# RIVERSIDE WILDLIFE AREA MANAGEMENT PLAN

**April 2009**
**(Updated July 2019)**

**Oregon Department of Fish and Wildlife**
**4034 Fairview Industrial Drive SE**
**Salem, Oregon 97302**

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# Executive Summary

The Riverside Wildlife Area is located along the main stem and Middle Fork of the Malheur River, in the southeastern part of the state. The wildlife area encompasses 3,798 acres, owned by the Oregon Department of Fish and Wildlife. The wildlife area was established in 1972, with an initial purchase of 1,720 acres. The wildlife area's purpose is to provide public fishing and hunting access to a previously privately held portion of the Malheur River canyon.

The most recent long range management plan was adopted by the Fish and Wildlife Commission in 2009. This 2019 Riverside Wildlife Area management plan is based on a review and revision of this adopted plan.

The 2019 Riverside Wildlife Area Management Plan offers a comprehensive vision and action plan for the next 10 years. This plan describes the wildlife area's management issues and provides actions for addressing them. These actions will be implemented during the life of this plan, but are subject to funding and personnel availability. The management plan will be reviewed in 2024 to gauge the implementation progress, make necessary revisions and reviewed in its entirety in 2029.

# Introduction

## Purpose of the Plan

This document is a long range plan designed to guide the management of the Riverside Wildlife Area (RWA) for the next 10 years. The Oregon Department of Fish and Wildlife's (Department) management planning process for wildlife areas involves the development of broad goals for the areas, and formulation of specific objectives and management strategies to achieve those goals. The purposes of this plan are:

- To provide clear direction for the management of the RWA over the next 10 years;
- To provide long-term continuity in wildlife area management;
- To communicate the department's management priorities for the RWA to its neighbors, visitors, and to the public;
- To ensure that management programs on the RWA are consistent with the original mandate and purpose of the area when it was first established;
- To ensure that management of RWA is consistent with Federal, State, and local plans, and;
- To provide details on staffing, operations, maintenance, and capital improvement needs on the RWA.

## Oregon Department of Fish and Wildlife Mission and Authority

The mission of the Oregon Department of Fish and Wildlife 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 the management of fish and wildlife resources.

## Purpose and Need of the Riverside Wildlife Area

The purpose of the initial acquisition of lands in the Malheur River Tract was to provide public fishing and hunting access to a previously privately held portion of the Malheur River canyon south of Drewsey, OR. Similar to the Malheur River Tract, the objective of the purchase of the Riverside Tract was to provide public fishing and hunting access to formerly privately held sections of the Malheur River south of Juntura, OR.

The natural resources available on the RWA will be managed to protect, maintain, enhance and restore fish and wildlife habitats to support optimum population levels of all desirable species for the enjoyment of present and future citizens. To protect these natural resources, management programs and strategies utilized on the RWA will meet or exceed habitat protection policies and standards set by the department.

## Riverside Wildlife Area Vision Statement

The vision for the RWA is as follows:

*To sustain and enhance fish and wildlife habitats along the Malheur River using sound stewardship practices while providing hunting, angling and other wildlife orientated 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 RWA are:

**Goal 1: To protect, enhance and restore upland habitats to benefit native and desired wildlife species.**

> **Objective 1.1:** Protect, enhance, and restore approximately 3,126 acres of mixed sagebrush steppe/shrubland habitats.
>
> **Objective 1.2:** Protect, enhance and manage approximately 16 acres of irrigated upland habitat.
>
> **Objective 1.3:** Maintain RWA facilities and equipment used to conduct habitat management projects

**Goal 2: To protect, enhance and manage riparian and freshwater aquatic habitats to benefit native and desired fish and wildlife species.**

> **Objective 2.1:** Protect, enhance, and restore approximately 61 acres of riparian habitat.
>
> **Objective 2.2:** Protect, enhance and manage approximately 21 miles of freshwater aquatic habitat.

**Goal 3: To provide a variety of fish and wildlife oriented recreational and educational opportunities to the public.**

> **Objective 3.1:** Provide hunting, trapping and angling opportunities consistent with species goals.

**Objective 3.2:** Provide wildlife viewing and education/interpretation opportunities compatible with Objective 3.1 and habitat management objectives.

## Wildlife Area Establishment

RWA consists of two discrete tracts: the Malheur River Tract and the Riverside Tract.

Malheur River Tract

In 1972, the Department purchased the Malheur River Tract. The objective of this purchase was to provide public fishing and hunting access to formerly privately held sections of the Middle Fork of the Malheur River south of Highway 20.

In 2005 the Department completed a land exchange with the adjacent private landowner to clean up the northern property boundary of this tract. The land exchange benefited both the Department and the private landowner. The Department received improved access to the northern end of the Malheur River Tract for its habitat management activities and public access for hunters and fishermen. The private landowner gained better operational ground for his ranch. In July 2005, a fence was constructed along surveyed property lines to secure the land exchange.

Riverside Tract

In 1976 the Department purchased the Riverside Tract. The Riverside Tract is adjacent to the Malheur River near the former railroad community of Riverside. It was purchased from the Blaylock family and has been administered by the Department as the Riverside Wildlife Area since that time.

Additional acres were added to this tract in 1976 when the Department purchased Union Pacific Railroad property and easements. Both of these purchases were made using SFR funds, a federal excise tax on fishing equipment and motor boat fuels.

An old rail service corridor traverses the center of the Riverside Tract and provides some of the only level ground available in the area for walking. Following purchase of the Union Pacific properties from 1977 until 1995, hunters, anglers, and others freely accessed the Riverside Tract along this corridor. When the rail service corridor was abandoned by the railroad in 1995 the railroad sold the corridor to an adjacent private landowner who closed it to public access. In 2007, the Department completed a land exchange with the private landowner to again establish public access to the rail service corridor and adjacent upland areas.

# Description and Environment

## Physical Resources:

## Location

Riverside Tract

The Riverside Tract can be accessed from Burns, Oregon by traveling 52 miles east on Highway 20 to the community of Juntura. Approximately 1/8 mile before Juntura, turn right on Riverside Road (County Road 587) and travel south towards the former railroad community of Riverside. There are two side roads that access the Riverside tract off of County Road 587.

Longsiding Access Road is located approximately 10 miles south of Juntura off of County Road 587 on the east side of Twin Knolls. This road is a two-track road that crosses five miles of Bureau of Land Management (BLM) land before reaching the wildlife area. The road is not maintained and only 4x4 vehicles with high clearance are recommended.

Riverside Headquarters Road is also accessible from County Road 587, approximately 17 miles south of Juntura. After crossing the Malheur River and past the BLM camp site, travel 3/4 mile to the first two-track road on the left. Follow that road for 1.5 miles. The road crosses approximately one mile of private land before entering Department property. Signs on the management area guide visitors to access sites.

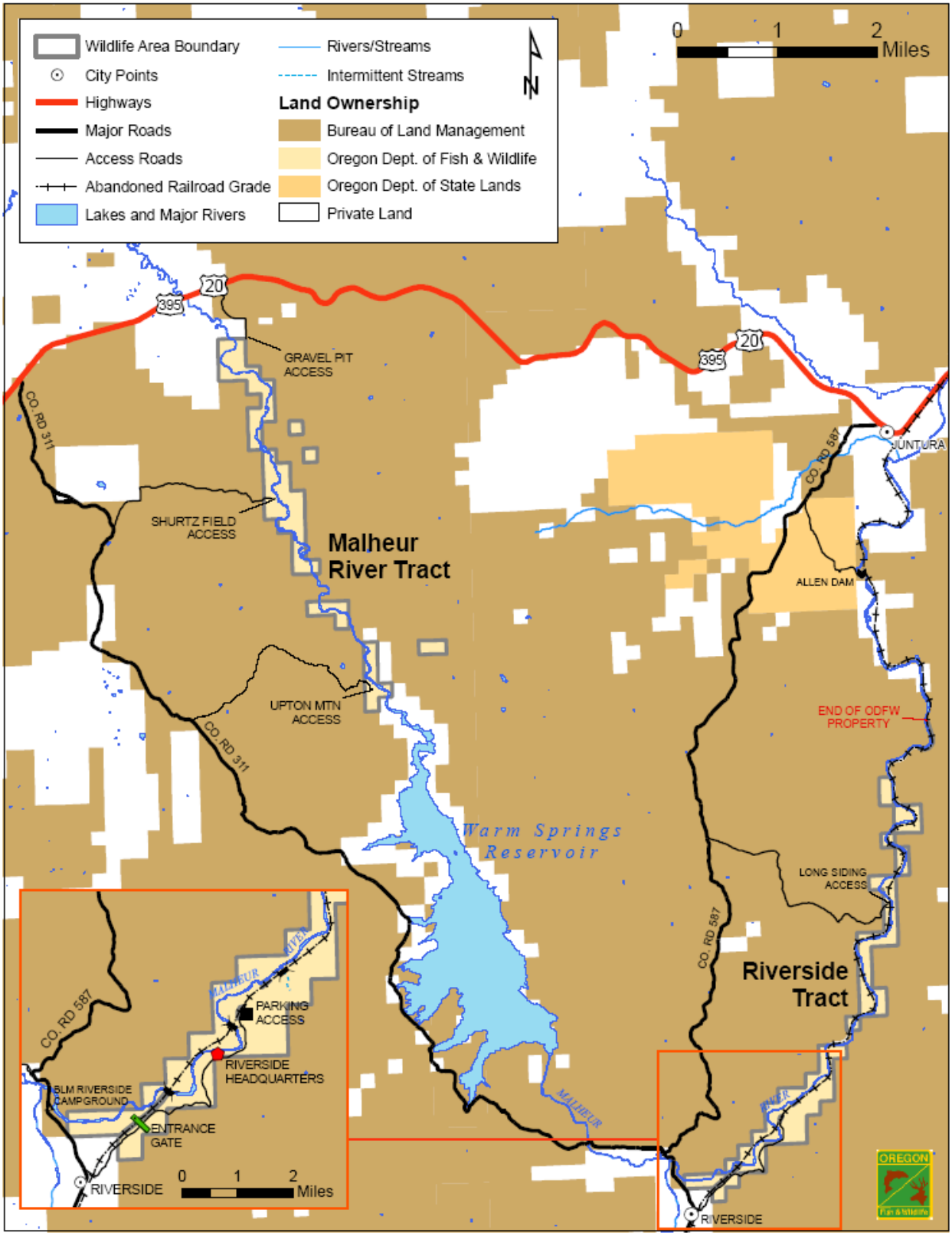
Malheur River Tract

Highway 20 Access Road can be reached by traveling 43 miles east of Burns on Highway 20 to where the Malheur River crosses Highway 20. The access road is located ¼ mile east of the river crossing near the county gravel pit on the south side of the highway. It is a crude two-track BLM side road that is not maintained and is seldom used by the public or staff. Only 4x4 vehicles with high clearance are recommended for use on this road.

Shurtz Field Access Road can be reached by traveling 39 miles east of Burns on Highway 20 to its intersection with County Road 311 (also known as the Warm Springs Access Road). From Highway 20, travel four miles south on County Road 311 (Warm Springs Access Road); then head east five miles on the Shurtz Field Road to the wildlife area. The road is a two-track side road that is in good condition and may be accessed by average 4x4 vehicles. Travel is only recommended when roads are dry.

Upton Mountain Access Road is also reached from County Road 311, approximately eight miles south of Highway 20. At the junction of County Road 311 (Warm Springs Access Road) and Upton Mountain Road, travel five miles east to the wildlife area. This road is in good condition but is recommended for 4x4 high clearance vehicles.

Figure 1 - Riverside Wildlife Area Features and Ownership



## Climate

RWA is typically subjected to cool/moist, rarely harsh winters and extremely hot/dry summers. Anual precipitation for the area is 11 inches, consisting mainly of winter snowfall. The annual average daily temperature is $47^0$F while $70^0$F is the average temperature in July. Winters are generally cold with $18^0$F as the average minimum temperature in January.

## Topography and Soils

RWA is predominantly a river canyon, bisected along its length by the Malheur River. The elevation of the Malheur River is approximately 3,250 feet above sea level, with some of the higher canyon peaks rising to about 4,500 feet. Most of the canyon is made of gently sloping hills, with only a few steep escarpments, cut by the river.

There are four major soil types within RWA (USDA, 2008). The most common soil type is a Risley-Gumble complex. This soil is found in areas of 2-20% slope, typically near the foothills of the agricultural fields within the area. This soil has slow permeability, but is well drained, with an available water-holding capacity of about five inches. The top three inches of this soil is characterized by pale, very gravely, silt loam.

The second most common soil type found on the area is a Longcreek-Rock outcrop complex. This soil is located on 40-70% south facing slopes within river canyons. Longcreek-Rock soil has very slow permeability, but is well drained. It is characterized by the first three inches consisting of a dark grayish-brown, very cobbly loam.

The third soil type found on the area is a Poall-Gumble complex. This soil is located on 2-20% slopes from the riparian areas to the edge of the upper terrace slopes. This soil also has slow permeability and is well drained. It is characterized by the first eight inches being a light brownish-gray, silt loam.

The final soil type on the area is Loupence silt loam. It is located on 0-2% slopes in the lower riparian areas and agricultural fields. It has moderate permeability and is moderately well drained. Loupence silt is characterized by the first 49 inches being a grayish-brown, silt loam.

## Habitat Types

There are four major habitat types found within RWA (Table 1). Most of the plant communities within RWA have been altered by human disturbances. These disturbances primarily consist of livestock grazing and the introduction of invasive plant species. Wildlife use of these habitats varies and is linked directly to shrub density, cover, and composition. Also critical to wildlife use is species composition within the habitat types' understory. Management activities within these habitat types are oriented to enhance these attributes for the use of native and desired non-native wildlife.

For a detailed list of plant species see Appendix B. The Riverside Tract habitat types are shown in Figure 2.1 and habitat types in the Malheur River Tract are shown in Figure 2.2.

**Table 1. Habitat Types and Approximate Acreages on the Riverside Wildlife Area.**

| Habitat Type | Acres* |
|---|---|
| Uplands | |
| Sagebrush Steppe/Shrubland | 3,126 |
| Agriculture | 46 |
| Rock | 240 |
| Riparian | 260 |
| Subtotal | 3,672 |
| Misc. (railroad grade, roads, facilities) | 126 |
| **Total** | **3,798** |

*These approximate acreages were developed by digitizing aerial maps.

Uplands

RWA contains a mixture of upland habitats which include sagebrush steppe/shrubland, agricultural lands and rock. A host of mammals, birds, reptiles, and amphibians utilize these habitats.

Sagebrush steppe/shrublands: The most common habitat on RWA is sagebrush steppe and shrubland. This type of habitat is usually found on loamy, wind-deposited soils. These upland areas are composed of a mosaic of upland shrubs such as Wyoming big sagebrush (*Artemisia tridentate ssp. wyomingensis)*, Basin Big Sagebrush (*Artemisia tridentate ssp. tridentata)*, rabbitbrush (*Chrysothamnus nauseosus*), greasewood (*Adenostoma* fasciculatum) and antelope bitterbrush (*Purshia tridentata*).

Grasslands: Many of the grasslands within RWA are in an altered state and rarely retain historic species composition and diversity. They consist of a mix of drought tolerant perennial bunchgrasses such as Idaho fescue (*Festuca idahoensis*), bluebunch wheatgrass (*Agropyron spicatum*), Sandberg bluegrass (*Poa secunda*) and needle and thread (*Stipa comata*).

Figure 2.1 - Habitat Types within Riverside Wildlife Area - Riverside Tract

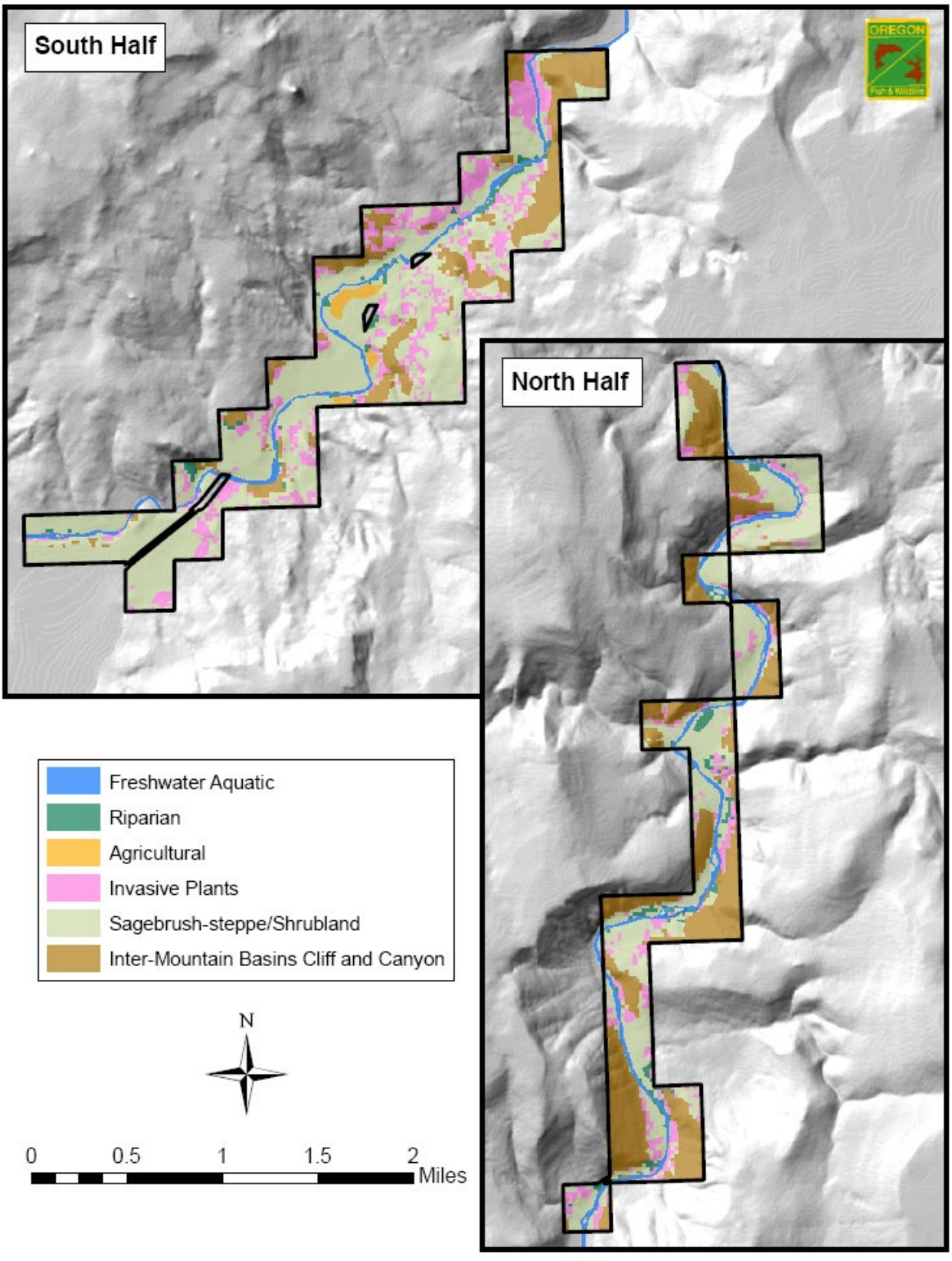
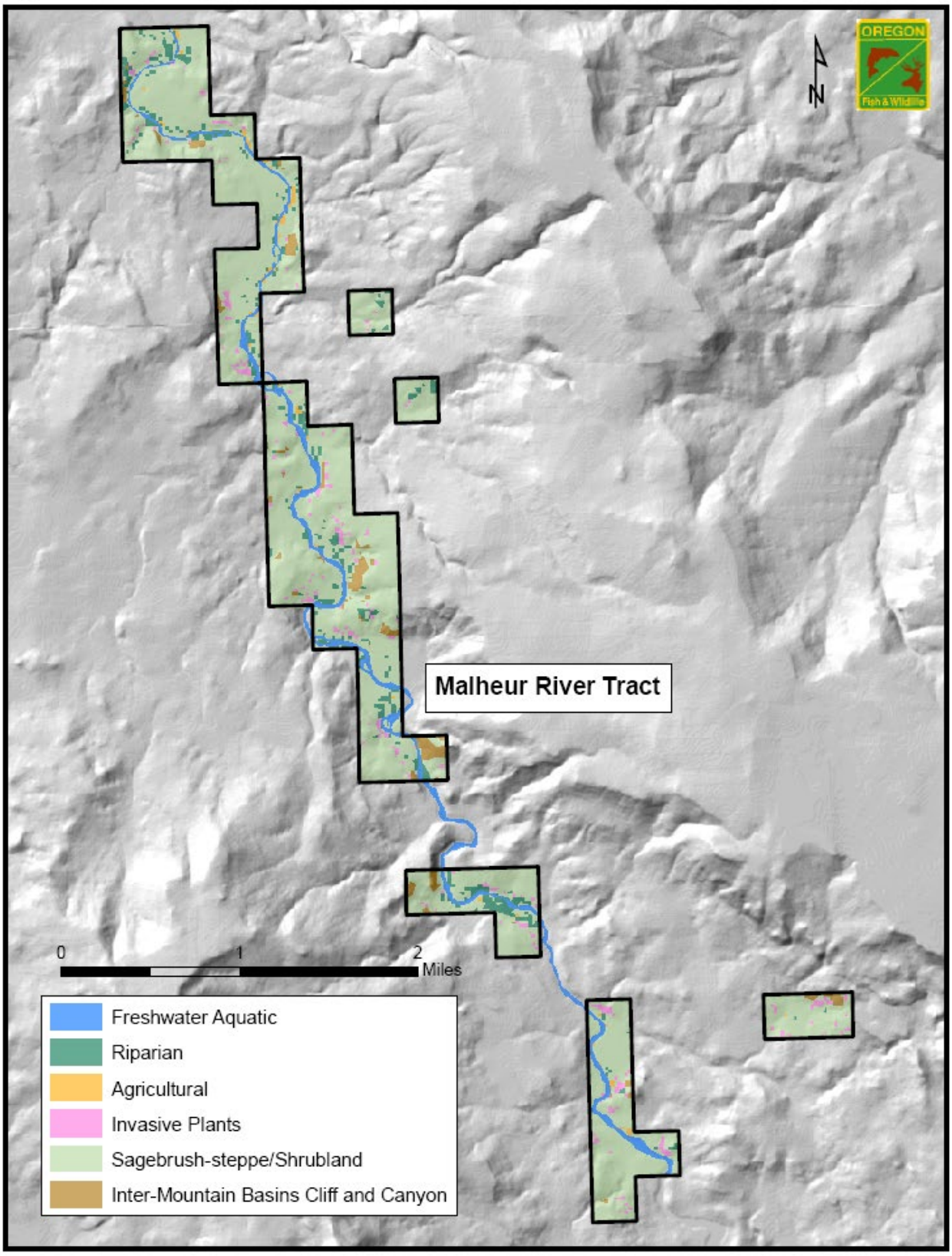


Figure 2.2 - Habitat Types within Riverside Wildlife Area - Malheur River Tract



These grassland communities also include forbs such as balsamroot (*Balsamorhiza sagittata*), mules' ear (*Wyenthia amplexicaulis*), wild onion (*Allium acuminatum*), and many others. Reduced species composition and diversity is largely the result of wildfire, historic overgrazing, as well as the introduction of invasive species such as cheatgrass (*Bromus tectorum*) and Medusahead rye (*Taeniatherum caput-medusae*). As a result of these influences, some habitats have undergone a transition in climax communities (i.e. sagebrush-steppe to grassland, perennial bunchgrass to annual communities).

Invasive plants are common in eastern Oregon's shrub-steppe habitats as a result of the many past land management practices. Invasive species, especially annual grasses can increase frequency, intensity, and extent of wildlfires. Bunchgrasses and sagebrush are adapted to weak and infrequent fires, so high fire frequency can eliminate these native species. Overgrazing in this habitat type also allows for invasive plant species to spread and become dominant.

Agriculture: There are 16 acres within RWA which have water rights. This habitat can be structurally diverse. Since construction of Warm Springs Dam in 1919, riverine terraces have been modified from wetland flood plains to agriculture/pasture areas. As described in the upland habitat section, this habitat type classification includes plant cover types that were historically annually farmed on former sagebrush-steppe habitat. During settlement, several floodplain and sagebrush areas were cleared, leveled, and extensively farmed by homesteading ranchers prior to the Department's acquisition. Sprinkler irrigation systems, covering 16 acres, are currently used by the Department to produce food and cover crops to benefit wildlife species.

Rock: Rock can also be considered a habitat type. It consists of volcanic outcrops, rock slides, and shear slopes that occur in conjunction with sagebrush steppe uplands, providing unique habitat for several wildlife species such as chukar (*Alectoris chukar*), golden eagle (*Aquila chrysaetos*) and various reptiles. Rock habitat is found within the river canyons of the area, and is characterized by steep slopes.

Riparian

Riparian habitat within RWA is limited to the banks of the Malheur River. The Riverside Tract lacks abundant large shade trees or shrubs typical of riparian habitat, such as black cottonwood *(Populus trichocarpa)*, willow (*Salix sp.*), chokecherry (*Prunus virginiana*) and red osier dogwood (*Cornus stolonifera*). Instead, this habitat is dominated by non-native grasses such as reed canarygrass (*Phalaris arundinacea*) and random shrubs such as mock-orange (*Philadelphus* spp) and Russian Olive (*Elaeagnus angustifolia*). In areas that are the least disturbed, native riparian species such as beaked sedge (*Carex utriclata*), coyote willow (*Salix exigua*), and chokecherry do occur.

The lack of healthy riparian and stream habitats can be largely attributed to the impacts of regulated flows out of Warm Springs Reservoirs and concentrated livestock grazing.

From April 15 through October 16, Warm Springs Reservoir releases irrigation water at approximately 400 - 450 cubic feet per second (cfs). Flows at this rate are continuous for three to four months. Flows are then reduced as storage capacities dwindle or irrigation demand subsides. At the end of irrigation season (~October 16), water flows into the Malheur River downstream of Warm Springs Dam are shut off. The only live water flow is at the confluence of the South Fork system, which lies approximately two miles below Warm Springs Reservoir. After irrigation season, flows in the Malheur River throughout RWA range from 10 to 20 cfs depending on reservoir seepage and contributing flows from the South Fork. During years of extreme drought Warm Springs Reservoir does not fill and downstream irrigation flow releases occur during a much shorter time period.

Riparian areas are very susceptible to impacts of grazing because livestock are attracted to palatable riparian vegetation. During hot summer months, livestock tend to concentrate near the river for water. This habitat is also susceptible to invasive plant species due to a continual supply of seed spread from upriver.

Riparian vegetation on the Middle Fork Tract is fairing much better. Off-site water and a riparian pasture fence has allowed for increased control of livestock use and has allowed for willow species to recolonize and flourish in many areas above Warm Springs Reservoir.

Freshwater Aquatic

RWA includes 21 miles of the Malheur River corridor, which includes 9.4 miles above Warm Springs Reservoir and 11.6 miles below. Numerous miles of perennial and intermittent streams, with associated riparian habitat, are present on the wildlife area and support redband trout (*Oncorhynchus mykiss newberrii*), rainbow trout (*Onchorhynchus mykiss*) and warm water fish species.

## Biological Resources

RWA contains a diverse array of wildlife and plant species. Numerically birds comprise the largest class of species occurring on the wildlife area. There are 139 species of birds known to utilize the wildlife area at some point during the year. Comprehensive inventory data is lacking, but from previously conducted surveys and incidental observations, RWA is inhabited by 15 species of fish, 15 species of amphibians and reptiles, 29 species of mammals, and 102 plant species (Appendix B). Further research and surveys are required to establish information regarding presence and abundance of invertebrate species as little is currently known.

## Birds

Birds are the most prevalent group of species present on RWA. Of the 139 bird species documented on the area, many are migratory, occurring only during spring and fall migration periods. Canada geese (*Branta canadensis*), golden eagles, red-tailed hawks

(*Buteo jamaicensis*), osprey (*Pandion halilaetus*) and canyon wrens (*Catherpes mexicanus*) all nest on the area.

The only native game bird on the wildlife area is the mourning dove (*Zenaida macroura*).

Non-native upland game bird species include chukar partridge, Hungarian partridge (*Perdix perdix*), and California quail (*Callipepla californica*). Eurasian collared doves (*Streptopelia decaocto*) have also expanded their range to include RWA.

Raptors which forage on the area include bald eagles (*Haliaeetus leucocephalus*), prairie falcons (*Falco mexicanus*) and American kestrels (*Falco sparverius*). Owls, resident songbirds, and neo-tropical migrant passerines are also present. These species are primarily found in upland grassland, sagebrush steppe, and riparian habitats. RWA contains varying degrees of forage, cover and structure values within habitat types and yields a variety of niche habitats for species.

## Mammals

At least 29 mammalian species have been documented on RWA. Large ungulates include mule deer (*Odocoileus hemionus*), California bighorn sheep (*Ovis canadensis californicus*), and occasionally Rocky mountain elk *(Cervus elaphus)*. Other common species include cougar (*Puma concolor*), bobcat (*Lynx rufus*), coyote (*Canis latrans)*, river otter (*Lutra canadensis*), California ground squirrel (*Spermophilus beecheyi*) and Nuttall's cottontail (*Sylvilagus nutallii*).

No recent surveys have been conducted for furbearers, bats or small mammals. In order to determine population levels of these species, additional resources would be required to conduct presence/absence surveys.

## Amphibians and Reptiles

Protection and maintenance of key habitats is the current management activity for reptiles and amphibians on RWA at this time. Amphibian and reptile species include western toad (*Bufo boreas*), Pacific tree frog (*Pseudacris regilla*), sagebrush lizard (*Sceloporus graciosus*), western fence lizard (*Sceloporus occidentails*), western skink (*Eumeces skiltonianus*), gopher snake (*Pituophis catenifer*), northwestern garter snake (*Thamnophis ordinoides*), western rattlesnake (*Crotalus viridis*) and potentially Columbia spotted frog (*Rana luteiventris*).

No threatened or endangered amphibians or reptiles are known to be present on RWA.

## Fish

RWA contains 21 miles of river, supporting 15 species of cold and warmwater fish.

Until construction of Warm Springs Reservoir in 1919, the Malheur River through the wildlife area was an historic migration corridor for salmon and steelhead. Today, with the loss of anadromous fish to the basin, Warm Springs Reservoir and sections of the Malheur River downstream of Warm Springs Dam are stocked with fingerling rainbow trout to provide fishing opportunities. Following drought conditions, the reservoir has also been stocked periodically with largemouth bass (*Micropterus salmoides*) and channel catfish (*Ictalurus punctatus*), to supplement existing populations.

Management activities for these species are passive through vegetation maintenance in and around riparian habitats.

## Species of Conservation Concern

There have been no formal surveys on RWA specifically to document presence of state or federally listed endangered, threatened, or candidate species.

There are several species of federal or state concern that are present at least part of the year on RWA (Table 2). Several species identified in Table 2 are also Strategy Species as defined in the Oregon Conservation Strategy (OCS). Key Species are Strategy Species with a special emphasis within a Conservation Opportunity Area. The OCS prescribes conservation activities to be implemented that contribute to the overall health of strategy habitats and species.

**Table 2. Federal and State Listed Endangered, Threatened, Candidate and Species of Concern Formally Present on the Riverside Wildlife Area**
(Federal Status: C–Candidate; LE–Endangered; LT–Threatened; SOC–Species of Concern; State Status: LE – Endangered; LT – Threatened; SC – Sensitive, Critical; S – Sensitive; OCS Strategy Species present - x, Key Species - X)

| Common Name | Scientific Name | Federal Status | State Status | OCS |
|---|---|---|---|---|
| Ferruginous hawk | *Buto regalis* | | S | x |
| Western toad | *Anaxyrus boreas* | | S | x |
| American White Pelican | *Pelecanus erythrorhynchos* | | S | |
| Swainson's Hawk | | | S | x |
| Columbia Spotted Frog | *Rana luteiventris* | | SC | x |

## Non-Native Species

With few exceptions, non-native species found on RWA are considered a threat to the persistence of desirable and endemic flora/fauna. Cheatgrass, perennial pepperweed (*Lepidium latifolium*), scotch thistle (*Onopordum acanthium*), and Medusahead rye are all examples of non-native species which stand to threaten the composition and diversity of native habitats and their overall value to fish and wildlife. A list of established noxious weeds on RWA which are being actively treated to preserve wildlife habitats are listed in Table 3. Although non-native plant species can directly and/or

indirectly affect native vegetation, non-native fish and wildlife species predominately pose threats directly to fish and wildlife species, typically in the form of predation and competition. Non-native species on RWA (Table 4) such as starling (*Sturnus vulgaris*) and house sparrows (*Passer domesticus)* present direct threats to native passerines by utilizing limited nesting cavities, while bullfrog *(Lithobates catesbeianus)* and smallmouth bass *(Micropterus dolomieu)* prey upon amphibian/reptile egg masses and/or their juveniles.

**Table 3. Noxious weeds listed by the Harney and Malheur County Weed and Pest Departments present on the Riverside Wildlife Area.**

| Common Name | *Scientific Name* | Class | Common Name | *Scientific Name* | Class |
|---|---|---|---|---|---|
| Perennial pepperweed | *Lepidium latifolium* | B | Diffuse Knapweed | *Centaurea diffusa* | A |
| Hoary Cress (White Top) | *Lepidium spp.* | B | Puncturevine | *Tribulus terrestris* | *C* |
| Yellow starthistle* | *Centaurea solstitialis* | A | Spotted Knapweed | *Centaurea maculosa* | A |
| Scotch Thistle | *Onopordum acanthium* | B | Rush Skeletonweed | *Chondrilla juncea* | *A* |
| Field Bindweed | *Convolvulus arvensis* | C | Russian Knapweed | *Acroptilon repens* | *B* |
| Canada Thistle | *Cirsium arvense* | B | Jointed goatgrass | *Aegilops cyclindrica* | A |
| Medusahead | *Taeniatherum caput-medusae* | *C* | | | |

**Table 4**. **Non-native wildlife species that may occur on the Riverside Wildlife Area.**

| Common Name | *Scientific Name* | Common Name | *Scientific Name* |
|---|---|---|---|
| Chukar | *Alectoris chukar* | European starling | *Sturnus vulgaris* |
| Rock pigeon | *Columba livia* | California quail | *Callipepla californica* |
| Hungarian partridge | *Perdix perdix* | House mouse | *Mus musculus* |
| Ring-necked pheasant | *Phasianus colchicus* | House sparrow | *Passer domesticus* |
| Eurasian collared-dove | *Streptopelia decaocto* | | |

## Monitoring

Since inception of RWA, monitoring of select wildlife species, habitats and public use has occurred. However, monitoring has only been conducted intermittently, primarily due to budget and personnel constraints. Thus, there is a need for more comprehensive monitoring (primarily wildlife species) on RWA to help guide habitat management actions that provide the greatest benefit to native and desired game species. Currently, project activities on RWA are based on sound biological principals supported with monitoring data when available.

**Recreational use**

Monitoring of recreational activities is conducted by the Department and Oregon State Police (OSP). Three informational kiosks with permit boxes are stationed at entry points into the RWA. The Department collects returned permits and summarizes the data. Informal monitoring of public use is also conducted through periodic contacts during the year. Below are examples of recreational use monitoring activities:

- Permit Boxes: free access permits are available to the public to complete and return in drop boxes at entry/exit points to the RWA.
- Hunter Checks. Each year during hunting season, watershed district staff conducts random checks throughout RWA from Juntura to Riverside, including properties south of Highway 20 by gathering information about species harvested and hunter use.
- Angler Checks. Angling can occur throughout the year and angling effort and date of use information is also gathered during any random encounters along the 22 miles of river in RWA.

Currently, public use is monitored through the collection of free access permits at self-serve kiosks at major entry points to the wildlife area.

**Habitat**

BLM conducts riparian vegetation monitoring annually on the Malheur River Tract.

**Big Game**

Malheur Watershed District Wildlife staff monitors big game numbers and animal condition each year at the Wildlife Management Unit scale. Deer are classified by gender and age in December and by adults and juveniles in March. Bighorn sheep are monitored year-round and when conditions warrant with emphasis on ewe/lamb ratios and abundance of rams. These counts and ratios are then used to determine herd status relative to management objectives, and to set the number of tags offered during the following year's hunting seasons.

**Other Wildlife**

District wildlife staff conducts annual surveys for waterfowl in January and upland gamebirds in July. Total numbers and species composition are recorded during waterfowl surveys. The upland gamebird surveys determine species and adult/young ratios to estimate brood production.

**Wildlife Diseases**

Bighorn sheep and mule deer are sampled by district wildlife staff for several diseases including *Mycoplasma ovipmneumoniae* and Chronic Wasting Disease (CWD) on a random basis and as opportunity arises. To date no positive samples have been found.

## Grazing

The influence of livestock grazing in eastern Oregon's riparian areas began with Euro-American settlement. Prior to settlement many streambanks were apparently lined with woody vegetation, such as willow, aspen, alder, and cottonwood. Photos of the RWA from 1978 confirm the presence of willows on the Malheur River Tract near the headquarters however it is uncertain if their presence was due to natural conditions or from historic flood irrigation practices conducted by the previous owner. Grazing practices on rangelands of eastern Oregon were similar to those throughout much of the West and relied primarily on year-long or season-long (April-October) use. These practices allowed livestock to concentrate their foraging activity in riparian areas, rather than on adjacent hillsides. As a result, many riparian areas on RWA are in a state of degradation compared to pre-settlement.

One of the challenges with current riparian area management on RWA is the inability to control livestock grazing. Both the Malheur River and Riverside tracts are fenced in common with BLM grazing allotments. Depending on grazing rotations and turnout periods, livestock have a tendency to concentrate in riparian areas or adjacent sagebrush steppe/grassland terraces due to the presence of water and higher quality forage. Over-utilization of these areas can adversely affect riparian habitats and upland forage on big game winter ranges.

In an effort to minimize grazing impacts to sensitive habitats on RWA, early spring grazing or late fall grazing with minimal stocking rates has been recommended by the Department to BLM district staff (Burns and Vale). The Department has also recently experimented with short duration, late winter “flash” grazing around the headquarters in an attempt to reduce annual grass densities and fuel loading.

Malheur River Tract

The Malheur River Tract lies within the Burns BLM’s River Grazing Allotment. The allotment is bisected by four pastures that are fenced in common with Department lands. Department lands are not fenced separately primarily due to difficult terrain and river crossings.

Grazing is conducted on a rotation basis and stocking rates are adjusted annually according to habitat conditions, forage and water availability, and timing of grazing (i.e. spring, summer, fall and winter). Currently BLM range conservationists and Department staff visually inspect range conditions pre and post-grazing each year.

**Table 5. Malheur River Tract - River Allotment Ownership by acreage**

**Malheur River Tract - River Allotment**

| **Pastures** | BLM Acres | Private Land | State Acres | BOR Acres | Total |
|---|---|---|---|---|---|
| Carey Tables | 5,555 | 58 | 81 | 0 | 5,694 |
| Drinkwater | 2,735 | 89 | 38 | 0 | 2,862 |
| River | 6,983 | 72 | 1,309 | 1 | 8,365 |
| Lake | 6,944 | 318 | 0 | 1,783 | 9,045 |
| Total Acres | 22,217 | 537 | 1,428 | 1,784 | 25,966 |

**Table 6. Malheur River Tract Grazing Schedule**

**Malheur River Tract - River Allotment Grazing System**

| **Pasture** | Year 1 | Year 2 | Year 3 |
|---|---|---|---|
| Carry Tables | 5/1 - 6/30 | Rest | Rest |
| Drinkwater | 3/1 - 3/31 | 3/1 - 3/31 | 3/1 - 3/31 |
| Lake West | 11/1 - 12/31 | 11/1 - 12/31 | 11/1 - 12/31 |
| Lake East | Rest | 5/1 - 6/30 | 5/1 - 6/30 |
| River | 4/1 - 4/30 | 4/1 - 4/30 | 4/1 - 4/30 |

Yellow highlight indicates BLM pastures that border RWA.

## Riverside Tract

The Riverside Tract lies within two grazing allotments, Black Butte and North Starr, both of which are managed by Vale District BLM. As noted in the tables below, the Black Butte Allotment consists of the Weisner, FFR, Parks, Riverside FFR and Sheep Rock pastures, each of which border the wildlife area. In the North Star allotment, the Basque is the only pasture that borders the wildlife area on the east side of the Malheur River. Three permittees use these pastures throughout the year and work cooperatively through grazing schedules and their respective allotment management plans.

The only section of the Riverside Tract not grazed is 480 acres between Parks and Sheep Rock pastures. This area is fenced and kept free from livestock for the benefit of fish and wildlife. The exclosure fence was built in the mid-1980s by Department staff and volunteers and is annually maintained by permittees and staff. Due to its location adjacent the river, this exclosure receives continual unpermitted use from trespass livestock, and is an example of the challenges that would occur if other portions of the wildlife area were fenced to exclude cattle.

**Table 7. Riverside Tract – Black Butte Allotment and North Star Allotment Ownership by acreage**

**Riverside Tract - Black Butte Allotment**

| **Pastures** | BLM Acres | Private Land | State Acres | BOR Acres | Total |
|---|---|---|---|---|---|
| Weisner | 2,754 | 781 | 330 | 0 | 3,865 |
| FFR | 280 | 0 | 13 | 0 | 293 |
| Sheep Rock | 3,397 | 362 | 380 | 0 | 4,139 |
| Parks | 3,447 | 284 | 10 | 0 | 3,741 |
| Riverside FFR | 4,563 | 0 | 181 | 0 | 4,744 |
| Potholes | 8,619 | 45 | 0 | 742 | 9,406 |
| Water Gulch | 7,704 | 0 | 0 | 0 | 7,704 |
| Moritiz | 763 | 10 | 0 | 50 | 823 |
| Juntura SG | 961 | 269 | 1 | 0 | 1,231 |
| Butte | 4,547 | 40 | 0 | 0 | 4,587 |
| McGetrick | 1,452 | 456 | 0 | 0 | 1,908 |
| Terry Basin | 4,768 | 81 | 0 | 0 | 4,849 |
| Meeker Mountain | 5,961 | 309 | 0 | 0 | 6,270 |
| Juniper Basin SG | 1,155 | 0 | 0 | 0 | 1,155 |

**Riverside Tract- North Star Allotment**

| **Pastures** | BLM Acres | Private Land | State Acres | BOR Acres | Total |
|---|---|---|---|---|---|
| Basque | 8,616 | 707 | 378 | 0 | 9,701 |
| Slaughter Gulch | 8,348 | 2,145 | 0 | 0 | 10,493 |
| Cottonwood Basin | 7,763 | 226 | 0 | 0 | 7,989 |
| Arrien FFR | 2,874 | 1,862 | 0 | 0 | 4,736 |
| Mosquito Seeding | 2,699 | 1,114 | 0 | 0 | 3,813 |
| Monument | 16,433 | 1,199 | 104 | 0 | 17,736 |
| Wildcat/Cold Spring | 43,225 | 2,839 | 10 | 0 | 46,074 |

**Table 8: Riverside Tract – Grazing Schedules**

**Riverside Tract - Black Butte Allotment Grazing System**

| **Pasture** | Year 1 | Year 2 | Year 3 |
|---|---|---|---|
| Water Gulch | 4/16 - 7/1 | 7/1 - 10/15 | Rest |
| Sheep Rock | Rest | Rest | 4/15 - 7/1 |
| Parks | Rest | 4/1 - 5/15 | Rest |
| Moritiz | Fall Trailing | Fall Trailing | Fall Trailing |
| Potholes | 7/1 - 10/15 | 6/1 - 8/30 | 7/1 - 10/15 |
| Weisner | Rest | Rest | 4/1 - 6/30 |

**Riverside Tract - North Star Allotment Grazing System**

| **Pasture** | Year 1 | Year 2 | Year 3 |
|---|---|---|---|
| Basque | 4/1 - 6/30 | 8/1 - 10/31 | Rest |
| Slaughter Gulch | 4/1 - 6/30 | Rest | 8/1 - 10/31 |
| Cottonwood Basin | 4/1 - 6/30 | 7/15 - 10/31 | Rest |
| Mosquito Creek Seeding | 4/1 - 6/30 | Rest | 7/15 - 10/31 |
| Monument | 7/1 - 10/31 | 4/01 - 6/30 | 7/1 - 10/31 |
| Wildcat Coldspring | Rest | 4/1 - 6/30 | 7/1 - 10/31 |

Yellow highlight indicates BLM pastures that border and/or encompass portions of RWA

Appendix D shows a map of the grazing allotments and pastures.

### Water Use

Irrigation water is adjudicated for 16 irrigated acres from the Malheur River below Warm Springs Reservoir. Irrigation water is drawn at a rate of 0.8 cubic feet using an electric pump. Four fields are irrigated through wheel line sprinklers. An aerial photograph of the existing irrigated areas is found in Appendix E.

### Public Use

Monitoring public use (hunting, trapping, angling, wildlife viewing, horseback riding, boating) on the area is conducted to determine if RWA is providing the type of wildlife oriented recreational opportunities and experiences desired by the public. Hunting and angling activity surveys include: 1) interviews conducted in the field, at hunting camps, fishing sites, creel checks by Department personnel and 2) free access permits at self-serve kiosks.

### Cultural Resources

Historically, most of the Malheur sub basin was within the Burns Paiute Tribe's (BPT) territory. As Euro-American settlement increased in the early 1800s, land use within the Malheur sub basin changed dramatically. Beaver were trapped intensively by the Hudson's Bay Company, beginning in the early 1800s, and were largely extirpated by the mid-1800s (Ogden 1950, 1961, 1971; USFS 2000). In the late 1860s, the Federal government negotiated a treaty with the BPT that included a provision to establish a reservation. The Treaty of 1868 reserved 1,792,000 acres for the BPT. In 1883, however, the U.S. government terminated the treaty and abolished the reservation because of armed conflicts between BPT members and settlers over encroachment by Euro-Americans on reservation lands. The current reservation of about 1,000 acres is outside of the Malheur River sub basin and is located in the community of Burns, Oregon (NPPC 2002).

The Department is responsible for coordinating with the State Historic Preservation Office (SHPO) on an annual basis, to ensure that proposed area management activities comply with State and Federal cultural resource laws. Prior to new ground-disturbing activities within any Department wildlife areas, consultation is sought through the appropriate agencies in order to protect potential culturally significant sites.

State, federal and tribal laws prohibit disturbance or removal of cultural resources. Violators are subject to criminal and civil penalties. Cultural resources include but are not limited to foods, weapons, weapon projectiles, tools, structures, pit houses, rock paintings, rock carvings, graves, human skeletal materials, or any portion or piece thereof. Visitors are encouraged to report suspicious activities to the Department or OSP.

## Social Environment

### Demographics

According to 2018 census estimates, the population of Harney County was 7,329 and Malheur County was 30,725. The population of the nearest town, Juntura, is 90.

### Land Use

RWA is surrounded by a mixture of private, state and federal lands. The primary land use surrounding RWA is livestock grazing with some irrigated alfalfa/hay production. (Figure 3).

# Infrastructure

## Developments/Facilities

RWA has limited land development and facilities. Currently, designated public parking is limited to one location where informational displays are located. Currently no program-related facilities, except for one equipment storage building and two RV pads, have been developed on RWA. The wildlife area contains approximately eight miles of boundary fence. Limited developments are listed below (Table 5).

**Table 9. Facilities and Developments on the Riverside Wildlife Area.**

| Development Type | Location/ Tract Name |
|---|---|
| Parking Areas (1) | Riverside Tract |
| Informational Kiosk (4) | Riverside Tract and Malheur Tract |
| RV Pad (2) | Riverside Tract |
| Storage Building (1) | Riverside Tract |
| Fences (8 miles) | Wildlife area boundary fences |
| Access roads (26 miles) | Throughout the wildlife area (Harney and Malheur Counties) |

### Water Resources

There is one active water right, on the Riverside Tract, that has been issued by the Oregon Water Resources Department to serve the wildlife area. This right allows water to be pumped from the Malheur River to irrigate 16 acres.

### Easements/Access Agreements

RWA contains two easements and access agreements. A one mile easement on land currently owned by an adjacent private landowner provides public access to the Riverside Tract. A second easement also on the Riverside Tract allows access to power transmission lines for maintenance purposes. Public access roads are described in greater detail in the Public Use section below.

## 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. Land adjustments would allow for the sale, trade or exchange of land with willing landowners to enable the department to consolidate wildlife area boundaries.

There are three categories of lands that may be considered for acquisition. These include: 1) Significant or unique habitats, especially those beneficial to threatened or endangered sensitive species; 2) Sites, or access to sites that provide wildlife-related recreational opportunities; and, 3) Properties to facilitate the performance of the Department's mandated duties (e.g., storage and warehouse, feeding barns, etc.).

In 2012, an adjacent ranch became available for sale. The Department held public meetings to engage the public on the potential of purchasing the property with mitigation funds from the development of the Ruby Pipeline. Due to opposition from neighboring landowners and community leaders, the Department did not pursue the purchase of the adjacent ranch.

At the current time no new land acquisitions are planned. However, lands adjacent to or within current wildlife area boundaries that may become available and would enhance RWA operations or management capabilities will be considered on an individual basis.

# Public Use

## Public Access

RWA is open year-round to the public for wildlife oriented recreational activities. The area is open to foot, boat, horseback and mountain bike use. Overnight camping is not allowed. In an effort to collect visitor use data, self-service free permits system is maintained at major entry points to the RWA. All roads on RWA outside of established access points are closed to motorized access.

## Hunting, Trapping and Angling

Providing hunting opportunities is one of the primary objectives of RWA. RWA is open to hunting, trapping and angling during authorized seasons. Hunting, trapping and angling activity is estimated by wildlife area and OSP personnel (Table 10).

Trapping on RWA is somewhat self-limiting due to the poor accessibility. Although there is very little information regarding trapping on RWA, some historical use has been documented. It is estimated that a few individuals trap on RWA each year in the pursuit of bobcat, muskrat (*Ondatra zibethicus*), beaver (*Castor canadensis*) and river otter.

Estimated use by anglers on RWA is approximately 100 angler days annually.

**Table 10. Estimated Annual Hunting, Trapping, and Angling Use Days on the Riverside Wildlife Area**

| Activity | Estimated Annual Use Days |
|---|---|
| Hunting | |
| Big Game | 150 |
| Waterfowl | 25 |
| Upland Game | 500 |
| Trapping | 10 |
| Angling | 100 |
| **Total** | **785** |

## Wildlife Viewing

Estimated use of RWA to observe and photograph wildlife, horseback ride, mountain bike, and pursue other outdoor recreation opportunities is listed in Table 11.

## Educational/Interpretive

Due to limited facilities and onsite staff or volunteers on RWA, the area has had very limited use for educational and interpretive purposes. Four kiosks located on the wildlife area provide an area map and wildlife area regulations.

**Table 11. Estimated Annual Wildlife Viewing Use days on Riverside Wildlife Area.**

| Activity | Estimated Annual Use Days |
|---|---|
| Wildlife Viewing | 15 |
| Photography | 15 |
| Hiking | 5 |
| Horseback Riding | 5 |
| **Total** | **40** |

# Objectives and Strategies

## Objectives and Strategies

As stated previously, 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.

The following objectives and strategies are based on the three goals described on pages 3 and 4. They identify the management activities and priorities of the Riverside Wildlife Area Management Plan:

**Goal 1: Protect, enhance and restore upland habitats to benefit native and desired wildlife species.**

**Objective 1.1:** Protect, enhance, and restore approximately 3,126 acres of mixed sagebrush steppe/shrubland habitats.

**Rationale**
Sagebrush steppe/shrubland habitats comprise the largest habitat type found on RWA. Sagebrush steppe/shrubland is a strategy habitat identified in the OCS and plays an important role in the ecology of several shrub steppe dependent species that are either sensitive and/or vulnerable. Quality of sagebrush steppe/shrubland habitat on RWA varies depending on plant species composition and diversity. Deterioration of this habitat is largely attributed to invasive plant species, land use practices, and changes in fire frequency and intensity. Management activities on RWA focuses on reduction of competition by invasive species while increasing recruitment and establishment of native shrubs and perennials.

> **Strategy 1.** Utilize integrated pest management to control invasive plant species and noxious weeds within and adjacent to sagebrush steppe/shrubland habitat.

Work will entail identifying and treating infestations utilizing best management practices and techniques.

**Strategy 2.** Enhance native shrub density, distribution, and composition by removal of invasive plant species then inter-seeding with native sage, shrub, grass, and forb species.

**Strategy 3.** Coordinate with Burns and Vale BLM districts to conduct baseline habitat inventories. Baseline data will assist in identifying key areas for protection and restoration in sagebrush steppe communities.

**Strategy 4.** Coordinate with BLM to manipulate grazing schedules to enhance and recover uplands by rotating grazing activities during dormant periods or initial growing stages.

**Strategy 5.** Evaluate fencing key areas where terrain and access allow.

**Strategy 6.** Participate in the Rural Fire Protection Association.

**Objective 1.2:** Protect, enhance and manage 16 acres of irrigated upland habitat.

**Rationale**

Irrigated areas within upland habitats on RWA currently consist of food and cover plots managed and maintained by Department personnel. Primary benefits of this managed habitat include: 1) additional and/or supplemental forage production to sustain resident and migratory wildlife and 2) increased cover and structure (vertical and horizontal) for hiding and/or nesting. Agricultural food and cover plots have been established in or adjacent to habitats lacking these attributes. Waterfowl, upland game birds, passerines, raptors, as well as large and small mammals benefit from managed agriculture lands on RWA. Species selection within irrigated habitats is managed in a manner consistent with individual site attributes and characteristics, wildlife and public use, field observations, and contribution to management goals, objectives, and strategies as outlined in this management plan.

**Strategy 1.** Continue irrigation practices, using permitted water rights, to produce wildlife food and cover.

**Strategy 2.** Re-establish native grasses, shrubs, and forbs. Work will entail weed control and by supplementing deficient soils with minerals and fertilizers to condition areas for optimum seeding success.

**Objective 1.3:** Maintain and expand RWA facilities and equipment used to conduct habitat management projects and other administrative functions.

**Rationale**

Facilities, structures and equipment are an integral part of the overall operation of RWA. Due to the remoteness of RWA it is necessary to maintain RV pads and storage facilities for staff and volunteers to work on site.

Infrastructure and equipment must be maintained and kept in good working order to accomplish habitat management projects and to provide public use opportunities. Existing infrastructure includes an equipment shed, ,two cement RV pads for staff or volunteer use, and domestic well. Existing equipment on site includes an irrigation pump, various hand and power tools, tractor, and farm implements.

> **Strategy 1.** Improve and maintain existing RV pads to provide staff and volunteers with suitable RV utilities while working on the RWA.

**Goal 2: To protect, enhance and manage riparian and freshwater aquatic habitats to benefit native and desired fish and wildlife species.**

**Objective 2.1:** Protect, enhance, and restore approximately 252 acres of riparian habitat.

**Rationale**
Prior to 1977, riparian habitat within the Malheur River Tract was degraded by 80 or more years of intense livestock grazing. Reduction and regulation of livestock grazing in the Malheur River Tract has improved the vegetative component of riparian areas thereby reducing potential for runoff into the Malheur River. Riparian conditions in the Malheur River Tract have also improved through the use of fencing to prevent cattle grazing in selected areas during certain times of the year. The portion of the Malheur River which passes through the Malheur River Tract shows a positive return of riparian vegetation along the river channel due to the control of cattle grazing.

Within the Riverside Tract, improvements to riparian habitat have not been as dramatic due to the rough terrain which has limited the Department's ability to fence cattle out of the streamside corridor. Through this plan the Department intends to continue to work closely with the BLM and appropriate permittees to manage cattle grazing consistent with improved riparian health in the Riverside Tract of RWA.

Riparian areas provide habitat for many terrestrial and aquatic species offering forage and cover for birds, small mammals and bats, and provide materials for nesting resident waterfowl, shorebirds and passerines. Department staff actively maintain and enhance riparian systems for high quality instream habitat to benefit resident fish and to improve water quality and quantity. Wildlife area uplands and riparian areas support a variety of reptiles, amphibians, mammals, and insects. Riverine habitats are identified as a strategy habitat in the OCS.

> **Strategy 1.** Coordinate with Burns and Vale BLM districts to conduct baseline habitat inventories (i.e. Hankin and Reeves method). Baseline data will assist in

identifying key areas for protection and restoration along the Malheur River corridor.

**Strategy 2.** Coordinate with BLM district to manipulate grazing schedules to enhance and recover riparian areas by rotating grazing activities during dormant vegetation periods or initial growing stages.

**Strategy 3.** Control invasive plant species (eg. perennial pepperweed, whitetop and thistle) along rail-grade corridor (~ 8 miles) to reduce transfer of noxious weeds to downstream landowners.

**Strategy 4.** Plant native riparian vegetation such as willow, dogwood, mock-orange and alder.

**Strategy 5.** Provide water gaps to Malheur River where needed to allow livestock watering.

**Strategy 6.** Develop off-site water (i.e. solar wells) to provide water to reduce livestock use of riparian areas.

**Objective 2.2:** Enhance approximately 21 miles of freshwater aquatic habitat.

**Rationale**
Aquatic habitat on RWA is an important recreational attraction for the hunting, angling and boating public. Department staff actively enhances riparian systems to benefit resident fish species by improving water quality and quantity and recruitment of wood for instream habitat. The strategies listed below support many of the aquatic habitat conservation actions described in the OCS.

**Strategy 1.** Establish willows and/or trees in appropriate areas along the river.

**Strategy 2.** Seek partnerships with other agencies, sport groups and volunteers for implementation of fish habitat enhancement projects (i.e. adding wood to the river to create fish habitat).

**Goal 3: Provide a variety of fish and wildlife oriented recreational and educational opportunities to the public.**

**Objective 3.1:** Provide hunting, trapping and angling opportunities in a manner compatible with habitat management objectives.

**Rationale**
Annual maintenance and operation of RWA 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 fall and winter months and, constitutes the largest annual recreational use. Department staff is committed to providing fish and wildlife-oriented recreational opportunities for the citizens of Oregon in the form of dispersed, non-motorized activities. Staff will continue to improve access and opportunities by providing quality fish and wildlife habitat and information on the wildlife area.

Public use of RWA will be monitored by Department staff and OSP to make sure all rules and regulations are followed.

**Strategy 1.** Provide biologically sustainable upland game, waterfowl, big game hunting, trapping, and angling opportunities.

**Strategy 2.** Maintain fences, gates, and seven miles of rail-grade trails to provide access for hunting, trapping, and angling use.

**Strategy 3.** Maintain and improve developments including all parking areas, access roads and informational signs (including signs identifying locations of access roads).

**Strategy 4.** Continue self-service free permit system. This permit system provides valuable visitor use data and helps to inform management of RWA.

**Strategy 5.** Develop and maintain relationships with hunting, trapping and angling organizations to assist with habitat and recreational management activities.

**Strategy 6.** Monitor railroad trestle closures to prevent public use of structures. In 2016, the Sheep Rock Fire damaged three abandoned railroad trestles.

**Objective 3.2:** Provide wildlife viewing and education/interpretation opportunities compatible with Objective 3.1 and habitat management objectives.

**Rationale**

Non-hunting, trapping, and angling recreation and education activities constitute a growing portion of the use on RWA. Based on the *Fishing, Hunting, Wildlife Viewing, and Shellfishing in Oregon – 2008 State and County Expenditure Estimates,* wildlife viewing in Harney and Malheur counties accounted for $7,953,000 and $1,345,000 respectively in expenditures. RWA provides many outdoor opportunities within a one hour drive of Burns and 1.5 hour drive from Ontario. The wildlife area and neighboring communities such as Crane and Juntura experience an increased amount of use on holidays and weekends.

Department staff will seek to expand opportunities for interpretation and environmental education that will foster visitors' appreciation, understanding, and stewardship of the

wildlife area's fish and wildlife species and their associated habitats. Wildlife viewing and other recreational activities will be managed to remain consistent with the biological needs of wildlife and the wildlife area's hunting program.

**Strategy 1.** Continue to utilize self-service free permit system and seek ways to increase visitor completion of the permit. Explore other ways to capture more complete visitor use data.

**Strategy 2.** Maintain and improve wildlife area infrastructure including parking areas, informational signs and trails.

**Strategy 3.** Add information about TMDLs and water quality enhancement to informational kiosks and RWA literature.

**Strategy 4.** Increase the availability of wildlife area related information through web page postings, social media, weekly recreational reports, other media publications, brochures, maps, and regulations.

# Plan Implementation

## Funding

Funding for the operation and maintenance of RWA is accomplished through an annual federal grant 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 Service 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, and providing for 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 apportioned 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%). Under the program no state may receive more than 5%, nor less than 0.5% of the total money available.

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 the 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 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 RWA has averaged approximately $20,000 annually. To implement many of the proposed actions and achieve objectives and goals of this plan, the Department will need additional funding and staff to undertake several types of projects including installation of off-site water, habitat improvement, and species and habitat monitoring.

## Accomplishments

Since the 2009 RWA Management Plan review, there has been some major accomplishments that are summarized in this section:

With the assistance of Burns BLM, a fence was completed on the west side of the River Pasture to divide the pasture. The objective of the fence is to control riparian grazing on Department lands. Prior to the fence, the River Pasture was grazed from April 1st through May 30th. During this time most of the grazing is focused on the riparian areas. Following completion of the fence, Department lands within the River Pasture have typically been grazed from April 1st through April 30th. Recently the Department, BLM, and the permittee have experimented with late fall/winter grazing to target annual grasses. This action will improve the efforts of this plan to restore riparian and upland habitats for the benefit of fish and wildlife species.

In 2011, diesel pumps used for irrigation were replaced by a much more reliable electric pump.

In 2018, staff restored a water gap downstream of the Headquarters which allows rafters to pass through while keeping livestock out.

In 2018, staff began conversion of irrigated alfalfa to Great Basin Wild Rye which will improve winter food and cover for wildlife.

Several miles of redundant barbed-wire fence along the old rail corridor were removed to better facilitate wildlife movement and hunter access.

A self-service permit system has been implemented at three access points to the RWA in an effort to better capture visitor use data.

Late winter “flash” grazing was utilized in the headquarters pasture to reduce annual grass densities and fuel loading. Staff will continue to periodically use flash grazing in an effort to reduce annual grass densities.

In 2018, late fall grazing was utilized on the Malheur Tract) in an effort to reduce annual grass densities and rotate timing of grazing in that pasture which is traditionally grazed in early spring.

## Staffing/Organization

The Department manages seventeen major wildlife areas statewide. The wildlife areas encompass approximately 200,000 acres and are found in both Department administrative regions; the RWA is located in the East Region.

The Malheur Watershed District Wildlife Habitat Biologist in Ontario oversees the budget administration of this plan and supervision of one full time technician and one seasonal technician.

## Compliance Requirements

This management plan was developed to comply with all Federal and State laws, Oregon Revised Statutes (ORSs), Oregon Administrative Rules (OARs), DEQ's TMDL WQMP guidelines and Department policies. Full implementation of all components of this plan will require compliance with the laws, regulations, rules, and policies listed in **Appendix D**.

Most of the guiding regulations complement the mission of the RWA. However, the requirements of some regulations may limit management options in a variety of ways. While the intent of the regulations is generally resource protection, the cost of compliance through significant research and reporting is often prohibitive and precludes action, including some habitat enhancement, in the RWA.

## Oregon's Total Maximum Daily Load (TMDL) Implementation

On December 3rd, 2010 the US EPA approved the Total Maximum Daily Load (TMDL) and Water Quality Management Plan (WQMP) for the Malheur River Basin. The Malheur River is considered "water quality limited" for bacteria, dissolved oxygen, and temperature.

According to the DEQ:

> In the **temperature** TMDL, the pollutant is heat. Water temperature can be greatly affected by a variety of human activities. The principal human-caused source of stream heating is the removal of trees and other shade-producing vegetation from stream banks. This allows direct sunlight to heat the water. Removing vegetation can also cause stream bank erosion that can result in a wider stream channel and disconnection with the floodplain, which can also result in higher stream temperatures.
>
> In the **bacteria** TMDL, the pollutant is *E coli* bacteria from warm-blooded animals. Principal sources are from non-point sources such as livestock and wildlife which occur throughout the landscape.
>
> Analysis of an extensive set of available data resulted in the determination that the Malheur River meets the applicable **dissolved oxygen** water quality criteria. It has been recommended for removal from the 303(d) list for this parameter.

The Department has been recognized as a Designated Management Agency (DMA) due to ownership along the Malheur River. As stated on page three, the vision for the Riverside Wildlife Area is, "*to sustain and enhance fish and wildlife habitats along the Malheur River using sound stewardship practices while providing hunting, angling and other wildlife orientated recreational opportunities for present and future generations."* Department personnel continue to make strides towards fulfilling obligations to DEQs TMDL and WQMP.

Livestock grazing and lack of riparian vegetation are the likely sources of bacteria and heat. Only 480 acres of Department-owned land are fenced from adjacent BLM. Due to Open Range laws, the unfenced ownership is grazed in common with surrounding BLM allotments. Subsequently, the Department's ability to manage those acres outside of the 480 acre exclosure are limited. This exclosure is typically not grazed and is only periodically "flash" grazed in late winter to target invasive annual grasses. Terrain, access and low probability of success prevent the fencing of additional parcels of the RWA.

On the Malheur Tract, the creation of a riparian pasture and implementation of a spring grazing program has allowed for extensive recolonization by riparian vegetation and willows. Aside from weed management and upland vegetation management, there are few options to increase stream shading or reduced bacteria loading (outside of complete livestock exclosure). Parcels of the Malheur River tract near Upton Cabin would benefit from reduced livestock impacts. ODFW and BLM personnel both believe that the impacts are from unauthorized grazing from cattle that come from a neighboring pasture, specifically around Warm Spring Reservoir. A possible solution is to fence across the upper end of Warm Springs Reservoir, however, fencing would require approval from BOR, as the fence would be on their property.

The Malheur River through the Riverside Tract is highly influenced by the Warm Springs Dam. Flow is regulated to supply irrigators in the Treasure Valley. Beginning in 2018 Department personnel began work to replace sixteen acres of alfalfa with Great Basin Wildrye on the Riverside Tract. This will require less fertilizer inputs and provide substantial vegetation structure throughout the winter and early spring, should Warm Springs Dam spill and create flood conditions. Additionally, because swathing will no longer occur, substantial riparian vegetation should reestablish in low areas adjacent the streambank. This action is currently being implemented and a response in riparian vegetation should be visible in the next three years. In 2011, Department personnel planted willows along the riverbank of the Riverside Tract. Unfortunately, unnatural flow conditions from Warm Springs Dam have prevented these willows from establishing.

Opportunities for protecting riparian vegetation include the establishment of off-channel livestock water. There are multiple water gaps on the 480 acre exclosure. These water gaps allow livestock from neighboring BLM land and private land to access the river channel for water. Oftentimes, cattle that use these water gaps walk the river or push around edges of the fence to enter into the Department-owned exclosure. This often

occurs in mid-late summer when riparian vegetation is more palatable than the surrounding uplands. Subsequently, this unauthorized grazing prevents riparian vegetation from reaching its potential. Fencing off these water gaps and providing off channel water for neighboring livestock would enhance recovery of compromised riparian vegetation in this area. Considering coordination with the neighboring livestock owner, funding, and SHPO permitting for the installation of off-channel wells, it is possible that this action could be realized in the next five years. Estimated costs are $30,000+ per well. Future funding for this effort may be limited.

Opportunities for education regarding water quality and TMDLs include updating RWA maps and kiosks to include information concerning water quality and the Malheur River.

As funding and resources allow, implementation of TMDL related efforts will occur. TMDL implementation efforts will be reported to DEQ every five years.

## Partnerships

A number of other state, federal, and local agencies and interest groups assist with management activities on the RWA. These partners play an important role helping the department achieve its mission and the RWA goals. The Department will continue to rely on these and other partners in the future to help implement this plan, monitor water quality and provide input for future updates. This management plan identifies projects that provide new opportunities for existing or new partners. The Department welcomes and encourages more public participation in the administration of the wildlife area.

Examples of current partnerships at work on RWA include:

- BLM – grazing, fire management, and recreation.
- Burns Paiute Tribe - Consultation and monitoring of cultural resources present on RWA.
- Adjacent landowners - Property access and grazing allotments.
- DEQ – TMDL improvement

## Adaptive Management

This plan provides for adaptive management of the wildlife area. 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 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 the goals and objectives described in this plan whenever possible. Where possible, habitat

management activities will be monitored 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 area, and as such each plan will be formally revisited after 5 years and updated every 10 years. In the meantime, however, the Department will be reviewing and updating this plan periodically based on the results of the adaptive management program. This plan will also be informally reviewed by area 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. The goals and objectives described in this plan will not change until they are re-evaluated as part of the formal plan revision process. However, the strategies may be revised to better address changing circumstances or due to increased knowledge of the resources on the area. If changes are required, the level of public involvement and associated compliance requirements will be determined by the Department.

# References


1. Oregon Conservation Strategy. 2016. Oregon Department of Fish and Wildlife, Salem, Oregon.

2. Malheur River Basin Total Maximum Daily Load (TMDL) and Water Quality Management Plan (WQMP). 2010. Oregon Department of Environmental Quality, Salem, Oregon.

3. Fishing, Hunting, Wildlife Viewing, and Shellfishing in Oregon. 2009. Dean Runyan Associates, Portland, Oregon.

# Appendices

## Appendix A. Land Acquisitions and Adjustments Involving the Riverside Wildlife Areas

| Year | Acres | Action | Cooperator |
|---|---|---|---|
| 1972 | 1,720 | Purchase Middle Fork Malheur River section of the Riverside Wildlife Area to improve fishing access | D.W. and Irene Williams |
| 1976 | 427.24 | Purchased Ranch to improve fishing access to Malheur River | Clifford W. Blaylock |
| 1976 | 1,709.56 | Purchased portions of rail-grade and adjacent properties to improve fishing access to Malheur River | Union Pacific |
| 2005 | 0 net acres (25 acres for 25 acres) | Land exchange on north end of Malheur River Tract to consolidate property boundary & improve fishing access to Malheur River | Patrick Wilber |
| 2007 | 185.09 | Exchange property to consolidate and improve public access to rail-grade | Robert Huston |
| 2007 | 128.62 | Exchange property to consolidate and improve public access to rail-grade | Robert Huston |

## Appendix B. Native and Non-native Plant Species Known to Occur on the Riverside Wildlife Area.

| COMMON NAME | SCIENTIFIC NAME |
|---|---|
| **Native plant species** | |
| **Conifer Trees** | |
| Western juniper | *(Juniperus occidentalis)* |
| **Deciduous Trees and Shrubs** | |
| Antelope bitterbrush | *(Purshia tridentata)* |
| Wyoming big sagebrush | *(Artemisia tridentata ssp. wyomingensis)* |
| Basin big sagebrush | *(Artemisia tridentata ssp. tridentata* |
| Black cottonwood | *(Populus trichocarpa)* |
| Common chokecherry | *(Prunus virginiana)* |
| Elderberry | *(Sambucus spp.)* |
| Four-winged saltbush | *(Atriplex canescens)* |
| Grey rabbitbrush | *(Chrysothamnus nauseosus)* |
| Mock orange | *(Philadelphus gordonianus)* |
| Poison oak | *(Rhus radicans)* |
| Red-osier dogwood | *(Cornus stolonifera)* |
| Scabland sagebrush | *(Artemisia rigida)* |
| Western sumac | *(Rhus glabra)* |
| Wild rose | *(Rosa spp)* |
| Willow | *(Salix spp)* |
| **Grasses and Sedges** | |
| Great Basin wildrye | *(Leymus cinereus)* |
| Bluebunch wheatgrass | *(Pseudoroegneria spicata)* |
| Bottlebrush squirreltail | *(Elymus elymoides)* |
| Cattail | *(Typha latifolia)* |
| Idaho fescue | *(Festuca idahoensis)* |
| Indian ricegrass | *(Oryzopsis hymenoides)* |
| Rush | *(Juncus spp )* |
| Saltgrass | *(Distichlis spicata)* |
| Sandberg bluegrass | *(Poa sandbergii)* |
| Sedge | *(Carex spp )* |
| Thurber's needlegrass | *(Stipa therberiana)* |
| Western needlegrass | *(Stipa occidentalis)* |
| **Legumes** | |
| Lupine | *(Lupinus spp)* |
| Milkvetch | *(Astragalus spp)* |
| Phlox | *(Phlox spp)* |

| COMMON NAME | SCIENTIFIC NAME |
|---|---|
| **Forbs** | |
| Biscuitroot | *(Lomatium spp)* |
| Blazing star | *(Mentzelis laevicaulis)* |
| Clematis | *(Clematis spp.)* |
| Columbine | *(Aquilegia spp.)* |
| Common cattail | *(Typha latifolia)* |
| Common mullein | *(Verbascum thapsus)* |
| Desert buckwheat | *(Eriogonum heracleoides)* |
| Desert parsley | *(Lomatium spp)* |
| Field mint | *(Mentha arvensis)* |
| Grass widow | *(Sisyrinchium douglasii)* |
| Heartshapped buckwheat | *(Erigonum compositum)* |
| Larkspur | *(Delphimium spp.)* |
| Goldenrod | *(Solidage gigantean)* |
| Nettle | *(Urtica spp)* |
| Paintbrush | *(Castilleja spp)* |
| Pale wallflower | *(Erysimum occidentale)* |
| Rigid fiddleneck | *(Amsinckia retrorsa)* |
| Shooting star | *(Dodecatgeon pauciflorum)* |
| Thyme buckwheat | *(Eriogonum thymoides)* |
| Umbrella desert buckwheat | *(Eriogonum umbrellatum)* |
| Upland Larkspur | *(Delphinium nuttallianum)* |
| Wild cucumber | *(Echinocystis oregana)* |
| Wild onion | *(Allium acuminatum)* |
| Yellow bell | *(Fritillaria pudica)* |
| **Composites** | |
| Hoary aster | *(Machaeranthera canescens)* |
| Arrowleaf balsam root | *(Balsamorhiza sagittata)* |
| Blazing star | *(Mentzelia laeviculmis)* |
| Common cocklebur | *(Xanthium strumariam)* |
| Curlycup gumweed | *(Grindelia squarrosa)* |
| Daisy | *(Erizeron spp)* |
| Horseweed | *(Conyza canadensis)* |
| Wavy leaf thistle | *(Cirsium undulatum)* |
| Yarrow | *(Achillea lanulosa)* |
| **Non-native plant species** | |
| Alfalfa | *(Medicago sativa)* |
| Black locust | *(Medicago sativa)* |
| Bulbous bluegrass | *(Poa bulbosa)* |
| Bull thistle* | *(Cirsium vulgare)* |
| Common mallow | *(Malva neglecta)* |
| Crested wheatgrass | *(Agropyron cristatum)* |
| Forage kochia | *(Bassia prostrata)* |

| COMMON NAME | SCIENTIFIC NAME |
|---|---|
| Fruit trees | *(various)* |
| Golden currant | *(Ribes aureum)* |
| Hare barley | *(Hordeum leporinum)* |
| Honeysuckle | *(Lonicera tatarica)* |
| Intermediate wheatgrass | *(Agropyron intermedium)* |
| Lilac | *(Syringa vulgaris)* |
| Poplar | *(Populus spp.)* |
| Reed canarygrass | *(Phalaris arundinacea)* |
| Ripgut brome | *(Bromus rigidus)* |
| Russian olive | *(Elaeagnus angustifolia)* |
| Sheep fescue | *(Festuca ovina)* |
| Sherman Big bluegrass | *(Poa ampla)* |
| Siberian peashrub | *(Caragana arborescens)* |
| Silver buffaloberry | *(Shepherdia argentea)* |
| Small burnet | *(Sanguisorba minor)* |
| Tall wheatgrass | *(Agropyron elongatum)* |
| Teasel | *(Dipsacus sylvestris)* |
| Tumble mustard | *(Sisymbrium altissimum)* |
| Tumble pigweed | *(Amaranthus albus)* |
| White sweet clover | *(Melilotus alba)* |
| Wild rose | *(Rosa viginiana)* |

## Appendix C. Wildlife Species Known to Occur on Riverside Wildlife Areas

| Common Name | Scientific Name | F | W | Sp | S |
|---|---|---|---|---|---|
| **Occurrence: A=Abundant, C=Common, U= Uncommon, R = Rare** | | | | | |
| **Waterfowl** | | | | | |
| American widgeon | (*Anas penelope*) | U | | C | C |
| Barrow's goldeneye | (*Bucephala islandica*) | | | R | U |
| Blue-winged teal | (*Anas discors*) | R | | | |
| Bufflehead | (*Bucephala albeola*) | U | | U | C |
| Canada goose | (*Branta canadensis*) | C | C | C | C |
| Canvasback | (Aythya valisineria) | R | | R | R |
| Cinnamon teal | (*Anas cyanoptera*) | | | C | C |
| Common goldeneye | (*Bucephala clangula*) | C | | C | C |
| Common merganser | *(Mergus merganser*) | C | C | C | C |
| Gadwall | (*Anas strepera*) | C | U | C | C |
| Great White-fronted goose | (Anser albifrons) | R | | R | |
| Greater scaup | (*Aythya marila*) | | | | |
| Green-winged teal | (*Anas crecca*) | U | | U | U |
| Hooded merganser | *(Lophodytes cucullatus*) | R | | R | U |
| Lesser scaup | (*Aythya affinis*) | U | | U | C |
| Mallard | (*Anas platyrhynchos*) | C | C | C | C |
| Northern pintail | (*Anus acuta*) | | | R | R |
| Northern shoveler | (*Anas clypeata*) | R | | R | R |
| Redhead | (*Aythya americana*) | U | | U | U |
| Ring-necked duck | (*Aythya collaris*) | U | | U | C |
| Ruddy duck | (Oxyura jamaicensis) | | | | R |
| Wood duck | (*Aix sponsa*) | | | R | |
| **Waterbirds** | | | | | |
| American pelican | (*Pelecanus erythrorhynchos*) | R | | C | C |
| California gull | (*Larus californicus*) | C | U | C | C |
| Caspian tern | (*Sterna caspia*) | R | U | | C |
| Common loon | (*Gavia immer*) | R | | R | R |
| Common snipe | (*Gallinago gallinago*) | U | | R | C |
| Double-crested cormorant | (*Phalacrocorax auritus*) | C | C | C | C |
| Eared grebe | (*Podiceps nigricollis*) | | | R | R |
| Foster's tern | (*Sterna fosteri*) | | | C | |
| Great blue heron | (*Ardea herodias*) | C | U | C | C |
| Horned grebe | (*Podiceps auritus*) | | | U | U |
| Pie-billed grebe | (*Podilymbus podiceps*) | U | R | U | R |
| Red-necked grebe | (*Podiceps grisegena*) | R | | | U |
| Ring-billed gull | (Larus delawarensis) | C | C | C | C |

| Common Name | Scientific Name | F | W | Sp | S |
|---|---|---|---|---|---|
| Western grebe | (*Aechmophorus occidentalis*) | U | | U | R |
| **Shore-Marsh-Wading** | | | | | |
| Black-crowned night-heron | (*Nycticorx nycticorax*) | R | | | |
| Black-necked stilt | (*Himantopus mexicanus*) | | | R | R |
| Killdeer | (*Charadrius vociferus*) | C | C | C | U |
| Sora | (*Porzana carolina*) | | | R | |
| Virginia rail | (*Rallus limicola*) | | | R | |
| Willet | (*Tringa semipalmata*) | | | C | R |
| **Upland Game Birds** | | | | | |
| California quail | (*Callipepla californica*) | C | C | C | C |
| Chukar | (*Alectoris chukar*) | C | C | C | C |
| Gray partridge | (*Perdix perdix*) | R | R | R | R |
| Ring-necked pheasant | (*Phasianus colchicus*) | U | U | U | U |
| Sage grouse | *(Centrocerus urophasianu)* | R | R | R | R |
| **Migratory Game Birds** | | | | | |
| Mourning dove | (*Zenaida macroura*) | C | | C | C |
| **Passerines** | | | | | |
| American crow | (*Corvus brachyrhynchos*) | U | U | U | U |
| American dipper | (*Cinclus mexicanus*) | U | U | U | U |
| American goldfinch | (*Carduelis tristis*) | C | C | U | U |
| American robin | (*Turdus migratorius*) | C | C | C | C |
| American tree sparrow | (*Spizella arborea*) | C | R | R | C |
| Ash-throated flycatcher | (*Myarchus cinerascens*) | C | R | R | C |
| Barn swallow | (*Hirundo rustica*) | C | C | C | |
| Belted kingfisher | (*Ceryle alcyon* ) | C | C | C | C |
| Black-billed magpie | (*Pica hudsonia*) | C | C | C | C |
| Black-capped chickadee | (*Poecile atricapilla*) | C | C | C | C |
| Black-headed grosbeak | (*Pheucticus melanocephalus*) | U | U | | |
| Black-throated sparrow | (*Amphisipiza bilineata*) | | U | R | C |
| Brewer's blackbird | (*Euphagus cyanocephalus*) | C | C | C | U |
| Brewer's sparrow | (*Spizella breweri*) | | | C | R |
| Brown-headed cowbird | (*Molothrus ater*) | C | C | C | |
| Bullock's oriole | (*Icterus bullockii*) | C | C | | |
| Bushtit | (*Psaltriparus minimus*) | C | C | C | C |
| Canyon wren | (*Catherpes mexicanus*) | C | C | C | R |
| Cedar waxwing | (*Bombycilla cedrorum*) | U | U | U | U |
| Cliff swallow | (*Petrochelidon pyrrhonota*) | C | C | C | |
| Common nighthawk | (*Chordeiles minor*) | | C | C | C |
| Common raven | (*Corvus corax*) | C | C | C | C |

| Common Name | Scientific Name | F | W | Sp | S |
|---|---|---|---|---|---|
| Common yellowthroat | (*Geothlypis trichas*) | R | | R | |
| Dark-eyed junco | (*Junco hyemalis*) | C | C | U | U |
| Downy woodpecker | (*Picoides pubescens*) | R | R | R | R |
| European starling | (*Sturnus vulgaris*) | C | C | C | C |
| Evening grosbeak | (*Coccothraustes vespertinus*) | | | R | R |
| Golden-Crowned kinglet | (*Regulus satrapa*) | | | U | U |
| Golden-crowned sparrow | (*Zonotrichia atricapilla* ) | U | | U | U |
| Gray flycatcher | (*Empidonax wrightii*) | U | U | | |
| Hairy woodpecker | (*Picoides villosus*) | | | R | R |
| Harris' sparrow | (*Zonotrichia querula*) | | | | R |
| Horned lark | (*Eremophila alpestris*) | C | C | C | C |
| House finch | (*Carpodacus mexicanus*) | C | C | C | C |
| House sparrow | (*Passer domesticus*) | C | C | C | C |
| House wren | (*Troglodytes aedon*) | C | C | U | |
| Lark sparrow | (*Chondestes grammacus*) | | | R | |
| Lewis's woodpecker | (*Melanerpes lewis*) | R | U | U | R |
| Loggerhead shrike | (*Lanius ludovicianus*) | U | U | | |
| Marsh wren | (*Cistothorus palustris*) | | | C | R |
| Mountain bluebird | (*Sialia currucoides*) | U | | U | |
| Northern flicker | (*Colaptes auratus*) | C | C | C | C |
| Northern shrike | (*Lanius excubitor*) | | | R | R |
| Orange-crowned warbler | (*Vermivora celata*) | U | | U | |
| Pine siskin | (*Carduelis pinus*) | | | R | |
| Red-winged blackbird | (*Agelaius phoeniceus*) | C | C | C | U |
| Rock wren | (*Salpinctes obsoletus*) | U | U | | |
| Ruby-crowned kinglet | (*Regulus calendula*) | C | | C | U |
| Rufous hummingbird | (*Selaphorus rufus*) | R | U | | |
| Sage thrasher | (*Oreoscopetes montanus*) | | | C | C |
| Song sparrow | (*Melospiza melodia*) | C | C | C | C |
| Spotted towhee | (*Pipilo maculatus* ) | C | C | C | U |
| Townsend's solitaire | (*Myadestes townsendi*) | C | C | C | C |
| Tree swallow | (*Iridoprocne bicolor*) | C | C | U | |
| Varied thrush | (*Zoothera naevia*) | | | U | C |
| Vesper sparrow | (*Pooecetes gramineus*) | | R | U | |
| Violet-green swallow | (*Tachycineta thalassina*) | C | C | C | |
| Warbling vireo | (*Vireo gilvus* ) | U | U | | |
| Western bluebird | (*Sialia mexicana*) | U | | U | R |
| Western kingbird | (*Tyrannus verticalis*) | U | C | | |
| Western meadowlark | (*Sturnella neglecta*) | C | C | C | U |
| Western tanager | (*Piranga ludoviciana*) | U | U | | |
| White-crowned sparrow | (*Zonotrichia leucophrys*) | C | | C | C |
| White-throated swift | (*Aeronautes saxatalis*) | R | | R | |
| Wilson's warbler | (*Wilsonia pusilla*) | U | U | U | |
| Winter wren | (*Troglodytes trogoldytes*) | | C | C | R |
| Yellow warbler | (*Dendroica petechia* ) | C | C | U | |
| Yellow-rumped warbler | (*Dendroica coronata*) | C | U | C | U |

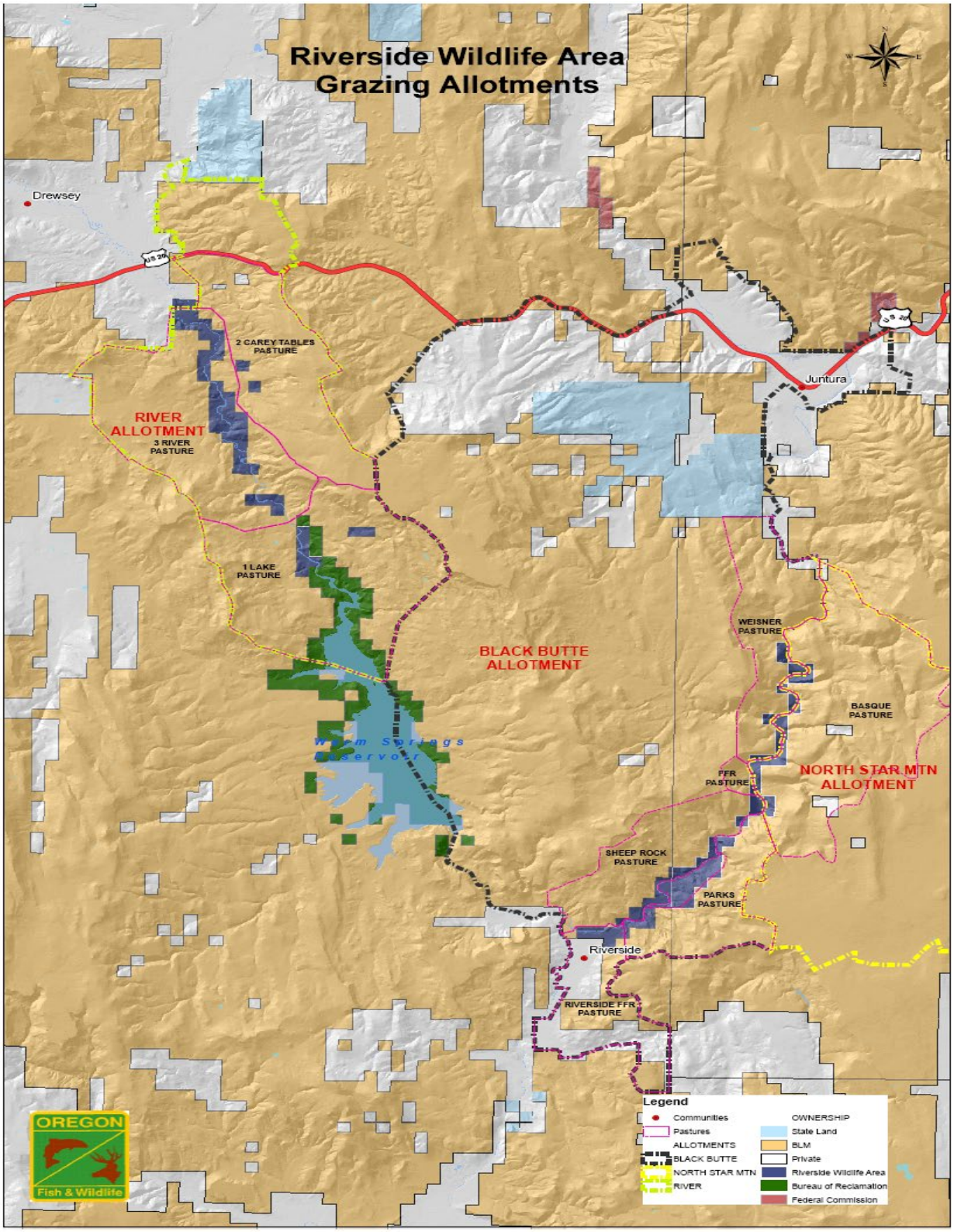
| Common Name | Scientific Name | F | W | Sp | S |
|---|---|---|---|---|---|
| **Raptors** | | | | | |
| American kestrel | (*Falco sparverius*) | C | C | C | U |
| Bald eagle | (*Haliaeetus leucocephalus*) | R | | R | U |
| Ferruginous hawk | (*Buteo regalis*) | U | U | U | U |
| Golden eagle | (*Aquila chrysaetos*) | U | U | U | U |
| Great horned owl | (*Bubo virginianus*) | U | U | U | U |
| Long eared owl | (*Asio Otus*) | U | U | R | U |
| Northern harrier | (*Circus cyaneus*) | U | R | C | C |
| Northern rough-winged | (*Stelgidopteryx serripennis*) | C | C | U | |
| Osprey | (*Pandion halilaetus*) | U | U | U | |
| Prairie falcon | (*Falco mexicanus*) | U | U | U | U |
| Red-tailed hawk | (*Buteo jamaicensis*) | C | C | C | C |
| Rough-legged hawk | (*Buteo lagopus*) | | | | U |
| Turkey vulture | *(Cathartes aura)* | R | R | U | C |
| Western screech-owl | (*Megascops kennicottii*) | U | U | U | U |
| **Fish** | | | | | |
| Bridgelip sucker | *(Catostomus columbianus)* | | | | |
| Channel catfish | *(Ictalurus punctatus)* | | | | |
| Chiselmouth | *(Acrocheilus alutaceus)* | | | | |
| Crappie | *(Pomoxis nigromaculatus)* | | | | |
| Great basin redband trout | *(Oncorhynchus mykiss newberrii)* | | | | |
| Largemouth bass | *(Micropterus salmoides)* | | | | |
| Largescale sucker | *(Catostomus macrocheilus)* | | | | |
| Longnose dace | *(Rhinichthys cataractae)* | | | | |
| Northern pikeminnow | *(Cyprinidae oregonensis)* | | | | |
| Rainbow trout | *(Oncorhynchus mykiss)* | | | | |
| Redside shiner | *(Richardonius balteatus)* | | | | |
| Smallmouth bass | *(Micropterus dolomieu)* | | | | |
| Speckled dace | *(Rhinichthys osculus)* | | | | |
| Tui chub | *(Siphateles bicolor)* | | | | |
| Yellow perch | *(Perca flavescens)* | | | | |
| **Mammals** | | | | | |
| Badger | *(Taxidea taxus)* | | | | |
| Beaver | *(Castor canadensis)* | | | | |
| Bighorn sheep | *(Ovis canadensis)* | | | | |
| Black tailed jackrabbit | *(Lepus californicus)* | | | | |
| Bobcat | *(Lynx rufus)* | | | | |
| Bushy-tailed woodrat | *(Neotoma cinerea)* | | | | |
| Cottontail rabbit | *(Sylvilagus floridanus)* | | | | |
| Coyote | *(Canis latrans)* | | | | |
| Deer mouse | *(Peromyscus maniculatus)* | | | | |
| Great basin pocket mouse | *(Perognathus parvus)* | | | | |

| | |
|---|---|
| House mouse | *(Mus musculus)* |
| Little brown myotis | *(Myotis lucifugus)* |
| Long-tailed vole | *(Microtus longicaudus)* |
| Mink | *(Mustella vision)* |
| Montane vole | *(Microtus montanus)* |
| Mule deer | *(Odocoileus hemionus)* |
| Muskrat | *(Ondatra zibethicus)* |
| Northern pocket gopher | *(Thomomys talpoides)* |
| Ords kangaroo rat | *(Dipodomys ordii)* |
| Porcupine | *(Erethizon dorsatum)* |
| Pronghorn antelope | *(Antilocapra americana)* |
| Raccoon | *(Procyon lotor)* |
| River otter | *(Lontra canadensis)* |
| Rocky mountain elk | *(Cervus elaphus)* |
| Sagebrush vole | *(Lemmiscus curtatus)* |
| Striped skunk | *(Mephitis mephitis)* |
| White-footed mouse | *(Peromyscus leucopus)* |
| Yellow-bellied marmot | *(Marmota flaviventris)* |

**Amphibians and Reptiles**

| | |
|---|---|
| Bullfrog | *(Rana catesbeiana)* |
| Common garter snake | *(Thamnophis sirtalis)* |
| Fence lizard | *(Sceloporus occidentalis)* |
| Gopher snake | *(Pituophis catenifer sayi)* |
| Great basin spadefoot | *(Spea intermontana)* |
| Leopard frog | *(Rana pipiens)* |
| Long-toed salamander | *(Ambystoma macrodactylum)* |
| Painted turtle | *(Chrysemys picta bellii)* |
| Racer | *(Coluber constrictor)* |
| Rubber boa | *(Carhina bottae)* |
| Short-horned lizard (Horned Toad) | *(Phrynosoma douglasii)* |
| Tree (Chorus) frog | *(Hyla regilla)* |
| Western rattlesnake | *(Crotalus oreganos)* |
| Western terrestrial garter snake | *(Thamnophis elegans)* |
| Western toad | *(Bufo boreas)* |
| Woodhouse toad | *(Bufo woodhouseii)* |

## Appendix D. BLM Grazing Allotments Associated with the Riverside Wildlife Area



## Appendix E. Legal Obligations Influencing Management of the Riverside 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

### 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
635-008-0140 Riverside Wildlife Area

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

**Division 50 - Furbearer and Unprotected Mammal Regulations**
635-050-0015 - Purpose
635-050-0045 - General Furbearer Regulations
635-050-0210 - Areas closed to Hunting or Trapping (except by permit)

**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

**Division 042 – Total Maximum Daily Loads (TMDLS)**

635-042-0080 Implementing a Total Maximum Daily Load