedback

Species	Status Designation(s)	Occurrence Context in Deer Parks WMU Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Deer Parks WMU
			population declines. Timing of agricultural activities such as tilling, mowing, burning, etc. can adversely affect short-eared owls breeding in agricultural areas. Because of their low-flying hunting technique and colonial tendencies, populations of short-eared owls in proximity to roads are potentially subject to high mortality due to vehicle collisions.	of agricultural lands prior to ground disturbing actions also would benefit the short-eared owl.	
Swainson's Hawk (<i>Buteo swainsoni</i>)	BLM Type 5, SGCN, IWJV, G5, S3B	Deer Parks WMU is important nesting habitat for Swainson's Hawks. Agricultural fields and abundant fields of dense vegetation provide a large prey base.	Main threats are vulnerability of this species as it congregates in large numbers during migration and on the wintering grounds (e.g., Argentina). On breeding grounds, conversion of native grasslands to crops can degrade or eliminate nesting habitat. Development of wind farms may cause direct mortality if migrating hawks collide with turbines during spring and fall migration.	Maintain and/or restore native grasslands in order to retain adequate foraging and nesting habitats. Avoid disturbance to nest trees during breeding. Migration corridors should be identified and important stopover habitat protected. Better data on mortality rates of migrating Swainson's hawks (and other raptors) as a result of wind farm development are needed.	Unsuitable as a focal species. Occurrence context on DP WMU does not reflect the main threats to Swainson's hawk (e.g., vulnerability on migration and wintering grounds). Limited and un-quantified seasonal occurrence on DPWMU limits potential management feedback at the focal species scale.
Trumpeter Swan (<i>Cygnus buccinator</i>)	Flagship SGCN BLM Type 3, USFS R4 Sensitive, USFWS State Imperiled Species Type 3, IWJV, G4,S1B, S2N	Populations have expanded throughout the Rocky Mountain region. Deer Parks WMU has become an important winter stop over, with cultivated food plots providing important calories for migration. No nesting has occurred on the DPWMU although suitable habitat may exist	Current distribution is expanding. Wintering food sources decrease as this population increases. Too many swans on small wintering areas have depleted food sources increasing winter mortality. Increased dependence on waste potatoes in local fields could lead to heavy winter mortality if unavailable due to extreme winter conditions.	Maintain or increase food plots on the WMU and protection from human disturbances during critical winter periods. Flag power lines in areas were wire strikes have been documented.	Potentially Suitable as a focal species. Trumpeter Swans will require increased secure nesting and winter habitat if the population is to increase and expand.
Western Burrowing Owl (<i>Athene cucularia hypugaea</i>)	BLM Type 5, SGCNG4T4,S3S4	Are rare on DPWMU.	Burrowing owls breed in open, well-drained grasslands, prairies, farmlands, steppes, and may have some association with irrigated agriculture. In Idaho, burrowing owls typically use burrows excavated by badgers. Loss of nesting habitat through urbanization and agricultural conversion is a serious threat throughout Idaho. Pesticides are a potentially significant threat to this species as it often nests close to agricultural fields.	Many of the recommended conservation actions in Idaho's SWAP relate to statewide population assessments or monitoring to better understand threats. However, management that identifies nesting areas, limits human disturbance in known nesting areas will benefit nesting burrowing owls on DPWMU.	Unsuitable as a focal species. Occurrence context on DPWMU does not reflect main threats to the population. Also, limited information on occurrence and use of DPWMU limits potential management feedback.
White-faced Ibis (<i>Plegadis chihi</i>)	BLM Type 4, SGCN, IWJV, G5, S2B	Deer Parks WMU provides some foraging opportunities on flooded areas, but does not currently have any active nesting.	Loss of foraging resources as the amount of flood irrigated lands decreases in the region.	Maintain mud flats and other foraging areas through water control methods.	Potentially Suitable as a focal species. Ibis require flooded areas for foraging, which DPWMU provides in limited quantities.
Willow Flycatcher (<i>Empidonax traillii</i>)	BLM Type 3, IWJV	Documented occurrences during the breeding season in riparian habitats on DPWMU.	Loss, degradation, and fragmentation of lowland riparian habitat due to water diversions, impoundments, heavy livestock grazing etc... Increase in nest predator access due to meadow desiccation and conifer encroachment is also an issue (Great Basin Bird Observatory 2013).	Riparian and springs habitat conservation strategies benefit this species. Maintain or restore shrub willow patches, preferably in multiple patches along a given riparian reach. Manage grazing such that it does not significantly fragment or reduce the density of willow patches. Maintain the presence of wet soils and nearby surface water. Reduce nest predator access by preventing conifer	Potentially suitable as a focal species. Willow flycatcher is a riparian obligate and representative of riparian-dependent species sharing similar conservation needs. Unqualified scope of occurrence on DPWMU would require preliminary work to determine the extent of breeding.

Species	Status Designation(s)	Occurrence Context in Deer Parks WMU Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Deer Parks WMU
				encroachment into riparian habitat. (Great Basin Bird Observatory 2013).	
Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)	Candidate, SGCN, G5, S2B Type 1	Occurs mostly along the river corridor in thick cotton wood groves. Historical and recent sightings indicate areas surrounding Twin Bridges and Deer Parks provide important breeding habitat.	Maintain cottonwood grove complexes; work collaboratively with BLM maintain adequate security; provide technical assistance to private landowners to reduce the likelihood cotton wood grove development, provide technical assistance to county planning and zoning staffs to minimize loss or degradation of habitat.	Reduction in historically occupied range, habitat loss or degradation, fragmentation of current habitat.	Potentially Suitable as a focal species. Yellow-billed Cuckoos require dense stands of cottonwood complexes for successful nesting. Therefore their thriving presence is one indicator of a highly functional system.
Reptiles and Amphibians					
Common Garter Snake (<i>Thamnophis sirtalis</i>)	BLM Sensitive Type 3	Occurs on DPWMU but context of occurrence is poorly documented.	Threats to common garter snakes are most likely related to loss and degradation of riparian and wetland habitats and hibernacula.	Management that protects, restores or improves riparian and other wet habitats and enhances prey species availability (i.e., earthworms, insects, amphibians, and small mammals) will benefit common garter snake. Identifying and protecting hibernacula will also benefit common garter snake.	Unsuitable as a focal species. Limited information on utilization of DPWMU habitats limits the potential value of management feedback.
Northern Leopard Frog (<i>Rana pipiens</i>)	BLM Sensitive; SGCN, G5,S2	Occurs in the South Fork of the Snake River bordering DPWMU Current population status is unknown.	Wetland protection and/or restoration of degraded sites are beneficial; a comprehensive understanding of population status is needed; amphibian survey (including disease monitoring) is scheduled in the Upper Snake Region for 2013. This investigation may identify future regional conservation recommendations.	Loss and degradation of wetland and riparian habitat is the most prevalent threat to populations. Introduced competitors and predators can cause amphibian population declines and losses. Disease is also a concern, particularly the chytrid fungus, <i>Batrachochytrium dendrobatidis</i> .	Potentially suitable as a focal species. Species is important indicator of riparian and wetland systems in southeast Idaho, the stronghold for this species in Idaho. Continued persistence in the drainage would help guide priorities for riparian and wetland conservation. If this species is found to have been extirpated from the drainage, it would be an appropriate lynchpin for riparian restoration and indicator of success in longer term.
Fish					
Bluehead Sucker (<i>Catostomus discobolus</i>)	USFS Sensitive	Historically, bluehead suckers occurred in streams and rivers Occurs in the drainages of the upper Snake, Weber, and Bear rivers (Sigler and Miller 1963, Sigler and Sigler 1996). Bluehead sucker is a benthic fish often found in riffle areas.	The primary threats to the bluehead sucker generally result from anthropogenic activities. Diversion of water results in changes in flow regime for main stem rivers and tributary streams. Construction of passage barriers (e.g., diversion dams and reservoirs) within many rivers and streams causes habitat degradation and fragmentation. Introduction of non-native species increases predation on and competition with bluehead suckers. Other threats to this species include channelization of streams, land use that changes the landscape, and local development of riparian zones that reduces the natural function of the stream ecosystem.	A data gap exists in basic life history information for the bluehead sucker. Habitat requirements and preferences are poorly understood for most life stages and life history events. Studies specifically designed to evaluate the impact of riparian grazing, road construction, passage barriers, and non-native species interactions are also imperative to preserving this species.	Potentially Suitable as a focal species. Limited information on utilization of DPWMU habitats limits the potential value of management feedback.

Species	Status Designation(s)	Occurrence Context in Deer Parks WMU Landscape	Threats	Beneficial Management and Conservation Actions	Suitability as a Focal Species for Deer Parks WMU
Yellowstone Cutthroat Trout (<i>Oncorhynchus clarkii bouvieri</i>)	USFS Sensitive; BLM Sensitive; SGCN, Type 2	Occurs in the South Fork of the Snake River bordering DPWMU.	Maintain YCT population distribution and trend monitoring program. Reduction in historically occupied range, habitat loss or degradation, fragmentation of current habitat, and isolation of existing populations, and hybridization with rainbow trout (IDFG 2005).	Restore connectivity of populations when possible, reduce competing rainbow trout. Maintain YCT population distribution and trend monitoring program.	<i>Potentially Suitable as a focal species.</i> Yellowstone cutthroat trout require well-oxygenated water; clean, well-sorted gravels, with minimal fine sediments for successful spawning; and a complexity of instream and riparian habitat. Therefore their thriving presence is one indicator of a highly functional system.
Invertebrates					
Desert Valvata (<i>Valvata utahensis</i>)	G5, S1B, S2N, Type 1	During recent surveys, colonies were documented at sites as far upstream as the lower Henrys Fork (Fields 2005). Population densities in occupied habitat have ranged from eight to 536 individuals per m ² (Fields 2005, Frest and Johannes 1992, U. S. BOR 2002).	Habitat loss is a prevalent threat to populations. Eutrophication of the Snake River has resulted from agricultural effluence, freshwater aquaculture inputs, and residential and industrial developments. Dams have altered the temperature and flow characteristics of the river. Introductions of exotic mollusks are also a threat. Alteration of the aquatic habitat has favored introduced mollusk competitors, notably the New Zealand mudsnail.	Protection of the remaining free-flowing mainstem and cold-water spring habitats in occupied reaches of the Snake River, stabilization of water levels, improvement of water quality, augmentation of flows above Milner Dam, and control of exotic species (USFWS 1995).	<i>Unsuitable as a focal species.</i> Limited information on utilization of DPWMU habitats limits the potential value of management feedback.
Columbia Pebblesnail (<i>Fluminicola fuscus</i>)	SNR, G3, Type 3	The Idaho Fish and Wildlife Information System database documented Columbia pebblesnail in several Idaho drainages including the Upper Snake River. Other similar specimens from the Great Basin of Utah, including the middle and upper Snake River above the River of No Return, are better assigned to one or more undescribed species.	Impoundments created by dams and other structures which create oxygen-poor conditions can create unsuitable habitat for this species. Waste-water or agricultural runoff into rivers can also create nutrient-rich conditions which are unfavorable to this species. Pollutants from pulp mill effluents or metal smelting discharges harmful.	Limit waste water outflow and agricultural runoff into rivers which may add nutrients and other pollutants to water. Avoid new construction of dams or other structures which slow water flow and cause reduced oxygenation. Found in larger tributaries and rivers, on upper surfaces of stable rocks, boulders and bedrock outcrops in fast current, in relatively shallow water. Species requires cold water with high oxygen content	<i>Unsuitable as a focal species.</i> Limited information on utilization of DPWMU habitats limits the potential value of management feedback.

Selection of Conservation Targets

The biodiversity of DPWMU is represented by numerous vertebrates, invertebrates, plants and ecological communities. It is impractical to evaluate and plan for the conservation of all these elements. Therefore, Conservation Targets, a sub-set of species and communities, were selected to represent the biodiversity of DPWMU for management and conservation; while still reflecting the management priorities of DPWMU.

Conservation Targets for the DPWMU Management Plan were selected from species ranked as potentially suitable focal species in Table 1. Invertebrates and plants are not included in this assessment due to practical considerations including lack of data and funding. Conservation Targets could also include habitats that effectively represent suites of the flagship and special status species evaluated in Table 1, regardless of their potential suitability as a focal species. A final consideration in the selection of Conservation Targets was the best professional judgment of the Upper Snake Regional Habitat Manager and DPWMU staff. Effective Conservation Targets cannot be selected based solely on species assessments. They must reflect regional threats, priorities, existing conservation partnerships and the limitations of WMU personnel and funding.

The Conservation Targets selected to guide management on DPWMU (corresponding DPWMU Priority (Target Species) in parentheses) are:

1. Migratory Waterbirds (Trumpeter Swan, Mallard Duck, Canada Goose, Northern Pintail, Sandhill Crane)
2. River Riparian Habitat (Yellow-billed Cuckoo, Bald Eagle, Northern Goshawk, Yellow Warbler, and Black-capped Chickadee)
3. Sagebrush-Steppe Habitat (Greater Sage-grouse, Sage Sparrow, Brewer's Sparrow, Ferruginous Hawk, and Burrowing Owl)

Migratory Waterbirds

Migratory Waterbirds were selected as a Conservation Target on DPWMU because:

- Sixty-three percent of the species evaluated in Table 2 will benefit from efforts to enhance wetlands for migratory waterbirds.
- Migratory waterbirds are easily counted and monitored on DPWMU and the adjacent landscape.
- Wetland habitat restoration and conservation for migratory waterbirds can be spatially monitored by Department staff.
- Given the high species value of migratory waterbirds (particularly of priority species such as northern pintail, white-faced ibis, mallard, sandhill crane, trumpeter swan, etc.) wetland restoration and conservation partnerships are very achievable.

Our vision for wetland areas for migratory waterbirds is healthy and functioning habitats that provide linkage and habitat continuity throughout the watershed. Improving or maintaining

highly functional wet meadows has the potential to directly benefit many species including, moose, white-tailed deer, northern leopard frog, and other species not identified in the focal species assessment table (e.g., Ute ladies'-tresses). Thus, selecting wetlands for migratory waterbirds as a focal habitat serves as an umbrella for conservation and has a high probability of improving habitat for a large number of species.

River Riparian Habitat

River riparian habitat was selected as a Conservation Target on DPWMU because:

- Eighty-one percent of the species evaluated in Table 1 will benefit from efforts to protect and/or restore river riparian habitats.
- River riparian habitat can be mapped and monitored on DPWMU and the adjacent landscape.
- River riparian habitat restoration and conservation can be spatially monitored by Department staff.
- Given the high species value of river riparian habitats—particularly of priority species such as bald eagles, yellow-billed cuckoos, yellow warbler, etc.—river riparian restoration and conservation partnerships are very achievable.
- Bald eagles, mallard ducks, and Canada geese are flagship species and are the primary foundational priority for the creation of DPWMU.
- The yellow-billed cuckoo is an important indicator species used to monitor environmental health of surrounding habitats.

Our vision for river riparian areas is healthy and functioning habitats that provide linkage and habitat continuity throughout the watershed. Improving or maintaining highly functional river riparian areas has the potential to directly benefit many species including white-tailed deer, northern leopard frog, and other species not identified in the focal species assessment table (e.g., Ute ladies'-tresses). Thus, selecting river riparian as a focal habitat serves as an umbrella for conservation and has a high probability of improving habitat for a large number of species.

Sagebrush-Steppe Habitat

Our vision for sagebrush-steppe areas is healthy and functioning habitats that provide linkage and habitat continuity throughout the watershed. Improving or maintaining highly functional sage-steppe areas has the potential to directly benefit many species including, greater sage-grouse, ferruginous hawks, golden eagle, and other species not identified in the focal species assessment table. Thus, selecting sage-steppe lands as a focal habitat serves as an umbrella for conservation and has a high probability of improving habitat for a large number of species.

Coverage Assessment of Selected Conservation Targets

We define an effective Conservation Target as one providing meaningful conservation benefits for multiple species that share similar habitat requirements or life history traits. They are useful for directing limited management resources and maximizing conservation effort. One measure of

effectiveness is to assess the number of species that a Conservation Target benefits (or covers) within the management landscape.

Regional Habitat and Diversity staff worked together to complete the coverage assessment table (Table 2). We evaluated each of the Conservation Targets to determine which species from Table 1 would benefit from management activities focused on that target. Evaluations are based on knowledge of species habitat requirements, occurrence within the management landscape, and the scope of current and planned management actions. The assessment considered only those habitat features or needs relevant to the species as it occurs on the management landscape. For instance, we emphasized the importance of resting and foraging habitat needs for the Migratory Waterbird Guild, knowing that most breeding activity for these species occurs elsewhere. Our results indicate that the selected Conservation Targets on DPWMU provide substantial, but variable habitat benefits for an array of assessed species.

We also evaluated which species or guilds would receive little or no tangible benefit from management actions for specific Conservation Targets; these are designated “conservation needs.” We identified conservation needs for several species or guilds and determined that further data will be useful to inform the next WMU planning process. A prudent management strategy is to consider a landscape where these species may be prioritized for management in the future. Broad strategies for addressing these management needs are identified in the following Management Program Table (pages 41-45), but typically include collection of additional baseline data.

Table 2. Analysis of Conservation Target coverage and identification of conservation needs.

Species Assessed in Table 1	Conservation Targets ^a			Conservation Need
	Migratory Waterbird Habitat	River Riparian	Sage-steppe	
Idaho Pocket Gopher		P	P	
Moose	P	X	P	
Mule Deer		P	X	
Myotis guild	P	P	P	Yes
Townsend's Big-eared Bat	P	P	P	Yes
White-tailed Deer	P	X	P	
Pygmy Rabbit			X	
Bald Eagle	P	X	P	
Breeding Waterfowl guild	X	P		
Brewer's Blackbird	X	X		
Brewer's Sparrow			X	Yes
Ferruginous Hawk			X	Yes
Greater Sage-grouse			X	Yes
Lewis's Woodpecker		X		
Loggerhead Shrike	P	P	P	
Long-billed Curlew				Yes
Merlin	P	X	P	
Migratory and Foraging Waterbird guild	X	P		
Northern Goshawk		X		Yes
Prairie Falcon		P	X	Yes
Peregrine Falcon	P	P	X	Yes
Sage Sparrow			X	
Sandhill Crane	X	P		
Short-eared Owl			X	
Swainson's Hawk	P	P	X	
Trumpeter Swan	P	P		Yes
White-face Ibis	P	P		Yes
Western Burrowing Owl			X	Yes
Willow Flycatcher		X		
Yellow-billed Cuckoo		X		Yes
Yellowstone Cutthroat Trout		P		Yes
Bluehead Sucker		P		Yes
Desert Valvata		P		Yes
Columbia Pebblesnail		P		Yes

^a Entries marked with "X" indicate that the majority or all habitat needs for an assessed species within the management landscape are being met by management actions benefitting the Conservation Target. Entries marked with "P" indicate only a portion of the species habitat needs are being met by management actions for the Conservation Target. Conservation needs exist where target-specific management actions provide little or no tangible habitat benefit for an assessed species. Blank cells under conservation targets may indicate a conservation need or where dissimilar habitat needs preclude conservation benefits.

Spatial Delineation of Selected Conservation Targets

Each focal species/habitat has an area of influence associated with it. This approach recognizes that while DPWMU is very important to wildlife, it is still just part of a larger landscape that determines the health of wildlife populations in the area. As part of a larger landscape, WMAs/WMUs influence, but do not control, most wildlife populations. Looking across our fences at the total landscape is imperative to achieving conservation in the long term. This section of the plan is dedicated to understanding how DPWMU fits into the larger landscape—the role it currently plays, future roles it may play and how influences outside DPWMU can dramatically influence, for good or bad, the relative value of DPWMU to conservation.

The idea here was to allow the focal species/habitats define the landscape of interest surrounding the WMU. We believe this approach acknowledges both the importance of the WMU within the landscape and the effect of the landscape on the function and purpose of the WMU.

The following describes the steps we took to delineate the landscape of interest for each of our focal species/habitats, Migrating Waterbirds – Wetlands and Farm (Figure 2), River Riparian (Figure 3), Sagebrush-Steppe (Figure 4), each with different amounts of data at our disposal. All GIS operations were conducted with ArcGIS 10 unless otherwise specified.

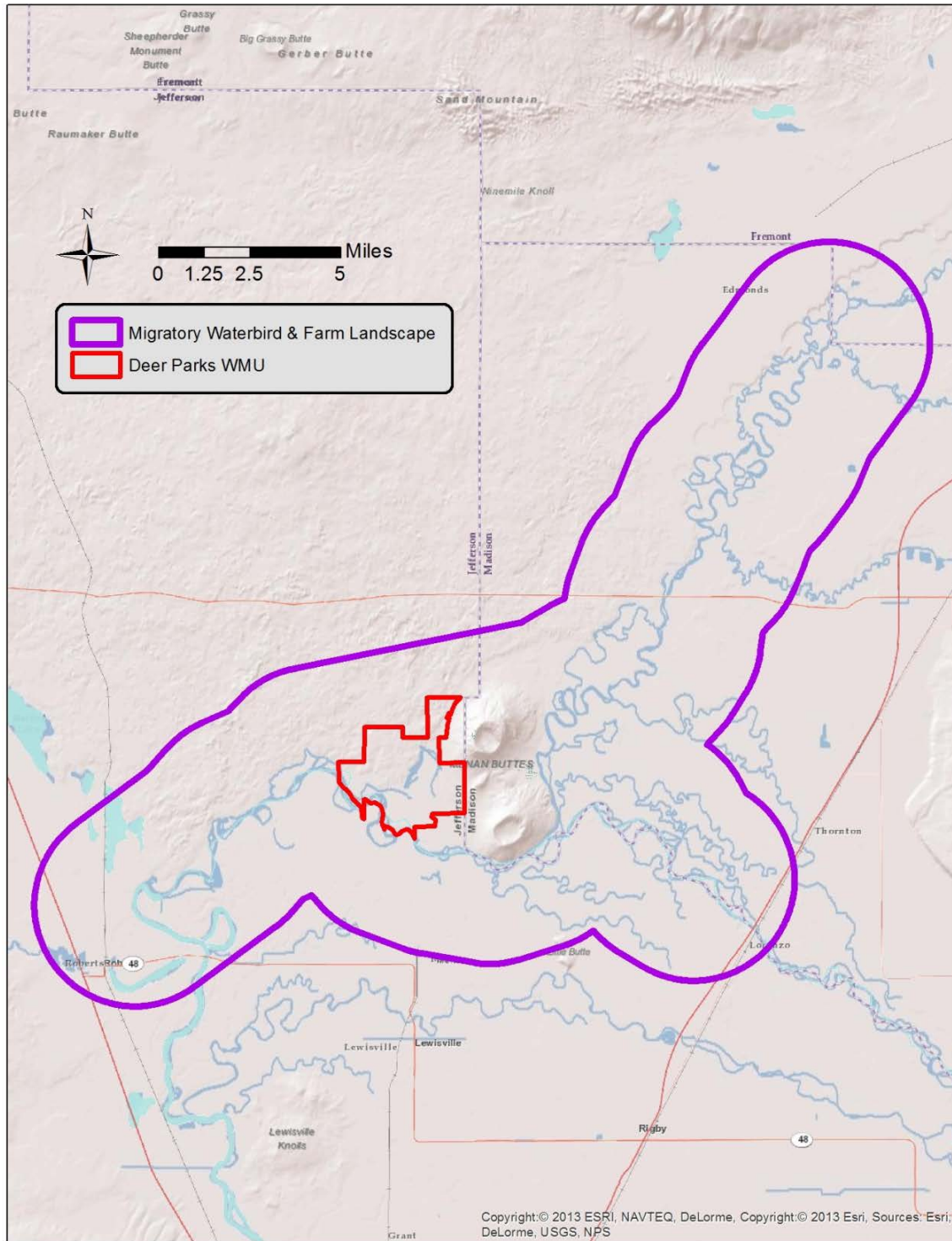


Figure 2. Migratory Waterbird (Wetlands & Farm) Landscape for Deer Parks WMU.

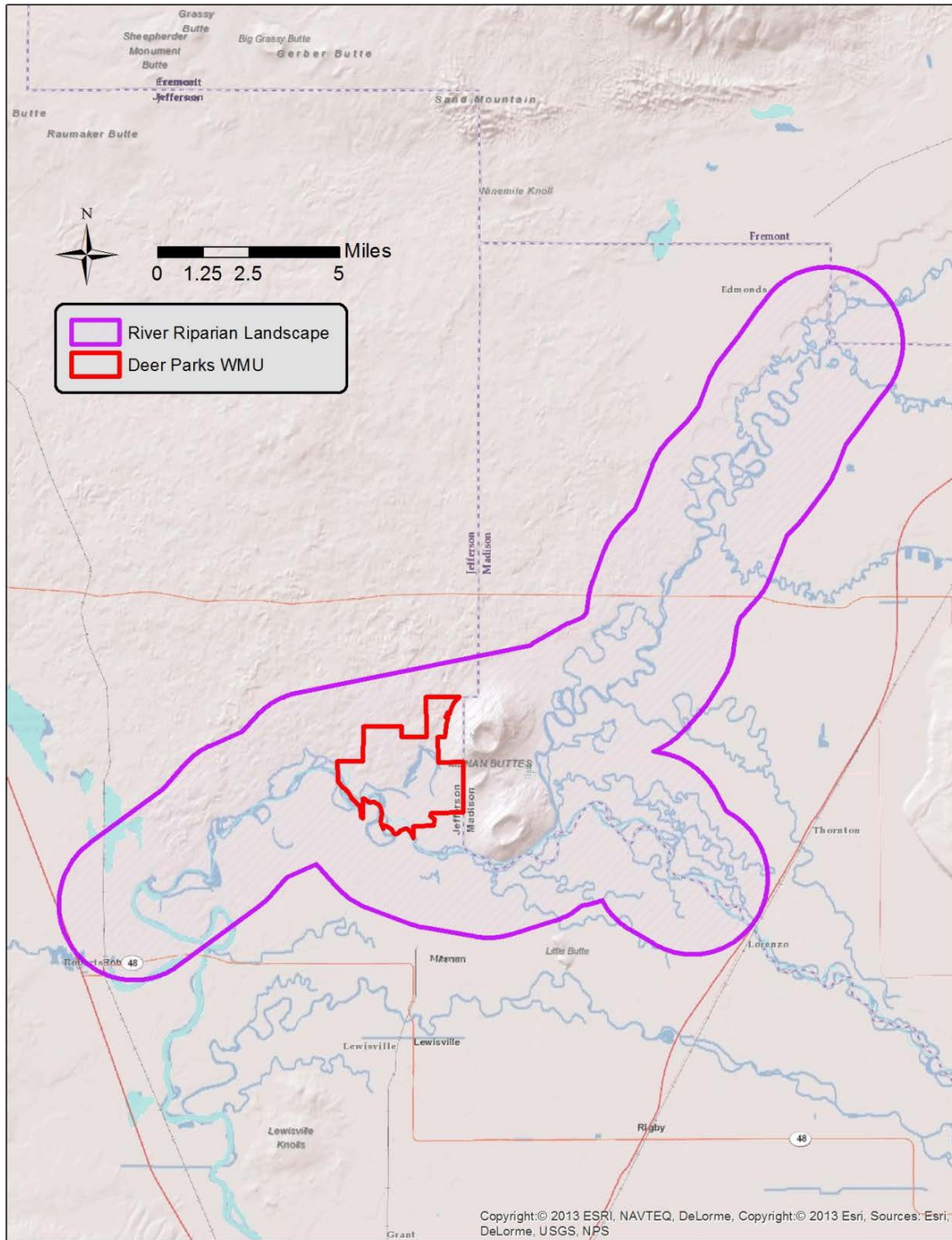


Figure 3. River Riparian Landscape for Deer Parks WMU.

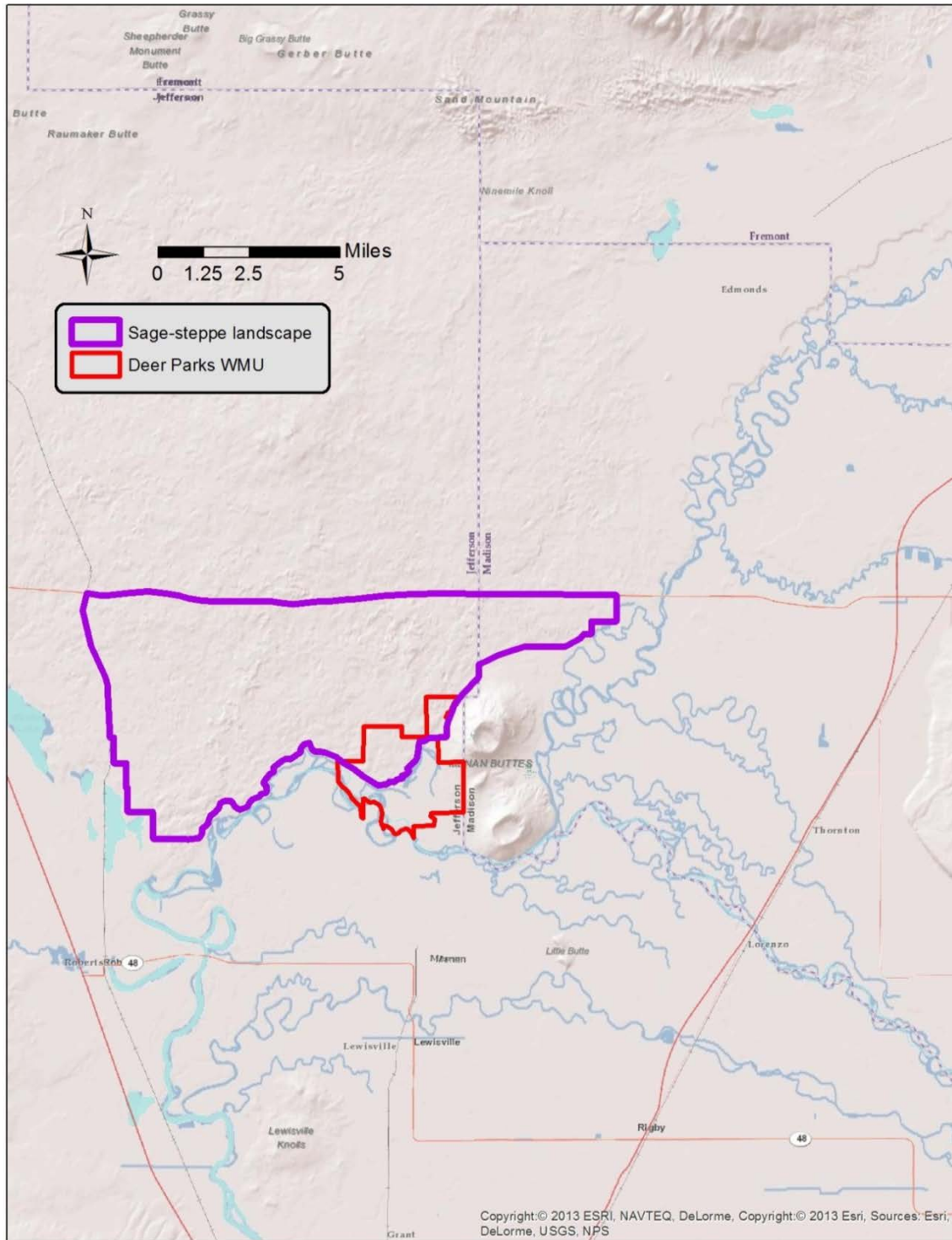


Figure 4. Sage-Steppe Landscape for Deer Parks WMU.

Deer Parks WMU Management Program Table

The following table outlines the Management Directions, Performance Targets, Strategies, and Outcome Metrics DPWMU staff will use to manage for the Conservation Targets selected (page 33) to represent each DPWMU Priority (page 24) at both the DPWMU and Conservation Target-specific landscape scale. The last section of the table outlines strategies that will be used to increase our knowledge of the voids identified in the Conservation Target coverage assessment (Table 2). The Compass Objective column links the Management Directions in this table to the objectives of the Department’s strategic plan, *The Compass* (Appendix I).

WMU Priority: Wetland Habitat Management					
Conservation Target: Migratory Waterbirds					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
DPWMU	Improve and/or maintain breeding and migration stop-over habitat for waterbirds on DPWMU.	Implement vegetation management techniques to provide high quality nesting, breeding and rearing habitat, treating 100 acres/year by changing plant composition to more diverse stands; by 2019, aim to reduce reed canarygrass acreage by 20%.	Utilize herbicide treatment, biological control, and/or mechanical disturbance to improve or maintain quality waterbird breeding and nesting habitats, including marshes and meadows.	Acres improved and/or maintained; plant community composition and structure	A, B, C, E, F, H,
			Experiment with different methods of converting reed canarygrass to native or desirable non-native vegetation.	Reed canarygrass cover	
		Annually, across DPWMU, implement travel restriction methods to maintain security for waterbirds	Maintain nesting security for waterbirds on Butte Slough by directing non-motorized boat entry to a single east end boat launch area and allow boat use only from July 15 to ice-up.	By September 30, 2015, have road/boat launch completed.	
			Maintain security for waterbirds on DPWMU by only allowing non-motorized travel and maintaining mowed trails to minimize cross country travel by visitors. Maintain existing mowed trails annually.	Miles of trails maintained	
		Increase nesting and foraging habitat on the 142 acre K1 (Menan) property. By 2019, replace 30% of smooth brome stands with native perennial bunchgrasses and forbs aiming for 25% canopy cover after five years; plant two acres of berry producing shrubs each year aiming for 50% survival after three years.	Repair irrigation system and use to water habitat improvement projects on the property.	Repairs completed by October 2014	
			Replace smooth brome stands with native perennial bunchgrasses and forbs.	Acres converted; cover of plant species	
			Plant native berry producing shrubs (e.g., golden currant, snowberry, chokecherry, service berry, spp.).	acres of shrubs planted; survival of shrubs	
		Implement moist soil management techniques to provide migrational stop-over habitat and food resources for a wide variety of waterbirds on 40 acres by 2019, starting at Cooks Pasture in 2015. Proceed to pastures floodable by Butte-Market Lake Canal headgates.	Develop areas that can be flooded and drawn down at appropriate time periods (spring flooding, shallow fall flooding) to provide quality waterbird migration stop-over habitat with maximum plant and invertebrate production.	Acres with moist soil management	
		Include shallow areas in the Cooks Pasture irrigation project to create moist soils throughout the growing seasons for birds (e.g., white-faced ibis) by Sept 30, 2015.			
	Improve and/or maintain breeding and migration stop-over habitat for waterbirds on DPWMU.	Increase our knowledge of wetland habitat condition, function, and wildlife use across DPWMU; develop assessment and monitoring plans and schedules before summer of 2015 and implement assessment and monitoring by 2019	Continue HEP inventories on DPWMU. (Contracted by BPA)	Assessments, monitoring, inventories, surveys completed	
Monitor use of wetland habitats by waterbird species. Use Idaho Master Naturalist volunteers to conduct surveys					
Implement wetland habitat monitoring for DPWMU. Monitor meadows in late summer to increase likelihood of detection of Ute ladies-tresses. Utilize qualified and interested volunteers if possible.					
		Work with the Greater Yellowstone Trumpeter Swan Working Group and other partners to evaluate DPWMU for swan breeding/nesting habitat.			

WMU Priority: Wetland Habitat Management						
<i>Conservation Target: Migratory Waterbirds</i>						
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)	
Migratory Waterbirds Landscape (Figure 2)	Improve and maintain breeding and migration stop-over habitat for waterbirds on the landscape.	Seek out ways to implement State, Federal, and NGO programs. Secure grants to benefit wetland habitats on at least three private properties by 2019. Identify potential projects that would maintain, improve or expand existing wetland functions across the DPWMU landscape. Identify and plan a project(s) by June, 2015. Secure one major project and 3 smaller projects on private land by 2019.	Develop restoration and conservation projects addressing wetland conversions to agriculture, draining of wetlands, or conversion of agricultural lands to wetlands. Secure a NAWCA grant to develop wetland projects.	Projects identified incorporating habitat needs, landowners contacted, and projects implemented	A, B, C, D, H, J, K, N	
			Work with IDFG farm bill coordinator to develop a priority list of properties that could benefit from wetland enhancement programs			
			Work with conservation partners, government agencies, politicians, and private landowners to identify programs or policies that expand or maintain flood irrigation practices across the landscape to help maintain water tables and create summer foraging for waterbirds.			
			Implement programs and policies such as HIP, EQIP or other cost share options to increase the amount and quality of waterbird habitats across the landscape. Create a priority list of properties by June 2015; develop one or more HIP and/or EQIP projects each year.	Develop HIP and/or EQIP projects addressing activities such as protective fencing, vegetation plantings, and weed control efforts that benefit waterbirds.		Projects/Acres improved and/or maintained
			Stay abreast of changing policies, programs, agreements, easements, or other efforts that could have both negative and positive effects on wetland habitats. Try to meet with partners at least bi-annually, monthly if possible	Maintain close working relationships with NRCS, Teton Regional Land Trust, Friends of the Teton River, USFS, BLM, IDL, local sportsman's groups, etc.		# of contacts per year
			Prioritize lands for acquisition, conservation, or easement to benefit wetland habitats by March 2019.	Work with Bureau of Wildlife Wetland Ecologist and wetland habitat partners to ground truth and refine existing GIS landscape-scale wetland assessment tool related to wetland habitat condition and function across the landscape. Use results to guide prioritization.		List of Parcels Identified for Protection
		Work with BLM, TRLT, DU and TNC to develop a prioritized list and GIS map of important wetland areas within the landscape and then pursue ways of protecting the wetland habitat values of these areas in perpetuity.				
WMU Priority: River Riparian Habitat Management						
<i>Conservation Target: River Riparian Habitat</i>						
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)	
DPWMU	Provide functioning river riparian habitat in good to excellent ecological condition for species dependent on non-fragmented riverine corridors.	Annually, protect all river riparian habitat from human-related impacts where necessary	Continue non-motorized vehicle restrictions and mowed trail system.	Miles of trail maintained, fence repaired, and signs maintained.	A, B, C, H, J	
			Control trespass grazing.			
			Continue camping, fireworks and fire restrictions.			
		Restore cottonwood stands and native understory vegetation on all sites with impaired function and poor bank stability by 2019 (determined by assessment); Plant 10,000 cottonwood tree seedlings by 2019, aiming for 30% survival by 2024. Stabilize banks on Cooks Pasture by September 2016.	Use bio-engineered river bank stabilization methods instead of rock rip rap, beginning at Cooks Pasture. Seek funding and implement bioengineering on 1100 feet of river bank in Cook's pasture.	Miles of river bank stabilized		
	Re-establish cottonwood trees in areas that lack periodic flooding needed for natural regeneration by planting seedlings; use volunteers as necessary.	Number of trees planted; tree survivability				

WMU Priority: River Riparian Habitat Management					
<i>Conservation Target: River Riparian Habitat</i>					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
DPWMU	Provide functioning river riparian habitat in good to excellent ecological condition for species dependent on non-fragmented riverine corridors.	Increase our knowledge of riparian habitat condition and function across DPWMU by implementing riverine assessment protocol by June 2016. Monitor by photos and other methods annually.	Implement river riparian habitat function and condition assessment protocol. Utilize qualified and interested volunteers if possible. Establish photo points and river bank monitoring sites (using steel fence posts) to establish rate of river bank losses during high water events. Use Bureau of Wildlife Wetland Ecologist to train volunteers.	Assessment Protocol implemented	B, N
		Increase our knowledge of Conservation species using DPWMU River Riparian habitat by implementing bird surveys every five years, completing the first by 2019.	Conduct neo-tropical bird surveys utilizing contractor or Diversity staff to determine bird densities and management practice impacts on populations.	Number monitoring of sites established	
		By June 2016, with partners, develop a list of at least two potential conservation easements or acquisitions that would conserve and/or improve River Riparian habitats in the landscape.	Use existing GIS landscape-scale assessment tool and other methods to identify potential River Riparian habitats for conservation and/or restoration. Work with the Teton Regional Land Trust, other partners, and private landowners to identify potential conservation/restoration projects and develop a plan to implement them. Provide comments on grazing plans, fencing, travel restrictions, affecting public land.	Number of conservation/restoration projects identified and evaluated.	A, B, C, H, J, K, N
Annually, work with at least one landowner to improve grazing management to conserve and/or restore River Riparian habitat through cooperative agreements.	Continue to work with federal agencies to monitor and control livestock grazing in River Riparian habitats to maintain or enhance cottonwood forest understories.	Number of grazing allotments commented on.			
	Work with private landowners through private, state and federal conservation programs to implement riparian habitat enhancement and/or restoration actions (e.g., conduct planting projects to re-establish native plants in degraded riparian habitats, implement grazing management that reduces impacts to riparian areas, etc.).	Riparian conservation/restoration project implemented on private land			
WMU Priority: Sagebrush-Steppe Habitat Management					
<i>Conservation Target: Sagebrush-Steppe Habitat</i>					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
DPWMU	Provide high quality sage-steppe habitat to benefit a wide range of wildlife species.	Maintain 1097 acres of sagebrush-steppe in good ecological condition. Ensure shrub species are maintained in a productive growth stage with appropriate cover for sagebrush obligate species. Improve 50% of Sagebrush-Steppe affected, within five years of any natural degradation event.; aim for at least 10% shrub cover five years after restoration.	Implement woody plant management activities if some form of natural degradation takes place (insect outbreak, fire, disease, etc.). Woody plant management activities could include; replanting (bare root), reseeding, noxious weed control, grazing restrictions.	Changes in % shrub cover; species composition	A, B, C, E., F, G, H, N
		Maintain wildlife security to include ground nesting bird brood rearing, calving and fawning areas.	Annually maintain 3.5 miles border fences to alleviate trespass grazing and reduce livestock impacts. Maintain non-motorized vehicle restrictions and keep trail system mowed. Maintain dog control restrictions.	Miles of fence maintained	
		Maintain quality sage-steppe habitat on private grounds. Develop one project by June 2016.	Work with conservation partners, diversity staff, and government agencies to develop grazing, fencing and watering programs that promote quality sage-steppe habitat. (EQIP, etc.).	Level of compliance/violations detected	
Sage-Steppe Landscape (Figure 4)	Provide high quality sage-steppe habitat to benefit a wide range of wildlife species over the desert landscape to the north and west of DPWMU	Work with federal agencies to maintain or improve sage-steppe habitats on public grounds	Review all grazing allotment pre-assessment letters and provide pertinent wildlife information and encourage them to follow sage-grouse guidelines on grazing in written comment letters so they can make more informed decisions.	Number of projects identified and acres maintained or improved.	A, B, C, E., F, G, H, N
				Number of comment letters written	

WMU Priority: Sagebrush-Steppe Habitat Management					
<i>Conservation Target: Sagebrush-Steppe Habitat</i>					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
Sage-Steppe Landscape (Figure 4)	Provide high quality sage-steppe habitat to benefit a wide range of wildlife species over the desert landscape to the north and west of DPWMU	Work with federal agencies to maintain or improve sagebrush-steppe habitats on public grounds	Attend all grazing allotment assessments in the DPWMU landscape to provide technical assistance on wildlife issues affected by grazing.	Number of grazing allotment assessments reviewed.	A, B, C, E., F, G, H, N
			Meet with BLM at least annually to discuss grazing on the DPWMU landscape.	Meetings attended	
WMU Priority: Farm Management					
<i>Conservation Target: Migratory Waterbirds</i>					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
DPWMU	Provide high quality stop-over habitat and high energy forage for a variety of waterbird species	Plant a minimum of 150 acres/year of food plots annually utilizing Sharecropping	Utilize sharecrop money to plant annual food plots and complete other habitat projects.	Acres developed	A, B, C, E, F, H,
			Develop additional 24 acres for increased food plot production by 2015.		
		Leave cereal grains standing to provide high energy winter forage for migrating waterfowl, big game and other wintering wildlife.	Acres left standing		
		Encourage Share-crop operator to use no-till farming methods to provide additional wildlife cover and forage.	Acres farmed with no-till methods		
Provide security for migrating waterbirds and wintering wildlife	Maintain the current level of non-motorized use.	Number of, violations detected	A, B, C, H		
		Annually maintain signs and other informational products to educate public about wildlife security issues.		Number of signs, kiosks, maps, etc. maintained	
Farm Management Landscape (Figure 5)	Provide high quality stop-over habitat that is not covered under Wetland Habitat Management	Encourage landowners to leave residual crops for migrating waterbirds. Complete one project by June 2016. Increase crop residue acreage by 10% by 2019.	Implement at least one cost share project (HIP or EQIP), annually, to increase the amount and quality of waterbird stop-over forage.	Acres involved with stop-over habitat	A, B, C, F, G, J, H, N
			Work with NRCS and landowners to use no-till farming methods and flood irrigation (to benefit species like white-faced ibis). Coordinate with Farm bill Coordinator.	Acres using no-till farming methods	
	Work with landowners to leave crop residue after harvest for migrational waterbirds to include potatoes, legumes and grains.	Acres left until spring to conduct field work			
Provide high quality stop-over habitat that is not covered under Wetland Habitat Management	Alleviate crop depredations on DPWMU landscape	Continue planting food plots on DPWMU and other WMAs within the DPWMU landscape. Continue food plot program.	Number of depredation claims filed	F, G, I	

WMU Priority: Wildlife-based Recreation and Education					
Scope	Management Direction	Performance Target	Strategy	Metric	Compass Objective (Appendix I)
DPWMU	Provide opportunity for consumptive and non-consumptive wildlife-based recreation and education	Provide at least 2,000 recreational hunting and fishing user-days consistent with the DPWMU mission	Unless future data indicates a needed change to meet the DPWMU mission, maintain the current level of non-motorized use restrictions.	User Days	E, F, G, H, J, K, M
DPWMU	Develop strategies to address gaps identified in the viability assessment	Waterbird Guild	With Diversity staff's lead, develop a monitoring protocol to address waterbird use on DPWMU.	Plans Completed	E, F, G, H, J, K, M
			Recruit volunteers to conduct monitoring of waterbird use according to protocols developed.		
		Bat Guild	With Diversity staff's lead, develop a plan to ensure that management considers bat habitat requirements.		
			With Diversity staff's lead, recruit volunteers to monitor bat populations and to develop a species list.		
			With Diversity staff's lead, identify areas of high concentrations of bats and identify habitat use.		
		Neo-tropical Migrants Guild	Maintain extent and complexity of riparian areas. These areas should have native species comprising mid-story canopy levels to maximize habitat for foraging and cover.	Percent loss or gain of riparian habitat with mid-story canopy	
Control noxious and invasive weeds in riparian areas on DPWMU.	Acres treated				
Raptor Guild	With Diversity staff's lead, develop a raptor monitoring protocol and organize volunteers to conduct raptor monitoring.	Plans Completed			
Sage-Steppe Obligate Guild	With Diversity staff's lead, develop a plan to ensure that management considers Sage-Steppe Obligate species habitat requirements.				

Monitoring

Monitoring and reporting are critical for tracking accomplishment of performance targets identified in the DPWMU Management Program Table. Monitoring can be separated into three categories: compliance monitoring, biological monitoring, and public use monitoring.

Compliance Monitoring

Compliance monitoring documents the completion of regular management tasks that are essential to WMU operations. These include but are not limited to:

- Maintaining WMU facilities and access sites
- Maintaining infrastructure at ponds and wetlands
- Providing technical assistance to local agency staff and private landowners
- Maintaining public access sites

Compliance monitoring will be reported annually at work plan meetings between regional and headquarters staff.

Biological Monitoring

Wildlife Management Areas across the state have a range of established biological monitoring programs and needs. Additional monitoring needs may have been identified during development of the DPWMU Management Program Table. Biological monitoring includes wildlife, vegetation, and habitat monitoring. It may also include assessing the effectiveness of management and restoration activities. Monitoring may occur at multiple spatial and temporal scales, depending on objectives.

In Table 3, future monitoring needs associated with performance targets and strategies identified in the Management Program Table are summarized. The goal is to measure success or effectiveness of strategies that are implemented to reach performance targets. A detailed monitoring plan including specific techniques will be completed for DPWMU by December 31, 2014.

In 2010, the Department initiated a statewide, long-term habitat monitoring program for all WMAs. The goal of the program is to collect quantitative and comparable baseline data to monitor habitat change on all WMAs due to management actions or other causes. The baseline data collected will be specific to each WMA, based on the habitat types present and its unique management issues. Baseline data typically includes:

- Distribution and extent of cover types, including mapping of vegetation cover types
- Vegetation structure, composition, and condition
- Presence or abundance of noxious weeds and other invasive plants

- Riparian and wetland condition and function assessment
- Photo points

To date, this program has collected baseline data on five WMAs, with surveys of all 32 WMAs expected to be completed by 2019. This is a long-term program and will be repeated starting in 2020.

Table 3. Biological monitoring for Deer Parks WMU, 2014-2023.

Performance Target	Survey Type	Survey Frequency
Experiment with different methods of converting Reed canary grass to native or desirable non-native vegetation. By 2019, reduce Reed canary grass by 20%.	Photo points, line-point intercept and/or belt transects	Before treatment and for three years post-treatment.
Replace smooth brome stands with bunch grasses and forbs. By 2019, have 30% replaced.	Photo points, line-point intercept and/or belt transects	Before treatment and for three years post-treatment.
Plant two acres of berry producing and low growing shrubs each year. Strive for 75% annual survival rates.	Plant survival counts	Every three years
Develop areas that can be flooded at appropriate time periods to provide quality waterbird migration stop-over habitat. By 2019, develop 40 acres of stop-over habitat.	Photo points, line-point intercept and/or belt transects	Before treatment and for three years post-treatment.
Monitor use of wetland habitats by waterbird species. Use Idaho Master Naturalist volunteers to conduct surveys. Develop protocol and schedule by June of 2015.	Brood, pair counts	Every year or every two years, dependent on available manpower.
Re-establish cottonwood trees in areas that lack periodic flooding needed for natural regeneration. Plant 10,000 seedlings by 2019. Strive for 75% annual survival rates.	Plant survival counts	Every three years
Conduct Neo-tropical birds surveys every five years to determine bird densities and management practices impacts on populations.	Contracted professional survey	Every five years
Implement woody plant management activities if some form of natural degradation takes place (Insect outbreak, fire, disease, etc.). Woody plant management activities could include; replanting, thinning, or chemical control. Improve 10% of Sage-Steppe by 2019.	Photo points, line-point intercept and/or belt transects	Before treatment and every three years post-treatment.

Public Use Monitoring

Wildlife Management Areas use public surveys and monitoring tools (e.g., traffic counters) to evaluate public satisfaction and use patterns as well as identify issues of concern. In some areas, hunter check stations monitor hunter success and satisfaction. These survey data help managers determine whether they are meeting the goals for DPWMU.

Reporting

Deer Parks WMU will produce a five-year report on implementation of this plan in 2019, including a summary of accomplishments and progress towards meeting performance targets. During the five-year review, WMU staff will determine whether modifications to the plan are needed to meet performance targets, to accommodate changing conditions and priorities, or to incorporate advancements in management knowledge and techniques.

Current Deer Parks WMU Monitoring Efforts

Weed monitoring/mapping

Noxious weed control efforts are a large portion of DPWMU work load. Monitoring has become increasingly important to determine if the time, money, and efforts spent are having any effects on infestations. Noxious weed control efforts (chemical, mechanical, and biological) are mapped and revisited the following year to measure effectiveness. The weed mapping efforts have an abundance, species, and percent cover component.

Photo plots

Twenty-one photo plots are spread across DPWMU. These plots are inventoried every other year and re-photographed to compare results.

Traffic counters

Traffic counters are little used due to the non-motorized travel restriction.

User surveys

User survey forms were developed to establish public use trends. Area personnel interview users as they are encountered. These user surveys inform managers as to what activities DPWMU is being used for by the public. Recent online WMU surveys were used to establish public use and future direction for DPWMU.

Wildlife Population Surveys

Deer Parks WMU conducts a number of wildlife population surveys. Amphibian surveys will be initiated when a new protocol has been established. Night time surveys are conducted throughout

the spring and summer seasons to monitor numbers, species and sex of big game populations and habitat use during different seasons. Waterfowl nest surveys are conducted during nesting season. Waterfowl pair counts are conducted early spring and brood counts conducted throughout the summer. Migratory swan counts are conducted during winter months.

Waterfowl nest structure use

Annual inventories are conducted to determine to what extent artificial nest structures (goose platforms and wood duck boxes) are used. To document nest success and obtain information to aid in future structure placement decisions. The Upper Snake River Master Naturalists have recently taken on this responsibility.

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Appendices

I. THE COMPASS – THE DEPARTMENT’S STRATEGIC PLAN

In 2006, the Department completed a strategic plan—*The Compass*—based on public input and legislative mandates. It continues to guide the Department in 2014 and is the primary guiding document for all other Department plans developed since 2006. The following table presents the goals, objectives, and strategies from *The Compass* that are most relevant to WMA management. *Compass* objectives are lettered on the left side for reference in the Management Program Table.

<i>The Compass</i>	
GOAL—Fish, Wildlife, and Habitat	
A.	Objective – Maintain or improve game populations to meet the demand for hunting, fishing, and trapping.
B.	Objective – Ensure the long-term survival of native fish, wildlife, and plants.
C.	Objective – Increase the capacity of habitat to support fish and wildlife.
D.	Objective – Eliminate the impacts of fish and wildlife diseases on fish and wildlife populations, livestock, and humans.
GOAL—Fish and Wildlife Recreation	
E.	Objective – Maintain a diversity of fishing, hunting, and trapping opportunities.
F.	Objective – Sustain fish and wildlife recreation on public lands.
G.	Objective – Maintain broad public support for fish and wildlife recreation and management.
H.	Objective – Increase opportunities for wildlife viewing and appreciation.
I.	Objective – Increase the variety and distribution of access to private land for fish and wildlife recreation.
GOAL—Working With Others	
J.	Objective – Improve citizen involvement in the decision-making process.
K.	Objective – Increase public knowledge and understanding of Idaho’s fish and wildlife.
GOAL—Management Support	
L.	Objective – Attract and retain a diverse and professional workforce.
M.	Objective – Provide equipment and facilities for excellent customer service and management effectiveness.
N.	Objective – Improve funding to meet legal mandates and public expectations.

II. HISTORY

The DPWMU 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 1800s, 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 1870s. 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 1920s. It was acquired by the Boyle family in the 1930s 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 1870s. 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.

III. MANAGEMENT REQUIREMENTS AND AUTHORITIES

Federal funds, including those derived from the Land and Water Conservation Fund and USFWS Federal Aid Program, have been used in part to acquire and manage DPWMU lands. Certain activities are prohibited from funding with Federal Aid funds, and all provisions of Federal Aid funding will be followed.

Other federal and state laws also affect management of the DPWMU. The Department has responsibility under provisions of the Endangered Species Act to ensure that management actions protect threatened and endangered species, and responsibility under the Clean Water Act to ensure that water quality standards and guidelines are in place on DPWMU lands and waters. Under the National Historic Preservation Act, the Department must ensure that historic properties are protected on the DPWMU.

The Idaho Noxious Weed Law under Idaho Code 22-2405 requires all landowners to eradicate noxious weeds on their lands, except in special management zones. The counties are required to enforce the law and the State of Idaho is required to ensure the counties do so.

Consistent with Idaho Codes 38-101 and 38-111, and through a cooperative agreement with the Idaho Department of Lands, the Department is required to pay a fee for fire protection on all forest and some rangeland acreage it owns, and for residences in forest areas. Fees are submitted annually based on the number of qualified acres and residences owned by the Department.

The Department is required by Idaho Code 63-602A to pay a fee-in-lieu of taxes (FILT) for lands that are owned by the Department and meet certain code requirements. These fees are submitted annually to affected counties based on the number of qualifying acres and agricultural tax rates.

Mitigation units are acquired to provide habitat for the target wildlife species identified in the original loss assessment. Deer Parks WMU was purchased for Palisades wildlife habitat mitigation debt. Habitat Evaluation Procedure (HEP) is used to determine Habitat Units (HU) that are deducted from the wildlife mitigation debts (Appendix VIII). Additional purchases of the Horkley and Twin Bridges properties added additional HUs, which were split between Palisades and Minidoka wildlife mitigation debts.

Wildlife mitigation units are developed and managed within the framework of the Northwest Power Planning Council's Fish and Wildlife Program. Funding for wildlife mitigation units is provided by BPA. Several specific agreements also provide direction about how mitigation units are managed including the following:

1. Memorandum of Agreement between the State of Idaho and the Shoshone-Bannock Tribes (SBT), 1996.
2. South Fork Snake/Palisades Wildlife Mitigation Agreement between BPA and the Department, 1997.
3. Southern Idaho Wildlife Mitigation Agreement between BPA and SBT of the Fort Hall Indian Reservation, 1997.

4. Memorandum of Agreement (ID-030-97-01) between BLM and BPA, 1997.
5. Cooperative Management Agreement between BLM and the Department, 1998.

The Department, representing the State of Idaho, has an obligation to meet certain requirements and objectives in the management of wildlife mitigation lands. The 1997 South Fork Snake/Palisades Wildlife Mitigation Agreement between BPA and the Department obligates wildlife mitigation project managers to protect the properties as wildlife habitat permanently, preventing any and all uses of the properties that are inconsistent with the Agreement, the Council's Program, and the Management Plans.

The BLM is obligated by the 1997 Memorandum of Agreement with BPA to manage properties for the primary benefit of wildlife and wildlife habitat in perpetuity, following the prescriptions and proscriptions in the South Fork Snake River/Palisades Wildlife Mitigation Project Final Environmental Assessment (BPA 1995) to ensure the properties retain at least their baseline HEP values. The Agreement also obligates BLM to provide public and tribal access when access does not adversely affect the purpose of the mitigation project. Public access to wildlife mitigation units and use compatible with protection and enhancement of wildlife and wildlife habitat is encouraged, but is not required. All of the Deer Parks Complex mitigation units are within the area covered by the Snake River Activity/Operations Plan (February 1991) which directs management activities on all BLM and USFS lands along the river corridor.

IV. OTHER PROGRAMS

Travel Program

Deer Parks WMU is open to public travel with the use of non-motorized vehicles. Two parking areas with informational kiosks are located off of Twin Butte Road. Numerous trails are mowed throughout the area for non-motorized use.

Dove Banding

Mourning dove banding was initiated on DPWMU three years ago as part of a statewide effort and normally starts on July 1. Deer Parks WMU's staff monitors three dove traps twice daily.

Noxious Weed Control

Noxious weeds have been under active control on DPWMU since its acquisition in 1999. Control measures include proper land use practices, mechanical control, chemical control, and biological control. The four main weed species being controlled are Russian knapweed (*Acroptilon repens*), Canada thistle (*Cirsium arvense*), musk thistle (*Carduus nutans*), and leafy spurge (*Euphorbia esula*). Cheatgrass (*Bromus tectorum*) is not classified as a noxious weed, but is a real concern for DPWMU managers. Control of cheatgrass has proven difficult, but still remains a priority for WMU personnel.

Biological control was initiated in the early 2000s with the releases of the Canada thistle stem mining weevil, seed head weevil, and defoliating beetles. Leafy spurge beetles have been released most seasons. Musk thistle weevils were present at the time of purchase and remain plentiful.

Chemical control is primarily used on infestations found along roadways, heavily used areas, and large expansive infestations. Chemicals (e.g., Weedmaster®, Roundup®, Starane®) are also used for specific applications when corresponding land management agency regulations allow. Tordon® was commonly used in the past, but residual longevity makes it less attractive to use as newer chemicals come on the market. Herbicides are applied with a blue dye and delivered with a 200-gallon tractor mounted sprayer, 35-gallon ATV sprayer, or backpack sprayer. Rapid revegetation of disturbed soil prior to noxious weed infestation is the preferred management option. Establishment of desirable plants minimizes weed control naturally, but restoration efforts often fail if there is insufficient moisture for rapid establishment.

The most common methods of weed movement onto and within DPWMU are vehicles, animal movements (e.g., wildlife and trespass cattle), canal irrigation water, wind/water borne seed, and humans. Weed mapping and photo points are the most common methods of weed monitoring on DPWMU. New Trimble GPS units increase ease and accuracy for mapping and downloading to computers.

V. 2001-2013 ACCOMPLISHMENTS

Since the Deer Parks WMU plan was revised in 2001, these accomplishments have occurred relative to the Goals and Objectives of the 2001 plan.

Goal: Protect, maintain, and enhance wildlife habitat consistent with the Deer Parks WMU mission.

Objective: Maintain or increase baseline habitat units for wildlife mitigation target species.

Accomplishments:

- Used mowing as a passive method of noxious weed control to decrease competition with native plant species.
- Prohibited motorized vehicle use which can spread noxious weed seed.
- Maintained four miles exterior fences to control trespass grazing.
- Allowed willow and cottonwood plant communities to expand naturally.
- Allowed agricultural fields to revert back to natural cover.
- Removed grazing, allowing natural succession to take over.
- Allowed river riparian, meadow/pasture, shrub-steppe, and slough riparian communities to grow, reproduce and expand naturally. This provided additional habitat for bald eagles, mule deer, mallard ducks, Canada geese, black-capped chickadees, yellow warblers, yellow-billed cuckoos, water birds, and other neo-tropical birds.
- Prohibited camping, fires, and fireworks.
- Kept roads, parking areas, and other high traffic areas mowed for fire control.

Objective: Monitor and evaluate wildlife habitat and species populations to determine effects of management actions.

Accomplishments:

- Conducted a HEP every five years for BPA crediting.
- Surveyed the 21 permanent vegetation monitoring photo points every two years using composition inventories to measure changes in the plant communities.
- Established numerous noxious weed control monitoring plots to measure effectiveness of weed control efforts.
- Used monitoring information to formulate annual work plans.
- Developed monitoring schedules for big game night surveys, waterfowl brood counts, waterfowl pair counts, Canada goose nest structure use, wood duck nest box use, and trumpeter swan/goose and duck winter counts.
 - Volunteers were used on many surveys.

Objective: Prevent, control or eradicate noxious weeds and other undesirable vegetation.

Accomplishments:

- Developed and implemented a noxious weed control plan and incorporated chemical, biological, mechanical, and cultural methods to control or eradicate noxious weed infestations.
- Applied Early Detection, Rapid Response (EDRR) methods to detect and eradicate new noxious weeds.
- Purchased Trimble GPS units to enhance mapping of weed infestations.
- Completed annual weed control reports. Reports included: acres treated, methods/chemicals used, equipment used, and hours/funds spent.
- Reviewed annual control results to aid in future management direction.
- Remained as a member in the Upper Snake River and Henrys Fork Cooperative Weed Management Areas.
- Participated in Cooperative Weed Management Area meetings and spray days.
- All seasonal workers were required to attain a professional herbicide applicators license to assist them in weed identification and proper chemical application methods.
- Developed and implemented plans for converting historical farm fields to better vegetation for wildlife.
 - The east Horkley field was converted to native grass and forb species.
 - Utilized irrigation on K1 to establish desirable native and non-native plant communities for wildlife habitat.
- Continually reseeding irrigation pivot corners with native grass species.
 - Grasses were planted on pivot corners to alleviate forb kills when agricultural crops are sprayed with broadleaf herbicides.

Objective: Manage for native plant communities where appropriate.

Accomplishments:

- Native plant seed mixes were planted when possible. Due to difficulty of establishing native species, non-native species were added to seed mixes to quickly establish stands. Native species would eventually establish when the right environmental conditions presented themselves.
 - The east Horkley field was replanted three times, sprayed, and mowed annually for three years before the right spring conditions enabled the sprouting of the grass seed. Now there is an established grass stand with native grasses and native forbs starting to grow throughout the field.
- Prohibited activities on the area are: disturbing soils, cutting, digging, or removal of any crops, trees, shrubs, grasses, forbs, logs, fuel wood, soils, gravel, or minerals.

Objective: Provide wildlife habitat and implement wildlife habitat enhancements by using sharecropping, or other farming techniques.

Accomplishments:

- Sharecropping was used to grow crops that are conducive to wildlife forage or nesting.
- Sharecrop shares have been used to grow corn, grain, millet, buckwheat, and sunflower crops that are left standing throughout the winter for big game, upland game, and migrating waterfowl.
 - An average of 100 acres of grain, 25 acres of corn, and 12 acres of alfalfa are left for wildlife.
 - Grain left on the ground after harvest is available to birds.
 - Alfalfa growth after the last cutting is available for big game.
- All non-essential fences have been removed.
- Livestock grazing is unavailable on DPWMU lands.

Goal: Provide for a diversity of public recreational opportunities on the Deer Parks WMU consistent with the mission.

Objective: Develop and implement an access management plan.

Accomplishments:

- Public access on DPWMU is limited to non-motorized travel and is applied consistently to all user groups.
- Two informational kiosks have been constructed on the two parking areas with WMU information and maps.
- Designated access sites are marked and provided at various locations.
- The Menan trailhead and Menan boat ramp parking areas have handicapped restrooms.
- The Menan and Beaver Dick Park boat ramps offer boat-in access to DPWMU.
- Tribal treaty rights are maintained and cultural resources are protected through the NEPA process.

Objective: Provide for diverse public recreational activities which do not harm wildlife or reduce the value of wildlife habitat.

Accomplishments:

- Created a number of mowed trails for users to discover the diverse opportunities available on DPWMU without destroying it.
- Prohibited the harvest of wood and wood products on DPWMU to protect bird perch and nest trees.
- Prohibited camping, campfires, and fireworks on DPWMU to protect wildlife, wildlife habitat, and prevent wildfires.

- Restricted use of non-motorized watercraft on Butte Slough between July 15 and freeze up to protect waterbird nesting and brood-rearing activities.
- Required all trappers to register at the Department Regional office to enable accountability and harvest inventories.
- Sharecrop agreements were approved with the consensus of the Department Regional Supervisor and the SBT Wildlife Mitigation Program Manager.

Objective: Inform and educate Deer Parks WMU visitors.

Accomplishments:

- Installed and maintained two informational kiosks.
- Promoted general public awareness of the BPA wildlife mitigation program through interactions with neighbors, visitors and the general public.
- Developed a new brochure with map of DPWMU.

Objective: Monitor and evaluate the effects of public use on the DPWMU.

Accomplishments:

- Conducted annual incidental and stratified public use surveys.
- Solicited voluntary comments from public visitors using parking area sign-in boards.
- Modified the DPWMU Management Plan to reflect impacts of public use during the development of the new 2014 management plans.

Goal: Strive to maintain good working relationships with neighbors.

Objective: Manage the DPWMU to be a responsible neighbor.

Accomplishments:

- Clearly marked DPWMU boundaries with plastic boundary signs.
- Cooperatively maintained common fences to keep out trespass livestock.
- Attended and participated in the Butte/Market Lake canal annual meetings.
- Coordinated with adjacent private landowners and the Upper Snake River Cooperative Weed Management Area to control noxious weeds.

Objective: Minimize wildlife depredation damage on nearby privately owned land.

Accomplishments:

- Left standing crops for migratory and wintering wildlife.
- Monitored and evaluated local wildlife depredations on private land near the Deer Parks Complex.

- Answered complaints of wildlife depredations on private land near the Deer Parks Complex in a timely manner consistent with Department policy.
 - Picked up wounded animals, hazed big game from hay stacks, and arranged for depredation materials to be delivered.
- Croplands on DPWMU were managed with consideration for the impacts it may have on adjacent private land and crops.
 - Weeds were controlled and the sharecrop agreements were bid out to the local populace.

VI. VEGETATION

Deer Parks WMU was purchased for Palisades wildlife mitigation debt. Habitat Evaluation Procedure (HEP) is used to determine Habitat Units (HU) that are deducted from the wildlife mitigation debts. Additional purchases of the Horkley and Twin Bridges properties added additional HUs, which were split between Palisades and Minidoka wildlife mitigation debts.

Mitigation units are acquired to provide habitat for the target wildlife species identified in the original loss assessment. Vegetation cover types that were lost due to construction of the Palisades project are the kinds that are sought for mitigation. Most of the mitigation units lie in the floodplain of the Snake River and Henrys Fork Snake River. Floodplain vegetation along these rivers is characterized by cottonwood forest, willows, and emergent wetlands. Some upland vegetation is also found on the mitigation units such as sagebrush grasslands and old pastures planted with non-native species. A more complete description of the vegetation of the Deer Parks Complex can be found in Appendix VI.

Habitat Evaluation Procedure Cover Types.

Cover Type	Acres by Mitigation Unit			
	Menan	Beaver Dick	Deer Parks	Total
Open Water	4		184	100
Emergent Wetland	60	245	242	440
Scrub-shrub Wetland	9	50	113	164
Forested Wetland	2	15	185	445
Sagebrush-steppe			1,043	1,097
Agricultural (pasture/cropland)	69		797	735
Developed Areas (facilities/roads)			38	27
Subtotal	142	310	2,602	3,052

Plant Species List

(Selected Common Species; additional information available at www.idfg.idaho.gov)

Wetland Trees

Rocky Mountain juniper (*Juniperus scopulorum*)
Narrowleaf cottonwood (*Populus angustifolia*)

Wetland Shrubs

Black hawthorn (*Crataegus douglasii*)
Redosier dogwood (*Cornus sericea*)
Chokecherry (*Prunus virginiana*)
Golden currant (*Ribes aureum*)
Woods' rose (*Rosa woodsii*)
Coyote willow (*Salix exigua*)
Black greasewood (*Sarcobatus vermiculatus*)
Common Snowberry (*Symphoricarpos albus*)
Western snowberry (*Symphoricarpos occidentalis*)

Wetland Graminoids

Redtop (*Agrostis stolonifera*)
Woolly sedge (*Carex pellita*)
Clustered field sedge (*Carex praegracilis*)
Saltgrass (*Distichlis spicata*)
Common spike-rush (*Eleocharis palustris*)
Foxtail barley (*Hordeum jubatum*)
Baltic rush (*Juncus balticus*)
Alkali scratchgrass (*Muhlenbergia asperifolia*)
Kentucky bluegrass (*Poa pratensis*)
Hardstem bulrush (*Schoenoplectus acutus*)
Alkali sacaton (*Sporobolus airoides*)
Cattail (*Typha latifolia*)

Wetland Forbs

Silverweed cinquefoil (*Argentina anserina*)
Dogbane (*Apocynum* spp.)
Water hemlock (*Cicuta douglasii*)
Willow-weed (*Epilobium* spp.)
Scouringrush (*Equisetum hyemale*)
Wild licorice (*Glycyrrhiza lepidota*)
Rocky Mountain iris (*Iris missouriensis*)
Marshholder (*Iva xanthifolia*)
Spotted ladythumb (*Polygonum persicaria*)
Curly dock (*Rumex crispus*)
Canada goldenrod (*Solidago canadensis*)
Dandelion (*Taraxacum officinale*)
Stinging nettle (*Urtica dioica*)

Sagebrush-Steppe Shrubs

Basin big sagebrush (*Artemisia tridentata* ssp. *tridentata*)
Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*)
Threetip sagebrush (*Artemisia tripartita*)
Fourwing saltbrush (*Atriplex canescens*)
Rabbitbrush (*Ericameria* spp.)
Antelope bitterbrush (*Purshia tridentata*)

Upland Grasses

Indian ricegrass (*Achnatherum hymenoides*)
Crested wheatgrass (*Agropyron cristatum*)
Squirreltail (*Elymus elymoides*)
Idaho fescue (*Festuca idahoensis*)
Needle-and-thread (*Hesperostipa comata*)
Basin wildrye (*Leymus cinereus*)
Western wheatgrass (*Pascopyrum smithii*)
Sandberg bluegrass (*Poa secunda*)
Bluebunch wheatgrass (*Pseudoroegneria spicata*)
Intermediate wheatgrass (*Thinopyrum intermedium*)
Tall wheatgrass (*Thinopyrum ponticum*)

Upland Forbs

Western yarrow (*Achillea millefolium*)
Common milkweed (*Asclepias speciosa*)
Wild onion (*Allium textile*)
Cicer milk vetch (*Astragalus cicer*)
Mustards (*Brassicaceae* spp.)
Fireweed (*Epilobium angustifolium*)
Prickly lettuce (*Lactuca serriola*)
Hoary aster (*Machaeranthera canescens*)
Alfalfa (*Medicago sativa*)
Yellow sweetclover (*Melilotus officinalis*)
Pricklypear (*Opuntia polyacantha*)
Penstemon (*Penstemon* spp.)
Globemallow (*Sphaeralcea* spp.)
Field pennycress (*Thlaspi arvense*)
Western salsify (*Tragopogon dubius*)
Common mullein (*Verbascum thapsus*)

Noxious Weeds and Unwanted Invasive Non-native Weeds

Russian knapweed (*Acroptilon repens*)
Catchweed (*Asperugo procumbens*)
Kochia (*Bassia scoparia*)
Smooth brome (*Bromus inermis*)
Cheatgrass (*Bromus tectorum*)
Whitetop Hoary Cress (*Cardaria draba*)
Musk thistle (*Carduus* spp.)
Canada thistle (*Cirsium arvense*)
Knapweed (*Centaurea* spp.)
Pigweed (*Chenopodium album*)
Poison hemlock (*Conium maculatum*)
Field bindweed (*Convolvulus arvensis*)
Houndstongue (*Cynoglossum officinale*)
Russian olive (*Elaeagnus angustifolia*)
Quackgrass (*Elymus repens*)
Leafy spurge (*Euphorbia esula*)
Black henbane (*Hyoscyamus niger*)
Yellow toadflax (*Linaria vulgaris*)
Reed canarygrass (*Phalaris arundinacea*)
Russian thistle (*Salsola tragus*)
Climbing nightshade (*Solanum dulcamara*)
Nightshades (*Solanum* spp.)
Puncture vine (*Tribulus terrestris*)
Common cocklebur (*Xanthium strumarium*)

VII. WILDLIFE AND FISH SPECIES LIST

Wildlife inventory on the Deer Park Complex is a continuing process that began in 1997. At least 289 wildlife species, consisting of 204 birds, 63 mammals, 15 reptiles, and seven amphibians use the Deer Parks Complex at some time of year.

(Selected Common Species; additional information available at www.idfg.idaho.gov)

The species listed below use the Deer Parks Complex to meet part or all of their life cycle.

<i>Birds</i>	<i>Birds (cont.)</i>	<i>Birds (cont.)</i>
American Avocet	Black-crowned Night Heron	Clark's Grebe
American Bittern	Black-headed Grosbeak	Clay-colored Sparrow
American Coot	Black-necked Stilt	Cliff Swallow
American Crow	Blue Jay	Common Goldeneye
American Goldfinch	Blue-gray Gnatcatcher	Common Loon
American Kestrel	Blue-winged Teal	Common Merganser
American Pipit	Bobolink	Common Nighthawk
American Robin	Bohemian Waxwing	Common Poorwill
American White Pelican	Brewer's Blackbird	Common Raven
American Widgeon	Brewer's Sparrow	Common Snipe
Audubon's Warbler	Broad-tailed Hummingbird	Common Tern
Baird's Sparrow	Brown-Headed Cowbird	Cooper's Hawk
Bald Eagle	Bufflehead	Dark-eyed Junco
Baltimore Oriole	Burrowing Owl	Double-crested Cormorant
Bank Swallow	Bushtit	Downy Woodpecker
Barn Owl	California Gull	Dunlin
Barn Swallow	Canada Goose	Eared Grebe
Barrow's Goldeneye	Canvasback	Eastern Kingbird
Belted Kingfisher	Caspian Tern	European Starling
Black Tern	Cattle Egret	Evening Grosbeak
Black-bellied Plover	Cedar Waxwing	Ferruginous Hawk

<i>Birds (cont.)</i>	<i>Birds (cont.)</i>	<i>Birds (cont.)</i>
Black-billed Magpie	Chipping Sparrow	Forster's Tern
Black-capped Chickadee	Cinnamon Teal	Franklin's Gull
Gadwall	Long-billed Dowitcher	Ruby-crowned Kinglet
Golden Eagle	Long-eared Owl	Ruddy Duck
Gray Catbird	Mallard	Sage Sparrow
Gray Partridge	Marbled Godwit	Sage Thrasher
Great Blue Heron	Marsh Wren	Sanderling
Great Egret	Mountain Bluebird	Sandhill Crane
Great Horned Owl	Mourning Dove	Savannah Sparrow
Greater Sage-grouse	Northern Flicker	Semipalmated Plover
Greater Scaup	Northern Goshawk	Semipalmated Sandpiper
Greater White-fronted Goose	Northern Harrier	Sharp-shinned Hawk
Greater Yellowlegs	Northern Mockingbird	Short-eared Owl
Green Heron	Northern Pintail	Slate-colored Junco
Green-winged Teal	Northern Rough-winged Swallow	Snow Bunting
Harris's Sparrow	Northern Shoveler	Snow Goose
Hermit Thrush	Northern Shrike	Snowy Egret
Herring Gull	Osprey	Snowy Owl
Hooded Merganser	Peregrine Falcon	Song Sparrow
Horned Grebe	Pied-billed Grebe	Sora
Horned Lark	Prairie Falcon	Spotted Sandpiper
House Sparrow	Red-breasted Merganser	Swainson's Hawk
House Wren	Red-breasted Nuthatch	Townsend's Solitaire
Killdeer	Redhead	Tree Swallow
Lark Bunting	Red-necked Phalarope	Trumpeter Swan
Lazuli Bunting	Red-tailed Hawk	Tundra Swan
Least Sandpiper	Red-winged Blackbird	Turkey Vulture
Lesser Scaup	Ring-billed Gull	Vesper Sparrow
Lesser Yellowlegs	Ring-necked Duck	Violet-green Swallow
Lewis's Woodpecker	Ring-necked Pheasant	Virginia Rail

<i>Birds (cont.)</i>	<i>Mammals (cont.)</i>	<i>Amphibians & Reptiles (cont.)</i>
Loggerhead Shrike	Rock Dove	Warbling Vireo
Long-billed Curlew	Rough-legged Hawk	Western Flycatcher
Western Grebe	Ermine	Northern Leopard Frog
Western Kingbird	Fox Squirrel	Painted Turtle
Western Meadowlark	House Mouse	Racer
Western Sandpiper	Least Chipmunk	Rubber Boa
Western Tanager	Long-tailed Weasel	Sagebrush Lizard
Western Wood-Pewee	Meadow Vole	Short-horned Lizard
White-breasted Nuthatch	Mink	Tiger Salamander
White-crowned Sparrow	Moose	Toad
White-faced Ibis	Mountain Lion	Western Chorus Frog
White-winged Scoter	Mule Deer	Western Rattlesnake
Willet	Muskrat	Western Skink
Willow Flycatcher	Porcupine	Western Terrestrial Garter Snake
Wilson's Phalarope	Raccoon	Western Toad
Wilson's Warbler	Red Fox	<i>Fish</i>
Wood Duck	River Otter	Bluehead sucker
Yellow Warbler	Spotted Skunk	Brown Trout
Yellow-bellied Sapsucker	Striped Skunk	Cutthroat Trout
Yellow-headed Blackbird	Townsend's Ground Squirrel	Longnose Dace
<i>Mammals</i>	White-footed Deer Mouse	Mountain Whitefish
American Badger	White-tailed Deer	Rainbow Trout
Beaver	White-tailed Jackrabbit	Redside Shiner
Black-tailed Jackrabbit	Yellow-bellied Marmot	Speckled Dace
Bobcat	<i>Amphibians & Reptiles</i>	Utah Chub
Bushy-tailed Wood Rat	Bull Snake	Utah Sucker
Cottontail Rabbit	Common Garter Snake	
Coyote	Great Basin Spadefoot	
Elk	Long-Toed Salamander	

VIII. HABITAT EVALUATION PROCEDURE

The Habitat Evaluation Procedure (HEP) method was developed by the U.S. Fish and Wildlife Service (USFWS 1980) to rate the quality and quantity of habitat in order to quantify the impacts of changes from development projects or management actions. The Northwest Power Planning Council has adopted HEP as the method used to document baseline habitat condition for mitigation crediting and from which to gauge future habitat modifications or enhancements.

The HEP is based on concepts firmly rooted in basic ecological principles. These principles include the assumptions that at the species level, habitat value can be described by a set of measurable habitat variables that are important for the species, and further, the value of an area may be influenced by changes in either habitat quantity or quality. For example, it is expected that if the quantity of deer browse in a valley is increased, then the value of the habitat for the deer herd in the valley is increased. This habitat variable (browse quantity) describes habitat in terms of the species needs. The same type of increase in habitat value holds true for an enhanced quality of deer browse.

The HEP methodology utilizes a team of biologists (the HEP team) that designs the HEP study, determines resource goals, selects evaluation species, develops and assesses HEP study assumptions, and subsequently evaluates habitat conditions based on selected species models. Each species model uses measurable physical and biological variables (for example, percent canopy cover and height of herbaceous vegetation) that characterize important habitat features or life requisites (for example, reproduction and winter habitat) for that species.

The value of an area to a given wildlife species is a product of the area's size multiplied by the quality of the area for the species. Mathematically, this is stated as:

$$\text{Habitat Value} = \text{Habitat Quantity} \times \text{Habitat Quality}$$

The quality measurement of the formula is expressed as an index (Habitat Suitability Index, or HSI), that varies from zero to 1.0, with zero representing no habitat value and 1.0 representing optimum habitat value for the evaluation species. HSI indicates how suitable the habitat is for the particular species when compared to optimum habitat. The product of these two measures, which is comparable to "habitat value" in the formula above, is expressed as a Habitat Unit, or HU. In HEP, the measure of habitat value becomes:

$$\text{Habitat Unit} = \text{Area} \times \text{Habitat Suitability Index}$$

or

$$\text{HU} = \text{Area} \times \text{HSI}$$

HEP is a complex of strategies, formulas, and techniques that guide the user through an appraisal of current wildlife habitat value so that the future value of that habitat may be estimated, and both positive and negative impacts of a project on the wildlife community may be gauged.

Cover Types

Cover types identified and used in the original loss assessment for the Palisades Project include forested wetland, scrub-shrub wetland, emergent wetland, aspen, riverine, rock bottom, shrub-steppe, grass-sagebrush, agricultural, non-irrigated cropland, built up areas, streams, and ponds. Not all cover types used in the original loss assessment are found on the Deer Parks Complex. Cover types used for Deer Parks Complex HEPs include forested wetland, scrub-shrub wetland, emergent wetland, open water, shrub-steppe, grass-sagebrush, and agriculture.

Forested Wetland

These wetlands occur where moisture is abundant, usually along the river and its tributaries. Woody vegetation is 20 feet or more tall. Narrow-leaved cottonwoods dominate the overstory with willow, dogwoods, and many other shrubs in the understory.

Scrub-shrub Wetland

These wetlands occur where moisture is abundant, usually along the river and its tributaries. Woody vegetation is 20 feet or less tall. Willows, red-osier dogwood, chokecherry, snowberry, and young cottonwoods are common plants found in this cover type.

Emergent Wetland

These areas are characterized by erect, rooted, herbaceous hydrophytes. Cattails, bulrushes, sedges, and various grasses may dominate, depending on water regime.

Open Water

This cover type describes the river including its channel and other water bodies too deep for vegetation to emerge from the surface.

Shrub-steppe

This cover type is usually dominated by sagebrush with bitterbrush, rabbitbrush, or other shrubs present. It is usually found on south facing slopes or level terrain.

Grass-Sagebrush

Grasses dominate this cover type (wheatgrasses, bromes, and blue grasses) with scattered sagebrush plants common. This cover type includes some areas used as non-irrigated pastures, perennial grasslands and dry meadows.

Agriculture

This cover type includes cropland and irrigated pasture that was used for historical livestock grazing.

IX. LAND ACQUISITIONS AND AGREEMENTS

The Deer Parks Complex currently includes three Wildlife Mitigation Units. The Menan and Beaver Dick properties were acquired in 1997 and the Deer Parks (Boyle Ranch) property was acquired in 1999. The BPA provided funds to BLM to purchase the lands. The Deer Parks Complex is managed cooperatively by BLM, the Department, and SBT.

The Deer Parks Wildlife Mitigation Unit is located along the mainstem Snake River in Jefferson County about three miles north of Menan, Idaho. The 2,556-acre property includes about two miles of river frontage, wetlands, shrub-steppe uplands, pasture and cropland. It abuts BLM land on three sides. 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 Menan Wildlife Mitigation Unit is located along the mainstem Snake River in Jefferson County adjacent to the Deer Parks unit. The 142-acre property includes river frontage, wetlands, former pasture and former cropland and floods most years.

The Beaver Dick Wildlife Mitigation Unit is located along the Henrys Fork Snake River in Madison County about five miles west of Rexburg, Idaho. The 310-acre property includes one mile of river frontage, wetlands, and former pasture. It also floods most years.

<i>Land Acquisitions</i>				
Year	Funds Used	Segment	Acres	Acquired From
1997	BPA	Menan – K1	142.2	Gunderson
1998	BPA	Beaver Dick – K2	310	Kinghorn
1999	BPA	Boyle	2,555.7	Boyle
2002	BPA	Horkley	120.08	Horkley
2002	BPA	Twin Bridges	81.22	Allen
	<i>WMU Total</i>		3,209	

<i>Cooperative Agreements</i>			
Year	Cooperator	Acres	Ownership
1999	BPA	3,209	Bureau of Land Management

<i>Water Rights^a</i>	
Year	Type
1890	31.49 (350.790 CFS) of Butte & Market Lake Canal Co.

^a The BLM holds water rights in the Butte-Market Lake Canal to facilitate management of the property. Ground water rights are held through Idaho Water District 120.

DEER PARKS
WILDLIFE MITIGATION UNIT PLAN

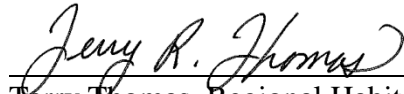
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Submitted by:

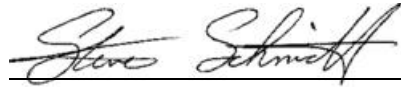


Paul J. Faulkner, Habitat Biologist

Reviewed by:



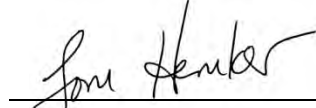
Terry Thomas, Regional Habitat Manager



Steve Schmidt, Regional Supervisor



Sal Palazzolo, Bureau of Wildlife



Tom Hemker, State Habitat Manager

Approved by:



Virgil Moore, Director