BRIDGE CREEK WILDLIFE AREA MANAGEMENT PLAN

April 2009

Oregon Department of Fish and Wildlife
3406 Cherry Avenue NE
Salem, Oregon 97303

Table of Contents

List of Figures

List of Tables

Executive Summary

Purpose of the Plan

This plan will guide management of the Bridge Creek Wildlife Area (BCWA) for the next 10 years. Purposes of this plan are to:

- Provide clear direction for management of BCWA;
- Provide long-term continuity in wildlife area management;
- Communicate the department's management priorities for BCWA to its neighbors, visitors, and the public;
- Ensure management programs on BCWA are consistent with the original mandate and purpose of the area when first established;
- Ensure management of BCWA is consistent with Federal, State, and local natural resource plans;
- Ensure management activities address conservation priorities and recommendations described in the 2006 Oregon Conservation Strategy (OCS), and;
- Provide a basis for budget requests to support BCWA needs for staffing, operations, maintenance, and capital improvements.

Historical Background

BCWA is located in Northeastern Oregon, approximately three miles south of the town of Ukiah along Forest Road 52 within the Blue Mountains Ecoregion of the OCS. This places BCWA roughly 50 miles south of Pendleton and similarly southwest of La Grande, Oregon.

Establishment of the BCWA initially started in 1961 when a parcel of land was purchased from the Frank Hilbert estate. After the initial purchase, several private holdings were acquired to consolidate the land under department ownership. The last parcel was purchased from the Colvin Cattle Company in 1975.

Three different land agreements complete the BCWA boundary. Thirty five acres are under agreement with the U.S. Forest Service along the southeast boundary fence. An adjacent 400 acres in two parcels of Bureau of Land Management property (320 acres located along the North Fork of the John Day River and 80 acres near Camas Creek) is under a cooperative management agreement for wildlife management as well as an administrative use site. The BCWA also encompasses approximately 1,585 acres of Oregon Department of Transportation (ODOT) and Oregon Parks and Recreation Department (OPRD) land along Camas Creek and the N.F. of the John Day River (these lands comprise most of the western and southwestern boundary of BCWA). In total the department manages 15,206 acres on the BCWA which includes both department-acquired lands and cooperatively managed lands.

The USFS, BLM, OPRD, Natural Resource Conservation Service (NRCS), Umatilla County, Umatilla Soil and Water Conservation District and Umatilla County Extension Service have all been involved with the development of the BCWA. A Coordinated Resources Management Plan developed in 1973 provided the basis for the formulation of the present grazing system.

The primary purpose of the BCWA is to maintain and protect a key historic winter range for Rocky Mountain elk (*Cervus elaphus nelsoni*). BCWA also provides year-round habitat for mule deer (*Odocoileus hemionus*). When managed to support department goals and objectives, the habitat management techniques currently employed on BCWA ensures protection of the big game winter range to alleviate damage on adjacent/nearby lands and reduce the potential of human-wildlife incidents on nearby transportation corridors. Protection and enhancement of the variety of habitats found on BCWA help to support other fish and wildlife population levels while providing numerous recreational opportunities. Recreational opportunities available on BCWA and surrounding public lands provide direct economic benefit to the local economies of Ukiah and Umatilla County.

Planning Approach

This management plan is the first of its kind developed for the BCWA. The goals, objectives and stategies (implementation actions) described in this 2009 plan are focused on maintaining and enhancing key habitats and providing significant wildlife oriented public use.

This plan describes current issues and actions to address them. These actions will be implemented during the life of this plan, but are subject to availability of funding and personnel. This management plan will be reviewed in 2014 to gauge the progress of implementation and make necessary revisions, and it will be revised in its entirety in 2019.

Bridge Creek Wildlife Area Vision

The vision for the BCWA is as follows:

Key winter range for Rocky Mountain elk and year-round mule deer habitat are enhanced and protected through sound stewardship practices while balancing the needs of other endemic fish and wildlife species and surrounding agricultural land uses as well as providing recreational opportunities for present and future generations.

Wildlife Area Goals

The goals for the Bridge Creek Wildlife Area are:

Goal 1: To protect, enhance, and manage winter range habitats for Rocky Mountain elk.

Goal 2: To protect, enhance, and manage habitats to benefit native wildlife and desired game species, compatible with Goal 1.
Goal 3: To provide a variety of recreational and educational opportunities to the public which are compatible with Goals 1 and 2.

Specific objectives and strategies to implement each goal, a well as detailed rationale, are provided in this plan on pages 28-38.

Implementation Approach

Current management direction is to protect, enhance, and manage fish and wildlife habitats and associated species while providing hunting, trapping, angling, and other public use opportunities on the BCWA. Recreational opportunities on the BCWA will vary through time, and when balanced with habitat management actions, may not be maximized in all cases.

Most habitats on the BCWA have been altered to some degree with respects to species composition and/or diversity. These alterations may be attributed to fire suppression and past land use practices such as timber harvest, overgrazing, agriculture, and invasive plant species. By employing various practices/techniques such as grazing management and restoration/enhancement (plantings, seeding, prescribed burning, etc) for their associated attributes, wildlife personnel have managed BCWA habitats to emphasize increased cover values (vertical and horizontal), compensatory growth, plant composition and diversity.

Introduction

Purpose of the Plan

This plan will guide management of the Bridge Creek Wildlife Area (BCWA) for the next 10 years. Purposes of this plan are to:

- Provide clear direction for management of BCWA;
- Provide long-term continuity in wildlife area management;
- Communicate the department's management priorities for BCWA to its neighbors, visitors, and the public;
- Ensure management programs on BCWA are consistent with the original mandate and purpose of the area when first established;
- Ensure management of BCWA is consistent with Federal, State, and local natural resource plans;
- Ensure management activities address conservation priorities and recommendations described in the 2006 Oregon Conservation Strategy (OCS), and;
- Provide a basis for budget requests to support BCWA needs for staffing, operations, maintenance, and capital improvements.

Oregon Department of Fish and Wildlife Mission and Authority

The mission of the department is to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. The department is the only state agency charged exclusively with protecting Oregon's fish and wildlife resources. The state Wildlife Policy (ORS 496.012) and Food Fish Management Policy (ORS 506.109) are the primary statutes that govern management of fish and wildlife resources.

Purpose and Need of Bridge Creek Wildlife Area

The primary purpose of the BCWA is to maintain and protect a key historic winter range for Rocky Mountain elk (*Cervus elaphus nelsoni*). BCWA also provides year-round habitat for mule deer (*Odocoileus hemionus*). When managed conducive to goals and objectives, the habitat management techniques currently employed on BCWA ensures protection of the big game winter range to alleviate damage on adjacent/nearby lands and reduce the potential of human-wildlife incidents on nearby transportation corridors. Protection and enhancement of the variety of habitats indicative of BCWA help to support other fish and wildlife population levels while providing numerous recreational opportunities. Recreational opportunities available on BCWA and surrounding public lands provide direct economic benefit to the local economies of Ukiah and Umatilla County.

The BCWA is located in the John Day Watershed District of the department's Northeast Region. Project coordination is provided by the Wildlife Division at the department's headquarters to integrate wildlife area management activities with large scale landscape planning including collaboration with federal land agencies (e.g. 1978 Bridge Creek Biological Unit Management Plan), Federal-Private-State-Tribal partnerships to manage

elk in the Blue Mountains of Oregon and Washington (1990 Blue Mountain Elk Initiatve), cooperative agreements with private landowners and individual species plans (e.g. 2003 Elk Management Plan, 2003 Mule Deer Management Plan, 2006 Cougar Management Plan, 2005 Oregon Wolf Conservation and Management Plan, and 2004 Wild Turkey Management Plan).

This management plan is the guiding document that will ensure natural resources on the BCWA will be managed in such a manner as to protect, enhance, and restore fish and wildlife habitats to support optimum population levels of many species for the enjoyment of present and future generations. To protect these natural resources, management programs and strategies utilized on the BCWA will meet or exceed habitat protection policies and standards set by the department.

Bridge Creek Wildlife Area Vision Statement

The vision for the BCWA is as follows:

Key winter range for Rocky Mountain elk and year-round mule deer habitat are enhanced and protected through sound stewardship practices while balancing the needs of other endemic fish and wildlife species and surrounding agricultural land uses as well as providing recreational opportunities for present and future generations.

Wildlife Area Goals and Objectives

Wildlife area goals are broad, open-ended statements of desired future conditions that convey a purpose but do not define measurable units. In contrast, objectives are more concise statements of what the department wants to achieve, how much the department wants to achieve, when and where to achieve it, and who will be responsible for the work. Objectives derive from goals and provide the basis for determining strategies, monitoring wildlife area accomplishments, and evaluating the success of strategies.

The goals and objectives for the BCWA are:

Goal 1: To protect, enhance, and manage winter range habitats for Rocky Mountain elk.

> **Objective 1.1:** Maintain and enhance 10,475 acres of grassland and 352 acres of shrubland habitat as key winter range for Rocky Mountain elk.
>
> **Objective 1.2:** Maintain and enhance 3,919 acres of Ponderosa pine woodlands and 434 acres of riparian habitats as thermal, hiding, and escapement cover for wintering Rocky Mountain elk.
>
> **Objective 1.3**: Monitor Rocky Mountain elk winter use and distribution.

Goal 2: To protect, enhance, and manage habitats to benefit native wildlife and desired game species, compatible with Goal 1.

Objective 2.1: To protect, enhance and manage upland habitats (10,475 acres grassland, 352 acres shrubland, 3,919 acres woodland) to benefit native and desirable non-native wildlife.

Objective 2.2: Protect, enhance and manage 434 acres of riparian and 3,919 acres of woodland habitat for high quality instream habitat, water quality and quantity, and proper functioning condition for resident and anadromous fish, native wildlife, and desirable non-native fish and wildlife.

Objective 2.3: Monitor wildlife presence and usage of BCWA habitats.

Objective 2.4: To maintain and enhance wildlife area facilities, structures, and equipment to conduct habitat management and public use projects on the wildlife area.

Goal 3: To provide a variety of recreational and educational opportunities to the public which are compatible with Goals 1 and 2.

Objective 3.1: Provide hunting, trapping and angling opportunities to the general public, compatible with habitat management objectives.

Objective 3.2: Provide wildlife viewing and education/interpretation opportunities compatible with Objective 3.1.

Specific objectives and strategies to implement each goal, as well as detailed rationale, are provided in this plan on pages 28-38.

Wildlife Area Establishment

Establishment of the BCWA initially started in 1961 when a parcel of land was purchased from the Frank Hilbert estate. After the initial purchase, several private holdings were acquired to consolidate the land under department ownership. The last parcel was purchased from the Colvin Cattle Company in 1975. As stated in the purchase agreement by the Fish and Wildlife Commission, priority was given to the former landowner (Colvin Cattle Company) to graze livestock on the newly acquired parcel of property as well as properties previously leased from the department. The agreement included implementation of a livestock grazing system and regulations on these lands to be managed as the department desires. In the event that the Colvins or Tom Colvin Jr. decide not to lease these lands from the department, they will assign to the department their lease on Bureau of Land Management (BLM) land north of the North Fork of the John Day River (T6S., R31E., Sec 36) and special use on U.S. Forest Service (USFS) land north of the North Fork of the John Day (T6S., R32E., Sec 29, 31, & 32). To date, the Colvin Cattle Company continues its grazing agreement on BCWA under the direction of the department. The total acres acquired were 13,186 (See **Appendix A** for more detailed acquisition history).

Three different land agreements complete the BCWA boundary. Thirty five acres are under agreement with the U.S. Forest Service along the southeast boundary fence. An adjacent 400 acres in two parcels of Bureau of Land Management property (320 acres located along the North Fork of the John Day River and 80 acres near Camas Creek) is under a cooperative management agreement for wildlife management as well as an administrative use site. The BCWA also encompasses approximately 1,585 acres of Oregon Department of Transportation (ODOT) and Oregon Parks and Recreation Department (OPRD) land along Camas Creek and the N.F. of the John Day River (these lands comprise most of the western and southwestern boundary of BCWA). By court action, County Road no. 1479 (previously no.275) was vacated to become a stock driveway. A portion of this road currently serves as BCWA's single public access road onto the area.

In total the department manages 15,206 acres on the BCWA which includes both department-acquired lands and cooperatively managed lands.

The USFS, BLM, OPRD, Natural Resource Conservation Service (NRCS), Umatilla County, Umatilla Soil and Water Conservation District and Umatilla County Extension Service have all been involved with the development of the BCWA. A Coordinated Resources Management Plan developed in 1973 provided the basis for the formulation of the present grazing system.

Description and Environment

Physical Resources

Location

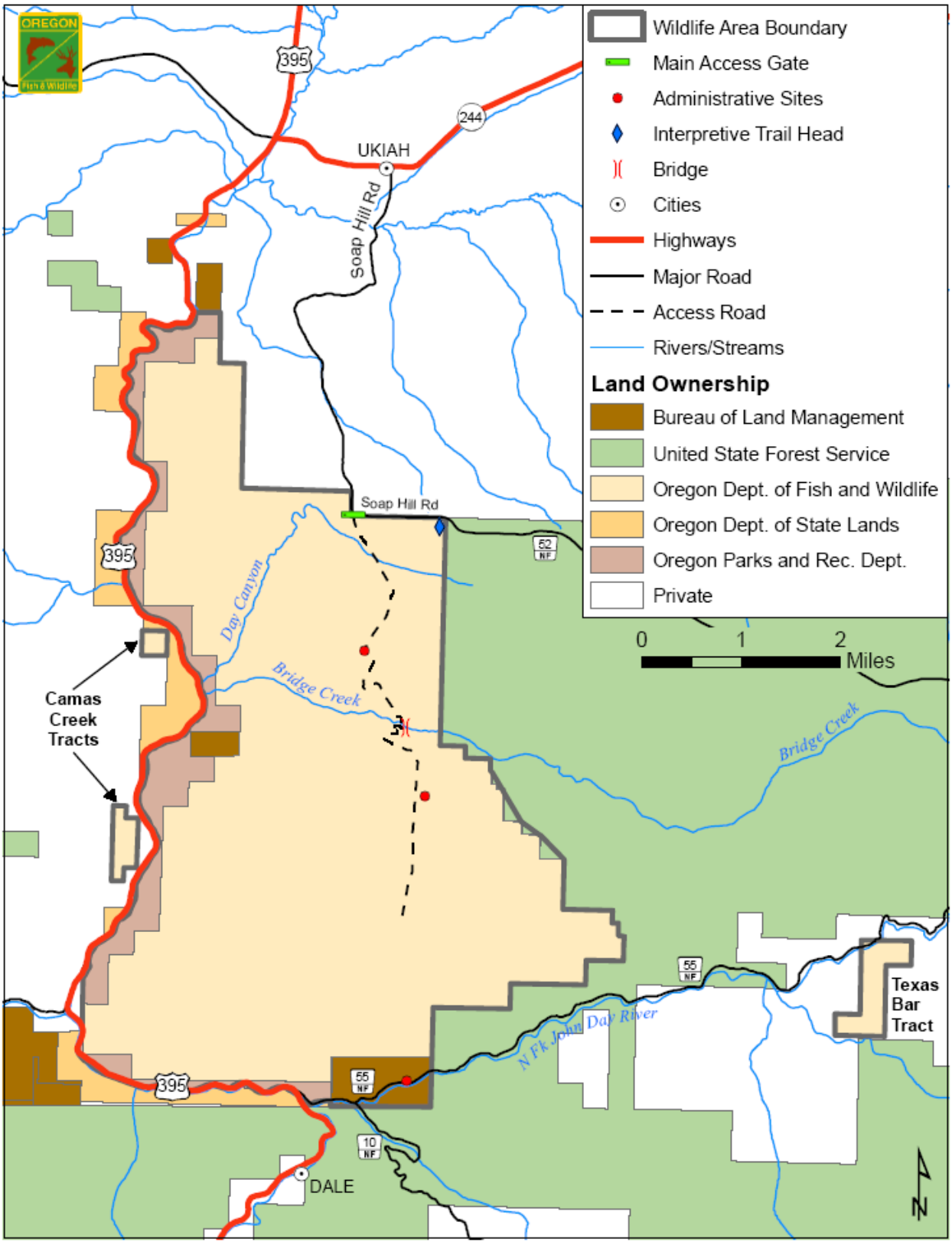
BCWA is located in Northeastern Oregon, approximately three miles south of the town of Ukiah along Forest Road 52 within the Blue Mountains Ecoregion of the Oregon Conservation Strategy (OCS). This places BCWA roughly 50 miles south of Pendleton and similarly southwest of La Grande, Oregon.

BCWA is bounded on the south by the North Fork of the John Day River, on the west by Camas Creek and a small portion of private land, and by private property on the north. On the northeast side, BCWA is adjacent to Forest Road 52 and on its east side by the Umatilla National Forest. Bridge Creek proper is a major drainage running from east to west and divides the wildlife area into north and south. **Figure 1** shows the locations and key features of the Bridge Creek Wildlife Area.

Climate

Due to the relative size and topography of the Blue Mountain Ecoregion, the climate of the region varies significantly depending on the specific geographic location. The BCWA exhibits some characteristics indicative of the ecoregion with short dry summers and long cold winters. Precipitation on the BCWA ranges from 16-20 inches annually of which approximately five inches is received during the growing season of April through July. The remainder of annual precipitation is largely composed of late season (Fall) rain showers and winter snowfall (November-March). Average annual temperatures on

Figure 1 - Bridge Creek Wildlife Area Features and Ownership



the BCWA range from 14°F in January to 82° F in August. Prevailing winds on the BCWA are from the west and vary significantly in speed. Topography of the surrounding area around BCWA heavily influences weather patterns and often creates dry prairie-like conditions on portions of the area.

Topography and Soils

The BCWA may be characterized as expansive plateaus or "flats" with deep timbered canyon draws. The BCWA contains a general southwest aspect and, in conjunction with prevailing winds, often creates winter incidences when snow is either blown or melted from the majority of the area. Elevation ranges over the BCWA from 2,800' at the confluence of Camas Cr. and the N.F. of the John Day River to approximately 4,000'. However, much of the BCWA is within the 3,800' to 4,000' elevation range.

Twelve soil types and/or complexes are present on the BCWA. The largest soil classification present on the BCWA is the Bocker-Bridgecreek complex which exhibits many characteristics of other soils/complexes present. Generally the soil types present contain cobble or large portions of stone, are shallow to moderately deep, well drained, with moderate to high risk of erosion. Soil types range in available water content from 0.5" to 19" and rooting depths from 4" to 60".

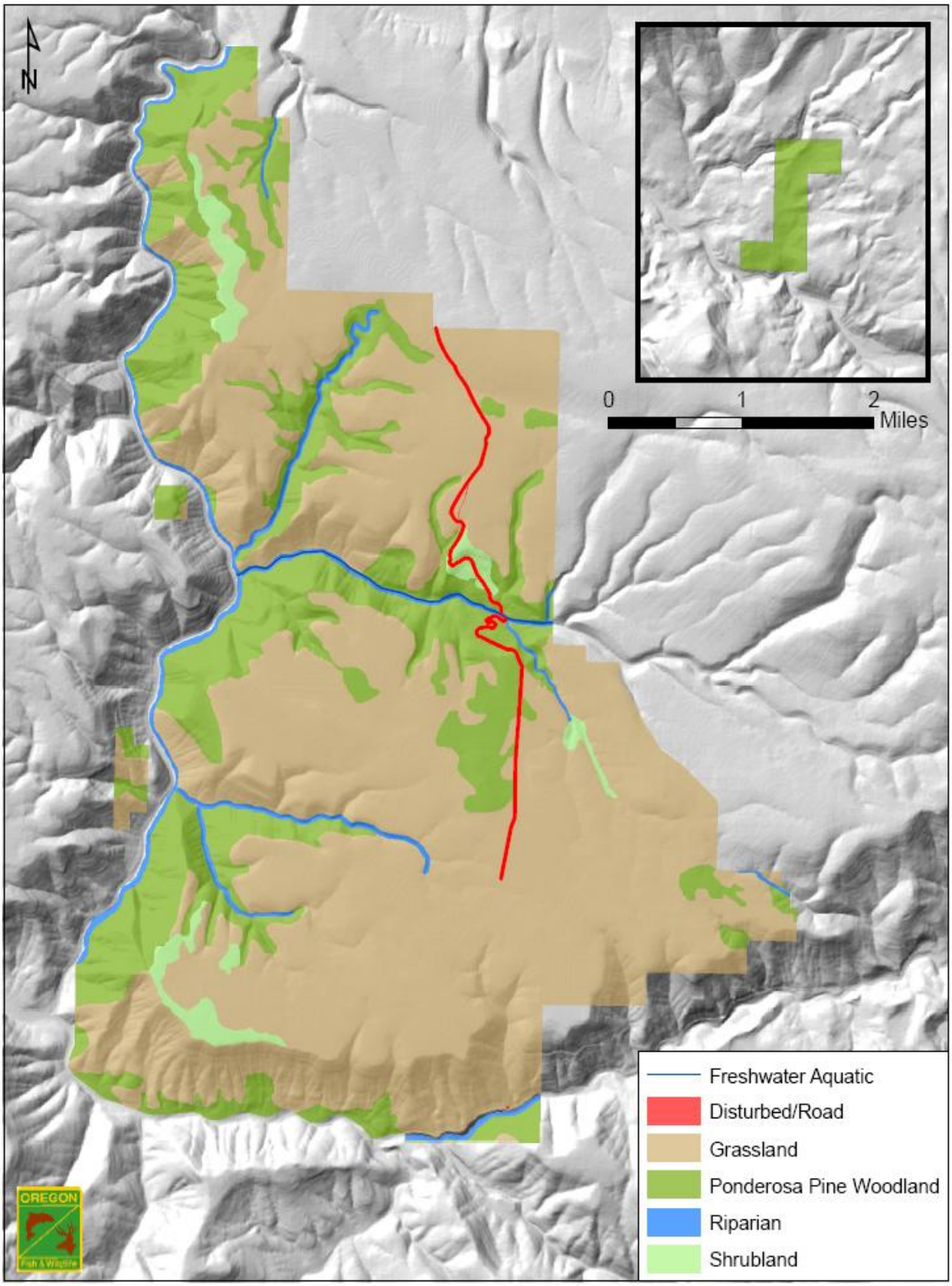
Individual soil type characteristics largely dictate the presences of existing plant communities. These plant communities vary but largely contain such species as: Idaho fescue (*Festuca idahoensis*), bluebunch wheatgrass (*Pseudoroegneria spicata),* prairie junegrass (*Koeleria cristata*), Sandberg bluegrass (*Poa secunda*), pinegrass (*Calamagrostis rubescens*), elk sedge (*Carex geyeri*), serviceberry (*Amelanchier alnifolia*), common snowberry (*Symphoricarpos albus*), Ponderosa pine (*Pinus ponderosa*), Woods rose (*Rosa woodsii*), bitterbrush (*Purshia tridentata*), Douglas fir (*Pseudotsuga menziesii*), western larch (*Larix occidentalis*), and lodgepole pine (*Pinus contorta*). Dry weight forage production may range significantly within soil types/classifications across BCWA from unfavorable soils and/or years of 200 lbs/acre to favorable soils and/or years of 2,300 lbs/acre (1988 USDA Soil Conservation Service). Production from fourteen monitored forage cages, within the BCWA's six pastures, over an eleven year period (1973-1983) yielded an average dry weight of 1,436 lbs/acre production with high-lows of 1,877 lbs/acre and 846 lbs/acre, respectively. Samples informally collected in 2004 by University of Idaho range students with production estimates of 787 lbs/acre for grasses and 292 lbs/acre for forbs within Stover Pasture.

Habitat Types

The BCWA contains five different habitat types which consist of grassland, Ponderosa pine woodland, sagebrush steppe and shrubland, riparian, and freshwater aquatic **Table 1**. **Figure 2** illustrates their distribution on the BCWA landscape.

All of these habitat types are strategy habitats listed within the Blue Mountain Ecoregion of the OCS. A portion of the BCWA has been identified by the OCS as a Conservation Opportunity Area (COA).

Figure 2 - Habitat Types within Bridge Creek Wildlife Area



The key habitat for this COA is aquatic, however conservation actions of the COA recommend restoration or maintenance of adjacent areas (riparian and Ponderosa pine woodland) for wildlife habitat and complexity. The OCS identified the riparian habitat as being a major migratory corridor for Rocky Mountain elk as well as utilization by key species including American marten (*Martes americana*), flammulated owl (*Otus flammeolus*), summer steelhead (*Onchoryncus mykiss*), and other fish species.

Most habitats on the BCWA have been altered to some degree with respects to species composition and/or diversity. These alterations may be attributed to fire suppression and past land use practices such as timber harvest, overgrazing, agriculture, and invasive plant species. By employing various practices/techniques such as grazing management and restoration/enhancement (plantings, seeding, prescribed burning, etc) for their associated attributes, wildlife personnel have managed BCWA habitats to emphasize increased cover values (vertical and horizontal), compensatory growth, plant composition and diversity. Although wildfire will continue to be a factor in changing BCWA habitat types and their associated values; efforts towards active timber management, pruning, thinning, identification of high-value protection areas and facilitation of emergency response travel access will aid in reducing catastrophic effects of wildland fire.

Although BCWA habitat types and the vegetative species that occur within those habitats are actively and passively managed for certain attributes, they are largely influenced by environmental factors such as temperature, aspect, precipitation, soil, invasive species, and wildfire. Common plant species found within the habitat types are listed in **Appendix B**.

Table 1. Habitat Types and approximate acreage/mileage located within Bridge Creek Wildlife Area boundaries.

Upland	**Acres**
Disturbed	26
Grassland	10,475
Ponderosa Pine Woodland	3,919
Riparian	434
Shrubland	352
Total	**15,206**
Aquatic	**Miles**
Freshwater Aquatic	
Bridge Cr.	2.5
N.F. John Day River	1
Total	**3.5**

Ponderosa Pine Woodland

BCWA Ponderosa pine woodlands vary considerably based on soil type, moisture, micro-climate, aspect, and fire history. This habitat type is characterized by open canopies (10%-40%) which are predominately ponderosa pine but may also contain species such as Douglas fir, lodgepole pine, and western larch. Ponderosa pine mixed

timber stands typically occur on north facing slopes on BCWA. The understory within this habitat type varies but may contain such species as snowberry, rose, manzanita (*Arctostaphylos patula*) and/or various grass communities. Stands of large diameter at breast height (DBH) Ponderosa pine with open canopies (<10%) and grass understory provide savanna conditions throughout BCWA.

Due to previous timber harvest and catastrophic fire, the age of ponderosa pine stands vary widely over the BCWA landscape. Acreages known to be dominated by Ponderosa pine prior to a 2001 wildland fire have been included in this habitat type classification as they are ultimately Ponderosa pine climax communities. These areas presently exhibit variable degrees of natural recruitment and recovery.

Ponderosa pine woodlands are valuable to a variety of wildlife species on BCWA. This habitat type provides thermal and security cover and is used as travel corridors for elk, foraging habitat for white-headed woodpecker (OCS strategy species), mountain (*Sialia currucoides*) and western bluebirds (*Sialia mexicana*) and roosting and foraging habitat for a variety of bat species. Ponderosa pine with a shrub understory on canyon rims is an important habitat feature on BCWA for blue grouse (*Dendragapus obscurus*).

Grassland

On BCWA, this habitat type is dominated by communities of Idaho fescue, bluebunch wheatgrass, Sandberg bluegrass, and praire junegrass. Composition of Idaho fescue and bluebunch wheatgrass communities on BCWA are ~70-75% and ~15%, respectively. Sandberg bluegrass and bluebunch wheatgrass communities are ~40% Sandberg and ~15% bluebunch. Forb components within these communities typically includes western yarrow (*Achillea millefolium*), lupine (*Lupinus* spp.), arrowleaf balsomroot (*Balsamorhiza sagittata*), and mules ear (*Wyenthia amplexicaulis*). Grassland draw bottoms differ from these plant communities by containing snowberry (*Symphoricarpos albus*), elderberry (*Sambucucus nigra*), and other shrub/sub-shrub species.

Grassland habitats are a critical component to the success of the BCWA in wintering large numbers of elk and deer by providing quality forage during a physiologically stressful time of the year. Grasslands are also beneficial to other species by providing foraging and nesting habitat for various passerines, reptiles and small mammals. Due to its relative importance to a range of species and its relative decline in quality throughout the western U.S., the proper conditioning, use, and management of this habitat type is essential.

A deferred rest-rotation livestock grazing management system is employed within this habitat type and sections of the Ponderosa Pine woodland on BCWA. This system conditions forage for wintering elk and assists with providing a range of habitat attributes (vertical and horizontal cover/structure) for a multitude of wildlife species inhabiting or using the habitats. Livestock grazing on the BCWA targets a rate of ~15% utilization to stimulate compensatory growth of native perennial bunchgrass communities. The program is also intended to aid in natural recruitment and dispersal

through seed shattering and hoofing action as well assists in reducing fine fuels and overall severity/frequency of catastrophic fire. With introduction of invasive species such as Ventenata (*Ventenata dubia*), it is important to protect the overall integrity of this habitat type. Management activities are intended to aid and assist grassland habitats while particular care is given to not over-stress or reduce vigor of native plant communities.

Sagebrush Steppe and Shrubland

This habitat type comprises a relatively small portion of the BCWA and primarily occurs in small or narrow bands within or adjacent to rocky outcrops, rims and/or draws. This habitat type contains open grass communities which are typically dominated by species such as sagebrush (*Artemisia* spp.), bitterbrush (*Purshia tridentata*), snowberry, and/or elderberry. These habitats are often considered dry and occur within areas with poor soil conditions. In addition to contributing to the overall diversity of BCWA, this habitat type is particularly valuable for management purposes as winter browse for mule deer. Management of these areas is intended to maintain and/or enhance natural recruitment of flora and wildlife cover/forage values.

Riparian

Riparian habitats, and their supporting vegetation, occur adjacent to waterways (rivers, streams, intermittent streams, springs, seeps, etc) and are primarily shaped or maintained through seasonal periods of inundation, flooding, scouring, and deposition of soil. On the BCWA, riparian habitats occur in both naturally sparse and dense vegetative stands adjacent to the North Fork of the John Day River, Camas Creek, Bridge Creek, and along intermittent/seasonal streams. Riparian habitats on BCWA are naturally narrow due to the characteristics and confines of canyons and draws they are located within. Shrub and deciduous tree species within these habitats may include cottonwood (*Populus* spp.), alder (*Alnus tenuifolia*), ninebark (*Physocarpus malvaceus*), oceanspray (*Holodiscus discolor*), serviceberry (*Amelanchier alnifolia*), currant (*Ribes cereum*), rose, willow (*Salix* spp.), aspen (*Populus tremuloides*) and elderberry. Riparian habitats within the BCWA may also contain or be dominated by conifers such as Ponderosa pine.

Riparian habitats have long been known to have high species diversity in relation to surrounding areas and be valuable to wildlife for such reasons. Riparian habitats typically support large invertebrate populations which benefit a host of fish and wildlife species as well as ecological functions. Neo-tropical migrants such as warblers, western tanagers (*Piranga ludoviciana*), Bullock's oriole (*Icterus bullockii*), wrens, and sparrows utilize this habitat type on the BCWA for foraging, nesting and breeding. Deciduous trees and shrubs located on benches within riparian and adjacent woodland areas play a key role in the foraging, nesting and escapement cover for mountain quail (*Oreortyx pictus*) and ruffed grouse (*Bonasa umbellus*). Riparian habitat is also a key component for reptile species such as the rubber boa (*Charina bottae*) alligator lizard (species name) and amphibian species such as the western toad (*Bufo boreas*) and Columbia spotted frog (*Rana luteiventris*) which are both OCS strategy species. Riparian areas provide not only habitat for individual species but also offer travel

corridors linking populations and/or seasonal ranges. Management of riparian areas at BCWA is intended to provide multiple attributes that fulfill a variety of species life history and/or habitat requirements. Management in this manner not only ensures propagation and protection of fish and wildlife species but also overall enhancement and protection of water quality and quantity within the John Day Watershed. Rotational grazing pastures established on BCWA are generally fenced or contain rim/outcrops to exclude riparian habitats of the primary waterways including significant acreage of adjacent uplands.

Freshwater Aquatic

This habitat type is composed almost entirely of the 2.5 miles of Bridge Creek passing through the wildlife area. Associated vegetation consists of black cottonwood, alder, and willow. Shrub species may include blue elderberry, red-osier dogwood (*Cornus stolonifera*), and rose. Designated as a fish bearing stream used by federally listed mid-Columbia summer steelhead, management of this habitat as well as adjacent riparian habitat is conducted to prevent degradation and enhance water quality, and to improve aquatic habitat for fish.

Disturbed

Disturbed areas are primarily comprised of roadways, their associated easements, and developments. Roadways and associated easements within the BCWA include portions of Forest Road 55, 5506, and 5507. Also included is the BCWA's five miles of unimproved public access road (County Road. no. 1479). Developments consist of the BCWA's administrative cabins and corrals.

Description of Tracts

The BCWA is composed of four separate management tracts (main body of BCWA, Texas Bar, and two Camas Creek parcels). The main body tract is the largest contiguous block of BCWA lands consisting of property owned by the department, BLM, ODOT, OPRD, and USFS. The main tract is referred as the BCWA by the majority of users. As such, this area is actively managed for wildlife (wintering elk habitat, year-round habitat for deer and other wildlife) as well as hunting, wildlife viewing and education/interpretation opportunities.

The other two tracts are physically separated from the BCWA tract. The much smaller Texas Bar (243 acres) and the two Camas Creek tracts (40 and 100 acres respectively) are managed slightly differently from the overall management of the main body due to their isolated nature and size. The management priorities for these tracts are primarily intended to maintain existing cover and habitat resources. Habitats on these tracts consist of large DBH Ponderosa pine stands and associated understory vegetation which provide habitat value to a variety of species. These tracts receive far less recreational use than that of the main body of BCWA.

Biological Resources

The BCWA contains a diverse array of wildlife and plant species found within the Blue Mountain Ecoregion. Numerically birds comprise the largest group of species known to

occur on the wildlife area. With approximately 115 species currently inventoried, the vast majority of these species utilize the wildlife area seasonally with few year-round residents. Current and past species inventory data and surveys and incidental observations indicate that the BCWA is inhabited by 15 species of fish, 9 species of amphibians and reptiles, 44 species of mammals, and 87 plant species (**Appendix C**). Further research and surveys are required to establish information regarding the presence and abundance of invertebrate, small mammals, and species of conservation concern as little is currently known.

Birds

Birds are the most prevalent group of species present on the BCWA. Of the 115 species inventoried, passerines comprise the largest portion. As is the case with most forest land within the Blue Mountain Ecoregion, neotropical migrants seasonally visit or inhabit BCWA due to its abundance of foraging and nesting habitat, and the areas proximity to or use as migratory corridors linking summering and wintering habitats. Species such as the American goldfinch (*Carduelis tristis*), Bullock's oriole, western tanager, yellow-rumped warbler (*Dendroica coronata*), and bluebirds may be frequently observed on the area.

Downy (*Picoides pubescens*) and hairy woodpeckers (*Picoides villosus*) are found inhabiting much of the same habitat as the passerines and are commonly observed on BCWA. Further study is needed however, to accurately determine presence and status of other picoformes such as the white-headed woodpecker (*Picoides albolarvatus*) on the BCWA.

Raptors are common on the BCWA with bald eagles (*Haliaeetus leucoephalus*), golden eagles (*Aquila chrysaetos*), red-tailed hawks (*Buteo jamaicensis*), Cooper's hawks (*Accipiter cooperii*), sharp-shinned hawks (*Accipiter striatus*), common nighthawks (*Chordeiles minor*), and American kestrels (*Falco sparverius*) accounting for most observations. These species utilize the area seasonally and year-round for nesting, perching, and foraging habitat. Raptor abundance throughout the vast grassland and forestland habitats is quite variable due to varying abundance/availability of ground nesting birds, small mammal and reptile populations occurring over the area, and the distribution of shallow soils inhibiting burrowing species.

Populations of upland game bird species on the BCWA include mountain quail (*Oreortyx pictus*), California quail (*Callipepla Californica*), chukar (*Alectoris chukar*), Hungarian partridge (*Perdix perdix*), Rio Grande turkey (*Meleagris galopavo intermedia*), blue grouse (*Dendragapus obscurus*) and ruffed grouse (*Bonasa umbellus*). BCWAs woodlands and riparian areas with a shrub understory provide foraging, nesting and escapement cover for quail and turkey which are encountered often. Similarly, canyon rims and benches dominated by shrub understory provide abundant populations of blue and ruffed grouse with the same habitat attributes for foraging, nesting, and escapement cover. Although infrequently encountered, chukar and Hungarian Partridge may be observed on the BCWAs open canyon rims or immediately adjacent to these areas in grassland habitat.

During the fall and spring months visitors may encounter sandhill cranes (*Grus canadensis*). Sandhill cranes often stop at the BCWA for short durations to rest and feed at stock/wildlife ponds and grasslands before continuing on with their migration. The actual number of these birds which utilize the area or the true significance of the BCWA in relation to their migration is unknown. To adequately determine this and the status of a number of other species, within the avian subset of biological resources, further research and surveys are required. Although further research is required one may still infer that the expanses of grasslands, woodlands, shrublands, and riparian habitats serve in providing species inventoried a variety of niche habitats that fulfill their life history requirements.

Mammals

Approximately 44 species of mammals are known to reside on the BCWA. The bulk of these species inhabit the area year-round but many may only occur infrequently or occur in large numbers seasonally. Species which only occur seasonally are largely composed of the bat species. Although little is currently known regarding bat species presence, distribution, and abundance at BCWA, future surveys are anticipated. Mammal species which exhibit the most dramatic seasonal shifts in abundance include Rocky Mountain elk and mule deer. An elk herd delineation study was conducted from 1982-1985 in the Ukiah Wildlife Management Unit (WMU) and included radio telemetry tagging on BCWA winter range. From this study, wintering elk on BCWA were comprised of animals from summer ranges in Ukiah, Desolation, Starkey and Heppner wildlife management units (ODFW, 1986). During recent years it is believed that some elk forgo migration back to their original summer range and remain on the wildlife area.

Found throughout BCWA habitats, elk range in population from approximately 100 in summer months to in excess of 1,500 during the winter. The ten year average for wintering elk observed on the BCWA is 1,500 with the largest number recorded (3,220) in 1994. Exhibiting an opposite shift in population, mule deer range from approximately 200 in the summer months to roughly 150 in the winter. The variety of habitat types on the BCWA provides key winter range for elk and summer/transitional/winter range for mule deer. Both elk and deer utilize the area most heavily from November-May when grassland, woodland, shrubland, and riparian habitats serve to meet nutritional requirements and predator avoidance strategies. Nutritional requirements are critical for body maintenance, growth, recovery of energy stores, mid-late term fetal development, and post-parturition (lactation, etc). It is critical that BCWA meet or exceed the habitat and nutritional requirements of these species to alleviate damage on adjacent private lands. A complete analysis of elk use and availability of cover and forage habitat components throughout the Blue Mountains which included BCWA documented the importance of each of these habitats and the benefits of proximity or edge effect (ODFW, 1984).

The BCWA also contain species such as raccoon (*Procyon lotor*), coyote (*Canis latrans*), striped skunk (*Mephitis mephitis*), and badger (*Taxidea taxus*) which are common and/or abundant. Comprehensive surveys to discern distribution, abundance, and presence of rodents are lacking but past inventory records and incidental

observations indicate species such as deer mice (*Peromyscus maniculatus*), bushy-tailed woodrat (*Neotoma cinerea*), and golden-mantled ground squirrels (*Spermophilus lateralis*) are present and common.

Amphibians and Reptiles

It is believed that five species of reptiles and four species of amphibians inhabit the BCWA. Reptile species present include western rattlesnake (*Crotalus oreganus*), bull snake (*Pituophis catenifer sayi*), rubber boa (*Charina bottae*), racer (*Coluber constrictor*), western fence lizard (*Sceloporus occidentalis*) and western skink (*Eumeces skiltonianus*). These species are common and inhabit all BCWA habitats. Amphibian species include Columbia spotted frog (*Rana luteiventris*), Pacific chorus frog (*Hyla regilla*), inland tailed frog (*Ascaphus montanus*), and western toad (*Bufo boreas*). It is believed that these species are present within riparian areas and ponds throughout the BCWA. These areas are an important habitat for spotted frogs and peripherally important for western toads. With a recent observation of an alligator lizard near BCWA it is likely that this species may soon occur on the wildlife area. As survey and incidental observations are lacking on the BCWA, future management should focus on inventory/surveys that identify species presence, distribution, and abundance on the BCWA.

Fish

The BCWA contains or is immediately adjacent to suitable habitat for 15 species of fish (Appendix C) including two listed species (**Table 2**). Management activities for these species are passive through vegetation maintenance oriented/conducted to prevent degradation of water quality, enhancement of water quantity, and to improve aquatic habitat for fish. Summer steelhead are present in the North Fork of the John Day River, Camas Creek, and Bridge Creek. Bull trout (*Salvelinus confluentus*) are not documented in Bridge Creek or Stover Creek, which are tributaries to Camas Creek, but are documented in the North Fork of the John Day River. During 2003, as part of a timber salvage operation on BCWA, a full span bridge was constructed across Bridge Creek to replace an old rock ford. This bridge satisfied part of the requirements to minimize potential impacts to listed species during the salvage operation and any future use.

Species of Conservation Concern

Numerous species of conservation concern on BCWA either occur, have previously been observed/recorded, or have suitable habitat present within their distribution or range (**Table 2**) (ODFW, 2008). These 28 species of conservation concern include 13 birds, 6 mammals, 3 amphibians/reptiles, and 6 fish. Birds include an assortment of hawks, owls, woodpeckers, and passerines. Species such as Swainson's hawk (*Buteo swainsoni*), northern goshawk (*Accipiter gentilis*), ferruginous hawk (*Buteo regalis*), great gray owl (*Strix nebulosa*), Lewis woodpecker (*Melanerpes lewis*), white-headed woodpecker (*Picoides albolarvatus*), pileated woodpecker (*Dryocopus pileatus*), and olive-sided flycatcher (*Contopus cooperi*) may be common in some geographic locations but overall are in decline within their individual species distribution.

Table 2. Bridge Creek Wildlife Area Species of Conservation Concern
Federal Status: **LT** = Listed, Threatened, **LE** = Listed, Endangered, **C** = Candidate, **SOC** = Species of Concern
State Status: **T** = Threatened, **E** = Endangered, **SC** = Sensitive,Critical, **SV** = Vulnerable
OCS Status: **X** = Strategy species present

Birds-Common Name	Species	Federal Status	State Status	OCS Strategy Species
Ferruginous Hawk	*Buteo regalis*		SC	X
Great Gray Owl	*Strix nebulosa*		SV	X
Lewis's Woodpecker	*Melanerpes lewis*	SOC	SC	X
Mountain Quail	*Oreortyx pictus*	SOC	SV	
Northern Goshawk	*Accipiter gentilis*	SOC	SV	
Loggerhead Shrike	*Lanius ludovicianus*		SV	X
Olive-sided Flycatcher	*Contopus cooperi*	SOC	SV	
Willow Flycatcher	*Empidonax traillii adastus*		SV	X
Pileated Woodpecker	*Dryocopus pileatus*		SV	X
Sandhill Crane	*Grus canadensis*		SV	
Swainson's Hawk	*Buteo swainsoni*		SV	
Upland Sandpiper (Plover)	*Bartramia longicauda*	SOC		X
White-headed Woodpecker	*Picoides albolarvatus*	SOC	SC	X
Mammals				
Hoary Bat	*Lasiurus cinereus*		SV	X
Long-eared myotis	*Myotis evotis*	SOC	SV	
Pallid Bat	*Antrozous pallidus*		SV	X
Silver-haired Bat	*Lasionycteris noctivagans*	SOC	SV	X
Townsend's Big-eared Bat	*Corynorhinus townsendii*	SOC	SC	X
Western Small-footed Myotis	*Myotis ciliolabrum*	SOC		
Amphibians/Reptiles				
Columbia Spotted Frog	*Rana luteiventris*	C	SV	X
Rocky Mountain Tailed Frog	*Ascaphus montanus*		SV	X
Western Toad	*Bufo boreas*		SV	X
Fish				
Brook Lamprey	*Ichthyomyzon fossor*		SV	X
Pacific Lamprey	*Entosphenus tridentatus*	SOC	SV	X
Inland Columbia Redband Trout	*Onchoryncus mykiss gairdneri*	SOC	SV	X
Sculpin	*Cottus sp.*			X
Steelhead (Middle Columbia River ESU)	*Onchoryncus mykiss*	LT	SC	X
Bull trout (John Day SMU)	*Salvelinus confluentus*	LT	SC	X

Mammals of conservation concern consist entirely of bat species. Due to a lack of adequate survey data and records, presence and abundance of these species is lacking. Species presence is likely due to a sufficient quantity of roosting sites within

woodland and riparian habitats and invertebrate populations within those and grassland habitats.

Amphibian species of conservation concern include Columbia spotted frog, inland tailed frog, and western toad. It is believed that these species occur on the BCWA as suitable habitat is present within riparian areas, permanent and intermittent streams, and ponds throughout the BCWA. Quality and quality of habitat for these species is ensured through passive management activities conducted on the BCWA while quantity of habitat is provided through maintenance and management of 28 developed stock/wildlife ponds located on the BCWA. Further surveys are required to adequately determine presence and abundance of amphibian populations such as the Columbia spotted frog and inland tailed frog.

Fish species of conservation concern are primarily found in the North Fork of the John Day River and Camas Creek. These species consist of steelhead, spring Chinook salmon (*Onchoryncus tshawytscha*), inland redband trout (*Onchoryncus mykiss spp*), Bull trout, Pacific lamprey (*Entosphenus tridentatus*), and brook lamprey (*Ichthyomyzon fossor*). Bridge Creek is designated as a fish bearing stream with use by federally listed steelhead. Management activities for these species are passive through vegetation maintenance oriented/conducted to prevent degradation of water quality, enhancement of water quantity, and to improve aquatic habitat for fish.

Non-Native Species

Non-native species typically present a threat to the persistence of desirable and endemic flora/fauna. On the BCWA, non-native plant species present or previously recorded warrant the greatest management concern. This is due to the fact that, if unchecked, these species could significantly alter native plant communities and therefore reduce overall quality of wildlife habitat values. Some species such as rush skeleton weed (*Chondrilla juncea*) as well as diffuse (*Centaurea diffusa*) and Russian knapweed (*Acroptilon repens*) have occurred on the BCWA and monitoring/treatment is ongoing. Other plant species which are of great concern are cheatgrass (*Bromus tectorum*) and ventenata. These species both occur on BCWA with ventenata only recently having been observed establishing throughout the range and on adjacent properties. Due to the landscape scale of cheatgrass and ventenata infestations, management options for these two species is limited. Management primarily consists of conducting activities which promote vigor and recruitment of native flora while reducing recruitment of the non-natives. This includes seedings and proper grazing management. To date, perennial bunchgrass communities are exhibiting natural recruitment with basal/crown expansion of juvenile cohorts.

Although aforementioned plant species pose an overall threat, the BCWA contains other non-native species which are considered desirable. These include upland game birds such as chukar, Hungarian partridge, California quail, and wild turkey. These species add to the diversity of the BCWA and provide additional recreational value to visitors.

Table 3. Introduced Species and Noxious Weeds on the Oregon Department of Agriculture's Noxious Weed List.

Common Name	Scientific Name	
California Quail	*Callipepla Californica*	
Chukar	*Alectoris chukar*	
European Starling	*Sturnus vulgaris*	
Gray Partridge (Hungarian)	*Perdix perdix*	
Wild Turkey (Rio Grande)	*Meleagris galopavo intermedia*	
House Mouse	*Mus musculus*	
Smallmouth Bass	*Micropterus dolomieui*	
Plant Common Name		**Weed Class**
Canada Thistle	*Cirsium arvense*	B
* Cheatgrass	*Bromus tectorum*	
* Diffuse Knapweed	*Centaurea diffusa*	B
Fiddleneck Tarweed	*Amsinckia intermedia*	B
Field Bindweed	*Convolvulus arvensis L*	B
Puncture Vine	*Tribulus terrestris L.*	B
* Rush Skeletonweed	*Chondrilla juncea*	B
* Russian Knapweed	*Acroptilon repens*	B
* Scotch Thistle	*Onopordum acanthium*	B
Tansy Ragwort	*Senecio jacobaea*	B
Ventenata	*Ventenata dubia*	

[Species are known to be or have been present on Bridge Creek Wildlife Area. (All species are subject to active control efforts, *Invasive plants identified in the 2006 OCS.)

ODA Weed Class: A = "designates a weed of known economic importance which occurs, or may occur, in the state/county in small enough infestations to make eradication/containment possible; **B** = designates a weed of known economic importance which is regionally abundant, but may have limited distribution in some counties.]

Monitoring

Since the inception of the BCWA, monitoring of select wildlife species, vegetative habitats, and public use has occurred. However, primarily due to budget and personnel limitations, some monitoring surveys have been intermittently conducted based on estimated future management need. This creates temporal gaps in data sets and a need for more routine comprehensive monitoring (primarily wildlife and vegetation) on the BCWA is needed. Data collected coupled with sound biological principles aids in, guides, and/or gauges success of management actions. Currently, further monitoring and inventory surveys for vegetation, bats, amphibians and small mammals are required to adequately determine species presence, distribution, and abundance.

Despite the aforementioned budget and personnel limitations, BCWA and district personnel routinely conduct the following inventory/surveys:

Rocky Mountain Elk and Mule Deer

Annual winter horseback composition surveys for Rocky Mountain elk and mule deer are conducted in December, February, March, and April. Composition (bull/cow/calf or buck/doe/fawn) surveys are conducted to provide district personnel with herd data to estimate overall population trend and hunter harvest impacts. These surveys aid

department personnel in management of BCWA by observing wildlife use and trend patterns in direct relationship to habitats and habitat conditions on the area.

Other Wildlife

Since 2006, from spring to fall BCWA personnel have conducted very limited presence/absence surveys for other wildlife species on a sporadic basis as time and personnel resources allow. The timing of these surveys is intended to record presence and abundance of resident and migrant species on the area. Surveys are used to update and verify wildlife area species accounts as well as gauge success of management activities. Incidental encounters with waterfowl and upland broods as well as calf/fawn ratios during non-standard composition routes are recorded and provided to District staff as an informal measure of initial recruitment and temporal survival rates. Surveys are conducted throughout the range of habitat types present on the Wildlife Area.

Vegetation Monitoring

BCWA personnel conduct landscape photo monitoring every 5-years at nine designated sites. Fifteen photographs from various cardinal directions at these sites record visual change over time since the inception of the BCWA.

Vegetation sampling is conducted on an intermittent basis to capture various aspects of plant communities. Currently, 22 permanent vegetation points are sampled yielding photographs of each plot and line intercept, grass height, cover, forage production, and composition data (See **Appendix E** for a map of monitoring sites). Efforts are currently underway to expand this monitoring and formalize protocol. Collected data aids to direct and measure success of management activities. Information collected also provides diversity, composition, density, and trend which is valuable for the management of the range and wildlife which inhabit it. Forage cages previously monitored on the BCWA have been abandoned due to potential biases of this monitoring approach such as nitrogen loading from perching birds and exclusion of herbivory.

Wildlife Disease

Sampling of hunter harvested elk and deer from the BCWA and surrounding areas is routinely conducted on an annual basis to monitor for the presence of various wildlife diseases such as Chronic Wasting Disease and Tuberculosis (part of statewide protocols from Wildlife Veterinary staff). Northeast Region Wildlife District and BCWA staff will continue to monitor and sample wildlife populations for these and other diseases to address key concerns of wildlife population health.

Water Use

BCWA personnel monitor all water righted ponds for annual water level and capacity as dictated per Oregon water law. Area personnel continue to monitor water level and livestock use of ponds throughout the grazing season to ensure adequate livestock distribution within pastures.

Grazing

Periodic pasture inspections are conducted by BCWA personnel to ensure proper pasture rotation, livestock distribution, capture of stray stock, overall effect of program and/or identify potential problems. Potential problems may include plant physiological stages in relationship to anticipated rotations, broken fences, water development needs, salting needs, or livestock health.

Timber

A timberland inventory and analysis was completed in 1983 for the BCWA by the Oregon Department of Forestry. Analysis identified 2,600 acres of forested land of which 906 acres were non-commercial or of no market value. Estimates within this analysis placed the volume of timber present to be approximately 7 million board feet. This analysis proved useful for many years in providing baseline data on timber inventories, stand type, soils, etc. However, in 2001 a lighting caused wildfire occurred on BCWA which consumed a large portion of the woodland resources available. Much of the current timber stand conditions are the direct result fire and associated recovery, broad scale weather patterns, wildland fire protection, and silvicultural practices.

Recent Oregon legislative action resulted in the passage of two forestry-related laws, House Bill (HB) 3152 and HB 2344, that impacts management activities on the BCWA. These laws are described below and in further detail in **Appendix F**.

HB 3152 requires the Oregon Department of Administrative Services (DAS) to coordinate with the department, OPRD, ODF, Department of State Lands (DSL) and other agencies with state forestland oversight responsibilities to adopt forest management plans or policies. HB 2344 directs state agencies to develop plans for timber salvage operations to restore and recover forest lands burned by fire.

A comprehensive integrated habitat management plan is needed for the BCWA that would incorporate much of the same information contained in the 1983 timberland inventory and analysis but would also include management recommendations for other types of habitat such as grazing, fencing and forage enhancement. This type of plan would enable the wildlife area staff to improve and increase wildlife habitat, improve forest health, reduce fire danger, and control insect infested and diseased stands of timber. These actions would not only benefit big game species, but all wildlife on the BCWA. Production of an Integrated Habitat Management Plan to accomplish these goals will require an environmental impact study on the BCWA to meet USFWS requirements related to timber harvest.

At this time, funding limitations prevent implementation of such a comprehensive study and related reports. Staff at the BCWA has instead conducted timber management activities to address the wildlife area's objectives and forest health.

Cultural Resources

Prior to settlement by Euro-Americans, very few game animals were present throughout most of the mountain regions explored by Lewis and Clark or early settlers. Deer were

not common and the first elk sighting was recorded in 1928. Regardless of low game abundance, areas of the BCWA were likely used by native peoples for root gathering, hunting, and fishing on the North Fork of the John Day River and Camas Creek. It is also likely that Native American trail systems may have once existed across BCWA linking various sites or connecting summer/winter encampments (C. Dickson, CTUIR, pers. comm.).

The BCWA was homesteaded by the turn of the century. The area was fenced to contain a small dairy herd which grazed on what is now BCWA and National Forest. Much of the milk was separated and cream was stored at a cold spring within Bridge Creek canyon. Cream was then transported to Ukiah for processing using the Stage Coach Road. The Stage Coach Road served as the main road from Pendleton to the gold fields of the John Day Valley until 1932 when a new road was constructed along Camas Creek. During the years of stage coach use, a large barn was constructed on the Meeng property to change stage coach horses for the return trips. Commercial timber harvest first occurred around the early 1940's when the Hilbert Family extracted marketable timber along Bridge Creek and some of the smaller canyons.

With the passage of time, the use of the area for dairy herds and stage coaches switched to wheat and beef cattle production. Farming practices were abandoned by the 1950s and limited success was encountered on the rangelands due to year-long use and/or overgrazing. Limited rangeland success was also intensified by grazing pressure from an increasing wintering elk herd.

The initial purchases of BCWA started in 1961 by the then Oregon Game Commission. Lands were selected for purchase because of the large numbers of elk that wintered in the area, an ability to reduce elk damage to adjacent private lands, abundance of big game summer/winter range, assurance of quality hunting conditions, and availability of lands through willing sellers. Today, many remnants of BCWAs historical occupation such as cabin/barn foundations, abandoned equipment, or farmsteads may be encountered.

To date no comprehensive cultural resource survey has been completed for the BCWA. The department is responsible for coordinating with the State Historic Preservation Office (SHPO) on an annual basis, when applying for federal grants for all wildlife areas, to ensure that proposed area management activities comply with State and Federal cultural resource laws. A cultural resource survey and SHPO clearance was completed in 2003 prior to a timber salvage project. No cultural sites were identified in the area of salvage operations.

Social Environment

Demographics

The BCWA is located approximately 3 miles south of the town of Ukiah in Umatilla County, Oregon. According to the U.S. Census Bureau figures for 2000, Ukiah had a base population of 255 residents. Ethnically, residents were identified as 95% White, 3% Asian, and 2% as another race. Median age of Ukiah residents was 39 years of

age. Ukiah's average household income of $34,773 was below that of Umatilla County at $45,362 (U.S. Census Bureau).

Land Use
With a few exceptions, the BCWA is surrounded almost entirely by public lands (USFS, ODOT, OPRD) (**Figure 3**). The dominate land use in both private and public ownership is forestry. Forestry incorporates not only timber production and sale but recreation on those lands as well as livestock grazing/production. This land use is indicative of the region which helps to sustain the nearby community of Ukiah, Oregon. Adjacent to the BCWA is State Highway 395 which serves as major travel corridor between Pendleton and John Day.

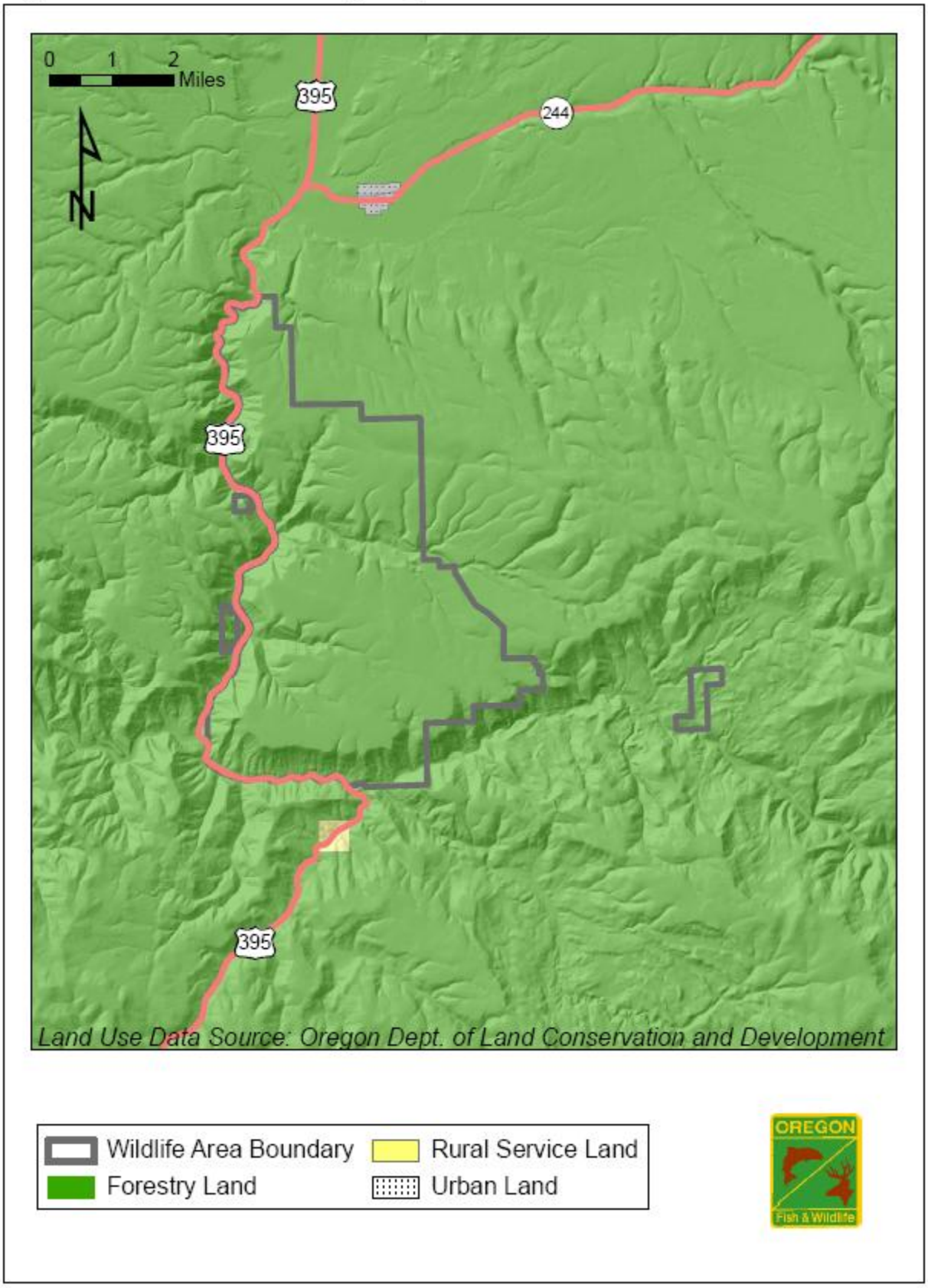
Infrastructure

Developments/Facilities
Developments and improvements on the BCWA have been oriented to wildlife, administration, and public use. Developments on the BCWA include:

- 2 administrative cabins with associated corrals
- 1 administrative observation/survey shed
- 1 interpretive trail with picnic table
- 5 miles of unimproved public access road
- 19 miles of lay-down fencing
- 10 miles of permanent and high-tension fencing
- 28 water righted ponds
- 1 water righted spring development (at Admin cabin)
- 1 bridge
- Informational signs (wildlife info, boundaries, and regulations/restrictions)

Water Resources
The BCWA contains 28 ponds which are encapsulated in 3 different water right certificates. A water right has also been attained for a spring development which serves one of the BCWAs administrative cabins. This spring is located on lands under management agreement (BLM) and the associated right is held thereof. In addition to water righted ponds the BCWA contains 10 depressions which serve to hold water for a

Figure 3 - Land Use Surrounding Bridge Creek Wildlife Area



portion of the year. BCWA also contains numerous natural springs and seeps. All of the water resources located on BCWA are traditionally used by wildlife and livestock and aid in their distribution across the landscape. See **Appendix D** for a list of water rights and to view a map of water resources located on BCWA.

Easements/Access Agreements

Purchases, easements and agreements are listed by year in Appendix A.
These agreements primarily pertain to access to electrical power and natural gas transmission lines, timber easements and public access roads.

Land Acquisition and Adjustment

It is the policy of the department to only acquire land or interests in lands, including easements and leases, from willing sellers consistent with statutory authority and the department's mission. Acquisitions and adjustments must be for the conservation of fish and wildlife and their habitats and to provide fish and wildlife-oriented public use for educational and recreational purposes.

There are three categories of lands that may be considered for acquisition. These include: 1) Significant or unique habitats, especially those beneficial to threatened, endangered or sensitive species; 2) Sites, or access to sites, that provide wildlife-related recreational opportunities; and, 3) Properties which facilitate the performance of the department's mandated duties (e.g., storage and warehouse, feeding barns, etc.). An in-depth analysis of the wildlife values associated with any property considered for acquisition would be developed prior to purchase.

Public Use

Public Access

The BCWA is open to the public for wildlife oriented recreational activities May 1st – Nov. 30th. From Dec. 1st – April 30th, a winter access closure is in effect to minimize disturbance to wintering wildlife. During this closure public access to the area is restricted to entry by permit only. During the open use period (May 1st - Nov 30th), the BCWA's five miles of unimproved road is subject to closure at the discretion of department personnel for the purpose of protecting existing road conditions. The BCWA administrative use roads are closed to public motorized travel year-round. Primitive camping is allowed on the BCWA within 300 feet of the area's public access road unless prohibited by ODF fire restrictions. Camping is common in conjunction with the various hunting seasons. See Appendix F for more information regarding BCWA public use regulations.

Hunting, Angling and Trapping

A variety of hunting/angling/trapping opportunities are available to visitors at the BCWA and are subject to Oregon Big Game, Game Bird, Furbearer, and Fishing Regulations. Recreation, primarily hunting, was one of the significant factors considered in the purchasing of BCWA. Given the vast wildlife resources and seasonal abundance of ungulate populations on the BCWA, big game hunting constitutes the highest number of

use days on the area. The majority big game hunting occurs during the rifle deer and elk seasons. Although archery hunting opportunities exist for both deer and elk on the BCWA, this type of use comprises a relatively small portion of total hunting and wildlife area use. In addition to big game, BCWA offers opportunities to hunt upland game birds (grouse, wild turkey, mountain quail) as well as unprotected wildlife (e.g. coyotes, marmot, porcupine, and badgers). Although trapping occurs for species such as coyotes, use of the area is constrained by the BCWA winter closure. The recreational use on BCWA and surrounding lands provides important economic gains to the local goods and services industries such as lodging, food services, and retail stores.

Hunting pursuits vary significantly from year to year and are dependent on numerous variables. These variables primarily pertain to, but are not limited to, local and unit wide distribution of ungulates, weather patterns, and fuel prices. The days of use for hunting, trapping and angling are estimated via patrols by wildlife area personnel and Oregon State Police (**Table 4**). It should be noted that these are average estimates and do not account for large fluxes in use which typically occur.

Table 4. Estimated Annual Hunting, Trapping and Angling Use Days on Bridge Creek Wildlife Area.

Activity	Estimated Annual Use Days	% of Total Use
Hunting		
Upland Bird	150	12
Big Game	850	66
Unprotected Wildlife	65	5
Trapping	15	1
Angling	20	2
Total	**1,100**	**85**

Wildlife Viewing

Horseback riding, hiking, photography, and sightseeing are typical uses to enjoy watchable wildlife (birding, elk viewing, etc) on the BCWA. Grassland and Ponderosa pine savanna habitats provide for open spaces and permit good wildlife viewing with scenic vistas. The BCWA, in conjunction with USFS, contains one interpretive trail which provides informational signs on BCWA history, flora, and fauna and a panoramic view of the Bridge Creek Flats. In excess of 15,000 acres the BCWA, and adjacent USFS lands provide vast expanses for horseback riding and hiking opportunities.

The estimated annual use days for wildlife viewing related activities are estimated based on incidental contacts with BCWA personnel while conducting routine operations (**Table 5**). It should be noted that these figures are estimates and may not truly reflect the total amount of wildlife viewing activities occurring on the BCWA. The paved road adjacent to BCWA is designated as a portion of the Blue Mountain Scenic Byway and receives far more traffic than other forest roads in the area.

Table 5. Estimated Annual Wildlife Viewing Related Use days on Bridge Creek Wildlife Area

Activity	Estimated Annual Use Days	% of Total Use
Wildlife Viewing	100	8
Photography	15	1
Hiking	20	2
Horseback Riding	30	2
Other misc.(e.g. gather berries, camping)	25	2
Total	**190**	**15**

Educational/Interpretive

Schools or other groups may visit the BCWA on their own or arrange for guided tours by department personnel. Informational talks and presentations have been given to many schools and special interest groups, when requested. Interpretive sign boards are present at the main entrance of the BCWA as well as along the areas only interpretive trial. Plans are underway to replace/update wildlife area boundary and interpretive signs and kiosks as many are in poor and/or deteriorated states. Currently, there is a desire by BCWA personnel to develop an internship opportunity on the BCWA. This internship would collaborate with either the University of Idaho and/or Oregon State University to monitor vegetation/range attributes, analyze overall effects of the livestock grazing program, and document wildlife interactions on BCWA. As outlined in goals, objectives, and strategies of this plan BCWA will continue to pursue this collaborative educational endeavor.

Objectives and Strategies

Objectives and Strategies

As previously stated, objectives are concise statements of what the department wants to achieve, how much the department wants to achieve, when and where to achieve it and who will be responsible for the work. Objectives derive from goals and provide the basis for determining strategies. Strategies describe the specific actions, tools, techniques or a combination of these elements used to meet an objective.

Goals, objectives and strategies in the plan were derived following an ecosystem based management philosophy. The primary action for benefiting wildlife is managing or preserving the range of habitat types that historically occurred in the Blue Mountains. These habitats were created and maintained by a variety of ecological processes, most importantly natural hydrology, local climate, and fire. Historical habitat types are now not only supported by those processes but a host of modern land use practices and

management activities on the wildlife area. Management activities including water level management (pond deepening) and vegetation manipulations (livestock grazing, controlled burning, seedings/plantings, and chemical control) are tools BCWA personnel use to maintain and enhance key habitats. Due to the wide variety of habitat use and preference among the different wildlife species utilizing the BCWA, benefits are varied. Not all species or guilds of species will see benefits at all times. In addition, recreational opportunities based on public demand and habitat capabilities, balanced with resource needs, are quite variable and specific uses are not maximized in all cases.

The following objectives and strategies are based on the four goals described earlier. They identify the management activities and priorities of the 2009 BCWA Management Plan:

Goal 1: To protect, enhance, and manage winter range habitats for Rocky Mountain elk.

BCWA is a key Rocky Mountain elk winter range. The BCWA was purchased to protect, enhance and manage wintering elk range and alleviate/reduce damage on private lands. The ten-year average of wintering elk observed on the BCWA from ground survey routes is 1,500 individuals with largest number of observed animals within that span being 1,957 recorded in both 2001 and 2003. The BCWA is the primary elk winter range for southern Ukiah and portions of the Starkey and Desolation wildlife management units. The ten-year wintering population estimate on BCWA is approximately 2,400 elk. Nutritional requirements of wintering populations vary given their size and composition but generally include demands imposed for body maintenance, growth, recovery of energy stores, environmental conditions, mid-late term fetal development, and post-parturition (lactation, etc). It is therefore essential that BCWA meet or exceed the habitat and nutritional requirements to not only hold and alleviate damage on adjacent lands but also to maintain healthy populations within their respective summer ranges. In addition to forage production, the BCWA is managed for various cover values to provide for a variety of life strategies/attributes such as travel corridors, thermal cover, hiding/escapement cover, and vegetation/terrain for predator avoidance.

Objective 1.1: Maintain and enhance 10,475 acres of grassland and 352 acres of shrubland habitat as key winter range for Rocky Mountain elk.

Rationale: Given the significance of these habitats as elk wintering range, BCWA management actions are intended to increase the production of quality forage and cover values. In addition, BCWA management actions are also intended to support and preserve the native plant community composition, diversity, density, and functionality of grassland and shrubland habitats. Some examples of these management actions include controlled burning, chemical control, fencing, water development, and grazing. The grazing program is designed to remove senesced grass stems and leaves to improve plant vigor and increase nutritive value (Anderson et. al. 1990, Vavra and Sheehy 1996) while offering compensatory growth (secondary growth) of green stems

and leaves by simulating meristematic tissue and or tillering. The grazing program also offer other benefits such as seed shattering (dispersal) and hoofing action to incorporate or scarify seeds into the soil. Management of grasslands in this manner provides abundant, palatable forage and cover for wintering wildlife.

Strategy 1. Utilize deferred rest rotation livestock grazing on 7,537 acres of grassland and 289 acres of shrubland to enhance quantity and quality of winter forage and browse through compensatory growth.

Strategy 2. Maintain and enhance 29 miles of interior pasture and boundary fences to ensure proper livestock distribution and placement therefore enhancing plant communities, species diversity, species richness, abundance, and/or cover values within habitat types.

Strategy 3. Plant native grass and shrub species within appropriate habitat types to enhance plant communities, species diversity, richness, abundance, and/or cover values.

Strategy 4. Develop annual vegetation monitoring program within grassland and shrub habitat types yielding quantifiable and qualitative data.

Strategy 5. Utilize fire for native vegetation enhancement and manipulation by reducing fine and woody fuels while increasing plant nutrition, vigor, and desired cover values.

Strategy 6. Utilize integrated pest management to control invasive plant species and noxious weeds within habitats. Work will entail monitoring, searching for, and treating infestations utilizing best management practices and techniques within the habitat types.

Strategy 7. Maintain and enhance 41 water resources (stock/wildlife ponds and troughs) for adequate wildlife and livestock distribution and use. Maintaining adequate depth and access of these resources will assist in emergency response for fire suppression activities.

Strategy 8. Collaborate with USFS personnel at North Fork John Day Ranger District of the Umatilla National Forest to design and implement projects inclusive of all the strategies for Objective 1.1. Project partnerships on the adjacent federal lands provide broader benefits of habitat activities to address variability in wildlife use and distribution through changes in environmental conditions.

Objective 1.2: Maintain and enhance 3,919 acres of Ponderosa pine woodlands and 434 acres of riparian habitats as thermal, hiding, and escapement cover for wintering Rocky Mountain elk.

Rationale: Woodland and riparian habitats on the BCWA serve to provide wintering elk with such attributes as travel corridors as well thermal, hiding, and escapement cover. Although elk on BCWA utilize these habitat types as hiding/escapement cover in their predator avoidance strategies, the critical role is for thermal cover and travel corridors. Elk retreat to this habitat as thermal/holding cover to withstand severe environmental conditions such as temperature or snowfall/pack across the landscape. Elk herds utilize forage in the understory of these cover habitats until returning to the open grasslands as conditions improve. However, if severe conditions persist elk utilize this habitat to continue migration to other geographic locations. Management actions in woodland and riparian habitats are intended to maintain or enhance a variety of cover and structure (vertical and horizontal) values to benefit elk.

Strategy 1. Utilize deferred rest rotation livestock grazing on 960 acres of woodland to maintain and/or stimulate compensatory growth of woody stems.

Strategy 2. Maintain and enhance 14.5 miles of woodland and riparian area exclosure fencing as deemed necessary to enhance plant species diversity, richness, abundance, and/or cover values within habitat types.

Strategy 3. Plant desired tree and sub-shrub species within 3,919 acres of woodland and 434 acres of riparian area, as deemed necessary to increase species diversity, richness, abundance, and/or cover values.

Strategy 4. Develop annual vegetation monitoring program within woodland and riparian habitat types yielding quantifiable data

Strategy 5. Utilize fire for native vegetation enhancement and manipulation by reducing fine and woody fuels while increasing plant nutrition, vigor, and desired cover values.

Strategy 6. Utilize integrated pest management to control invasive plant species and noxious weeds within habitats. Work will entail monitoring, searching for, and treating infestations utilizing best management practices and techniques within the habitat types.

Strategy 7. Manage canopy cover values (overstory) of woody species within woodland and riparian habitat types, as deemed necessary, to optimize thermal cover function for wintering Rocky Mountain elk.

Strategy 8. Collaborate with USFS personnel at North Fork John Day Ranger District of Umatilla National Forest to design and implement projects inclusive of all the strategies for Objective 1.2. Project partnerships on the adjacent federal lands provide broader benefits of habitat activities to address variability in wildlife use and distribution through changes in environmental conditions.

Objective 1.3: Monitor Rocky Mountain elk winter use and distribution.

Rationale: Data of elk numbers, composition and habitat use is fundamental when seeking to make well informed, accurate, and successful habitat management decisions. Monitoring focuses on attaining this information through routine surveys throughout the BCWA habitats to capture basic population characteristics, use of existing habitats, and correlation to management activities. Coupling the data collected with sound biological and physiological stewardship practices and principals, will aid BCWA management activities direction and measure success of projects.

> **Strategy 1.** Conduct Rocky Mountain elk herd composition, use, and distribution surveys with relationship to management operations (livestock grazing, etc) and/or environmental conditions.

Goal 2: To protect, enhance, and manage habitats to benefit native wildlife and desired game species, compatible with Goal 1.

BCWA personnel's management activities to meet Goal 1 will also result in providing a variety of niche habitats for other native and desired game species. However, not all species or guilds of species will see benefits at all times. BCWA may orient management actions or aspects of management actions of Goal 1 as deemed necessary, to provide for individual species. This especially applies to sensitive, threatened, and endangered species which will receive special management consideration.

Although BCWAs primary focus is on that of Rocky Mountain elk, mule deer are an important feature as well. The BCWA contains a variety of habitats which serve as mule deer summer, transition, and winter ranges. Summer range encompasses all of the BCWA habitat types, however transitional and winter range consists mostly of shrubland, riparian, and woodland habitats. Peripheral winter use of open grasslands does occur to some degree. The summer mule deer population on the BCWA is estimated to be 200 animals with a large amount of migration and transition through the area during the fall, winter, and spring months. Winter deer herd numbers are quite variable with winter conditions. Management of these habitats for mule deer emphasizes enhancement of habitat through woody stem production (browse component) and overall protection of plant species diversity and composition within each habitat type. Controlled burns, chemical treatment, fencing, grazing, and seedings/plantings are all tools currently employed by BCWA personnel to achieve management goal.

Objective 2.1: To protect, enhance and manage upland habitats (10,475 acres grassland, 352 acres shrubland, 3,919 acres woodland) to benefit native and desirable non-native wildlife.

Rationale: BCWA management activities in meeting Goal 1 will also result in providing for a variety of other wildlife species which coexist within these habitat types. One such example is the increased quantity of available habitat for amphibians through

development and maintenance of livestock/wildlife ponds. These also serve a variety of other species in their distribution as well. BCWAs grazing program is intended to increase herbaceous biomass production and conditioning but also correlates to increases in cover attributes for a number of species including ground nesting birds.

The vast grassland habitat of BCWA is especially important to mule deer in the early fall and spring when their diet is composed largely of grasses rather than browse. This period of fall and spring green-up provides a key source to meet nutritional requirements. These include nutritive demands for body maintenance, growth, recovery of energy stores, environmental conditions/stresses, mid-late term fetal development, and post-parturition. The wide open spaces and benches of this habitat type also serve as fawning areas in the spring. Shrubland habitats provide hiding and escapement cover, but more importantly, provides a source of winter browse. Management of these habitats is intended to enhance habitat through woody stem production (browse component), cover values, and overall protection of plant species diversity and composition within habitat type.

Strategy 1. Utilize deferred rest rotation livestock grazing on 7,537 acres of grassland and 299 acres of shrubland to enhance quantity and quality of winter forage and browse through compensatory growth.

Strategy 2. Maintain and enhance 29 miles of BCWA pasture and exclosure fencing as deemed necessary to enhance plant communities species diversity, richness, abundance, and/or cover values within habitat types.

Strategy 3. Plant native grass, shrub, sub-shrub and tree species within grassland, shrubland, woodland habitat types as deemed necessary to enhance plant communities species diversity, richness, abundance, and/or cover values.

Strategy 4. Enhance and/or restore approximately 20 acres of shrubland habitat. Work will entail planting bitterbrush and mahogany in pre-determined areas along canyon rims through seeding to increase quality and quantity of mule deer browse/cover and supplement natural recruitment.

Strategy 5. Enhance 10 acres of woodland habitat. Work will entail planting native shrub species in pre-determined areas on canyon rims to supplement natural recruitment and enhance understory for the benefit of blue and ruffed grouse.

Strategy 6. Enhance 5 acres of woodland habitat. Work will entail the planting of aspen to supplement natural recruitment and benefit a host of native wildlife species.

Strategy 7. Utilize fire for native vegetation enhancement and manipulation by reducing fine and woody fuels while increasing plant nutrition, vigor, and desired cover values.

Strategy 8. Utilize integrated pest management to control invasive plant species and noxious weeds within habitats. Work will entail monitoring, searching for, and treating infestations utilizing best management practices and techniques within the habitat types.

Strategy 9. Maintain and enhance 41 water resources (stock/wildlife ponds and spring troughs) to ensure adequate wildlife and livestock distribution as well as to meet habitat requirements for various amphibian and reptile species. Maintaining adequate depth and access of these resources will assist in emergency response for fire suppression activities.

Strategy 10. Collaborate with USFS personnel at North Fork John Day Ranger District of Umatilla National Forest to design and implement projects inclusive of all the strategies for Objective 1.1. Project partnerships on the adjacent federal lands provide broader benefits of habitat activities to address variability in wildlife use and distribution through changes in environmental conditions.

Objective 2.2: Protect, enhance and manage 434 acres of riparian and 3,919 acres of woodland habitat for high quality instream habitat, water quality and quantity, and proper functioning condition for resident and anadromous fish, native wildlife, and desirable non-native fish and wildlife.

Rationale: Riparian and adjacent woodland areas are an important component of BCWA as they provide a variety of habitat attributes to fulfill life history requirements for a number of terrestrial wildlife, invertebrates, and aquatic species. BCWA personnel maintain and enhance riparian and woodland habitats for high quality instream habitat to benefit anadromous and resident fish and to improve water quality and quantity. The North Fork John Day River River Conservation Opportunity Area (2006 Oregon Conservation Strategy) is located adjacent to BCWA and contains key aquatic habitats. The riparian and adjacent woodland habitats are also managed to provide varying foraging, nesting, cover, travel corridor values for many species of the BCWA such as neotropical migrants. Additionally, woodland and riparian habitats on the BCWA serve to provide mule deer with seasonal travel corridors, thermal cover, hiding cover, fawning and escapement cover. Moist riparian habitats also provide for additional quality foraging area during spring and summer months. However, special management consideration is given to sensitive, threatened and endangered species.

Strategy 1. Utilize deferred rest-rotation livestock grazing on 960 acres of woodland and 39 acres of riparian habitats to maintain and/or stimulate compensatory growth of woody stems.

Strategy 2. Plant desired tree and sub-shrub species within 3,919 acres of woodlands and 434 acres of riparian area, as deemed necessary to increase species diversity, richness, abundance, and/or cover values.

Strategy 3. Provide stream shade by protecting streamside vegetation within approximately 3,354 acres of riparian (395 acres) and woodland (2,959 acres) habitats. Work will entail maintaining 14.5 miles of existing exclosure fencing and fencing additional areas if warranted.

Strategy 4. Monitor and regulate water use per Oregon Water Resources Department standards.

Strategy 5. Work with fish district staff to identify fish habitat improvement projects that may include placing large woody debris, removal of fish passage barriers, planting riparian vegetation, and seeking partnerships with other agencies, sport groups or volunteers for implementation of such projects.

Strategy 6. Develop annual vegetation monitoring program within woodland and riparian habitat types yielding quantifiable data.

Strategy 7. Utilize integrated pest management to control invasive plant species and noxious weeds within habitats. Work will entail monitoring, searching for, and treating infestations utilizing best management practices and techniques within the habitat types.

Objective 2.3: Monitor wildlife presence and usage of BCWA habitats.

Rationale: Data of species presence, abundance, and habitat use is fundamental when seeking to make well informed, accurate, and successful habitat management decisions. Monitoring focuses on attaining this information through routine transects/surveys over the BCWA habitats to capture a diverse group of species and yield quality data sets spanning through time. Coupling the data collected with sound biological and physiological stewardship practices and principals, will aid BCWA management activities direction and measure success of projects.

Strategy 1. Conduct mule deer herd composition, use, and distribution surveys with relationship to management operations (livestock grazing, etc) and/or environmental conditions.

Strategy 2. Conduct avian surveys for presence/absence and frequency as time and personnel resources allow. Observations of other species and habitat use will also be documented.

Strategy 3. Coordinate with other agency personnel and assist with taxa specific surveys/monitoring with priorities given to Threatened and Endangered species, bats, amphibians, and reptiles inhabiting BCWA.

Objective 2.4: To maintain and enhance wildlife area facilities, structures, and equipment to conduct habitat management and public use projects on the wildlife area.

Rationale: Facilities, structures, and equipment are integral to the overall operation of the BCWA. Facilities, structures, and equipment must be maintained, kept in good working order, or upgraded to accomplish habitat and wildlife management projects as well as to provide public use opportunities.

Strategy 1. Maintain and improve the wildlife areas' two cabins, two horse corral/supply storage areas as well as the Pendleton field station (John Day Watershed District Office) which provides office space for BCWA personnel, shop area, and equipment storage. Work will include carpentry repair and improvements to office and shop facilities, improvements to storage area and structures, landscaping maintenance, and general complex structural maintenance and improvement.

Strategy 2. Maintain 29 miles of perimeter and cross fence, one bridge and 0.5 miles of interpretive trail. Work will entail planning, monitoring, maintaining, repairing, and evaluating the functionality of fences, bridge, and trail on an annual basis.

Strategy 3. Maintain public and administrative primitive roads in a manner conducive for emergency reponse and wildland fire breaks. Work will entail improving connectivity of roadways through grading, pruning, thinning, hand-piling, and underburning therefore compartmentalizing wildland fires and subsequent suppression efforts.

Strategy 4. Maintain, improve, and acquire integral capital items and disposable assets required for efficient wildlife habitat activities. Work will entail inventories, maintenance, repair, upgrades, and acquisitions of equipment (e.g. tractors, seeders, sprayers) and supplies (e.g. seed and herbicide) needed to conduct fish and wildlife habitat operations as outlined in this plan.

Strategy 5. Identify and implement fire protection/reduction projects for areas of key habitats and/or habitat attributes. Work will entail pruning, thinning, underburning, and hand-piling vegetation as well as improving emergency response access to those areas where applicable.

Strategy 6. Continue proactive project administration activities to address easements, property boundaries, land uses, and other issues affecting or impacting BCWAs operations. Work will entail identifying issues, preparing briefing documents and soliciting internal and external assistance where appropriate.

Goal 3: To provide a variety of recreational and educational opportunities to the public which are compatible with Goals 1 and 2.

The department and BCWA personnel strive to balance the biological needs of fish and wildlife using the areas habitats with various recreational and educational desires of the

general public. In order to meet habitat management objectives, decisions are made to manage public use both temporally and spatially to minimize undesirable impacts to wildlife and their habits.

Objective 3.1: Provide hunting, trapping and angling opportunities to the general public, compatible with habitat management objectives.

Rationale: The BCWA is funded entirely by hunter dollars through the Federal Aid to Wildlife Restoration Act (Pittman Robertson) (75%) and hunting license receipts (25%). Hunting is the major public activity on the area during the fall months and constitutes the largest annual recreational use.

Strategy 1. Continue current big game and game bird hunting and trapping opportunities. Work will include providing recommendations for seasons and use of the wildlife area to district and headquarters staff.

Strategy 2. Continue current angling opportunities. Work will entail monitoring angler use on an incidental basis and providing recommendations or changes as necessary regarding access to district and headquarters staff.

Strategy 3. Conduct and improve wildlife population, distribution, and use surveys. Work will entail coordination with district wildlife staff and volunteers to adequately plan, conduct, collect, record, compile, and summarize survey data which assists and guides the prioritization of management activities.

Strategy 4. Continue tracking hunter use and success on the wildlife areas as resources allows. Information will be used to evaluate and modify public access and regulations. Work may include hunter questionnaires to assess access and/or use.

Strategy 5. Maintain 5 miles of primitive road for public and administrative use.

Strategy 6. Collaborate with USFS personnel at North Fork John Day Ranger District of Umatilla National Forest to design, maintain and implement projects to ensure the integrity and benefits of the Access and Travel Management Plan.
Strategy 7. Maintain and improve developments including all informational signs (entry, boundary, interpretive, etc.), picnic area, and trail.

Strategy 8. Develop and maintain relationships with hunting and trapping organizations to assist with wildlife area management.

Objective 3.2: Provide wildlife viewing and education/interpretation opportunities compatible with Objective 3.1.

Rationale: Wildlife viewing related activities constitute a small but increasing portion of public use over the entirety of the BCWA. BCWA personnel will continue to foster these

activities and increase educational and informational efforts as outlined in subsequent strategies while ensuring compatibility with Goals 1 and 2 and Objective 3.1.

Strategy 1. Develop a program for tracking wildlife viewing (and other non hunting, trapping, or angling related activities) use on the wildlife areas. Information will be used to evaluate and modify public use programs and regulations. Work may include questionnaires to assess public use opportunities and programs or development of a self-service permit system.

Strategy 2. Explore the potential of developing internship program with various educational institutions to conduct range/vegetation monitoring and wildlife use surveys.

Strategy 3. Maintain and improve developments including all informational signs (entry, boundary, interpretive, etc.), picnic area, and trail. Also coordinate with USFS on maintenance of Bridge Creek Overlook elk viewing site and interpretive trail.

Strategy 4. Provide wildlife habitat educational and informational events as requested by schools, civic groups, conservation entities, and/or other institutions. Work entails conducting wildlife habitat educational events at the areas compatible with Goals 1 and 2, and related objectives.

Strategy 5. Maintain current winter closure of the BCWA and/or adjust as deemed necessary by BCWA personnel for resource protection and achievement of Goals 1 and 2.

Strategy 6. Provide guidance, information, and support to local organizations and City, County, State, Federal and Tribal entities as requested.

Plan Implementation

Funding

Funding for operation and maintenance of the BCWA has been accomplished through annual federal grant agreements under the Federal Aid to Wildlife Restoration (WR) Program. This program was created with the passage of the Pittman-Robertson (PR) Act in 1937. The PR Act authorizes the U.S. Fish and Wildlife Services to cooperate with the States, through their respective State fish and wildlife departments, to fund wildlife restoration projects. Eligible types of projects include restoration, conservation, management, and enhancement of wild birds, wild mammals and their habitats, as well as providing public use and benefit from these resources. Funding for WR is derived from a federal excise tax on the sale of firearms, ammunition, and archery equipment. Funding is then appropriated to states based on a mathematical formula of area of the state in square miles (50%) and total number of hunting licenses sold annually (50%).

To be eligible, States must have assented to the provisions of the PR Act and passed laws for the conservation of wildlife that include a prohibition against diversion of license fees paid by hunters for any other purpose than the administration of the State fish and wildlife department. Another major requirement is that states have to contribute up to 25% of the total grant cost using non-federal funds, since federal participation is limited to 75% of eligible costs incurred under a grant. The department provides its 25% cost share from annual license and tag revenues.

Over the past five years, funding for the operation and maintenance of the BCWA has averaged approximately $133,990 annually and constitutes 40% of the John Day Watershed Wildlife Habitat budget. To implement many of the proposed actions and achieve the objectives and goals of this plan, the department will need additional funding and staff to undertake several types of projects including upgrades of existing facilities, habitat improvement, construction of new facilities or amenities (educational/orientation kiosks and interpretive signs), and species and habitat monitoring.

Staffing / Organization

The department manages sixteen major wildlife areas throughout the state. The wildlife areas encompass approximately 200,000 acres and are found in all four department administrative regions. The BCWA is currently staffed by two full time Wildlife Habitat Technicians stationed at the Pendleton District Office and one full time Wildlife Habitat Manager stationed at the Phillip. W. Schneider Wildlife Area, in Dayville, Oregon. In addition to the BCWA, the two Wildlife Habitat Technicians and Manager operate the Columbia Basin Wildlife Management Areas. The Wildlife Habitat Manager is also responsible for oversight of program and staff at the Phillip W. Schneider Wildlife Area.

Compliance Requirements

The BCWA Management Plan was developed to comply with all Federal and State laws, Oregon Revised Statutes (ORS), Oregon Administrative Rules (OAR), and department policies. Full implementation of all components of this plan will require compliance with laws, regulations, rules, and policies listed in Appendix F including consultation with applicable partners.

Partnerships

Partnerships with federal, state and local agencies, universities, tribes, non-profits, individual volunteers and private landowners are an important part of BCWA operations and management. Partnerships occur through project funding assistance, research assistance, private land access and/or other types of collaboration. The department will continue to rely on these and other partners in the future as new potential opportunities arise. The department welcomes and encourages such participation to assist in management and operation of the BCWA as desired.

Examples of current partnerships at work on BCWA include:

- Colvin Cattle Company and Currin Ranch – Grazing permittees and BCWA maintenance

- University of Idaho – Vegetation monitoring/Educational field exercise.
- OSU Extension – Advisement regarding vegetation
- Blue Mountain Elk Initiative- Protection of winter range (noxious weed control, travel access)
- Adjacent landowners - Property access. Observation/report of activities and security on properties.
- USFS – Coordination and management of resource activities (grazing, road closures, controlled burns, etc) within BCWA and on adjacent USFS lands.
- Oregon Department of Forestry – Advisement of forest issues and fire protection.
- CTUIR (Cultural Resource Protection Program) - Advisement of cultural resources present on the BCWA.
- BLM, OPRD, ODOT – Coordination for management activities that occur on partner lands within BCWA for compliance to applicable Federal and State rules and regulations.

Adaptive Management

This plan provides for adaptive management of the BCWA. Adaptive management is a flexible approach to long-term management of resources that is directed by the results of ongoing monitoring activities and latest data. Management techniques and strategies are regularly evaluated in light of monitoring results, new scientific understanding, and other new information. These periodic evaluations are used over time to adapt both management techniques and strategies to better achieve the wildlife area goals.

Monitoring is an essential component of adaptive management in general, and of this plan in particular; specific monitoring strategies have been integrated into goals and objectives described in this plan whenever possible. Habitat management activities will be monitored where possible to assess whether the desired effects on wildlife and habitat components have been achieved.

Plan Amendment and Revision

Wildlife area management plans are meant to evolve with each individual wildlife area, and as such, each plan will be formally revisited after five years and updated every ten years. In the meantime, however, the department will be reviewing and updating this plan periodically (at least as often as every five years) based on the results of the adaptive management program. This plan will also be informally reviewed by BCWA staff while preparing annual work plans. It may also be reviewed during routine inspections or programmatic evaluations. Results of any or all of these reviews may indicate a need to modify the plan. Goals and objectives described in this plan will not change until they are re-evaluated as part of the formal plan revision process. However, strategies may be revised to better address changing circumstances or due to increased knowledge of the resources on BCWA. If changes are required, the level of public involvement and associated compliance requirements will be determined by the department.

References

Anderson, E. William , David L. Franzen, and Jack E. Melland, 1990. *Rx Grazing to Benefit Watershed-Wildlife-Livestock*. Rangelands 12(2), April 1990.

Dickson, C., Confederated Tribes of the Umatilla Indian Reservation-Cultural Resource Department, Novovember 12, 2008

ODFW, 1978. *Bridge Creek Biological Unit Management Plan.* Umatilla National Forest, Wallowa-Whitman National Forest and Oregon Department of Fish and Wildlife.

ODFW, 1980 revised 1987. *Grazing History of Bridge Cr. Wildlife Area*. Internal document. Jack Melland.

ODFW, 1984. *Elk Herd Delineation using Telemetry Data, Ukiah WMU*. Wildlife Research Report Number 16.

ODFW, 1984. *Elk Use and Availability of Cover and Forage Habitat Components in the Blue Mountains, Northeast Oregon, 1976-1982.* Wildlife Research Report Number 14. 1984.

ODFW, 2006. The *Oregon Conservation Strategy.* Oregon Department of Fish and Wildlife, Salem, Oregon

ODFW, 2008. *Oregon Department of Fish and Wildlife Sensitive Species List*. Oregon Department of Fish and Wildlife, Salem, Oregon. Available at: http//www.dfw.state.or.us/wildlife/diversity/species/sensitive_species.asp

ODFW, SCS, USFS and Umatilla SWCD, 1993. *Coordinated Resources Management Plan. August 1973.*

United States Department of Agriculture-Soil Conservation Service, 1988, *Soil Survey of Umatilla County Area, Oregon*.

Vavra, Martin and Dennis Sheehy , 1996. *Improving Elk Habitat Characteristics with Livestock Grazing*. Rangelands 18(5), October 1996

U.S. Census Bureau- http://www.census.gov/

Appendices

Appendix A. Land Acquisitions, Adjustments and Easements Involving the Bridge Creek Wildlife Area

Date	Acres	Action	Cooperator	Comments/ Other
6/29/1961	4243.46	Acquired	Hilbert, Frank	
6/29/1961	593.33	Acquired	Hilbert, Maude	
6/29/1961	-20	Sold	Hilbert, Harold & Maureen	
6/30/1961		From	Hilbert, Frank	Grazing Right
7/24/1961		Acquired	Hilbert, Maude	Grazing Right
9/8/1961		Correction	Hilbert, Maude	Title
9/29/1961	2900.98	Acquired	Hilbert, Kate	
10/3/1961	160	Acquired	Stubblefield, F & L	
10/23/1963	160	Acquired	Martin, Harold	
4/22/1964		Easement, Perpetual	US Forest Service	Road-FS 5506
4/22/1964		Easement, Perpetual	US Forest Service	Road-FS 5507
11/6/1964	-627	Sold	Martin, Harold	
12/4/1964		Acquired	French, John	Quitclaim
4/7/1965	-160	Sold	Georgia Pacific Corp.	
4/8/1965	160	Acquired	Georgia Pacific Corp.	
7/22/1966	80	Agreement	Bureau of Land Management	
7/22/1966	320	Agreement	Bureau of Land Management	
6/26/1969	885.49	Acquired	Georgia Pacific Corp.	
6/26/1969	6.8	From	Georgia Pacific Corp.	Easement
6/26/1969	-75	Sold	Georgia Pacific Corp.	
11/24/1969	239.67	Acquired	Stubblefield, F & L	
10/27/1972	35	Agreement	US Forest Service	
11/14/1974		Acquired	Stubblefield, Lillian	Timber
9/22/1975	4725.44	Acquired	Colvin Cattle Co./ Colvin T.	
12/13/1950		Easement, Perpetual	Columbia Power Cooperative Assoc.	Powerline Right of Way
		Agreement	Oregon Parks and Recreation Department	

Appendix B. Plant Species Known to Occur on Bridge Creek Wildlife Area

Order - Common Name	Species Name	Family
Asterales		
Arrowleaf Balsamroot	*Balsamorhiza sagittata*	Asteraceae
Blanket Flower	*Gaillardia aristata*	Asteraceae
Canada Thistle	*Cirsium arvense*	Asteraceae
Diffuse Knapweed	*Centaurea diffusa*	Asteraceae
Dwarf Yellow Fleabane	*Erigeron chrysopsidis*	Asteraceae
Elk Thistle	*Cirsium foliosum*	Asteraceae
Groundsel	*Senecio spp*	Asteraceae
Heartleaf Arnica	*Arnica cordifolia*	Asteraceae
Mulesears	*Wyenthia amplexicaulis*	Asteraceae
Rabbitbrush	*Ericameria nauseosa*	Asteraceae
Rush skeletonweed	*Chondrilla juncea*	Asteraceae
Russian Knapweed	*Acroptilon repens*	Asteraceae
Sagebrush	*Artemisia spp*	Asteraceae
Scotch Thistle	*Onopordum acanthium*	Asteraceae
Tansy Ragwort	*Senecio jacobaea*	Asteraceae
Western Hawkweed	*Hieracium albertinum*	Asteraceae
Western yarrow	*Achillea millefolium*	Asteraceae
Woolly Goldenweed	*Haplopappus lanuginosus*	Asteraceae
Caryophyllales		
Prickly Pear Cactus	*Opuntia polyacantha*	Cactaceae
Winterfat	*Ceratoides lanata*	Chenopodiaceae
Bitterroot	*Lewisia rediviva*	Portulacaceae
Cornales		
Red-oiser Dogwood	*Cornus stolonifera*	Cornaceae
Cyperales		
Elk Sedge	*Carex geyeri*	Cyperaceae
Ross Sedge	*Carex rossii*	Cyperaceae
Basin Wildrye	*Leymus cinereus*	Poaceae
Bluebunch Wheatgrass	*Pseudoroegneria spicata*	Poaceae
Bottlebrush Squirrel Tail	*Sitanion hystrix*	Poaceae
Cheatgrass	*Bromus tectorum*	Poaceae
Idaho Fescue	*Festuca idahoensis*	Poaceae
Intermediate Wheatgrass	*Thinopyrum intermedium*	Poaceae
One Spike Oatgrass	*Danthonia unispicata*	Poaceae
Oniongrass	*Melica bulbosa*	Poaceae
Orchardgrass	*Dactylis glomerata*	Poaceae
Pinegrass	*Calamagrostis rubescens*	Poaceae
Praire Junegrass	*Koeleria cristata*	Poaceae
Sandberg Bluegrass	*Poa secunda*	Poaceae
Timothy	*Phleum pratense*	Poaceae
Ventenata	*Ventenata dubia*	Poaceae
Dipsacales		
Teasel	*Dipsacus fullonum*	Dipsaceae

Order - Common Name	Species Name	Family
Blue Elderberry	*Sambucucus nigra*	Caprifoliaceae
Common Snowberry	*Symphoricarpos albus*	Caprifoliaceae
Ericales		
Kinnickinnick	*Arctostaphylos uva-ursi*	Ericaceae
Manzanita	*Arctostaphylos patula*	Ericaceae
Pinemat Manzanita	*Arctostaphylos nevadensis*	Ericaceae
Fabales		
Lupine	*Lupinus spp*	Fabaceae
White Clover (Dutch)	*Trifolium repens*	Fabaceae
Mountain Alder	*Alnus tenuifolia*	Betulaceae
Geraniales		
Sticky Geranium	*Geranium viscosissimum*	Geraniaceae
Lamiales		
Fiddleneck(Buglass) Tarweed	*Amsinckia intermedia*	Boraginaceae
Narrowleaf Skullcap	*Scutellaria angustifolia*	Lamiaceae
Liliales		
Grass Widows	*Olsynium douglasii*	Iridaceae
Common Camas	*Camassia quamash*	Liliaceae
Falsehellebore	*Veratrum spp*	Liliaceae
Robinson's Onion	*Allium robinsonii*	Liliaceae
Tapertip Onion	*Allium acuminatum*	Liliaceae
Wing-fruited Mariposa Lily	*Calochortus eurycarpus*	Liliaceae
Western Blue Flax	*Linum lewissii*	Linaceae
Myrtales		
Elkhorn Clarkia	*Clarkia pulchella*	Onagraceae
Pinales		
Western Juniper	*Juniperus occidentalis*	Cupressaceae
Douglas Fir	*Pseudotsuga menziesii*	Pinaceae
Grand Fir	*Abies grandis*	Pinaceae
Lodgepole Pine	*Pinus contorta*	Pinaceae
Ponderosa Pine	*Pinus ponderosa*	Pinaceae
Western Larch	*Larix occidentalis*	Pinaceae
Polygonales		
Buckwheat	*Eriogonum spp*	Polygonaceae
Ranunculales		
Oregon Grape	*Berberis repens*	Berberidaceae
Red Columbine	*Aguilegia formosa*	Ranunculaceae
Rhamnales		
Snowbrush Ceanothus	*Ceanothus velutinus*	Rhamnaceae
Rosales		
Bitterbrush	*Purshia tridentata*	Rosaceae
Cinquefoil	*Potentilla spp*	Rosaceae
Curlleaf Mountain Mahogany	*Cercocarpus ledifolius*	Rosaceae
Mallow Ninebark	*Physocarpus malvaceus*	Rosaceae
Oceanspray	*Holodiscus discolor*	Rosaceae
Prairie Smoke	*Geum triflorum*	Rosaceae

Order - Common Name	Species Name	Family
Serviceberry	*Amelanchier alnifolia*	Rosaceae
Wax current	*Ribes cereum*	Rosaceae
Wild strawberry	*Fragaria vesca*	Rosaceae
Wood's Rose	*Rosa woodsii*	Rosaceae
Rununculales		
Larkspur	*Delphinium spp*	Ranunculaceae
Salicales		
Cottonwood	*Populus spp*	Salicaceae
Quaking Aspen	*Populus tremuloides*	Salicaceae
Willow	*Salix spp.*	Salicaceae
Sapindales		
Puncture Vine	*Tribulus terrestris*	Zygophyllaceae
Scrophulariales		
Indian Paintbrush	*Castilleja spp*	Scrophulariaceae
Solanales		
field bindweed	*Convolvulus arvensis L*	Convolvulaceae
Skyrocket	*Ipomopsis aggregata*	Polemoniaceae
Typhales		
Cattail	*Typha latifolia L.*	Typhaceae

Appendix C. Fish and Wildlife Species Known to Occur on Bridge Creek Wildlife Area

Occurrence: **C** = Common, **U** = Uncommon, **O** = Occasional, **R** = Rare, **X** = Status Unknown (Few Observations and/or habitat present within species distribution)

		Occurrence			
AVIAN **Order-**Common Name	**Scientific Name**	**Winter**	**Spring**	**Summer**	**Fall**
Anseriformes					
Blue-winged Teal	*Anus discors*		U	U	
Canada Goose	*Branta canadensis*	O	C	C	
Cinnamon Teal	*Anas cyanoptera*		U	U	
Common Merganser	*Mergus merganser*		C	C	C
Green-winged Teal	*Anus crecca*		U	U	
Mallard	*Anas platyrhynchos*	U	C	C	
Northern Pintail	*Anas acuta*		U	U	
Northern Shoveler	*Anas clypeata*		C	C	
Redhead	*Aythya americana*		O	O	
Widgeon	*Anas americana*		O	O	
Apodiformes					
Black-chinned Hummingbird	*Archilochus alexandri*		U	U	
Rufous Hummingbird	*Selasphourus rufus*		C	C	
Caprimulgiformes					
Common Nighthawk	*Chordeiles minor*	C	C	C	C
Charadriiformes					
Long-billed Dowitcher	*Limnodromus scolopaceus*			U	U
California Gull	*Larus californicus*		U	U	U
Common Snipe	*Gallinago gallinago*		U	U	
Killdeer	*Charadrius vociferus*		U	U	
Upland Sandpiper (Plover)	*Bartramia longicauda*		R	R	
Ciconiiformes					
Great Blue Heron	*Ardea herodias*		C	C	
Turkey Vulture	*Cathartes aura*		O	O	O
Columbiformes					
Mourning Dove	*Zenaida macroura*		C	C	C
Coraciiformes					
Belted Kingfisher	*Ceryle alcyon*	C	C	C	C
Falconiformes					
American Kestrel	*Falco sparverius*	C	C	C	C
Bald Eagle	*Haliaeetus leucoephalus*	C	C	C	C
Coopers Hawk	*Accipiter cooperii*	C	C	C	C
Ferruginous Hawk	*Buteo regalis*		R	R	
Golden Eagle	*Aquila chrysaetos*	C	C	C	C
Northern Goshawk	*Accipiter gentilis*		R	R	

AVIAN **Order-**Common Name	**Scientific Name**	**Winter**	**Spring**	**Summer**	**Fall**
Northern Harrier (Marsh Hawk)	*Circus cyaneus*	X	X	X	X
Prairie Falcon	*Falco mexicanus*		R	R	
Red-tailed Hawk	*Buteo jamaicensis*	C	C	C	C
Rough-legged Hawk	*Buteo lagopus*	C			
Sharp-shinned Hawk	*Accipiter striatus*	C	C	C	C
Swainson's Hawk	*Buteo swainsoni*	X	X	X	X
Galliformes					
Blue Grouse	*Dendragapus obscurus*	C	C	C	C
Chukar	*Alectoris chukar*	O	O	O	O
Gray Partridge (Hungarian)	*Perdix perdix*	U	U	U	U
California Quail	*Callipepla Californica*	U	U	U	U
Mountain Quail	*Oreortyx pictus*	U	U	U	U
Rio Grande Turkey	*Meleagris galopavo intermedia*	U	U	U	U
Ruffed Grouse	*Bonasa umbellus*	C	C	C	C
Gruiformes					
American Coot	*Fulica americana*		O	O	
Sandhill Crane	*Grus canadensis*				C
Passeriformes					
Willow Flycatcher (Traill's)	*Empidonax traillii*	X	X	X	X
American Crow	*Corvus brachyrhynchos*	C	C	C	C
American Dipper (Water Ouzel)	*Cinclus mexicanus*		O	O	
American Goldfinch	*Carduelis tristis*		C	C	
American Robin	*Turdus migratorius*		C	C	
Barn Swallow	*Hirundo rustica*	X	X	X	X
Black-billed Magpie	*Pica pica*	C	C	C	C
Black-capped Chickadee	*Poecile atricapilla*	X	X	X	X
Brewer’s Blackbird	*Euphagus cyanocephalus*	X	X	X	X
Brown-Headed Cowbird	*Molothrus ater*	X	X	X	X
Bullock's Oriole	*Icterus bullockii*		C	C	
Canyon Wren	*Catherpes mexicanus*		O	O	
Cassin's Finch	*Carpodacus cassinii*	X	X	X	X
Cassin's Vireo (Solitary)	*Vireo cassinii*	X	X	X	X
Cedar Waxwing	*Bombycilla cedrorum*	X	X	X	X
Chipping Sparrow	*Spizella passerina*	X	X	X	X
Clark's Nutcracker	*Nucifraga columbiana*	X	X	X	X
Common Raven	*Corvus corax*	C	C	C	C
Dark-eyed Junco (Oregon)	*Junco hyemalis*	C			
Eastern Kingbird	*Tyrannus tryannus*	X	X	X	X
European Starling	*Sturnus vulgaris*	C	C	C	C
Evening Grosbeak	*Coccothraustes vespertinus*	X	X	X	X

AVIAN **Order-**Common Name	**Scientific Name**	**Winter**	**Spring**	**Summer**	**Fall**
Golden-Crowed Kinglet	*Regulus satrapa*		O		O
Gray Jay	*Perisoreus canadensis*		U	U	
Green-tailed Towhee	*Pipilo chlorurus*	X	X	X	X
House Wren	*Troglodytes aedon*	X	X	X	X
Lazuli Bunting	*Passerina amoena*	X	X	X	X
MacGillivray's Warbler	*Oporonis tolmiei*		O	O	O
Mountain Bluebird	*Sialia currucoides*	C	C	C	C
Mountain Chickadee	*Poecile gambeli*	X	X	X	X
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	X	X	X	X
Northern Shrike	*Lanius exubitor*	X	X	X	X
Olive-sided Flycatcher	*Contopus cooperi*	X	X	X	X
Pine Grosbeak	*Pinicola enucleator*	X	X	X	X
Pine Siskin	*Carduelis pinus*		C	C	
Pygmy Nuthatch	*Sitta pygmaea*		C	C	C
Red-Breasted Nuthatch	*Sitta canadensis*	X	X	X	X
Red-winged Blackbird	*Agelaius phoeniceus*		C	C	
Rock Wren	*Salpinctes obsoletus*		O	O	
Ruby-crowed Kinglet	*Regulus calendula*	X	X	X	X
Song Sparrow	*Melospiza melodia*	X	X	X	X
Steller's Jay	*Cyanocitta stelleri*	O	O	O	O
Swainson Thrush	*Catharus ustulatus*	X	X	X	X
Townsend's Solitaire	*Myadestes townsendi*	X	X	X	X
Townsend's Warbler	*Dendroica townsendi*		O	O	
Tree Swallow	*Tachycineta bicolor*	X	X	X	X
Varied Thrush	*Ixoreus naevius*	X	X	X	X
Vesper Sparrow	*Pooecetes gramineus*	X	X	X	X
Violet-green Swallow	*Tachycineta thalassina*	X	X	X	X
Warbling Vireo	*Vireo gilvus*	X	X	X	X
Western Bluebird	*Sialia mexicana*		C	C	C
Western Kingbird	*Tyrannus verticalis*		C	C	
Western Meadowlark	*Sturnella neglecta*		C	C	
Western Tanager	*Piranga ludoviciana*		C	C	
Western Wood-Pewee	*Contopus sordidulus*	X	X	X	X
White-breasted Nuthatch	*Sitta carolinensis*	X	X	X	X
White-crowned Sparrow	*Zonotrichia leucophrys*	C	C		C
Yellow Warbler	*Dendroica petechia*		C	C	
Yellow-headed Blackbird	*Xanthocephalus xanthocephalus*	X	X	X	X
Yellow-rumped (Audubon's) Warbler	*Dendroica coronata*		C	C	
Piciformes					
Downy Woodpecker	*Picoides pubescens*	C	C	C	C
Hairy Woodpecker	*Picoides villosus*	C	C	C	C
Lewis Woodpecker	*Melanerpes lewis*		U	U	
Northern Flicker	*Colaptes auratus*	C	C	C	C
Pileated Woodpecker	*Dryocopus pileatus*		U	U	

AVIAN **Order-**Common Name	**Scientific Name**	**Winter**	**Spring**	**Summer**	**Fall**
White-headed Woodpecker	*Picoides albolarvatus*	X	X	X	X
Red-naped Sapsucker	*Sphyrapicus nuchalis*		O	O	
Strigiformes					
Great Gray Owl	*Strix nebulosa*	O	O	O	O
Great Horned Owl	*Bubo virginianus*	C	C	C	C
Long-eared Owl	*Asio otus*	O	O	O	O
Northern Pygmy Owl	*Glaucidium gnoma*	C	O	O	O
Northern Saw-whet Owl	*Aegolius acadicus*	O	O	O	O
Short-eared Owl	*Asio flammeus*	O	O	O	O
MAMMAL					
Artiodactyla					
Mule Deer	*Odocoileus hemionus*	C	C	C	C
Pronghorn	*Antilocapra americana*		O	O	
Rocky Mountain Elk	*Cervus elaphus nelsoni*	C	C	C	C
Carnivora					
Badger	*Taxidea taxus*	O	O	O	O
Black Bear	*Ursus americanus*		O	O	O
Bobcat	*Lynx rufus*	U	U	U	U
Cougar	*Felis concolor*	U	U	U	U
Coyote	*Canis latrans*	C	C	C	C
Mink	*Mustella vision*	O	C	C	C
Raccoon	*Procyon lotor*	C	C	C	C
River Otter	*Lutra canadensis*	O	O	O	O
Striped Skunk	*Mephitis mephitis*		O	O	O
Weasel	*Mustella* sp	O	O	O	O
Chiroptera					
Big Brown Bat	*Eptesicus fuscus*	X	X	X	X
Hoary Bat	*Lasiurus cinereus*	X	X	X	X
Long-eared myotis	*Myotis evotis*	X	X	X	X
Pallid Bat	*Antrozous pallidus*	X	X	X	X
Silver-haired Bat	*Lasionycteris noctivagans*	X	X	X	X
Townsend's Big-eared Bat	*Corynorhinus townsendii*	X	X	X	X
Western Small-footed Myotis	*Myotis ciliolabrum*	X	X	X	X
Lagomorpha					
Black-tailed Jackrabbit	*Lepus californicus*	R	R	R	R
Cottontail Rabbit	*Sylvilagus nuttallii*	C	C	C	C
Snowshoe Hare	*Lepus americanus*	O	O	O	O
White-tailed Jackrabbit	*Lepus townsendii*	R	R	R	R
Rodentia					
Beaver	*Castor canadensis*	O	O	O	O
Belding's Ground Squirrel	*Spermophilus beldingi*	X	X	X	X
Bush-tailed Woodrat	*Neotoma cinerea*	C	C	C	C
Columbian Ground Squirrel	*Spermophilus columbianus*	X	X	X	X

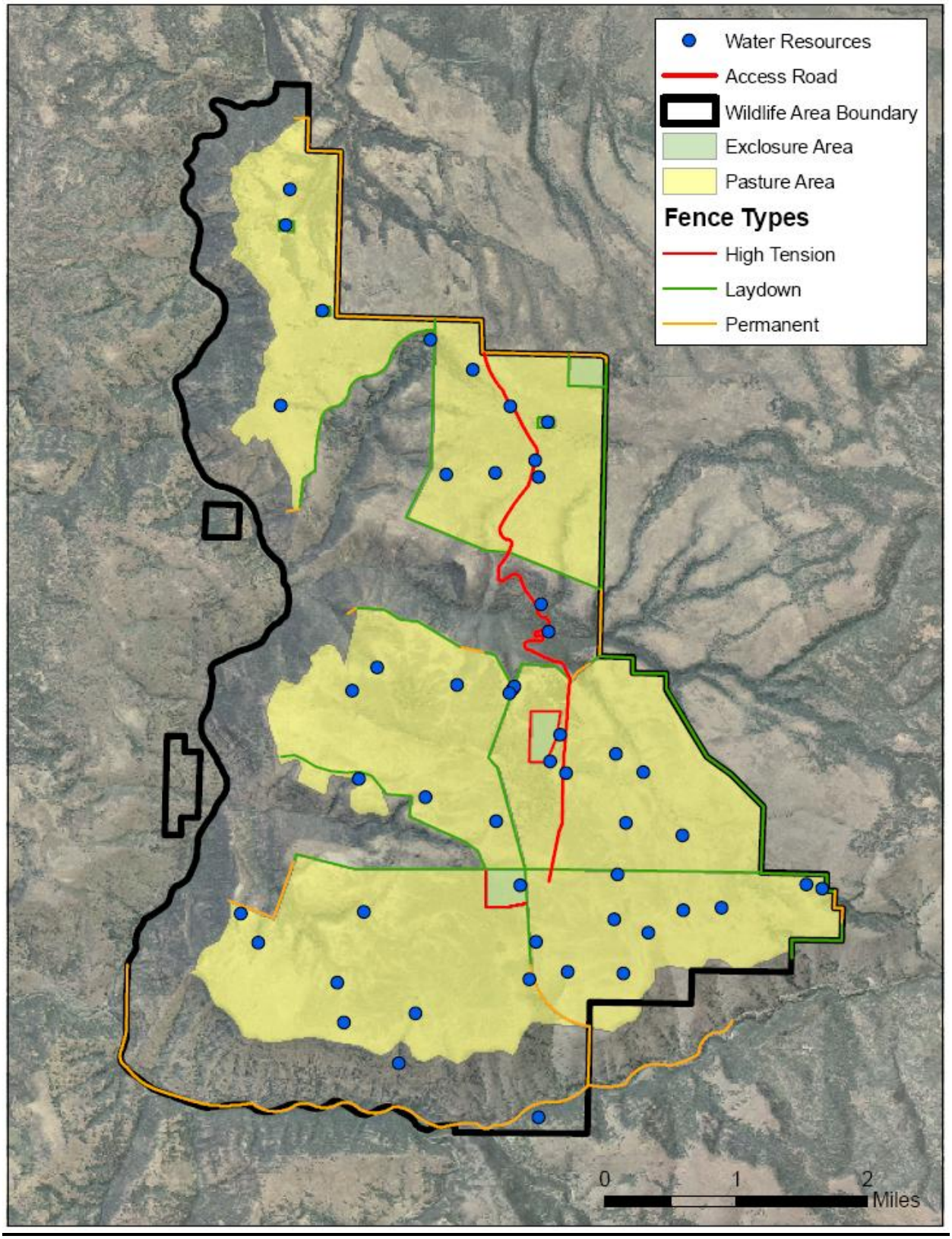
Mammal Order-Common Name	**Scientific Name**	**Winter**	**Spring**	**Summer**	**Fall**
Deer Mouse	*Peromyscus maniculatus*	C	C	C	C
Golden-mantled ground Squirrel	*Spermophilus lateralis*	C	C	C	C
House Mouse	*Mus musculus*	X	X	X	X
Least Chipmunk	*Neotamias minimus*	O	O	O	O
Long-tailed Vole	*Microtus longicaudus*	C	C	C	C
Montane Vole	*Microtus montanus*	X	X	X	X
Muskrat	*Ondatra zibethicus*	O	O	O	O
Northern Flying Squirrel	*Glaucomys sabrinus*	X	X	X	X
Northern Pocket Gopher	*Thomomys talpoides*	X	X	X	X
Porcupine	*Erethizon dorsatum*	C	C	C	C
Red Squirrel	*Tamiasciurus hudsonicus*	C	C	C	C
Southern Red-backed Vole	*Myodes gapperi*	X	X	X	X
Water Vole	*Microtus richardsoni*	X	X	X	X
Western Jumping Mouse	*Zapus princeps*	X	X	X	X
Yellow-bellied Marmot	*Marmota flaviventris*	R	R	R	R
Yellow-pine Chipmunk	*Neotamias amoenus*	C	C	C	C
AMPHIBIAN/ REPTILE					
Anura					
Columbia Spotted Frog	*Rana luteiventris*	X	X	X	X
Inland Tailed Frog	*Ascaphus montanus*	X	X	X	X
Pacific Chorus Frog (Treefrog)	*Hyla regilla*	X	X	X	X
Western Toad	*Bufo boreas*	X	X	X	X
Squamata					
Bull Snake	*Pituophis catenifer sayi*		C	C	C
Racer Snake	*Coluber constrictor*		C	C	C
Rubber Boa	*Charina bottae*		C	C	C
Western Rattlesnake	*Crotalus oreganus*		C	C	C
Western Fence Lizard	*Sceloporus occidentalis*		C	C	C
Western Skink	*Eumeces skiltonianus*		C	C	C
FISH					
Cypriniformes					
Bridgelip Sucker	*Catostomus columbianus*	Abundant			
Chiselmouth	*Acrocheilus alutaceus*	Abundant			
Coarsescale Sucker	*Catastomas macrocheilus*	Abundant			
Longnose Dace	*Rhinichthys cataractae*	Abundant			
Northern Pike Minnow	*Ptychocheilus oregonensis*	Abundant			
Redsided Shiner	*Clinostomus elongatus*	Abundant			
Speckled Dace	*Rhinichthys osculus*	Abundant			
Perciformes					

FISH		
Smallmouth Bass	*Mycropterus dolomieui*	Occasional
Brook Lamprey	*Ichthyomyzon fossor*	Common
Pacific Lamprey	*Entosphenus tridentatus*	Common
Salmoniformes		
Bull trout	*Salvelinus confluentus*	Uncommon
Mountain Whitefish	*Prosopium williamsoni*	Common
Redband/inland Rainbow	*Onchoryncus mykiss sp.*	Abundant
Spring Chinook Salmon	*Onchoryncus tshawytscha.*	Seasonally common
Steelhead	*Onchoryncus mykiss*	Abundant
Scorpaeniformes		
Sculpin	*Cottus* spp.	Abundant

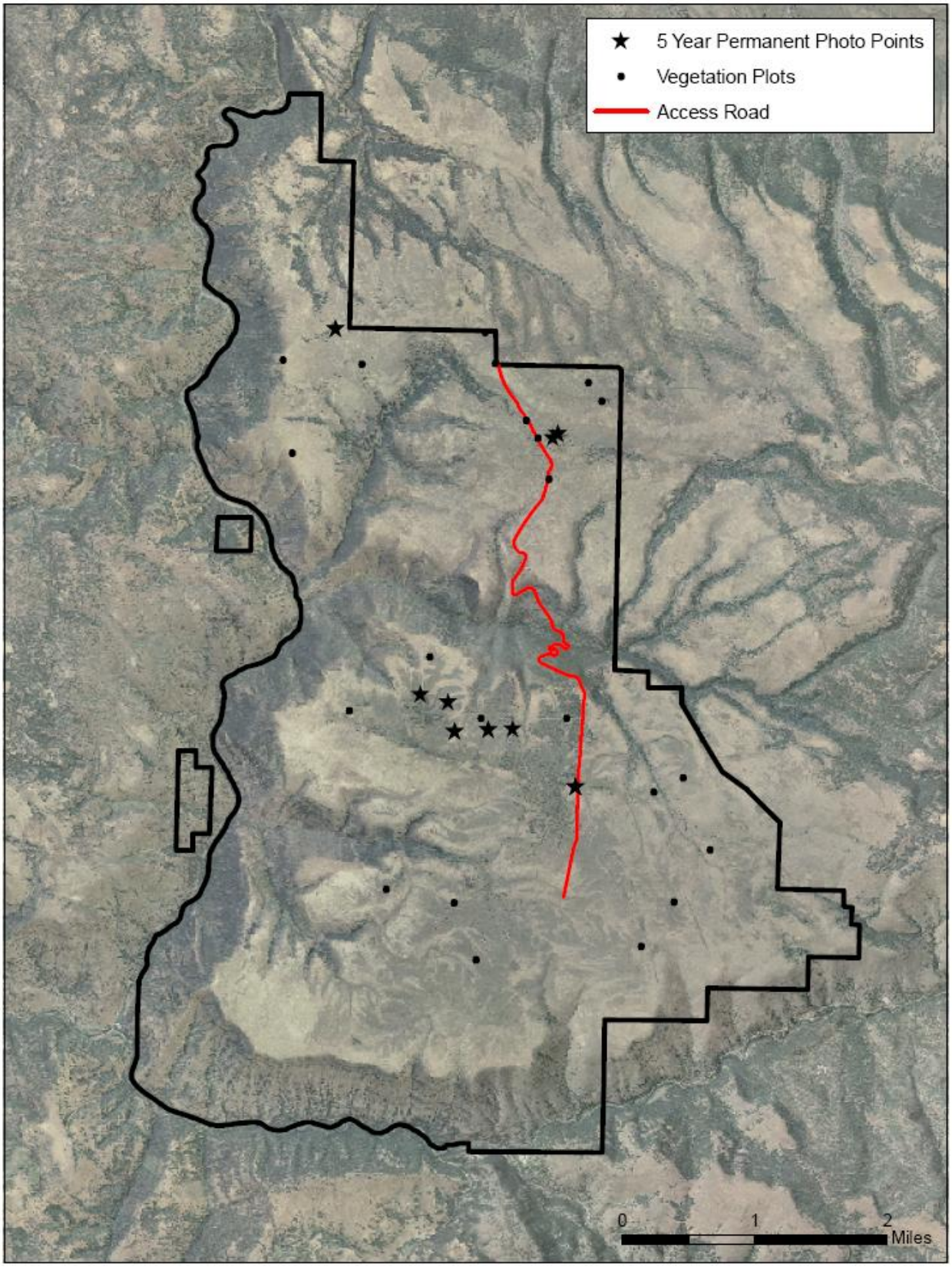
Appendix D. Water Rights on Bridge Creek Wildlife Area

	Type	Acre Feet	Certificate #	POD #	Remarks
1	Stock Pond	1.30	69175	134332	
2	Stock Pond	6.90	69175	134333	
3	Stock Pond	3.80	69175	134334	
4	Stock Pond	0.20	69175	134335	
5	Wildlife Pond	0.50	69175	134336	
6	Stock Pond	0.20	69175	134337	
7	Wildlife Pond	7.10	69175	134338	
8	Stock Pond	0.30	69175	134339	
9	Stock Pond	0.30	69175	134340	
10	Wildlife Pond	0.20	69176	134341	
11	Stock Pond	0.50	69176	134342	
12	Stock Pond	0.10	69176	134343	
13	Stock Pond	0.30	69176	134344	
14	Stock Pond	0.10	69176	134345	
15	Stock Pond	0.30	69176	134346	
16	Stock Pond	3.30	69176	134347	
17	Stock Pond	0.60	69176	134348	
18	Stock Pond	2.60	69176	134349	
19	Stock Pond	3.00	73673	145108	
20	Stock Pond	0.02	73673	145107	
21	Stock Pond	2.40	73673	145102	
22	Stock Pond	0.07	73673	145103	
23	Stock Pond	0.30	73673	145104	
24	Stock Pond	0.40	73673	145105	
25	Stock Pond	0.40	73673	145106	
26	Stock Pond	0.10	73673	145109	
27	Stock Pond	0.60	73673	145110	
28	Stock Pond	0.60	73673	145111	

A map of Water Development Sites is below.


Water Resources
Access Road
Wildlife Area Boundary
Exclosure Area
Pasture Area
Fence Types
High Tension
Laydown
Permanent
0
1
2
Miles

Appendix E. Aerial View of Monitoring Points



Appendix F. Legal Obligations Influencing Management of Bridge Creek Wildlife Area

Federal Laws

Federal Aid in Wildlife Restoration Act
Pittman- Robertson Act of 1937
The Endangered Species Act of 1973, as amended
National Historic Preservation Act
National Environmental Policy Act
Americans with Disabilities Act

Oregon Revised Statutes

ORS 496.012 Oregon's Wildlife Policy
ORS 496.138 General Duties and Powers; Rulemaking Authority
ORS 496.146 Additional Powers of the Commission
ORS 496.162 Establishing seasons, amounts and manner of taking wildlife; rules
ORS 496.992 Penalties
ORS 570.535 Landowner responsibility for weed control

Oregon Administrative Rules

Division 008 - Department of Fish and Wildlife Lands
635-008-0015 Agreements to Restrict Motor-propelled Vehicles
635-008-0040 Forage Removal from State Lands
635-008-0050 Fish and Wildlife Commission to Post and Enforce Rules
635-008-0055 Bridge Creek Wildlife Area

Division 011 - Statewide Angling Regulations
635-011-0050 Procedure of Promulgation of Angling Regulations
635-011-0100 General Rule

Division 051 - General Game Bird Regulations
635-051-0000 Purpose and General Information
635-051-0065 State Wildlife Area Regulations

Division 065 - Game Mammal General Seasons and Regulations
635-065-0001 Purpose and General Information
635-065-0625 Regulations on State Wildlife Areas, Refuges and Special Areas

State Legislation for Forestlands

HB 3152: Requires the Department of Administrative Services to coordinate with the Department of Fish and Wildlife, the Parks and Recreation Department, the State Forestry Department, the Division of State Lands and other agencies with state

forestland oversight responsibilities to adopt forest management plans or policies. The bill also establishes provisions whereby state forestland plans may address excess fuels build up and forest health. Calls for efforts to determine necessary silvicultural practices to improve and increase wildlife habitat, improve forest health, control insect-infested and diseased-stands of timber, and reduce fire danger.

HB 2344: Directs state agencies to develop plans for timber salvage operations to restore and recover forest lands burned by fire.

A comprehensive integrated habitat management plan is needed for the BCWA that would incorporate much of the same information contained in the timberland inventory and analysis but would also include, recommendations for other types of habitat management such as grazing, fencing and forage enhancement for the benefit of wildlife. This type of long range plan would enable us to improve and increase wildlife habitat, improve forest health, reduce fire danger, and control insect infested and diseased stands of timber. These actions would not only benefit big game species, but all wildlife of BCWA. Production of an Integrated Habitat Management Plan to accomplish these goals will require an environmental impact study on the BCWA to meet USFWS requirements related to timber harvest. At this time, funding limitations prevent implementation of such a comprehensive study and related reports.