Final Draft

RIVERSIDE WILDLIFE AREA MANAGEMENT PLAN

April 2009

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Executive Summary

Purpose of the Plan

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

- Provide clear direction for management of RWA;
- Consolidate management of the Riverside Tract and Malheur River Tract under the RWA Management Plan;
- Provide long-term continuity in wildlife area management;
- Communicate the department's management priorities for RWA to its neighbors, adjacent land managers, visitors, and the public;
- Ensure management programs on RWA are consistent with the original mandate and purpose of the area when first established;
- Ensure management of RWA 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 RWA needs for staffing, operations, maintenance, and capital improvements.

Historical Background

RWA consists of two discrete tracts: the Riverside Tract and Malheur RiverTract. Historically, these tracts have been managed separately with only the Riverside Tract acknowledged as RWA. As stated earlier, one of the purposes of this plan is to consolidate management of the Riverside Tract and Malheur River Tract under the RWA Management Plan.

Riverside Tract

The original Riverside Tract is adjacent to the Malheur River near the former railroad community of Riverside. It was purchased from the Blaylock family in 1976 and has been administered by the Oregon Department of Fish and Wildlife (department) as RWA since that time.

The purpose of this initial acquisition was to provide public fishing and hunting access to a previously privately held portion of the Malheur River canyon. In addition, this purchase provided the opportunity for the department to emphasize fish and wildlife habitat management in the river canyon.

Additional acres were added to this tract in 1977 when the department purchased Union Pacific Railroad property and easements. Both of these purchases were made using Sport Fish Restoration (SFR) funds, a federal excise tax on fishing equipment and motor boat fuels.

A 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 2006, the department completed a land exchange with the private landowner to again establish public access to the rail service corridor and adjacent upland areas.

Malheur River Tract

In 1972, the department purchased a second tract, the Malheur River Tract, also with SFR funds, from D.W. Williams. Similar to the Riverside Tract, the objective of this purchase was to provide public fishing and hunting access to formerly privately held sections of the Malheur River south of Highway 20.

At the time of the original purchase the northern boundary of the former Williams property (Township 23 S Range 36 E SW ¼ of Section 5) was not fenced on the property line. As a result, the adjacent landowner had been using the northern most 80 acres for his cattle operation for several decades.

To resolve this issue, in 2005 the department completed a land exchange with the adjacent private landowner to consolidate the property boundary. The land exchange was based on trading equal acreage of equal monetary value. The department and the private landowner traded a 25-acre parcel of land to each other.

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 anglers. 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.

Currently the wildlife area's total acreage is 3,798.

Planning Approach

This management plan is the first of its kind developed for RWA. Goals, objectives and stategies (implementation actions) described in this 2009 plan are focused on maintaining and enhancing key habitats, as well as enhancing fish and wildlife oriented public use of the wildlife area.

Habitat goals, objectives and associated strategies were developed in an attempt to balance key habitat enhancement and maintenance with public use opportunities associated with those habitats.

This plan describes current issues and provides 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.

Riverside Wildlife Areas Vision
The vision for RWA is as follows:

Fish and wildlife habitats along the Malheur River are healthy and thriving, due to sound stewardship practices, while providing hunting, angling and other wildlife oriented recreational opportunities for present and future generations.

Wildlife Area Goals

The goals for RWA are:

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

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

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

Specific objectives and strategies to implement each goal, a well as detailed rationale, are provided in this plan on pages 30-37.

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

Upland habitats on RWA are both actively managed and passively managed. Actively managed upland habitats consist of developed agricultural lands utilized primarily for cereal grain production and upland game bird use. Livestock grazing by permittees on RWA lands is also a form of active management. Management of select historic, remnant sagebrush-steppe habitats in the absence of livestock grazing or farming is considered passive management.

Management activities such as vegetation manipulations (controlled burning, disking, farming, mowing) are tools department staff uses to maintain and restore healthy habitats.

Introduction

Purpose of the Plan

This plan will guide management of RWA for the next ten years. The department's management planning process for Wildlife Areas (WAs) involves development of broad goals, and formulation of specific objectives and management strategies to achieve those goals. Purposes of this plan are to:

- Provide clear direction for management of RWA;
- Consolidate management of the Riverside Tract and Malheur River Tract under the RWA Management Plan;
- Provide long-term continuity in wildlife area management;
- Communicate the department's management priorities for RWA to its neighbors, adjacent land managers, visitors, and the public;
- Ensure management programs on RWA are consistent with the original mandate and purpose of the areas set when first established;
- Ensure management of RWA 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 RWA 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 Riverside Wildlife Areas

The purpose of the initial acquisition of lands in the Riverside Tract was to provide public fishing and hunting access to a previously privately held portion of the Malheur River canyon. Similar to the Riverside Tract, the objective of the purchase of Malheur Tract lands was to provide public fishing and hunting access to formerly privately held sections of the Malheur River south of Highway 20.

RWA is currently managed to enhance and/or maintain habitat for native and desired fish and wildlife species as well as to provide dispersed, non-motorized fish and wildlife oriented recreational opportunities for the public. Its total acreage now stands at 3,798 acres.

RWA consists of two discrete tracts: the Riverside Tract and Malheur River Tract. As stated earlier, one of the purposes of this plan is to consolidate management of the Riverside Tract and Malheur River Tract under the RWA Management Plan.

Riverside Tract

The original Riverside Tract is adjacent to the Malheur River near the former railroad community of Riverside. It was purchased from the Blaylock family in 1976 and has been administered by the department as RWA since that time. The purpose of this initial acquisition was to provide public fishing and hunting access to a previously privately held portion of the Malheur River canyon. In addition, this purchase provided the opportunity for the department to emphasize fish and wildlife habitat management in the river canyon.

Additional acres were added to this tract in 1977 when the department purchased Union Pacific Railroad property and easements. Following purchase of the Union Pacific properties, from 1977 until 1995, hunters, anglers, and others freely accessed the Riverside Tract along the rail service 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 2006, the department completed a land exchange with the private landowner to again establish public access to the rail service corridor and adjacent upland areas.

Malheur River Tract

In 1972, the department purchased a second tract, the Malheur River Tract. Similar to the Riverside Tract, the objective of this purchase was to provide public fishing and hunting access to formerly privately held sections of the Malheur River south of Highway 20.

Iin 2005 the department completed a land exchange with the adjacent private landowner to consolidate the property boundary. The department and the private landowner traded a 25-acre parcel of land to each other. 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 anglers. 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.

The OCS, adopted in 2006, is the state's overarching strategy for conserving native fish and wildlife, to help ensure that Oregon's natural treasures are passed on to future generations. RWA is specifically described in the OCS and contains key habitats such as riparian and sagebrush shrub-steppe and key species such as bats and the listed Malheur wire lettuce. Many habitat management activities which occur on RWA address conservation actions recommended in the OCS, and these will be identified throughout this management plan.

This management plan is the guiding document that will ensure natural resources on RWA 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 RWA will strive to meet or exceed habitat protection policies and standards set by the department.

Riverside Wildlife Area Vision Statement

The vision for RWA is as follows:

Fish and wildlife habitats along the Malheur River are healthy and thriving, due to sound stewardship practices, while providing hunting, angling and other wildlife oriented 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.

Goals and objectives for Riverside Wildlife Area 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 46 acres of agricultural upland habitat.
>
> **Objective 1.3:** Maintain and expand RWA facilities and equipment used to conduct habitat management projects and other administrative functions.

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 in a manner compatible with habitat management objectives.

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

Specific objectives and strategies to implement each goal, as well as detailed rationale, are provided in this plan on pages 30-37.

Wildlife Area Establishment

RWA consists of two discrete tracts: the Riverside Tract and Malheur River Tract. Historically, these tracts have been managed separately with only the Riverside Tract acknowledged as the RWA.

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Description and Environment

Physical Resources

Location

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 Knowles. This road is a two-track side 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. An orange gate marks the entrance to the wildlife area. Signs on the management area guide visitors to access sites.

There are three vehicle access points to the 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. Due to the infrequent use and roughness, the road is generally recreated every year by the first user in spring (generally locals, BLM or department staff). This is the only access to the northern section of the wildlife area.

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.

Malheur Watershed Wildlife Habitat personnel are responsible for management and oversight of RWA and are headquarted at the department's district office in Hines, Oregon. RWA is located in the Basin and Range ecoregion as described in the OCS (ODFW, 2006).

Figure 1 shows the location and key features of the RWA.

Climate

RWA is typically subjected to cool/moist, rarely harsh winters and extremely hot/dry summers. The wildlife area averages 3,200 feet in elevation, with an annual rainfall of 12 inches, consisting mainly of winter snowfall. The nearest weather station is located in Burns, Oregon, approximately 58 miles west of RWA. The annual average daily temperature is 46^0F while 66^0F is the average temperature in July. Winters are generally cold with 16^0F the average minimum temperature in January (Johnsgard, 1963). The average frost-free period is 83 days, with a range of 20 to 116 days (Gomm, 1979).

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.

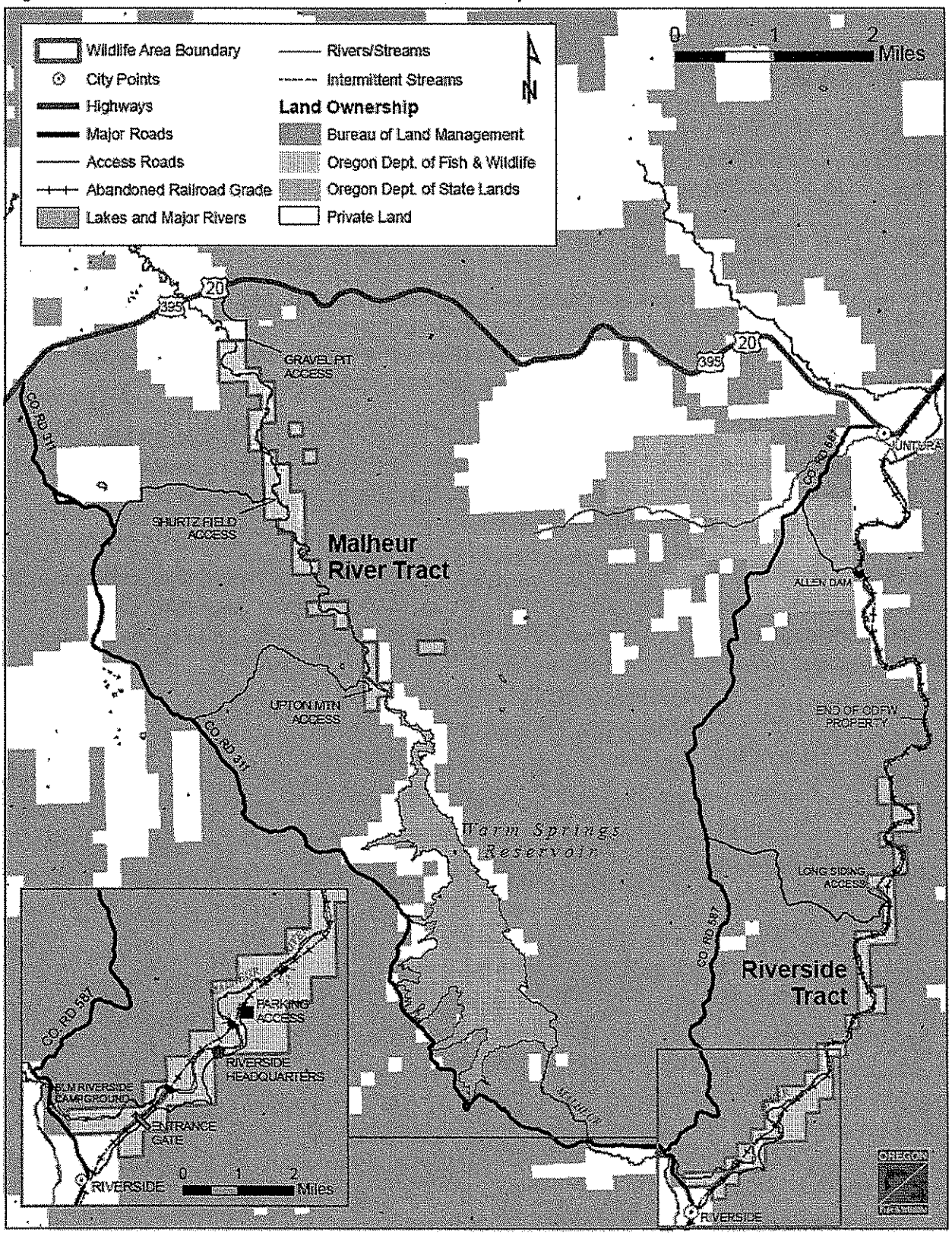
There are four major soil types within RWA (USDA, 2008). The most common soil type is a Risley-Gumble complex. This soil is found in areas of 2-20% slope, typically near the foothills of the agricultural fields within the area. This soil has slow permeability, but is well drained, with an available water-holding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

The next 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 next 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.

Figure 1 - Riverside Wildlife Area Features and Ownership



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. These habitats are important for some species which are listed as State threatened or sensitive such as the golden eagle *(Aquila chrysaetos)* and sage sparrow (*Amphispiza belli*).

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 sagebrush (*Artemisia tridentata)*, rabbitbrush (*Chrysothamnus nauseosus*), and antelope bitterbrush (*Purshia tridentata*).

Grasslands are also a component of shrub steppe habitat. 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

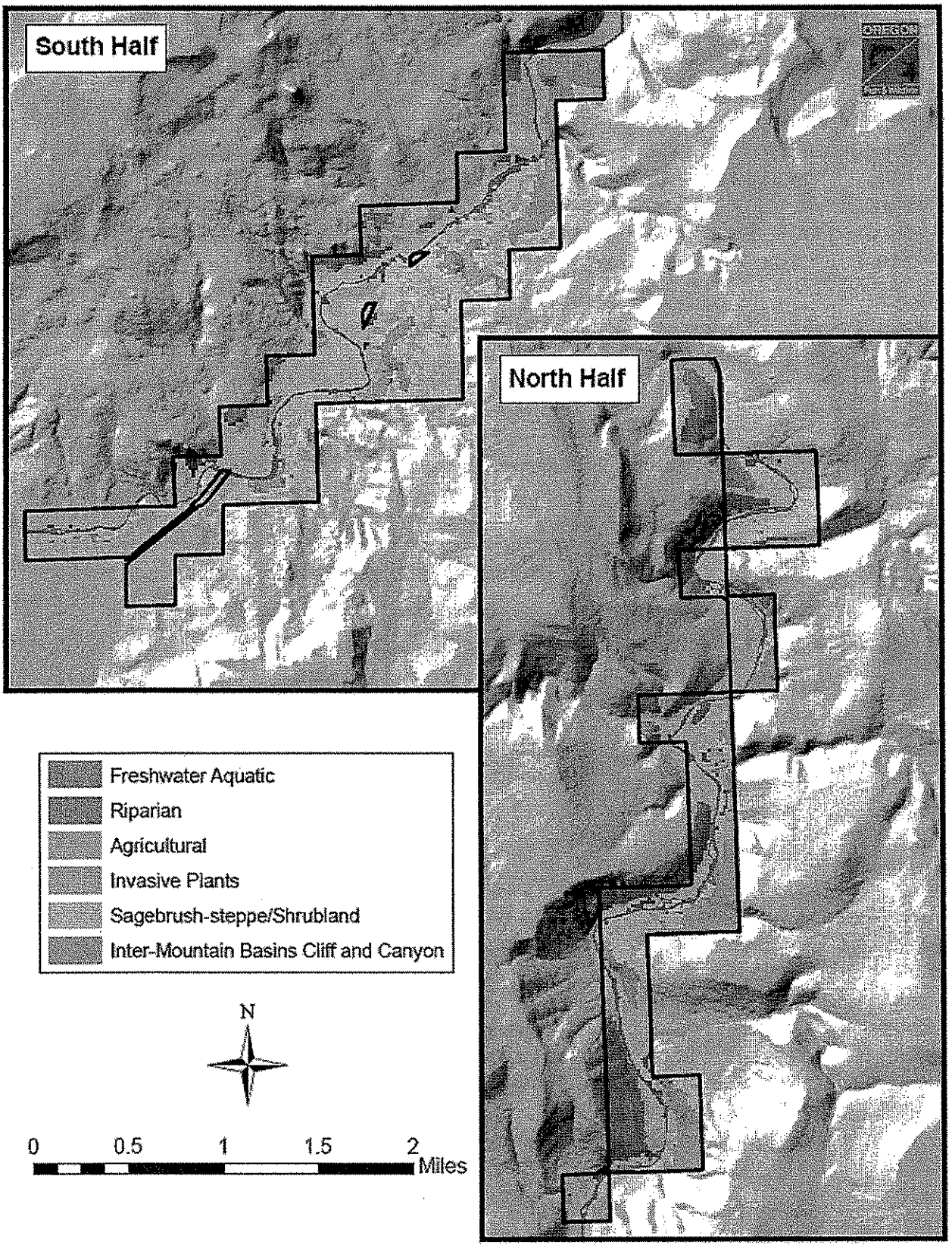
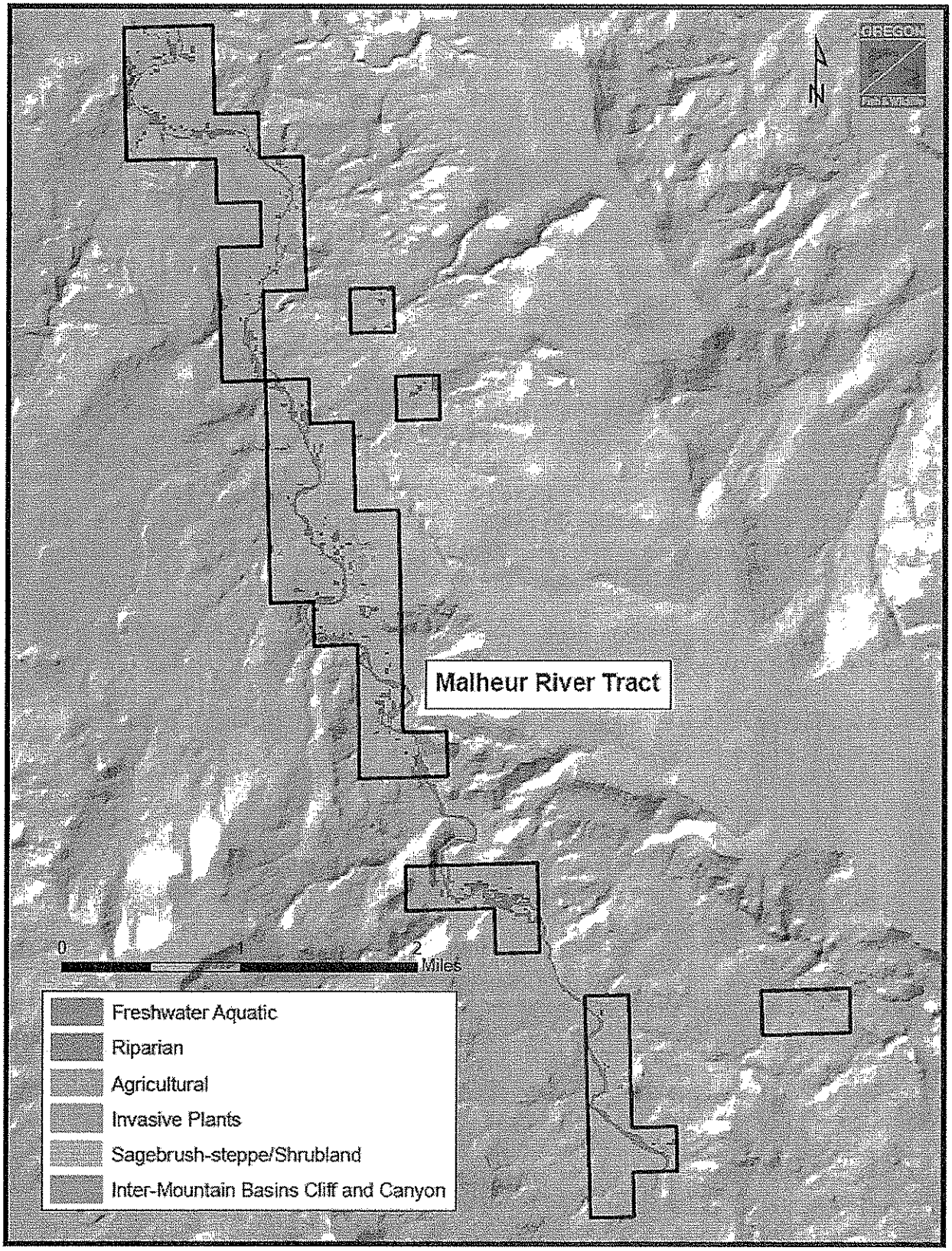


Figure 2.2 - Habitat Types within Riverside Wildlife Area - Malheur River Tract



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 changes within the fire regime, past land use practices, 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).

Non-native plant encroachment is common in eastern Oregon's shrub-steppe habitats due to many past land management practices including fire suppression. The invasion by species as previously mentioned can increase frequency, intensity, and extent of wildland fires. Bunchgrasses and sagebrush are adapted to weak and infrequent fires, so high fire frequency can eliminate these native species. Also, as livestock grazing in or near this habitat type increases, it is common to see invasive plant species colonize and become dominant. Fire suppression has also led to encroachment of junipers (*Juniperus occidentalis*) across much of this habitat.

In relation to this plan's goals and objectives, the department will develop a memorandum of agreement (MOA) between the department and the two respective BLM districts (Vale and Burns) to address fire suppression efforts on RWA. The following criteria will be addressed in the MOA:

- Areas where treatment with fire is essential or potentially effective (fire is needed to improve resource conditions or reduce risks).

- Areas where fire is unlikely to succeed (fire would be adverse; examples include areas significantly altered by fuel accumulation and species changes; Medusahead rye/ cheatgrass). In these areas determine appropriate, ecologically sound alternatives.

- Areas where fire does not need to be re-introduced (fire is not a significant component, or the fire regime has not been altered, i.e. rock areas or native grass/shrub areas with low fuel accumulations).

Agriculture: There are approximately 46 acres within RWA that can be considered agriculture, pasture and mixed environment habitat. This habitat can be structurally diverse. Since construction of Warm Springs Dam in 1919, riverine terraces (currently farmed areas) 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 are typically 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. Mechanical irrigation (pumps and wheel-lines) and soil supplements (fertilizer) modified the harsh growing conditions, allowing grain and hay crops to be

produced. Sprinkler irrigation systems in several locations 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 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. Unlike many riparian habitats the wildlife area 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). 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 upstream flows, existing wide channels with poor wetland vegetation communities, limited canopy and shrub cover, and concentrated livestock grazing.

Riparian areas are very susceptible to impacts of grazing because livestock are attacted 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.

From April 1 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. Then flows are 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.

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 and warm water fish species.

Description of Wildlife Area Tracts
The wildlife area is comprised of two discrete tracts: the Malheur River Tract and the Riverside Tract (see Figures 2.1 and 2.2).

The Malheur River Tract contains 1,720 acres of riparian and upland habitat adjacent to the Malheur River for approximately seven miles, between Highway 20 and Warm Springs Reservoir.

The Riverside Tract is comprised of approximately 2,080 acres of riparian and upland habitat along approximately eight miles of the Malheur River, between the community of Juntura and the former railroad community of Riverside. Most lands adjacent to either Tract are managed by the BLM.

The Riverside Tract is located approximately 17 miles southwest of the community of Juntura (via County Road 587) and five miles downstream of Warm Springs Dam. The wildlife area is notable for its remoteness and has been enjoyed for decades by anglers, hunters and wildlife viewers seeking a truly out-of-the-way outdoor experience.

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 20 species of fish, 15 species of amphibians and reptiles, 29 species of mammals, and 102 plant species. Further research and surveys are required to establish information regarding presence and abundance of invertebrate species as little is currently known.

See Appendix B for a list of wildlife species.

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. Resident Canada geese (*Branta canadensis*), golden eagle, red-tailed hawk (*Buteo jamaicensis*), osprey (*Pandion halilaetus*) and the vocal canyon wren (*Catherpes mexicanus*) all nest on the area.

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

Non-native upland game bird species include chukar partridge, Hungarian partridge (*Perdix perdix*), ring-necked pheasant (*Phasianus colchicus*), and California quail (*Callipepla californica*).

Raptors which forage on the area include bald eagle (*Haliaeetus leucocephalus*), golden eagle, prairie falcon (*Falco mexicanus*) and American kestrel (*Falco sparverius*).

Owls and resident 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*), and California bighorn sheep (*Ovis canadensis californicus*). Other common species include cougar (*Puma concolor*), bobcat (*Lynx rufus*), raccoon (*Procyon lotor*), 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*) and western rattlesnake (*Crotalus viridis*).

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

Fish
RWA contains 21 miles of river, supporting 20 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 and channel catfish, to supplement existing populations.

Management activities for these species are passive through vegetation maintenance and chemical control buffers in/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 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; SV – Sensitive, Vulnerable; OCS Strategy Species present - x, Key Species - X)

Common Name	Scientific Name	Federal Status	State Status	OCS
Ferruginous hawk	*Buto regalis*	SOC	SC	x
Pallid bat	*Antrozous pallidus*		SV	x
Inland Columbia Basin redband trout	*Oncorhyncus mykiss*	SOC	SV	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*), 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 effect 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 and smallmouth bass 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 and present on the Riverside Wildlife Area.

Common Name	*Scientific Name*	Common Name	*Scientific Name*
Poison Hemlock	*Conium maculatum*	**Diffuse Knapweed***	*Centaurea diffusa*
Whitetop*	*Cardaria draba*	Puncturevine*	*Tribulus terrestris*
Yellowstar Thistle*	*Centaurea solstitialis*	**Spotted Knapweed***	*Centaurea maculosa*
Scotch Thistle*	*Onopordum canthium*	**Rush Skeletonweed***	*Chondrilla juncea*
Field Bindweed	*Convolvulus arvensis*	Wild oat	*Avena fatua*
Prickly Lettuce	*Lactuca serriola*	Russian Knapweed*	*Centaurea repens*
Common Teasel	*Dipsacus fullonum*	Goatgrass	*Aegilops cyclindrica*
Cheatgrass	*Bromus secalinus*	**Russian thistle***	*Salsola kali*
Canada Thistle*	*Cirsium arvense*	Common Mullein	*Verbascum thapsus*
Cereal Rye*	*Secale cereale*	**Medusahead**	*Taeniatherum caput-medusae*

* Species known to be present on RWA and subject to mechanical, biological and/or chemical control. Species in bold are identified in the Oregon Conservation Strategy.

Except for the authorized hunting seasons for introduced upland game birds, there is no active management effort on RWA aimed specifically at control of non-native wildlife species.

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 dove	*Columba livia*	California quail	*Callipepla californica*
Hungarian partridge	*Perdix perdix*	House mouse	*Mus musculus*
Ring-necked pheasant	*Phasianus colchicus*	House sparrow	*Passer domesticus*

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 and social science principals supported with monitoring data when available.

Annual program activities are in place to monitor wildlife populations, habitat use and other features. Wildlife response to habitat developments is a major objective of most surveys. Data are collected by administrative units and in some cases, specific localities, habitats or vegetative types based upon survey objectives. Population data are used to monitor effectiveness of population management plans, especially for selected big game species.

Recreational use

Monitoring of recreational activities is conducted by department, Oregon State Police (OSP) and BLM staff. Informal monitoring of public use is also conducted through periodic contacts during the year. Below are examples of recreational use monitoring activities:

- 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, there is no systematic methodology in place to monitor public use at RWA. The need to systematically monitor public use at RWA is identified in Objectives 3.1 and 3.2 of this plan.

Habitat
Monitoring is an important component of determining if objectives are met or if changes are needed to better provide the desired result. The department has set up a working agreement between BLM range technicians and department staff to monitor range conditions on RWA and adjacent BLM lands. When budgets allow, transect monitoring and photo points may be repeated on a five-year cycle.

Big Game
Malheur Watershed District Wildlife staff monitors big game numbers and animal condition each year. 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 hatching success.

Wildlife Diseases
Bighorn sheep and mule deer are sampled by district wildlife staff for several diseases including Pasterella (pneumonia) 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. 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 cause adverse conditions for wildlife utilizations particularly 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).

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 separate primarily due to difficult terrain, river crossings and limited funding resources.

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.

With the assistance of Burns BLM, a fence is currently under construction 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. Currently the River Pasture has been grazed from April 1st through May 30th. During this time most of the grazing is focused on the riparian areas. Once the fence is completed department lands within the River Pasture will only be grazed from April 1st through April 30th. This action will improve the efforts of this plan to restore riparian and upland habitats for the benefit of fish and wildlife species.

Malheur River Tract - River Allotment

Pastures	BLM Acres	Private Land	State Acres	BOR Acres	Total
Carry 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

Grazing Schedule:

Malheur River Tract - River Allotment Grazing System

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

Yellow highlight indicates 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.

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

Riverside Tract - Black Butte Allotment Grazing System

Pasture	Year 1	Year 2	Year 3
Potholes	7/1 - 10/31	7/1 - 10/31	7/1 - 10/31
Water Gulch	4/15 - 7/1	6/15 - 10/15	Rest
Sheep Rock	Rest	Rest	4/15 - 6/15
Parks	Rest	4/15 - 6/15	Rest
Moritiz	Trailing in Fall	Trailing in Fall	Trailing in Fall
Juntura SG	Rest	4/1 - 7/1	Rest
Butte	4/1 - 7/1	Rest	Rest
McGetrick	Rest	4/1 - 7/1	Rest
Terry Basin	4/1	Rest	Rest
Meeker Mountain	9/15 - 10/31	6/1 - 8/31	7/1 - 10/31
Potholes	7/1 - 10/31	7/1 - 10/31	7/1 - 10/31
Weisner	Rest	Rest	4/1 - 6/30
Juniper Basin SG	7/15 - 9/15	6/1 - 10/31	6/15 - 10/31

Riverside Tract - North Star Allotment Grazing System

Pasture	Year 1	Year 2	Year 3
Basque	4/01 - 6/30	Rest	Rest
Slaughter Gulch	4/01 - 6/30	Rest	Rest
Cottonwood Basin	4/01 - 6/30	Rest	Rest
Arrien FFR	4/01 - 6/30	Rest	Rest
Mosquito Seeding	4/01 - 6/30	Rest	Rest
Monument	7/1 - 10/31	4/01 - 6/30	7/1 - 10/31
Wildcat/Cold Spring	Rest	7/1 - 10/31	4/01 - 6/30

FFR Pastures are managed at the discretion of the permittee. BLM charges a flat AUM fee annually regardless if pastures are used or rested.

Yellow highlight indicates pastures that border 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 a diesel pump. Four fields are irrigated through wheel line sprinklers. An arial photograph of the existing irrigated areas is found in Appendix E.

Public Use

Monitoring public use (hunting, trapping, angling, wildlife viewing, horse back 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) wildlife viewing, horse back riding, and boating use of the area is estimated based on periodic counts of individuals visiting the wildlife area. Currently, there is no systematic methodology in place to monitor public use at RWA. The need to systematically monitor public use at RWA is

identified in Objectives 3.1 and 3.2 of this plan.

Cultural Resources

History

Historically, most of the Malheur subbasin was within the Burns Paiute Tribe's (BPT) territory. As Euro-American settlement increased in the early 1800s, land use within the Malheur subbasin 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 subbasin and is located in the community of Burns, Oregon (NPPC 2002).

Resources

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 required to report suspicious activities to the department or OSP.

Culturally Significant Plants

All native plants are important to the BPT. Some species, however, have cultural significance (Appendix B). Not all of the plants occur on RWA, but they do occur within southeast Oregon on lands owned by the BPT. Harvesting and/or disturbance of culturally significant vegetation by non-tribal members are prohibited on the wildlife area unless permission is granted by tribal authorities.

Social Environment

Demographics

According to 2006 census figures, the estimated population of Harney County was 6,888 and Malheur County was 31,247. The population of the nearest town, Juntura, is 245.

Land Use
RWA is surrounded by a mixture of private, state and federal lands. The primary land use surrounding RWA is for agriculture with grain crops and some livestock grazing (Figure 3).

Infrastructure

Developments/Facilities
RWA is 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, have been developed on RWA. The wildlife area contains approximately eight miles of boundary fence. Limted developments are listed below (Table 5).

Table 5. Facilities and Developments on the Riverside Wildlife Area.

Development Type	Location/ Tract Name
Parking Areas (1)	Riverside Tract
Informational Kiosk (4)	Riverside Tract
Walking/Horse-back riding trails (8 miles)	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)

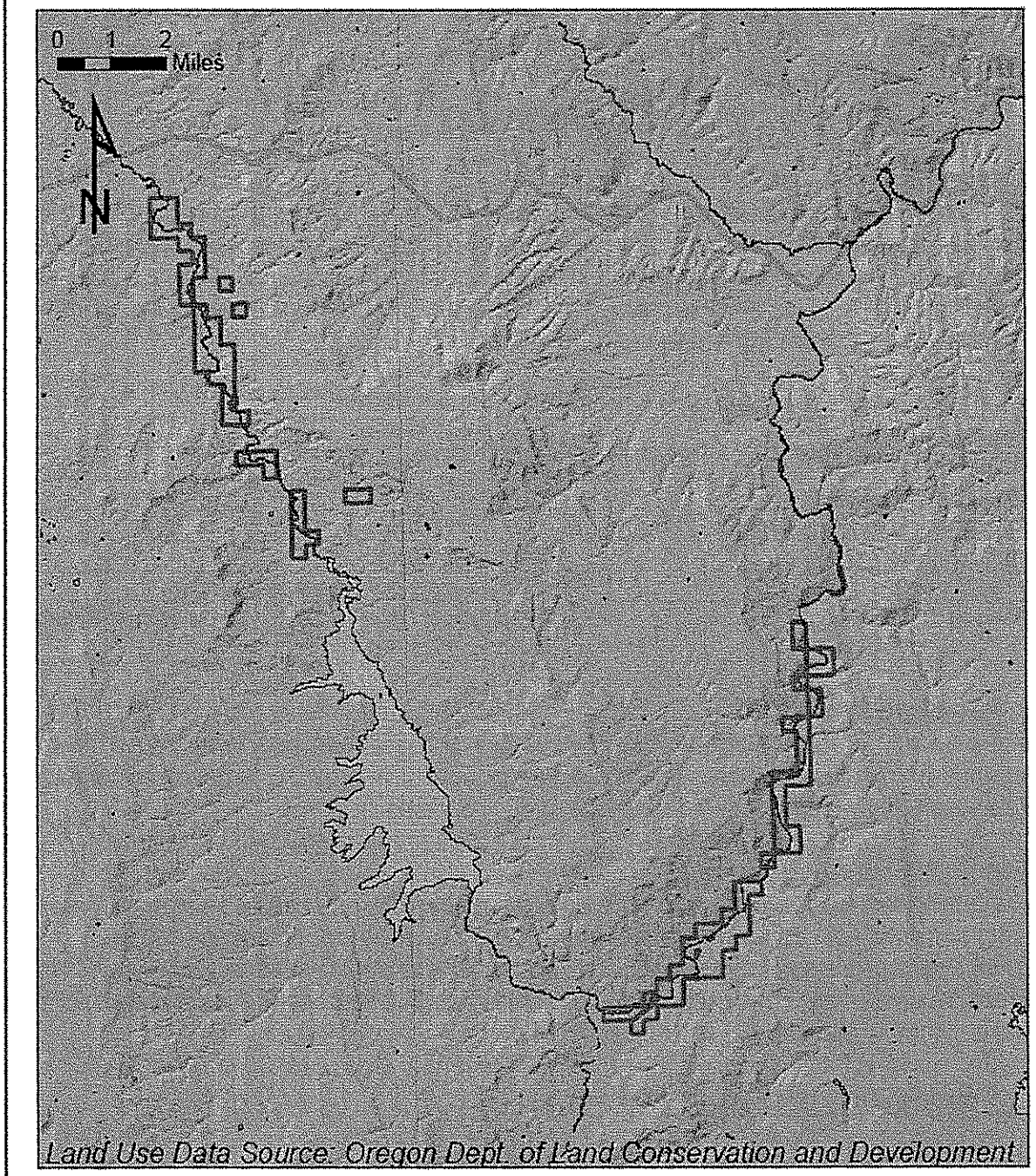
Water Resources
There is one active water right, on the Riverside Tract, that has been issued by the Oregon Water Resources Department to serve the wildlife area. This right allows water to be pumped from the Malheur River to irrigate 16 acres.

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

Figure 3 - Land Use Surrounding Riverside Wildlife Area



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 or feeding barns).

Appendix A lists the changes in property owned including the original purchase in 1972.

As other lands adjacent to or within current wildlife area boundaries become available and would enhance RWA operations or management capabilities, additional acquisitions or land trades 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. All roads on RWA outside of established access points are closed to motorized access. Public access points are limited to the following:

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 Knowles. This road is a two-track side road that crosses five miles of 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 Bureau of Land Management (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. An orange gate marks the entrance to the wildlife area. Signs on the management area guide visitors to access sites.

Malheur River Tract
There are three vehicle access points to the 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. Due to the infrequent use and roughness, the road is generally re-created every year by the first user in spring (generally locals, BLM or department staff). This is the only access to the northern section of the wildlife area.

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.

Warm Springs Reservoir is a nearby attraction, popular for waterskiing, fishing and waterfowl hunting. Much of the land adjacent to the Riverside Tract is managed by the BLM and is also open to the public for hunting, fishing, wildlife viewing and other recreational activities. Malheur River which runs through the Riverside Tract is only boatable (primarily by raft) during late spring through early summer months (May to the first week of July).

Currently, there is no camping allowed on RWA. However, there is a BLM campsite with public toilets, picnic tables, fire rings, and developed campsites 2.25 miles west of the Riverside Tract entrance, along the main Riverside Road, . In addition, abundant camping opportunities exist on BLM ground adjacent to the Riverside Tract.

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 6).

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. A few individuals trap on RWA each year in the pursuit of muskrat, beaver and river otter.

Estimated use by anglers on RWA is approximately 500 angler days annually.

Table 6. Estimated Annual Hunting, Trapping, and Angling Use Days on the Riverside Wildlife Area

Activity	Estimated Annual Use Days
Hunting	
Big Game	1,600
Waterfowl	800
Upland Game	1,700
Trapping	50
Angling	500
Total	**4,650**

Wildlife Viewing

An increasing number of people are using the area to observe and photograph wildlife, boating, horseback ride, mountain bike, and pursue other outdoor recreation opportunities (Table 7).

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.

Table 7. Estimated Annual Wildlife Viewing Use days on Riverside Wildlife Area.

Activity	Estimated Annual Use Days
Wildlife Viewing	50
Photography	25
Hiking	25
Horseback Riding	25
Other misc.(e.g. gathering of plants by Tribal members)	25
Total	**150**

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 Malheur River Basin. These habitats were created and maintained by a variety of ecological processes, most importantly the area's local climate and resulting hydrology. Historical habitat types are not only supported by those processes but a host of modern land use

practices on adjacent lands (i.e. modern irrigation structures/use on adjacent lands) and management activities on the wildlife areas. Management activities including vegetation manipulations (farming, mowing, cutting, disking, controlled burning, and chemical control) are tools RWA personnel use to maintain and create important healthy habitats. Benefits are varied due to the wide variety of habitat uses and preferences among the different wildlife species utilizing RWA. Not all species or guilds of species will see benefits at all times.

The following objectives and strategies are based on the three goals described earlier. They identify the management activities and priorities of the 2009 RWA 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 decreases 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 indentifying key areas for protection and restoration in sagebrush steppe commnuities.

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. Fence key areas where terrain and access allow.

Strategy 6. Coordinate with BLM to conduct prescribed burns as a management tool to enhance upland habiats.

Strategy 7. Develop a MOA with both Vale and Burns BLM districts to address interagency fire suppression efforts, access roads, water sources, safety of firefighters and the public, and post-fire rehabilitation treatments.

Objective 1.2: Protect, enhance and manage approximately 46 acres of agricultural upland habitat.

Rationale
Agricultural 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; 2) increased cover and structure (vertical and horizontal) for hiding and/or nesting, and: 3) reduced agricultural damage by wildlife on neighboring private lands. 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. Crop selection within agricultural 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 promote wildlife food plots.

Strategy 2. Utilize crop varieties (cereal/forb/row crop) similar to neighboring agricultural land uses that are attractive to migratory and resident wildlife, to encourage wildlife to use the wildlife area and minimize private land crop damage by wildlife.

Strategy 3. Provide cereal grain and forb mixed food plots for migratory waterfowl and upland bird species (pheasant, Californian quail, and chukar).

Strategy 4. Re-establish native grasses, shrubs, and forbs on outer food plot areas where irrigation is not applicable. 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 develop and maintain housing 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, lean-to implement storage shed, and two cement RV pads for staff or volunteer use. Existing equipment on site includes diesel irrigation pumps, various hand and power tools, tractors, D3 Cat/backhoe tractor, and farm implements.

Strategy 1. Replace former house with permanent or seasonal headquarters facility where seasonal and permanent staff are housed and can conduct habitat management activities.

Strategy 2. Improve and maintain existing RV pads to provide host and volunteers with suitable RV utilites.

Strategy 3. Provide satellite phone and/or radio communication system to maintain contact among field staff, volunteers and field offices.

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. The portion of the Malheur River which passes through the Malheur River Tract shows a postive return of riparian vegetation along the river channel due to the control of cattle grazing in riparian areas.

In 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 wok closely with the 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.

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 indentifying 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. Develop an annual riparian monitoring protocol, to assess grazing utilization and impacts.

Strategy 4. Develop an inventory protocol (consistent with BLM sampling methods), to monitor riparian health every five years.

Strategy 5. 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 6. Plant native riparian vegetation such as willow, dogwood, mock-orange and alder.

Strategy 7. Fence key riparian areas where terrain and access allow.

Strategy 8. Provide water gaps to Malheur River where needed to allow livestock watering.

Strategy 9. Coordinate with BLM to conduct prescribed burns as a management tool to enhance riparian habitats.

Strategy 10. Coordinate with BLM and district fish biologists to develop restoration actions to improve riparian conditions for fish and wildlife. Seek partnerships with other agencies, sportsman's groups, or volunteers for implementation of such projects.

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 Oregon Conservation Strategy.

> **Strategy 1.** Coordinate with district fish biologists to identify fish habitat improvement projects, such as planting riparian vegetation.
>
> **Strategy 2.** Seek partnerships with other agencies, sport groups and volunteers for implementation of fish habitat enhancement projects.

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. Currently, camping is not allowed on RWA due to the threat of wildfire, as well as lack of facilities and staff to monitor camping use. Through this plan the department intends to develop a recreational use plan to explore development of boater access sites and feasibility of providing primitive camp sites once funding and staffing are available. Staff will continue to improve access and opportunities by providing quality fish and wildlife habitat and information on the wildlife area. Improved sinage is needed to identify access roads into both the Riverside and Malheur River Tracts. Currently, there are no signs on site identifying the Highway 20, Shurtz Field, Upton Mountain and Riverside Headquarters access roads to RWA.

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

> **Strategy 1.** Continue current upland game, waterfowl, big game hunting and trapping opportunities. Work will include providing recommendations for seasons and use of the wildlife area.

Strategy 2. Continue current angling opportunities. Work will entail monitoring angler use by district fisheries staff and/or OSP and providing recommendations or changes as necessary regarding access.

Strategy 3. Maintain fences, gates, and seven miles of rail-grade trails to provide access for hunting, trapping, and angling use.

Strategy 4. Maintain and improve developments including all parking areas, access roads and informational signs (including signs identifying locations of access roads).

Strategy 5. Improve and maintain access bridges to provide hiking, biking, and horseback access to 12 river miles within the Riverside Tract.

Strategy 6. Develop a method to track hunter and trapper use and success on the wildlife area, to help evaluate and/or modify current hunt programs and regulations. Method may include hunter questionnaires to assess hunt programs or development of a self-service free permit system.

Strategy 7. Develop a recreational use plan to explore development of boater access sites and feasibility of providing primitive camp sites (currently camping is prohibited on the wildlife area) while maintaining dispersed, non-motorized recreational activities.

Strategy 8. Develop and maintain relationships with hunting, trapping and angling organizations to assist with habitat and recreational management activities.

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 significant portion of the use on RWA. 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 Juntura experience an increased amount of use on holidays and weekends. At this time, there is no systematic methodology in place to monitor public use at RWA. The need to systematically monitor public use at RWA is identified below in Strategy 1.

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. Develop a progam 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 free permit system.

Strategy 2. Maintain and improve Wildlife Area infrastructure including parking areas, informational signs and trails.

Strategy 3. Conduct and improve wildlife population, distribution, and use surveys. Work will entail coordination between district wildlife staff, volunteers and students to catalog and inventory wildlife sightings, creel surveys, monitor progress of habitat improvement projects and other recreation use, which will help guide the prioritization of future management activities.

Strategy 4. Develop internship programs with colleges and universities to support education, management, inventory, and monitoring needs.

Strategy 5. Provide wildlife habitat educational and informational events for schools, civic groups, conservation entities, and/or other institutions, as requested.

Strategy 6. Partner with recreational and conservation groups to assist in developing a recreational use plan which promotes dispersed non-motorized recreational activities.

Strategy 7. Increase the availability of wildlife area related information through web page postings, weekly recreational reports, other media publications, brochures, maps, and regulations.

Strategy 8. Provide RWA specific 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 RWA 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 hunting license and tag revenues.

Over the past five years, funding for the operation and maintenance of RWA has averaged approximately $60,000 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 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. RWA is located in the High Desert Administrative Region. RWA is currently staffed part time by one six-month seasonal technician. The Malheur Watershed District Wildlife Habitat Biologist in Hines oversees the budget administration of this plan and supervision of the seasonal technician.

Compliance Requirements

RWA 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.

Partnerships

Partnerships with federal, state and local agencies, universities, tribes, non-profits, individual volunteers and private landowners are an important part of RWA 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 partners in the future as new potential opportunities arise. The department welcomes and encourages such participation to assist in management and operation of RWA as desired.

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.

Adaptive Management

This plan provides for adaptive management of RWA. 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 RWA 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 RWA. If changes are required, the level of public involvement and associated compliance requirements will be determined by the department.

References

Gomm, F.B. 1979. *Climate and agriculture of Malheur-Harney Basin, Oregon.Special Report 530.* Oregon State University, Corvallis, Oregon.

Johnsgard, G.A. 1963. *Temperature and the water balance for Oregon weather stations.* Oregon Agricultural Experiment Station Special Report 150.

Northwest Power Planning Council, 2002. *Draft Malhuer River Subbasin Summary.* SPPC. Portland, OR. 96pps.

Ogden, P.S. 1950. *Peter Skene Ogden's Snake Country Journal, 1824-25 and 1825-1826.* E.E. Rich (ed). Hudson's Bay Record Society, London.

Ogden, P.S. 1961. Peter *Skene Ogden's Snake Country Journal, 1826-27.* K.G. Davies (ed). Hudson's Bay Record Society, London.

Ogden, P.S. 1971. *Peter Skene Ogden's Snake Country Journal, 1827-28 and 1828-1829.* G. Williams (ed). Hudson's Bay Record Society, London.

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

U.S. Department of Agriculture. Natural Resource Conservation Service (2008) *Oregon Soil Data.* United States Department of Agriculture, Washington, D.C. Available at: http//www.or.nrcs.usda.gov/pnw_soil/or_data.html.

U.S. Forest Service. 1993. *Malheur wild and scenic river management plan.* Malheur National Forest, John Day, Oregon.

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		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, Non-native and Culturally Significant 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 brush	*(Purshia tridentata)*
Big sagebrush	*(Artemisia tridentata)*
Bitterbrush	*(Purshia 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)*
Quaking aspen	*(Populus tremuloides)*
Red-osier dogwood	*(Cornus stolonifera)*
Scabland sagebrush	*(Artemisia rigida)*
Western sumac	*(Rhus glabra)*
Wild rose	*(Rosa spp)*
Willow	*(Salix spp)*
Grasses and Sedges	
Basin wildrye	*(Leymus cinereus)*
Bluebunch wheatgrass	*(Pseudoroegneria spicata)*
Bottlebrush squirreltail	*(Sitanion hystrix)*
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 needlegrass	*(Stipa therberiana)*
Western needlegrass	*(Stipa occidentalis)*
Legumes	
Lupine	*(Lupinus spp)*
Milkvetch	*(Astragalus spp)*
Phlox	*(Phlox spp)*

Forbs

COMMON NAME	SCIENTIFIC NAME
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)*
Barley	*(Hordeum vulgare)*
Black locust	*(Robinia pseudoacacia)*
Blue mustard	*(Chorispora tenella)*
Bulbous bluegrass	*(Poa bulbosa)*
Bulbous bluegrass	*(Poa bulbosa)*
Bull thistle*	*(Cirsium vulgare)*
Common mallow	*(Malva neglecta)*
Crested wheatgrass	*(Agropyron cristatum)*
Fourwing saltbush	*(Atriplex canescens)*

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)*
Rocky Mountain juniper	*(Juniperus scopulorum)*
Russian olive	*(Elaeagnus angustifolia)*
Sainfoin	*(Onobrychis viviaefolia)*
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)*
Triticale	*(Triticosecale spp.)*
Tumble mustard	*(Sisymbrium altissimum)*
Tumble pigweed	*(Amaranthus albus)*
Wheat	*(Triticum spp.)*
White sweet clover	*(Melilotus alba)*
Wild rose	*(Rosa viginiana)*

Culturally significant plant species:

COMMON NAME	SCIENTIFIC NAME
Yarrow	*Archilea millefolium*
Tapertip onion	*Altium acuminatum*
Rock onion	*Allium macrum*
Balsamroot	*Balsamorhiza* spp.
Mountain mahogany	*Cercoarpus ledifolius*
Red-osier dogwood	*Cornus stolonifera*
Great Basin wild rye	*Elymus cinercus*
Larch	*Larix occidentalis*
Bitter root	*Lewsisia redivia*
Sweet biscuit root	*Lomatium canbyi*
Biscuit root	*Lomatium cous*
Desert parsley	*Lomatium gormanii*
Henderson lomatium	*Lomatium hendersonii*
Desert celery	*Lomatium nuducauli*
Indian mint	*Mentha arvensis*
Indian ricegrass	*Oryzopsis hymenoides*
Reed grass	*Phragmites australis*
Ponderosa pine	*Pinus ponderosa*
Quaking aspen	*Populus tremuloides*

Chokecherry	*Prunus virginiana*
Rose hips	*Rosa* spp.
Golden currant	*Ribes aureum*
Arrowhead/wapato	*Sagittaria latifolia*
Coyote willow	*Salix exigua* spp.
Red willow	*Salix* spp.
Elderberry	*Sambucus canadensis*
Bullrush	*Scirpus validus*
Cattail	*Typha latifolia*
Stinging nettle	*Urtica dioica* spp.
Huckleberry	*Vaccinium membranaceum*
Mules ear	*Wyethia amplexicaulis*
Death camus	*Zigadenus venenosus*

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*)	C		C	C
Canada Goose	(*Branta canadensis*)*	C	C	C	C
Canvasback	(Aythya valisineria)	R		R	R
Cinnamon Teal	(*Anas cyanoptera*)	U			
Common Goldeneye	(*Bucephala clangula*)	C		C	C
Common Merganser	(*Mergus merganser*)*	C	C	C	C
Gadwall	(*Anas strepera*)			R	R
Great White-fronted goose	(Anser albifrons)	R		R	
Greater Scaup	(*Aythya marila*)				U
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
Red-breasted Merganser	(*Mergus serrator*)	C		C	C
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 Coot	(*Fulica americana*)	C		C	C
American Pelican	(*Pelecanus erythrorhynchos*)	R		C	A
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	C	C	C
Horned Grebe	(*Podiceps auritus*)			U	U
Pacific loon	(*Gavia pacifica*)			R	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
Great Egret	(*Adea alba*)	C			C
Greater Sandhill Crane	(*Grus canadensis*)			R	R
Killdeer	(*Charadrius vociferus*)*	C	C	C	U
Sandhill Crane	(*Grus canadensis*)	U		R	R
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*)*	U	R	R	R
Ring-necked Pheasant	(*Phasianus colchicus*)*	U	U	U	U
Sage Grouse	(*Centrocerus urophasianu)*	U	U	R	R
Migratory Game Birds					
Mourning Dove	(*Zenaida macroura*)*	C	C	C	U
Passerines					
American Crow	(*Corvus brachyrhynchos*)*	C	C	C	C
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 Yellowthroat	(*Geothlypis trichas*)	R		R	
Dark-eyed Junco	(*Junco hyemalis*)*	C	C	U	U
Downy Woodpecker	(*Picoides pubescens*)	R	R	R	R

Common Name	Scientific Name	F	W	Sp	S
Eastern Kingbird	(*Tyrannus tyrannus*)				
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*)				R
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	
Willow Flycatcher	(*Empidonax traillii*)	R	C		
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
Raptors					
American Kestrel	(*Falco sparverius*)*	C	C	C	U
Bald Eagle	(*Haliaeetus leucocephalus*)	R		R	U

Common Name	Scientific Name	F	W	Sp	S
Ferruginous Hawk	(*Buteo regalis*)	U	U	C	C
Golden Eagle	(*Aquila chrysaetos*)*	U	U	U	U
Great Gray Owl	(Strix nebulosa)	R	R	C	C
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

Common Name	Scientific name	Order
Mammals		
Artiodactyla		
Mule Deer	*Odocoileus hemionus*	Cervidae
Carnivora		
Coyote	*Canis latrans*	Canidae
Badger	*Taxidea taxus*	Mustelidae
Mink	*Mustella vision*	Mustelidae
Otter	*Lutra canadensis*	Mustelidae
Striped Skunk	*Mephitis mephitis*	Mustelidae
Weasel	*Mustella spp*	Mustelidae
Raccoon	*Procyon lotor*	Procyonidae
Chiroptera		
Little Brown Myotis	*Myotis lucifugus*	Vespertilionidae
Lagomorpha		
Black-tailed Jackrabbit	*Lepus californicus*	Leporidae
Mountain Cottontail	*Sylvilagus nuttallii*	Leporidae
Rodentia		
Beaver	*Castor canadensis*	Castoridae
Bushy-tailed Woodrat	*Neotoma cinerea*	Cricetidae
Porcupine	*Erethizon dorsatum*	Erethizontidae
Northern Pocket Gopher	*Thomomys talpoides*	Geomyidae
Great Basin Pocket Mouse	*Perognathus parvus*	Heteromyidae
Kangaroo Rat	*Dipodomys ordii*	Heteromyidae
Ords Kangaroo Rat	*Dipodomys ordii*	Heteromyidae
Deer Mouse	*Peromyscus maniculatus*	Muridae
Long-tailed Vole	*Microtus longicaudus*	Muridae
Montane Vole	*Microtus montanus*	Muridae
Muskrat	*Ondatra zibethicus*	Muridae
Sagebrush Vole	*Lemmiscus curtatus*	Muridae
White-footed Mouse	*Peromyscus leucopus*	Muridae
Yellow-bellied Marmot	*Marmota flaviventris*	Sciuridae
Amphibians / Reptiles		
Anura		
Western Toad	*Bufo boreas*	Bufonidae
Woodhouse Toad	*Bufo woodhouseii*	Bufonidae
Tree (Chorus) Frog	*Hyla regilla*	Hylidae
Great Basin Spadefoot	*Spea intermontana*	Pelobatidae
Bullfrog	*Rana catesbeiana*	Ranidae
Leopard Frog	*Rana pipiens*	Ranidae
Caudata		
Long-toed Salamander	*Ambystoma macrodactylum*	Ambystomatidae

Common Name	Scientific name	Order
Squamata		
Rubber Boa	*(Carhina bottae)*	Boidae
Gopher Snake	*(Pituophis catenifer sayi)*	Colubridae
Racer	*(Coluber constrictor)*	Colubridae
Common Garter Snake	*(Thamnophis sirtalis)*	Colubridae
Western Terrestrial Garter Snake	*(Thamnophis elegans)*	Colubridae
Fence Lizard	*(Sceloporus occidentalis)*	Phrynosomatidae
Short-horned Lizard (Horned Toad)	*(Phrynosoma douglasii)*	Phrynosomatidae
Western Rattlesnake	*(Crotalus oreganos)*	Viperidae
Testudines		
Painted Turtle	*(Chrysemys picta bellii)*	Emydidae

Fish

Gamefish

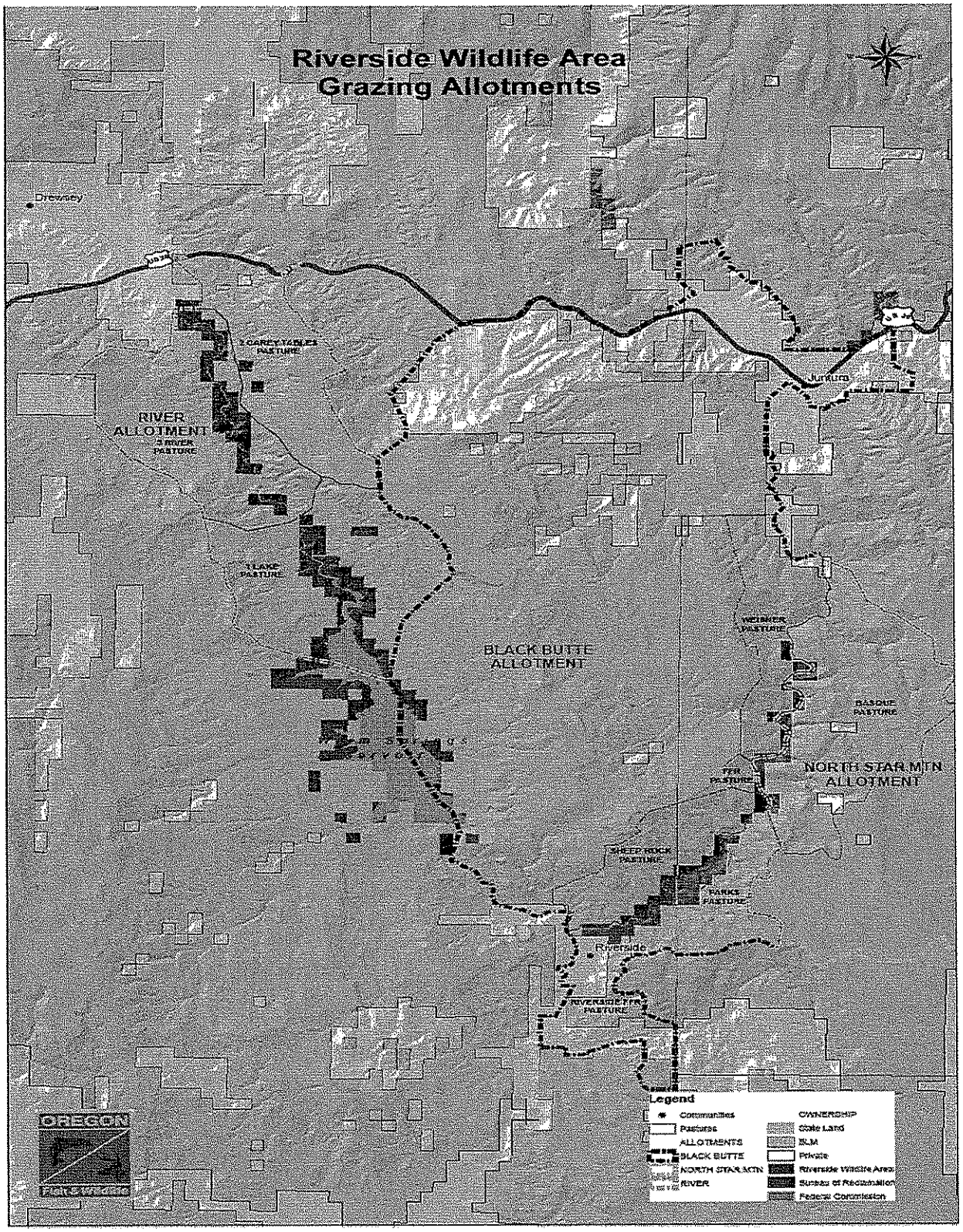
Trouts: Family Salmonidae		
Redband trout	*(Oncorhynchus mykiss gairdneri)*	
Rainbow trout	*(Oncorhynchus mykiss irideus)*	
Sunfishes: Family Centrarchidae		
Largemouth bass	*(Micropterus salmoides)*	
Smallmouth bass	*(Micropterus dolomieui)*	
Black crappie	*(Pomoxis nigromaculatus)*	
White crappie	*(Pomoxis annularis)*	
Bluegill	*(Lepomis macrochirus)*	
Pumpkinseed	*(Lepomis gibbosus)*	
Perches: Family Percidae		
Yellow perch	*(Perca flavescens)*	
Bullhead catfishes: Family Ictaluridae		
Channel catfish	*(Ictalurus punctatus)*	
Brown bullhead	*(Ameiurus nebulosus)*	
Crayfishes: Family Asticidae		
Crayfish	*(Pacifasticus gambeli, Pacifasticus leniusculus)*	

NONGAME FISH

Suckers: Family Catostomidae		
Bridgelip sucker	*(Catostomus columbianus)*	
Largescale sucker	*(Catostomus macrocheilus)*	

Minnows: Family Cyprinidae	
Common carp	*(Cyprinus carpio)*
Chiselmouth	*(Acrocheilus alutaceus)*
Redside shiner	*(Richardsonius balteatus)*
Longnose dace	*(Rhinichthys cataractae)*
Speckled dace	*(Rhinichthys osculus)*
Northern pikeminnow	*(Ptychocheilus oregonensis)*
Sculpins: Family Cottidae	
Mottled sculpin	*(Cottus bairdii)*

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



Appendix E. Aerial View of Irrigated Fields on the Riverside Tract.

Appendix F. Legal Obligations Influencing Management of the Riverside Wildlife Areas

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
635-008-0140 Riverside 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