LIST OF CONTRIBUTORS

The following individuals, consisting of Oregon Department of Fish and Wildlife biologists and program coordinators, provided valuable input into this plan:

- Chris Vogel, Restoration and Monitoring Biologist
- David Speten, Fern Ridge Wildlife Area Manager
- David Stroppel, Habitat Program Manager, South Willamette Watershed
- Bernadette Graham-Hudson, West Region Manager
- Steve Marx, West Region Manager (retired)
- Doug Cottam, South Willamette Watershed District Manager
- Laura Tesler, Willamette Wildlife Mitigation Program Coordinator
- Ann Kreager, Willamette Wildlife Mitigation Project Biologist
- Colin Tierney, Assistant Habitat Biologist
- Susan Barnes, West Region Regional Conservation Biologist
- Keith Kohl, Wildlife Area Operations Coordinator

In addition, the following individuals provided input to the development of this plan:

- Diane Steeck, Wetland Ecologist, City of Eugene
- Paul Gordon, Wetland Technical Specialist, City of Eugene
- Emily Steel, Ecologist, City of Eugene
- Katie MacKendrick, Restoration Ecologist, Long Tom Watershed Council
- Jarod Jabousek, Wildlife Biologist, USFWS Partners for Fish and Wildlife Program
- Jodi Delevan, Wildlife Biologist, USFWS
- Cat Brown, Wildlife Biologist, USFWS
- Wes Messinger, Botanist, US Army Corps of Engineers
- Bob Altman, American Bird Conservancy
- Lawrence Schwabe, Confederated Tribes of Grand Ronde

Coyote Creek Northeast Management Plan was prepared by:

Chris Vogel – WWMP Restoration and Monitoring Biologist
Oregon Department of Fish and Wildlife
Fern Ridge Wildlife Area
26969 Cantrell Rd.
Eugene, OR 97402
# Executive Summary

# 1 Introduction and Background

1.1 Purpose of the Management Plan
1.2 Conservation Values
1.3 ODFW Mission and Authority
1.4 Property and Administrative Oversight
1.5 Willamette Wildlife Mitigation Program
1.6 Ecological Significance of Coyote Creek Northeast

# 2 Site Description, History and Public Use

2.1 Landscape Setting
2.2 Site History
2.2.1 Historic Vegetation
2.2.2 Historic and Cultural Land Use
2.2.3 Cultural Resources/SHPO Consultation
2.3 Existing Conditions
2.3.1 Physical Description, Topography, and Boundaries
2.3.2 Habitat Types/Land Use/Invasive Vegetation
2.3.3 Hydrology
2.3.4 Soils and Geology
2.3.5 Facilities, Roads, and Maintenance Access
2.3.6 Hazardous Waste
2.3.7 Water Rights
2.4 Public Access and Site Use
2.4.1 Public Access, Use, and Recreation
2.4.2 BPA Conservation Easement
2.4.3 Zoning
2.4.4 Agricultural Lease
2.5 Environmental Setting
2.5.1 Climate

# 3 Strategy Habitats and Species: Existing Conditions, Threats, and Conservation Importance

3.1 Strategy Habitats
3.1.1 Wetland Habitats
3.2 Strategy Species
3.3 Fish & Wildlife Species

# 4 Strategy Habitats: Desired Future Conditions and Management Goals and Objectives

4.1 Wetlands
4.2 Grasslands
Public Access and Use ................................................................. 44
Infrastructure ............................................................................... 45
Management Plan Implementation ................................................. 46
7.1 Prioritization of Restoration and Enhancement Actions with Suggested Timeframes ................................................................. 46
7.2 Projected Restoration Timeline and Activities .......................... 47
7.3 Adaptive Management ................................................................ 50
7.4 Monitoring ................................................................................ 51
7.4.1 Effectiveness Monitoring ..................................................... 51
7.4.2 Compliance Monitoring ....................................................... 52
7.5 Planning Process and Public Participation ................................. 53
7.6 Regulatory Requirements .......................................................... 53
7.7 Operations & Management ....................................................... 54
7.8 Management Plan Development and Reporting ....................... 54
7.9 Management Staff Contact Information .................................... 56
References Cited ........................................................................... 57

List of Figures
Figure 1. Landscape Setting ............................................................ 8
Figure 2. Historic Vegetation ............................................................ 14
Figure 3. Site Topography ................................................................. 16
Figure 4. Coyote Creek Northeast Property Tax Lot Map ................ 17
Figure 5. Coyote Creek Northeast Field Unit Map ......................... 19
Figure 6. Coyote Creek Northeast Hydrology Map ....................... 20
Figure 7. Soils Map ........................................................................ 23
Figure 8. Infrastructure Map ........................................................... 24
Figure 9. Desired Future Conditions .............................................. 38
Figure 10. Restoration Phases .......................................................... 49
Figure 11. Monitoring Points ............................................................ 51

List of Tables
Table 1. Coyote Creek Northeast Tax Lots ........................................ 15
Table 2. Soils of Coyote Creek Northeast, Lane County, Oregon .... 21
Table 3. Coyote Creek Northeast Easement Restrictions and Management Actions ......................................................... 27
Table 4. Priority OCS Strategy Habitats and Species ....................... 32
Table 5. Restoration Timeline and Activities ................................. 47

List of Appendices
Appendix 1: BPA Conservation Easement
Appendix 2: Biodiversity Report
Appendix 3: Historical Aerials
Appendix 4: Plant and Wildlife Species Inventory
Appendix 5: Coyote Creek Northeast Oregon Conservation Strategy Species List
Executive Summary

In August 2015, the Oregon Department of Fish and Wildlife (ODFW) purchased the 224.83-acre Coyote Creek Northeast property in Lane County, Oregon, for the purposes of conserving and restoring wetland and grassland habitats for a variety of wildlife including grassland birds, amphibians, reptiles, raptors, and waterfowl. The acquisition was funded under the Willamette Wildlife Mitigation Program (WWMP).

In 2010, the Bonneville Power Administration (BPA) and the State of Oregon signed an agreement to settle BPA wildlife habitat mitigation obligations in the Willamette Valley, guaranteeing more than $117 million for fish and wildlife habitat conservation and restoration, protecting a minimum of 16,880 acres of important native habitats. To accomplish this mitigation objective the parties established the Willamette Wildlife Mitigation Program (WWMP), managed by the ODFW.

ODFW granted BPA a permanent conservation easement on the property in exchange for the program funds. The conservation easement identifies the conservation values of the site with desired future conditions (DFC) to include restoring degraded habitats from cropland to wet prairie and upland prairie (See Appendix 1).

Coyote Creek Northeast adds an important piece of land to the Fern Ridge Wildlife Area (FRWA) and compliments conservation management on the West Eugene Wetlands, a network of conserved and managed prairie, savanna, woodland, and riparian areas totaling over 3,500 acres. This acquisition creates a key connection between three adjoining conservation areas: the U.S. Army Corps’ (USACE) Fern Ridge complex, much of which is managed by ODFW as the FRWA, the City of Eugene’s Coyote Prairie, and the ODFW’s Coyote South. The Coyote Creek South was purchased through the WWMP in 2013. The Coyote Creek South Management Plan (2016) served as a template and provided significant background information and direction for the development of this plan.

This plan describes the overall goals and objectives of ODFW’s management of Coyote Creek Northeast for the next 10 years (2017-2027), and serves to guide restoration and management actions as well as public access and use. The plan implements the intent of the Oregon Conservation Strategy (OCS), documents site features and history, and designates the habitat types and species that will be the focus of management and restoration actions. It describes the present conditions and a suite of actions to move the site toward DFC. The plan is based on an adaptive management framework, recognizing the importance of a schedule of implementation, monitoring and evaluation, and applying the successful strategies into ongoing restoration and management regimes.
The four primary goals under this plan are:

1. Restore and enhance wetland habitats (wet prairies and vernal pools) to benefit native species;
2. Improve the quality of grassland (upland prairie and oak savanna) habitats;
3. Provide public uses and access that is compatible with conservation goals; and
4. Conduct monitoring for WWMP compliance, management effectiveness and program implementation.

Under this plan, the 224.83-acre site will transform from its current agricultural use and unmanaged edge habitats to a large expanse of restored prairie, seasonal wetlands, and oak savanna. The improved site is expected to support a suite of native wildlife and plants. Visitor access will be provided for activities such as wildlife viewing, nature exploration and hunting.
1 Introduction and Background

The Oregon Department of Fish and Wildlife (ODFW) acquired the 224.83-acre Coyote Creek Northeast in August 2015 with funding from the Willamette Wildlife Mitigation Program (WWMP). Located in Lane County, Oregon, Coyote Creek Northeast is immediately adjacent to the east of Fern Ridge Wildlife Area (FRWA). The property is north of Cantrell Road and south of Highway 126, west of the city limits of Eugene, east of the city limits of Veneta and south of Fern Ridge Reservoir (Figure 1).

Figure 1. Coyote Creek Northeast Location Map
Coyote Creek Northeast is within the West Eugene Area Conservation Opportunity Area (COA 086) and hosts habitats highlighted within the Oregon Conservation Strategy (ODFW 2016), specifically wetland and grassland habitats in the form of restorable native prairie. The site holds potential for improving habitat conditions for wet and upland prairie habitats, including several OCS strategy species that are in decline in the Willamette Valley, such as the western meadowlark (*Sturnella neglecta*) and the federally listed (threatened), streaked horned lark (*Eremophila alpestris strigata*).

Coyote Creek Northeast adds an important piece of protected land to the FRWA and compliments existing conservation management of the West Eugene Wetlands, a network of conserved and managed prairie, Oregon white oak savanna, woodland and riparian areas totaling over 3,500 acres. The site’s acquisition creates a key connection between three adjoining conservation areas: the U.S. Army Corps’ Fern Ridge complex, much of which is managed by ODFW as the FRWA, the City of Eugene’s Coyote Prairie site and ODFW’s Coyote Creek South site (also purchased through the WWMP in 2013)(Figure 1). Benefits of proposed management also fit within the long-term vision of the Rivers to Ridges Partnership, a group of 14 agencies and organizations including ODFW, to connect a landscape scale habitat corridor for the benefit of wildlife, plants and people.

The purchase of Coyote Creek Northeast by ODFW preserves the property in perpetuity. The permanent conservation easement on the property held by the Bonneville Power Administration designates that the site be managed for the purpose of preserving the site’s documented conservation values.

The OCS provides the foundation for management of Coyote Creek Northeast. The OCS is predicated on using the best available science to create a broad vision for long-term conservation of Oregon’s native fish and wildlife, as well as various invertebrates and native plants. The intent of the plan is to help ensure these resources are passed on to future generations by proactively conserving declining species and habitats to reduce the possibility of future federal or state listings. Goals and objectives set by this plan will assist with conserving, restoring, and reconnecting key habitats in the area to help achieve habitat and wildlife goals in the Willamette Valley consistent with the vision set by the OCS.
1.1 Purpose of the Management Plan

This Management Plan (Plan) provides the guidance for site management and restoration for the next ten years (2017-2027). It summarizes existing site conditions, past uses, and site history, envisions future habitat conditions, outlines public access and use opportunities, communicates management and restoration goals and objectives, provides a timeline for undertaking restoration actions, and suggests a monitoring strategy. Management and restoration goals and desired future conditions identified in this plan will serve as the foundation for the development of more specific operational prescriptions and budgets for individual projects, as well as for grant applications to secure restoration funding. As with any restoration and management plan, the goals and objectives outlined in the plan will drive actions by ODFW. The timing and/or sequencing of actions are projections and actual timing will be contingent on evaluation of treatment effectiveness to ensure project success, and also in response to available funding. Targets and success criteria for Coyote Creek Northeast will be based on achieving habitat restoration and management goals and objectives identified in this plan within the prescribed timeline.

1.2 Conservation Values

The permanent conservation easement between ODFW (State of Oregon) and BPA (United States of America) lists the conservation values associated with the property at the time of purchase. As stated therein (Appendix 1), the property’s conservation values include the following:

- Restorable wet and upland prairie habitats to provide habitat for declining grassland birds, amphibians, reptiles, raptors, waterfowl and other species.
- Potential opportunities for re-introduction of endangered Willamette Valley plants, such as Bradshaw’s lomatium (*Lomatium bradshawii*) and Willamette daisy (*Erigeron decumbens*).
- Strategic location to Fern Ridge Wildlife Area other the prairie and wetland conservation lands.
- Presence of important habitats that support wildlife serving important roles in the ecosystem.
- Ecosystem attributes, including but not limited to wildlife habitats, biodiversity, clean air and water, maintenance of soil productivity, and carbon sequestration.
- Provides a scenic resource.

BPA and ODFW agree that portions of the property currently include and may include important species, habitat and other important ecosystem attributes. The property’s large size and its location near other conservation properties are of landscape-scale importance.
1.3 ODFW Mission and Authority

ODFW’s mission is, “To protect and enhance Oregon’s fish and wildlife and their habitats for use and enjoyment by present and future generations.” ODFW is the only state agency charged exclusively with protecting Oregon’s fish and wildlife resources, and the state wildlife policy (ORS 496.012) and food fish management policy (ORS 506.109) govern management of fish and wildlife resources. ODFW’s authorities are further defined in Oregon Administrative Rule.

1.4 Property and Administrative Oversight

The FRWA functions within the ODFW’s West Region to meet overarching goals as identified in the Mission and Authority above, department policies and procedures, species management plans, the OCS and FRWA goals. It is located within boundaries of the USACE Fern Ridge Lake Project and was created authorizing the state to “develop, conserve, and manage all wildlife resources” on land and water within the Fern Ridge Project. Coyote Creek Northeast will be under the direct management of FRWA and will be included as part of the FRWA.

Management plan goals and objectives identified in this plan will be incorporated into the FRWA plan and the full plan added as an appendices. The FRWA manager is responsible for meeting program goals with assistance from WWMP staff support including project and restoration biologists and seasonal fish and wildlife technicians. The property, restoration work and ongoing maintenance will be under the direction of the FRWA manager.

1.5 Willamette Wildlife Mitigation Program

As part of the construction, subsequent inundation, and on-going operation of the Willamette River Basin Flood Control and Hydroelectric Projects in the Willamette River basin, BPA is required to provide wildlife mitigation for habitat affected by these facilities. In 2010, BPA and ODFW created the WWMP, to operate from 2011-2025 with the goal of protecting a minimum of 16,880 acres in the basin, for the benefit of native species affected by habitat loss. Over the lifetime of the program, BPA will provide over $117 million in habitat acquisition funds and $26 million to ODFW to administer the program, including development and implementation of a monitoring and evaluation program.

The WWMP aims for projects that meet the following goals:

- Protect wildlife habitat with significant cultural value;
- Use cost-sharing measures to ensure the WWMP meets or exceeds its protected acreage goal;
- Draw on partnerships to enhance the likelihood of successful project completion;
- Provide public access to WWMP properties in a manner consistent with each site’s Conservation Values; and
- Encourage the use of ecosystem services markets.
1.6 Ecological Significance of Coyote Creek Northeast

The floor of the southern Willamette Valley was once characterized by large expanses of wet and upland prairie, braided river systems with wide riparian forests and numerous backwaters and sloughs, and Oregon white oak savannas and woodlands on foothills. With Euro-American settlement of the valley beginning in the mid-1800s, nearly all of the original grassland, riparian forest, and oak ecosystems have been converted to agricultural, urban, and rural development, and harvested for timber. Less than 2% of historic prairie and oak savanna and 7% of oak woodland persist today (ODFW 2016), and both have been impacted extensively by invasive species. ODFW’s OCS identifies these habitats plus wetland and riparian habitats as Strategy Habitats for the Willamette Valley Ecoregion. As a result of the scale of habitat loss and function, especially in prairies and savannas, the Willamette Valley ecoregion is recognized as globally imperiled (Noss et al. 1995, Floberg et al. 2004, Hoekstra et al. 2005).

Remaining Willamette Valley grasslands are threatened by ecosystem degradation from invasive species (plant and animal) and by successional changes to shrub and woodland habitats due to fire suppression (ODFW 2006, USFWS 2010). Similarly, numerous wildlife and animal species including some endemic to the Willamette basin are dependent upon prairie and oak systems (Christy and Alverson 2011, Floberg et al. 2004, Alverson 2005, Vesely and Rosenberg 2010), and many are experiencing population decline. Habitat loss, conversion, fragmentation, and impacts from invasive species have been identified as the major limiting factors affecting most of the Endangered Species Act listed and at-risk wildlife species in the Willamette Valley (ODFW 2006, USFWS 2010, Vesely and Rosenberg 2010, Primozhic and Bastasch 2004).

Several efforts to identify the highest priority areas for conserving Willamette Valley ecosystems and species have been undertaken in the last decade. Protection and restoration of prairie, oak savanna, oak woodlands, wetlands, and headwater streams have been identified as critical conservation needs by ODFW, Oregon Department of Forestry, the U.S. Fish and Wildlife Service (USFWS), the Oregon Watershed Enhancement Board, the Northwest Power and Conservation Council, The Nature Conservancy (TNC), Partners in Flight, the Oregon Biodiversity Project, and the Pacific Coast Joint Venture, in addition to local watershed councils, conservation organizations, and researchers. Locally, the Ridgeline Area Open Space Vision and Action Plan (LCOG 2008) identifies the area of Coyote Creek Northeast as a potential open space anchor that protects priority habitats and provides landscape connectivity.

The OCS draws upon regional conservation planning efforts and species’ population data to identify ecoregional Strategy Habitats, map localized Conservation Opportunity Areas (COAs), and designate Strategy Habitats and Strategy Species for each COA. Coyote Creek Northeast is located in the OCS West Eugene Area (086) COA, and of the Strategy Habitats identified for the COA, the following are present on the site: wetlands and grasslands.
2 Site Description, History and Public Use

2.1 Landscape Setting

Coyote Creek Northeast is located on the valley floor at the southern end of the Willamette Valley, among a complex of protected lands comprising the West Eugene Wetlands, with surrounding land use of rural residences and agriculture. Approximately halfway between the cities of Eugene and Veneta, the site provides a direct connection between neighboring permanently protected properties such as Fern Ridge Wildlife Area (ODFW managed), Coyote Prairie (owned by the City of Eugene) and Coyote Creek South (ODFW owned and managed) (Figure 1).

Numerous properties within a few miles of Coyote Creek Northeast are managed for conservation of native ecosystems and species by a suite of government agencies and non-profit organizations, including ODFW, who have formed a collaborative partnership known as the Rivers to Ridges Partnership (R2R). Established in the mid-1990s as the West Eugene Wetlands Partnership, this group has become nationally recognized for its success at protecting rare habitats and populations of rare and declining species at the edge of an urban area. In the last decade, the group completed a regional visioning effort, which involved public input and was widely endorsed by city and county governments, the public, and organizations representing birds and native plants to environmental education and trails. The *Rivers to Ridges Metropolitan Regional Parks and Open Space Study* (LCOG 2003) describes a regional vision for open space protection and connectivity, identifying seven guiding principles: variety, scenic quality, connectivity, recreation and education, habitat, protection and conservation of wetlands, waterways, and the ridgeline, and community buffers. This plan and the partners working to implement it are beginning to achieve a degree of regional and local landscape-level connectivity in protected and restored habitat conditions. The acquisition of Coyote Creek Northeast is a critical piece in implementing this vision, in addition to meeting ODFW and BPA goals for acquiring and managing valuable habitat for conservation and public use under the WWMP.

2.2 Site History

2.2.1 Historic Vegetation

General Land Office surveys in the 1850s document the vegetation in the area of Coyote Creek as predominantly seasonal wet prairie (Christy et al. 2009). As indicated in Figure 2, tufted hairgrass (*Deschampsia cespitosa*) and Roemer’s fescue (*Festuca roemeri*) dominated the site.
2.2.2 Historic and Cultural Land Use

Prior to Euro-American settlement, the area around what is now Fern Ridge Reservoir and the historic Long Tom River was occupied by the Chemala or Long Tom Band of the Kalapuya, whose descendants today belong to the Confederated Tribes of the Grand Ronde. The FRWA Management Plan summarizes the known cultural resources surveys that have occurred in the area of the Fern Ridge project boundary (ODFW 2009):

“A number of cultural resource surveys and archeological excavations have been conducted within Fern Ridge project including wildlife area licensed lands. The project area was visited by members of the River Basin Surveys prior to 1930 (Strong et al. 1930). Field crews from the University of Oregon surveyed the eastern shoreline (Minor 1978) and the rest of the project was surveyed in the early 1980s (Cheatham 1984, Cheatham 1988). During these surveys the lake level appears to have been between elevation 353 and 360 feet. Over 119 archeological sites were recorded within the Fern Ridge project boundaries. Over 80 known prehistoric sites spanning 8,000 years of prehistory and a dozen sites with historic components are located within the pool. There has been at least one find of a Clovis point within the fluctuation of the operating pool that may date back 10,000 years. The 1980s archeological work included archeological excavations at Kirk Park, Perkins Peninsula, and Hannavan Creek to determine site areas and evaluate site significance. Additional surveys were conducted along the Long Tom drainage (Toepel 1985) and the lower reaches of Amazon Creek (Oetting 1995).”
The historic wet prairies, Coyote Creek, riparian forest, nearby low hills dominated by Oregon white oak trees, and known long-term human presence in the area makes it likely that Coyote Creek Northeast was used by the Kalapuya people. Kalapuyan management activities that may have occurred at Coyote Creek Northeast include regular burning to maintain open prairie conditions, including stimulating growth of culturally significant plants such as camas (*Camassia* sp.), tarweed (*Madia elegans*) and yampah (*Perideridia sp.*).

Euro-American settlement appeared well underway by the 1860s, with land claims being allocated through the General Land Office. The 1939 aerial photo indicates that farming practices were prevalent across the site (Appendix 3). Neilson and Cantrell Roads were present including the farm house on Cantrell Road along the southern boundary of Field 3. Drainage ditches on and around the site are also prevalent as early 1939. The site has remained relatively without change in the last seventy-five years with the exceptions of the construction of the BPA transmission corridor and the small pond in the northwest corner (1979-1990).

### 2.2.3 Cultural Resources/SHPO Consultation

Since ODFW acquired the site in 2015, other than the presence of plant species valued by the Kalapuya, there have not yet been any discoveries of features that suggest that the site was occupied for long periods of time, such as camas ovens or mounds.

ODFW will contact the State Historic Preservation Office (SHPO) for a review of potential historic or cultural sites present if a project disturbing the soil is planned. Disturbance will likely include the enhancement of vernal pool habitat, excavation of soils to restore site hydrology (drainage patterns), and similar work. In the event that any cultural material is encountered during project activities, state and federal regulations will apply.

### 2.3 Existing Conditions

#### 2.3.1 Physical Description, Topography, and Boundaries

Coyote Creek Northeast is located north of Cantrell Road and south of Highway 126 and is bisected by Kenneth Neilson Road (“Neilson Road”) (Figure 1). The property consists of three tax lots; two on the east side of Neilson Road and one to the west. Table 1 indicates the tax lot numbers and respective acreages.

<table>
<thead>
<tr>
<th>Tax lot</th>
<th>Acres</th>
<th>Township</th>
<th>Range</th>
<th>Sec</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>34.5</td>
<td>17S</td>
<td>5W</td>
<td>35</td>
</tr>
<tr>
<td>502</td>
<td>107.21</td>
<td>17S</td>
<td>5W</td>
<td>36</td>
</tr>
<tr>
<td>503</td>
<td>83.12</td>
<td>17S</td>
<td>5W</td>
<td>36</td>
</tr>
</tbody>
</table>
An approximate centroid is 44° 2’ 39.98”N, 123° 14’ 43.854”W. The full legal description is included in Appendix 1, Exhibit A. All tax lots are zoned Exclusive Farm Use.

Coyote Creek Northeast is nearly level across its entire acreage at about 380 feet in elevation, with the exception of the eastern portion nearing 400-420 feet (Figure 3). At 380 feet in elevation, much of the site is inundated during winter wet periods.

Figure 3. Site Topography

The property is bounded by conservation lands to the west and south and lands currently being used for agricultural production to the north and east, additionally a small rural residential property was partitioned out of tax lot 503 prior to the acquisition (Figure 4). Neighboring properties to the west and south are ODFW’s FRWA, Coyote Creek South and City of Eugene’s Coyote Prairie.
Figure 4. Coyote Creek Northeast Property Tax Lot Map
2.3.2 Habitat Types/Land Use/Invasive Vegetation

Existing vegetation cover and land use on the site is predominately comprised of agriculture (annual rye grass and hay). The conservation easement for the site categorizes the agriculture fields as restorable to native wet and upland prairie habitats.

Active agricultural lands make up the greatest proportion of the site (202 acres, or 90%). Currently 202 acres are being leased by ODFW for agriculture production on a yearly basis. Nearly the entire acreage (190.33 acres) east of Neilson Road is being farmed for annual rye grass (Field 3) and sixteen acres of Field 2 the west side of Neilson Road is hayed (Figure 5). A non-transferable Land Use Agreement dated February 19, 2016, was authorized by BPA enabling ODFW to provide a Forage Removal Permit to the lessee.

Nearly 13 acres in the northwest corner of the site have been fallow for a number of years (Field 1). Woody species have encroached the field however there has been a resurgence of native tufted hairgrass.

A small man-made pond (<1 acre) is at the far northwest corner of this fallow field. Predominately surrounded by invasive non-native Himalayan blackberry (Rubus bifrons) and reed canarygrass (Phalaris arundinacea); there is native Hooker’s willow (Salix hookeriana) that is established at the water’s edge. Native emergent vegetation predominately consists of ovoid spikerush (Eleocharis ovata); tapered rush (Juncus acuminatus); and Sierra rush (Juncus nevadensis var. nevadensis). Floating emergent non-native eastern false loosestrife (Ludwigia palustris) is dominant throughout the pond surface. Water is present only in the wet months of the year (December – April) and no are no structures (e.g. logs) in the pond.

Since the acquisition of the property, ODFW has not performed any ground activities (e.g. invasive species control, fence/gate repair, or mowing). Management activities have focused on the execution of the agriculture lease, managing public access, and assessing site conditions for management plan integration.
In 2015, a biodiversity survey report was completed by Salix Associates, during which the site was visited eight times (Appendix 2). During the surveys, 182 vascular plants species detected, of which 99 are native (3 rare) and 83 exotic (non-native). The report highlights that the highest quality of remnant native wet prairie and habitat diversity is present in Field 1. However, the presence of reed canarygrass and Oregon ash (*Fraxinus latifolia*) encroachment are degrading the native prairie. The small pond, which is seasonal and dries by mid-summer, is dominated by native tapered rush and highly invasive eastern false loosestrife. Native tufted hairgrass and one-side sedge (*Carex unilateralis*) are present in Field 2.

Invasive plants species occur onsite and have been documented and mapped in a GIS database. The three dominant invasive plant communities consist of reed canarygrass (31 acres), pennyroyal (*Mentha pulegium*), and shining geranium (*Geranium lucidum*). Other invasives of note are teasel (*Dipsacus fullonum*) and blackberry. Additionally a small row of non-native shore pine (*Pinus contorta*) are along the western fence line along Neilson Road.

2.3.3 **Hydrology**

Coyote Creek Northeast is within the 6th field HUC of Lower Coyote Creek. Roughly 0.5 miles northeast of Coyote Creek and 1.5 miles southeast of Fern Ridge Reservoir, the site is
completely influenced by runoff and catchment of seasonal rains. A series of agricultural drainage ditches and swales route water through the site into the East Coyote Management Unit of FRWA. Standing water is present on the site during the wettest times of the year, with the highest concentration just east of Neilson Road in Field 3.

With the exception of Field 2, a network of man-made ditches were installed to drain the fields for agriculture purposes (Figure 6). Within the middle of Field 3, two shallow ditches run east to west. These ditches are maintained annually during field preparation with the use of a plow. The majority of water from Field 3 and Neilson Road ditches flows through six 22-inch diameter cement culverts under Neilson Road into a ditch that separates Fields 1 and 2. The culverts are approximately 90-95% free of obstruction from sediment. The ditch between Fields 1 and 2 is seven foot wide and one-foot deep and enters the larger ditch system of East Coyote Management Unit of FRWA, which flows into Coyote Creek. Field 3 is affected by large ditch on the adjacent privately owned field to the north. A significant amount of water is routed to the southeast corner of the property, resulting in sheet flow at the northeast corner of Field 3.

Field 1 has four remnant ditches running north to south which drain to the southwest corner of the field and then into the East Coyote Management Unit ditch. Field 2 has a small ditch to the west of the area in agricultural production that routes water from the Cantrell Road ditches as well as water from the Coyote Creek South Site via a 36-inch diameter cement culvert. This culvert is 75% free of obstruction and transfers the water traveling north and into the East Coyote Management Unit.

Figure 6. Coyote Creek Northeast Hydrology Map
The seasonal pond in Field 1 is not connected to the ditch network, nor is a control structure present (e.g. culverts or flashboards) to regulate water storage. By mid-summer the pond is devoid of water.

No drain tiles are known to occur on the site.

2.3.4 Soils and Geology

The site is underlain by fine-grained alluvial sediments deposited within the Quaternary period (2.5 million years ago to present) (Ma et al. 2009). The southern portion of the Willamette Valley floor is characterized by the presence of these sediments, which were deposited following tectonic uplift of the Coast and Cascade mountain ranges and the modern southern boundary of the valley. In most areas, sediments carried by the Missoula floods also were deposited on the valley floor; however, the Eugene area is at the far south end of those deposits and the site may not have received any sediment input from those events.

The soils on the site are predominately silty clay loam to loam (Table 2, Figure 7).

Table 2. Soils of the Coyote Creek Northeast, Lane County, Oregon.

<table>
<thead>
<tr>
<th>Map Unit Symbol</th>
<th>Map Unit Name</th>
<th>Acres</th>
<th>Percent of Site</th>
<th>Hydric</th>
</tr>
</thead>
<tbody>
<tr>
<td>52B</td>
<td>Hazelair silty clay loam, 2-7% slopes</td>
<td>14.2</td>
<td>6.4</td>
<td>No</td>
</tr>
<tr>
<td>85</td>
<td>Natroy silty clay loam</td>
<td>150.9</td>
<td>67.6</td>
<td>Yes</td>
</tr>
<tr>
<td>38</td>
<td>Dayton silt loam, clay substream</td>
<td>0.4</td>
<td>0.2</td>
<td>Yes</td>
</tr>
<tr>
<td>102C</td>
<td>Panther silty clay loam, 2 to 12% slopes</td>
<td>33.9</td>
<td>15.2</td>
<td>No</td>
</tr>
<tr>
<td>107C</td>
<td>Philomath silty clay, 3 to 12% slopes</td>
<td>23.8</td>
<td>10.6</td>
<td>No</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>223.1</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


The dominant Natroy silty clay loam (85) is a deep, poorly drained hydric soil derived from Quaternary alluvium (river-deposited sediments) and is found in digressional areas and drainages. The slow permeability hydrologic effect of this soil, limits the effective rooting depth due to a ponded water table during the rainy season with water levels between one foot below and one foot above the surface and frequent periods of long flooding from November to May (NRCS 1987). Classified as farmland importance, typical land use on Natroy soils is grass seed production; in non-cultivated areas it supports grasses, sedges, rose species, and Oregon ash (NRCS 1987). Natroy soils exhibit severe cracking in late summer due to their high clay content, with the B horizon consisting of a clay layer from approximately 5-26 inches below the surface. Soils may be so wet as to limit trail development (NRCS 1987).

Panther silty clay loam soils (102C) comprise the next largest type on the site. Panther silty clay loam soils are poorly drained categorized as not prime farmland soil with a parent material...
comprised of colluvium and residuum derived from basic igneous and sedimentary rock. Philomath silty clay (107C) is well drained and not classified as prime farmland. With no water ponding, Philomath silty clay soils are derived from colluvium and residuum. Hazelair silty clay (52B) is a moderately drained soil categorized as farmland important. Derived from colluvium sedimentary rock, the soil has no frequency of ponding. Dayton silt loam soils (38) underlie less that one acre of the site. They are categorized as farmland of state wide importance and are poorly drained with frequent ponding.
2.3.5 Facilities, Roads, and Maintenance Access

Coyote Creek Northeast is undeveloped, there are no buildings or roads on the site. Farm field wire fencing consisting of metal or wooden posts encloses most of the site’s perimeter (Figure 8). Approximately, 13,600 linear feet of 4 foot tall fence comprised of 4 inch woven wire topped with 1-strand of barb wire encloses Field 3. This fencing limits passage to animals that either fly or jump over the fence. Fencing (5,200 linear feet) along Fields 1 and 2 is two and three strand barbed wire.
Figure 8. Infrastructure Map

Three gated access points are currently present, two on Cantrell and one Neilson Road. All are in disrepair and presently used for agriculture access. At the northeast corner of Field 1, a break in the fence line currently provides pedestrian access. Along the eastern boundary of
Field 3, there is a gate between the fields that was utilized for agricultural management between the two properties under prior ownership.

A temporary-fenced parking area under the BPA Right-of-Way (ROW) north of Cantrell Road during the goose hunting season previously provided access for the hunters participating in the special permitted waterfowl/goose hunt program.

Field 3 is bisected by BPA’s Lane-Wendson Transmission Line No. 1 and 2 as well as Alvery-Lane Line No. 1. The Lane-Wendson lines consisted of two steel and three wooden structures. The Alvery- Lane line consists of two steel structures. Maintenance access for the right-of-way corridor is provided via Cantrell Road.

All road culverts and roadside ditches are owned and maintained by Lane County.

2.3.6 **Hazardous Waste**

There are no known solid, liquid, or contained gas hazardous wastes on the property. Herbicides have been used on the site to manage the agricultural fields.

2.3.7 **Water Rights**

There are no water rights associated with the property.
2.4 Public Access and Site Use

The site currently can be accessed by the public from multiple entrance points on either Cantrell or Neilson Roads. Three gates are currently being used for agriculture access. There is an existing parking lot within the East Coyote Management Unit on Neilson Road.

2.4.1 Public Access, Use, and Recreation

ODFW strives to balance public use with resource protection on wildlife areas (ODFW 2009). Currently the site is open to non-motorized public use, although there are no parking, trail, or wayfinding facilities. Foot travel within the site is allowed during daylight hours except for seasonal closure dates, which will be posted at the site entrances as they are for other units of the wildlife area. Allowed and anticipated public uses are the same as for other areas of the FRWA: nature access, wildlife viewing, education and interpretation, and hunting.

FRWA is managed to provide both hunting access and wildlife refuge during hunting season, specifically for waterfowl (ODFW 2009). All lands owned or controlled by ODFW and the USACE in and around Fern Ridge reservoir are open to hunting during all authorized game bird and game mammal seasons, with restrictions published annually by ODFW.

Annual bird hunting season dates, hunting hours, allowable species to harvest and other information is provided in ODFW’s Oregon Game Bird Regulation booklet. In addition to bird hunting, game mammals including black-tailed deer (*Odocoileus hemionus*) may be hunted. Coyote Creek Northeast will require that hunters obtain a self-service free daily hunting permit for the site. All hunters must use non-toxic shot, except deer/elk hunters using slugs or buckshot in shotguns, or archery equipment as per hunting regulations. ODFW may adjust hunting regulations annually based on flyway regulations, wildlife population assessments, and other social and habitat considerations.

Since 2006, ODFW has utilized seasonal closures and access restrictions during and after the hunting season for the purpose of providing rest and undisturbed forage for the wintering goose population, including the dusky Canada goose (*Branta canadensis occidentalis*) (ODFW 2009). This practice also has resulted in providing sanctuary for all wetland-dependent wildlife species including large concentrations of waterfowl that use the FRWA.

Trapping is used by ODFW to help manage infrastructure and species populations. Generally, at FRWA trapping is limited to nutria (*Myocastor coypus*) that damage earthen levees by aggressive burrowing (ODFW 2009). Any trapping requires a permit or contract issued through ODFW.
In addition to these allowed uses, the property is subject to following Oregon Administration Rules specific to Fern Ridge Wildlife Area (ODFW 2016):

1. Open to the discharge of firearms only while hunting big game and game birds during authorized seasons, or by access permit issued by ODFW.
2. Discharging rifles and handguns is prohibited.
3. No person shall possess or use any shot other than federally-approved nontoxic shot at any time, except for big game hunters using buckshot or slugs.
4. The use of air guns, BB guns and paintball guns is prohibited.
5. All dogs must be on a leash except during authorized hunting seasons, or by access permit issued by ODFW.
6. Camping is prohibited except by access permit issued by ODFW.
7. Open fires are prohibited.
8. The wildlife area is closed to the public 10 pm to 4 am.
9. Horses and horseback riding are prohibited except by access permit issued by ODFW.
10. Free daily hunting permits are required for hunting various wildlife area units, must be possessed at all times by users and must be completed and returned at the end of the day. Consult annual Game Bird regulations for check station locations, time and date restrictions, and hunting requirements.
11. Seasonal access restrictions may be in place to provide wildlife sanctuary. Consult annual Game Bird Regulations and posted signage for dates and locations.
12. Trapping is prohibited except by access permit issued by ODFW.
13. ODFW Wildlife Area Parking Permit required.

Hunting within the conservation casement area is limited to legally approved shotgun and archery methods outlined in the Big Game and Game Bird Regulations.

2.4.2 BPA Conservation Easement

The three parcels that comprise Coyote Creek Northeast were purchased by ODFW in August 2015, at which time ODFW became the fee-title owner of the property and assumed all legal responsibilities stated in the conservation easement. The conservation easement was deeded by ODFW to BPA in perpetuity, for the purpose of protecting the Conservation Values (Section 1.2) associated with the site. Permitted and prohibited uses that have relevance for short- and long-term actions recommended under this management plan are summarized in the table below.

Table 3. Coyote Creek Northeast Easement Restrictions and Management Actions

<table>
<thead>
<tr>
<th>Easement Restrictions</th>
<th>Management Plan Compliance</th>
</tr>
</thead>
</table>
| 1. _Residential, Commercial or Industrial Uses._ Any residential, commercial, or industrial uses of the Protected Property is prohibited, including timber harvesting, grazing of livestock, and agricultural production. | A NON-TRANSFERABLE LAND USE AGREEMENT, dated February 19, 2016, authorizes ODFW to lease the property for agricultural activities. All agricultural leases will be terminated during restoration phases.  
_See Section: 2.3.2 Agricultural Leases_                                                              |
### Easement Restrictions

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Management Plan Compliance</th>
</tr>
</thead>
</table>
| 2.  | Construction of Buildings, Facilities, Fences or Other Structures. Construction of new buildings, facilities, fences or other structures is prohibited. Repair, maintenance, or replacement of existing buildings, facilities, fences or other structures identified in the Baseline Documentation Report are permitted at the same location and within the existing footprint of such structures. | Woven and barb wire fences will be replaced with improved wildlife access fencing (e.g. 2 strand smooth wire) as needed.  
**Goal I1 Objectives 1 & 2**  
Replace existing gates in disrepair. **Goal I1 Objective 3** |
| 3.  | Utilities. Except as provided for in Section J.2, the installation or relocation of new public or private utilities, including electric, telephone, or other communications services is prohibited. Existing utilities on, over, or under the Protected Property may be maintained, repaired, removed or replaced at their current location as that location is documented in the Baseline Documentation Report. | None contemplated as part of management plan. |
| 4.  | Signs. Except for no trespassing signs, for sale signs, signs identifying the owner of the Protected Property, and signs that may be erected by the Grantee identifying the Purpose of the Protected Property, all other signs, advertisements, and billboards of any nature are prohibited. The permitted signs may not exceed 15 square feet in size. | Property boundary and signs providing public use information will be established public entry areas. All signs will be consistent with those in use at FRWA. FRWA boundary signs are 2 feet long by 2 feet wide and wildlife area information signs are 5 feet long by 3 feet wide. **Goal PAU1. Objective 3** |
| 5.  | Mining. The exploration, development, mining or extraction of soil, sand, loam, gravel, mineral, oil, gas, or other substance from the surface or subsurface of the Protected Property is prohibited. | None contemplated as part of management plan. |
| 6.  | Topography. Altering the existing topography of the Protected Property by digging, plowing, disking, or otherwise disturbing the surface or subsurface is prohibited. | Restoration actions considered include disking and/or grading of existing cropland and drainage ditches to restore wet prairie habitats. **WP1 Objective 1, WP3 Objective 1 & VP1 Objective 1** |
| 7.  | Watercourses/Wetlands. Draining, dredging, channeling, filling, leveling, pumping, diking, impounding or any other alteration of any watercourses, ponds, seeps, bogs, springs, wetlands, or any seasonally wet area is prohibited, as is altering or tampering with existing water control structures or devices. | Restoration actions considered include disking and/or grading of existing drainage ditches and swales to restore wet prairie habitats. **WP1 Objective 1, WP3 Objective 1 & VP1 Objective 1**  
Restoration actions considered include the installations of water control device in existing ditch system. |
### Easement Restrictions

<table>
<thead>
<tr>
<th></th>
<th>Management Plan Compliance</th>
</tr>
</thead>
</table>
| 8. **Vegetation.** The cutting, trimming, shaping, killing, or removal of any vegetation from the Protected Property, except for noxious weeds, is prohibited. | Restoration actions include invasive weed control, native plant restoration, and tree thinning to restore native habitats.  
**Goals WP2 Objective 1 & UP1 Objective 1** |
| 9. **Exotic Species.** The introduction, cultivation, or use of exotic plant or animal species on the Protected Property is prohibited. Exotic plants include non-native invasive plant species. | None contemplated as part of management plan. |
| 10. **Roads and Impervious Surfaces.** Construction of new roads and paving of any existing road not paved or otherwise covered in an impervious material as of the Effective Date is prohibited. Existing roads identified in the Baseline Documentation Report may be maintained and repaired in their current condition and within their existing footprint as identified in the Report. | Evaluate parking area to facilitate access to the property. ODFW will work with BPA on Land Use Agreement for all parking related improvements.  
**Goal PAU1 Objective 2** |
| 11. **Vehicle Use.** The use of motorized vehicles is prohibited, except as necessary to carry out activities approved by the Grantee, or for limited, de-minimus, non-commercial recreational uses such as hunting or bird watching if those activities are approved uses in the Management Plan. | None contemplated as part of management plan. |
| 12. **Subdivision.** The legal or “de facto” division, subdivision or partitioning of the Protected Property is prohibited. | None contemplated as part of management plan. |
| 13. **Grant of Rights.** The granting of any property interest or rights in the Protected Property, including easements, permits, licenses, and leases, without the prior written consent of the Grantee is prohibited. | None contemplated as part of management plan. |

### 2.4.3 Zoning

Tax lots 502 and 203 (Field 3) east of Neilson Road are Exclusive Farm Use (EFU). Tax lot 300 (Field 1 and 2) is zoned Non-EFU/Impacted Forestry and Farm Use by Lane County (Figures 4 and 5).
2.4.4 Agricultural Lease

Two 1-year, annually renewable agricultural leases were in place for 2015 when the property was acquired by ODFW. ODFW has continued the leases into 2017 for a total of 202 acres. At present, 186 acres of Field 3 are being leased for annual rye grass and 16 acres of Field 2 are managed for pasture grass hay. The agricultural leases will be phased out to implement restoration activities (see Table 5 for estimated restoration schedule). Income generated from the lease will be used toward activities that advance the goals of the management plan.

2.5 Environmental Setting

2.5.1 Climate

About 75 percent of the annual precipitation falls from October through March, and less than 5 percent falls in July and August. Average high temperatures in the project area range from 48 °F to 84 °F (8.9- 28.9°C) and low temperatures range from 34 °F to 53 °F (1.1-11.7 °C). The highest recorded temperature was 108 °F (42.2 °C) in 2002 and the lowest recorded temperature was -3 °F (-19.4 °C) in 1972. January is the average coolest month and December is the average wettest month. Average yearly precipitation is 51.5 inches with the lowest in July and highest in December, with averages ranging from 0.57 inches (1.45 cm) to 8.13 inches (20.65 cm).

3 Strategy Habitats and Species: Existing Conditions, Threats, and Conservation Importance

Though historically a mosaic of upland prairie (Grassland) and wet prairie with vernal pools (Wetlands), Coyote Creek Northeast is currently in agricultural use. Conservation priorities and management actions recommended in this plan include two levels of restoration: first, restoring and managing Strategy Habitats to support native wildlife and plant species that depend on them, and second, improving and maintaining specific habitat conditions for rare, uncommon, or declining species that use these habitats.

Almost the entire site (90%) is covered by restorable wetland prairie habitat type. Approximately 9% of the site currently could be restored to upland prairie. OCS on-site and restorable Strategy Habitats determined the restoration priorities for Coyote Creek Northeast under this 10-year management plan. Numerous federal, state, and non-governmental organization conservation planning efforts for the Willamette Valley or the Willamette Subbasin have identified priority conservation habitats and ecosystem types, as well as focal species whose habitat needs represent groups of at-risk species (e.g., western meadowlark and grassland birds) or who are imperiled enough that the species themselves are a high conservation priority.
Determination of restoration priorities at Coyote Creek Northeast drew on the body of work encompassed by these plans, including the federal Endangered Species Act (USFWS), Oregon Endangered Species Act and the OCS (ODFW/Oregon Department of Agriculture (ODA) listed and OCS habitat types and species), and other efforts documenting declining species, wildlife-habitat relationships, and locally rare or uncommon species (Willamette Restoration Initiative, Oregon Watershed Enhancement Board (OWEB), Oregon Biodiversity Information Center (ORBIC), Partners in Flight (PIF), and Native Plant Society Oregon (NPSO)).

Once the priority habitat types were identified, a second review of potential priority wildlife and plant species was conducted to determine which species the site has the greatest opportunity to benefit (Table 4). Selection of the focal species accounted for existing or restorable features of on-site habitats, whether the species has been documented on-site or within a couple of miles in the West Eugene Wetlands (higher potential to colonize the site), and how rare these species are in the Willamette Valley.

Two “Priority Habitats” (wetlands and grasslands) were identified as the primary habitat conservation targets for this site and are directly tied to the OCS (2016) and the Conservation Values expressed in the conservation easement for the site (Appendix 1).

Restorable habitats provide structural diversity and support a different suite of species than the priority habitats, but which are limited in extent on the site. The current conditions of the priority and restorable habitats are described in Table 4. OCS species listed are anticipated to benefit from habitat restoration and management.
Table 4. Priority OCS Strategy Habitats and Species

<table>
<thead>
<tr>
<th>Strategy Habitats</th>
<th>Priority Strategy Species</th>
<th>Additional Strategy Species Benefitting from Restoration</th>
<th>Current Condition</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wetlands: Wet Prairie</td>
<td>Birds: Western Meadowlark, Grasshopper Sparrow, Short-eared Owl</td>
<td>Birds: Streaked Horned Lark, Dusky Canada Goose</td>
<td>Poor</td>
<td>Site is currently in agricultural production for grass seed/hay. Current agricultural management techniques are incompatible with conservation goals.</td>
</tr>
<tr>
<td>Vernal Pool/Seasonal Pond</td>
<td>Amphibians: Red-legged Frog</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deciduous Swamps and Shrublands</td>
<td>Reptiles: Western Pond Turtle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plants: Bradshaw’s Lomatium, Willamette Daisy, White-topped Aster</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grasslands: Upland Prairie</td>
<td>Birds: Common Nighthawk, Western Meadowlark, Western Bluebird, Oregon Vesper Sparrow</td>
<td>Birds: White-breasted (Slender-billed) Nuthatch</td>
<td>Poor</td>
<td>All the restorable upland habitats are present in agricultural use. No native upland grasses noted on the site.</td>
</tr>
<tr>
<td></td>
<td>Grasshopper Sparrow</td>
<td>Mammals: Western Gray Squirrel</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acorn woodpecker</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reptiles: Western Pond Turtle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oak savanna</td>
<td>Birds: White-breasted (Slender-billed) Nuthatch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mammals: Western Gray Squirrel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.1 Strategy Habitats

3.1.1 Wetland Habitats

Wetlands - Wet Prairie

OCS Status and Habitat Type Description

Wetlands is one of the Strategy Habitats identified in the OCS for the West Eugene Area Conservation Opportunity Area (COA-086). Wetlands include wet prairies and seasonally wet areas including vernal pools. Restoring and maintaining wetland habitats is one of the stated Recommended Conservation Actions in the OCS (ODFW 2016).

Wet prairies in the Willamette Valley are typically comprised of herbaceous vegetation dominated by bunchgrasses, in particular tufted hairgrass. Wet prairie is found primarily on the valley bottom on poorly drained soils characterized by a high clay content, which perches water resulting in saturated or inundated conditions in winter and spring. Soils completely dry.
out in summer and stay dry through the early fall. The shrinking, swelling, and cracking of the
clay creates microtopography at the soil surface, leading to variation and increased complexity
in microsite conditions. Many plant and animal species take advantage of these niches,
resulting in a highly diverse biotic community. While wet prairies historically supported an array
of native forb species, these species are largely gone from wet prairies today due to agricultural
cultivation, invasive grass colonization, and alteration of natural wet prairie hydrology.
The OCS identifies land use conversion/habitat loss, habitat fragmentation, invasive species,
and altered fire regimes as limiting factors in wet prairie habitats. Willamette Valley wet
prairies were historically maintained in an open condition by humans setting periodic fires,
which prevented establishment of woody vegetation and succession to shrub and forested
habitats. Over a century of lack of use of fire by people has allowed native and non-native
woody vegetation and trees to encroach in these systems, fundamentally changing the
grassland nature of the habitat and displacing both typical and rare prairie species from
grassland birds to wet prairie plants. Agricultural conversion and management techniques,
primarily for the production of grass seed, have significantly contributed to the loss of native
wildlife and plant species diversity across historic wet prairie acreage in the valley.

**Existing Wet Prairie Conditions at Coyote Creek Northeast**

Remnant wet prairie habitats are limited to Field 1 and the parts of Field 2. Native tufted
hairgrass is prevalent as well as one-sided sedge in areas not dominated by reed canarygrass.
Field 3 is currently managed for non-native rye grass.

**Threats to Wet Prairie at Coyote Creek Northeast**

Agricultural use of wet prairie habitats is the single most significant threat to wet prairie at the
site, having replaced the native vegetation over much of the site. Continued agricultural site
management may result in further losses of native plant patches at the edges of agricultural
fields. Continued encroachment of by reed canarygrass, Himalayan blackberry, woody
vegetation (e.g. ash), and non-native grasses and forbs threatens the remnant wet prairie
habitats present on site. Ditches on the site continue to affect wetland hydrology by draining,
channelizing, and transporting surface water off-site.

In addition to the conversion of habitat, two additional factors also pose threats to wet prairie:
the loss of regular burning and climate change. Prairies are fundamentally fire-dependent
systems and their vegetative structure and composition were substantially determined for
thousands of years by frequent fires set by humans. The abundance of woody vegetation in
non-agricultural areas and lack of many native plants adapted to frequent burning reflect the
absence of fire at Coyote Creek Northeast. Regarding climate change, southern Willamette
Valley annual average temperatures are expected to increase 2-4 °F (1.1-2.2 °C) or more by
2050, with greater increases in summer temperatures (4-6°F [2.2-3.3 °C] on average) (Doppelt
et al. 2009). Less precipitation is expected during spring, summer and fall, while a small increase
is possible in winter months, and the region may experience more frequent flooding due to
increased storm events (Doppelt et al. 2009). For Willamette Valley grasslands, this may mean
higher winter and spring water levels, increases in spring flooding events, and a noticeably
warmer and prolonged summer drought period. Two recent modeling studies using NatureServe’s Climate Change Vulnerability Index investigated the climate vulnerability of Willamette Valley prairie plant and butterfly species (Kaye et al. 2012) and OCS species (Steel et al. 2011). The studies both found grassland plants and butterflies, including rare and listed species, to be moderately to highly vulnerable to predicted climate change, and terrestrial wildlife species to be stable to moderately vulnerable. While it is unlikely that much measurable climate change will be noted during the 10-year timeframe of this plan, it makes sense to consider how the site can provide habitat for many wet prairie species that may be vulnerable to climate change effects over longer periods.

**Wetlands – Vernal Pool/Season Pond**

**OCS Status and Habitat Type Description**

Wetlands are identified as one of the Strategy Habitats for the West Eugene Area COA, and vernal pools are listed as one type of seasonally wet habitat that is important for migrating waterfowl, shorebirds, songbirds, mammals, amphibians, and reptiles, all of which use Coyote Creek Northeast. The OCS recommends restoring and maintaining wetland habitats as an important conservation action.

The OCS describes vernal pools and ponds as wetland habitats that hold water during the winter and spring but typically dry up during the dry summer months. Vernal pools occur in complexes of networked depressions that are seasonally-filled with rain water. They host a variety of species with unique adaptations (OCS 2016).

**Existing Vernal Pool/Seasonal Pond Conditions at Coyote Creek Northeast**

Vernal pool habitat at Coyote Creek Northeast is located primarily in Field 1. These seasonally wet areas occur along naturally low contours and range is size, shape and depth. Native vegetation is limited by non-native pennyroyal. Surface water typically dries up by early summer however soil conditions remain wet through mid to late summer. Field 3 has hydrologic conditions necessary for vernal pool habitat, but the existing agricultural grasses dominate the area.

A small man-made pond (<1 acre) is at the far northwest corner of Field 1. Predominately surrounded by invasive non-native Himalayan blackberry and reed canarygrass; however there is native Hooker’s willow that is established at the water’s edge. Native emergent vegetation predominately consists of ovoid spikerush (*Eleocharis ovata*); tapered rush; and Sierra rush. Floating emergent non-native eastern false loosestrife is dominant throughout the pond surface. Water is present only in the wet months of the year (December – April) and there are no structures (e.g. logs) in the pond.
Threats to Vernal Pools/Seasonal Pond at Coyote Creek Northeast

There are two main threats to the vernal pool habitat, alteration to the hydrology of the site, and the abundance of non-native vegetation. The drainage ditches remove surface water at a faster rate than in a natural system resulting in a reduction of vernal pool habitat. Additionally, fluctuations in neighboring fields and roadside ditches can alter the hydrology of the site.

A second threat is the presence of intensively managed non-native plant species that occur throughout the agriculture fields. This plant community of non-native crop and invasive weed species lacks the diversity seen in natural vernal pool habitats.

Wetlands – Deciduous Swamps and Shrublands

Deciduous swamps and shrublands are located in depressions, around lakes or ponds, or on river terraces. They generally flood seasonally with nutrient-rich waters and are dominated by woody vegetation, including willows (Salix spp.), hardhack (Spiraea douglasii), alder (Alnus sp.), redosier dogwood (Cornus sericea), Pacific crabapple (Malus fusca), and Oregon ash (OCS 2016).

Existing Deciduous Swamps and Shrublands Conditions at Coyote Creek Northeast

Approximately 2.5 acres of ash forest are present at the southwest corner of the site. The understory is dominated by reed canarygrass and shining geranium. The open center of this area indicates it was historically managed; however, ash encroachment has thrived in recent years. Oregon ash is the dominant overstory species. Water is routed through this area via the ditch from the south. During winter and spring months standing water can persist throughout the area. Many of the trees in this area were burned in 2014 from a fire that was started by an arsonist.

Threats to Deciduous Swamps and Shrublands Conditions at Coyote Creek Northeast

Invasive vegetation, such as non-native fruit trees, hawthorn (Crataegus sp.), and purple loosestrife (Lythrum salicaria) are present within proximity to the area. The spreading of such exotic vegetation poses a threat to the existing condition of the habitat.

3.1.2 Grassland Habitats

Grasslands - Upland Prairie

OCS Status and Habitat Type Description

Grasslands, also called upland prairies, are dominated by grasses, forbs, and wildflowers. Grasslands have well-drained soils and often occur on dry slopes. The greatest loss of grasslands has been in valley bottoms and foothills where they have been impacted by conversion to agriculture, development, and invasive plant species. In some areas, past grazing has impacted grasslands, affecting plant composition and structure. Also, non-native species were historically seeded for livestock forage in some grasslands, decreasing the abundance and
diversity of native plants. However, grazing practices have become more sustainable over time, and carefully managed grazing can help maintain grassland structure where prescribed fire is not practical or desired. Disruption of historical fire regimes has allowed for shrubs or trees to encroach, replacing grasslands with forest. In addition, some foothill grasslands have been converted to forests through tree planting (OCS 2016).

**Existing Upland Prairie Conditions at Coyote Creek Northeast**

Native upland prairie is currently not present at Coyote Creek Northeast. Upland prairie could be restored to approximately twenty acres on the eastern portion of the site in Field 3 (See Figure 9). The area is currently in rye grass production.

**Threats to Upland Prairie at Coyote Creek Northeast**

The OCS identifies land use conversion, land management conflicts (grazing), invasive species, loss of habitat connectivity, and altered fire regimes as limiting factors in upland prairie (grassland) habitats. The main threat to upland prairie at Coyote Creek Northeast at the time of writing of this plan is its complete conversion to non-native grasses.

**Grasslands – Oak Savanna**

**OCS Status and Habitat Type Description**

Oak savannas are grasslands with scattered Oregon white oak (*Quercus garryana*), generally only one or two trees per acre (denser oak stands are included in the Oak Woodlands Strategy Habitat). Oak trees in savannas are usually large with well-developed limbs and canopies (OCS 2016).

**Existing Oak Savanna Conditions at Coyote Creek Northeast**

Oak savanna is currently not present at Coyote Creek Northeast. Oak savanna could be restored to approximately 10 acres on the eastern portion of the site in Field 3 (See Figure 9). The area is currently in rye grass production.

**Threats to Oak Savanna at Coyote Creek Northeast**

The OCS (2016) identifies loss of habitat complexity, recreational impacts, land use conversion, land management conflicts (grazing), invasive species, loss of habitat connectivity, and altered fire regimes as limiting factors in oak savanna (grassland) habitats. The main threat to oak savanna at Coyote Creek Northeast at the time of writing of this plan is its complete conversion to non-native grasses.
3.2 Strategy Species

At present condition, the site provides limited habitat for species identified as Strategy Species under the OCS (2016). Winter months during migration, western meadowlarks and dusky Canada geese have been observed in the open fields.

OCS species could benefit from habitat improvements and management at the site include, but are not limited to, those identified in Table 4. Appendix 5 provides additional information on each species’ needs, limiting factors, data gaps, and conservation actions.

3.3 Fish & Wildlife Species

No fish species are present on the site.

With FRWA providing extensive wintering habitat for ducks and geese, seasonal ponding on the site currently provides habitat for species such as: mallard (*Anas platyrhynchos*), green-winged teal (*Anas crecca*), northern shoveler (*Anas clypeata*), American wigeon (*Anas americana*), northern pintail (*Anas acuta*), and gadwall (*Anas strepera*). This habitat is limited to fluctuations in precipitation quantity and duration.

Raptors such as northern harrier (*Circus cyaneus*), red tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*) are commonly observed perched and hunting over the open fields. Bald eagles (*Haliaeetus leucocephalus*) and turkey vultures (*Cathartes aura*) have also been observed scavenging on prey. Great blue heron (*Ardea Herodias*) and numerous subspecies of Canada geese (*Branta canadensis*) have been observed foraging on the site in winter.

Non-native wildlife documented on the site include: European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), red swamp crayfish (*Cambarus clarkia*), and ring-necked pheasant (*Phasianus colchicus*). Roster pheasants are released throughout FRWA annually for the Western Oregon Fee Pheasant Hunt Program and often enter lands outside of wildlife area.

4 Strategy Habitats: Desired Future Conditions and Management Goals and Objectives

Management of Coyote Creek Northeast in the first 10 years of ODFW ownership will focus on restoration and enhancement of native habitats for the benefit of native wildlife and plant species, and on providing key features which support a suite of at-risk and declining Willamette Valley species. The desired future conditions (DFCs) and related goals and objectives reflect the property’s Conservation Values and regional conservation priorities.

DFCs describe characteristics of the site following restoration and management (Figure 9). They are referenced when developing restoration projects and prescriptions, and can also be used to
measure progress toward achieving restoration objectives and meeting the needs of focal species. DFCs are intended to be guidelines and should be applied with flexibility in consideration of project context, short- and long-term objectives, current and future vegetation potential, soils and topography, habitat patch size and landscape context.

Figure 9. Desired Future Conditions

The goals, objectives, and strategies are designed to protect the site’s Conservation Values, native habitats, and unique and important ecological features, while also providing a framework to guide restoration and management actions. Goals are broad statements describing the transition from the site’s current condition to its desired future condition. Each goal has one or more objectives; these objectives direct implementation of site activities. Each objective is assigned one or more strategies which are also used to evaluate whether the objective has been met.
4.1 Wetlands

Wetland habitats are highly diverse and are saturated with water either permanently or seasonally. On Coyote Creek Northeast, seasonally wetland habitats include wet prairies and vernal pools.

The wet prairie will be dominated by native bunchgrass, such as tufted hairgrass or in places shorter-statured species such as California oatgrass (*Danthonia californica*), with a significant forb component. Bunchgrass structure should be present and sufficiently dense to provide nest sites and cover for grassland birds such as western meadowlarks. Sedges and rushes will dominate areas that retain water longer into the late spring. Forb species should support pollinators by flowering over the entire growing season, and providing a range of flower morphology, including species accessible to generalists (e.g., *Asteraceae*). Total vegetative cover in the wet prairie (not including vernal pools) should optimally aim for 90% cover, for the purpose of competing with weeds and to minimize management needs. The seeding across the site will be diverse to allow for a mosaic of species and habitat characteristics.

Woody vegetation in the form of shrubs or small trees should be sparse across the site (all species combined) in wet prairie areas. Woody vegetation, such as willow shrubs, will provide perching, cover and singing habitat. Clusters of willows and dense forbs, such as Douglas’ spirea (*Spiraea douglasii*) and Nootka rose (*Rosa nutkana*) will diversify the habitat creating cover habitat for small mammals as well as neo-tropical birds such as, willow flycatchers (*Empidonax traillii*) and western bluebirds (*Sialia Mexicana*).

With historical agricultural practices such as baiting, trapping, and disking removed from the site and native plants established providing cover habitat and forage; rodent species such as mice, voles and the camas pocket gopher (*Thomomys bulbivorus*) can persist. These population increases will be a source of food for raptors and carnivorous mammals such as coyotes (*Canis latrans*).

Any highly invasive species, such as blackberry or reed canarygrass, should be treated as soon as possible following detection. Ideally, problematic invasive species commonly occurring in wet prairie restorations, such as rat-tail fescue (*Vulpia myuros*), pennyroyal and creeping bentgrass (*Agrostis stolonifera*), should be limited as feasible. By restoring the wet prairies on the site to moderate to high-quality conditions, ODFW and USFWS can assess the potential for the reintroduction of Bradshaw’s lomatium and Willamette daisy.

Wet prairie and vernal pool habitats will be maintained by regular disturbance, including controlled ecological burns, mowing, haying, herbicide treatments and if needed, limited tilling, disking, or other means of removing unwanted vegetation. Once restored vegetation has established sufficiently to carry fire, controlled ecological burns should be implemented on a 3-5 year return interval (local weather conditions and ODFW policies permitting).

Alteration of existing drainage ditches through disking and re-routing will enhance existing vernal pool/seasonal wetland habitats by increasing the water retention and emergent...
vegetation. Dabbling ducks such as: mallard, green-winged teal, northern shoveler, American
to, northern pintail, and gadwall will benefit from these actions. Additionally, these
seasonal pools with emergent vegetation will provide multiple life cycle habitat requirements
for pond-breeding amphibians including long-toed salamander (*Ambystoma macrodactylum*),
northwestern salamander (*Ambystoma gracile*), rough-skinned newt (*Taricha granulosa*),
Pacific chorus frog (*Pseudacris regilla*) and red-legged frog.

Additionally, the wet prairie areas that are frequently inundated might provide suitable habitat
for the streaked horned lark. Similar habitats attract streaked horned larks on the private
property to north of Field 3.

Mechanized activities in established wet prairies will be performed to avoid nest disruption or
fledgling mortality. Depending on how the vernal pools establish, limited tilling or herbicide
application may be required to maintain open conditions in the centers of the pools. This would
occur during the late dry season when the pools are not likely to be used by wildlife, and would
occur only as needed to prevent dense vegetation from becoming established and altering the
function of the pools.

In the event that drain tiles are found, ODFW will evaluate tile impacts to the Desired Future
Conditions of wetland habitats. ODFW will work with BPA to evaluate the required compliance
actions for any removal activities.

<table>
<thead>
<tr>
<th>Wetland: Goals, Objectives, and Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wet Prairie</strong></td>
</tr>
<tr>
<td><strong>Goal WP1. Increase water inundation on the site to promote and maintain native vegetation to provide habitat for wintering waterfowl, amphibians, pollinators, neo-tropical migrants, grassland birds, and other wet prairie wildlife species.</strong></td>
</tr>
<tr>
<td><strong>Objective 1.</strong> restore surface hydrology in wet prairie restoration areas (210 acres) so that water remains on the site through late spring.**</td>
</tr>
<tr>
<td><strong>Strategy:</strong></td>
</tr>
<tr>
<td>1) Continue to monitor water storage capacity on-site.</td>
</tr>
<tr>
<td>2) Monitor the hydrologic effects on native vegetation recruitment.</td>
</tr>
<tr>
<td>3) Identify potential locations that will facilitate surface water inundation.</td>
</tr>
<tr>
<td>4) Remove and or modify existing ditches to retain water on the site by disking, plowing, or filling.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Goal WP2. Restore native wet prairie plant communities</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective 1.</strong> Convert agricultural crop fields to native wet prairie (210 acres).</td>
</tr>
<tr>
<td><strong>Strategy:</strong></td>
</tr>
<tr>
<td>1) Continue agricultural crop contract to prohibit the invasion of non-native plants until the restoration activities begin.</td>
</tr>
<tr>
<td>2) Divide out acreage into manageable restoration units.</td>
</tr>
<tr>
<td>3) Restore wet prairie throughout agricultural crop fields.</td>
</tr>
<tr>
<td>* Incorporate plant species into restoration mixes that hold cultural significance for native tribes who historically occupied the area around Fern Ridge.</td>
</tr>
<tr>
<td>* Wet prairie will be planted with a diverse mix of native grass and forb species.</td>
</tr>
</tbody>
</table>
## Wetland: Goals, Objectives, and Strategies

### Objective 2. Actively restore existing wet prairie areas (approximately 20 acres).

**Strategy:**
1. Non-native woody vegetation in wet prairies should not to exceed 5%.
   - Management methods include prescribed fire, herbicide, or mechanical techniques.
2. Interplant suitable areas with a diverse mix of native grass and forb species.
3. Maintain connectivity of wet prairie habitats between adjacent properties (South Coyote, City of Eugene, and Fields 1/2/3) for grassland birds and other wet prairie associated wildlife species.
4. In combination with VP1 (See page 40), incorporate and maintain travel and feeding corridors for wildlife and other bird species (neo-tropical, passerine, and other bird species).

### Objective 3. Evaluate the feasibility and opportunities to plant Willamette Daisy and Bradshaw’s lomatium.

**Strategy:**
1. Upon completion of successful restoration of native species, evaluation for introduction will be conducted.
2. Work with local partners (USFWS, USACE, City of Eugene and Willamette Valley Native Seed Coop) to develop plan for sensitive plant species restoration.

### Objective 4. Coordinate with BPA on restoration and management actions under the power line easement.

**Strategy:**
1. Obtain Land Use Agreement (LUA) for planned actions within ROW.
2. Maintain vegetation within ROW according to specifications within the LUA.

### Goal WP3. Maintain wet prairie habitats through management actions.

### Objective 1. Control encroachment of woody vegetation and non-native species establishment to 5-10% of wet prairie habitat.

**Strategy:**
1. Mow, spray and/or burn prairie in order to prevent woody vegetation from establishing.
2. Perform periodic disturbances through mowing, disking, burning and spraying as needed.

---

### Vernal Pools/Seasonal Wetlands

**Goal VP1.** Restore swales, vernal pools and seasonal wetland habitats in Field 3 to support amphibians, waterfowl, shorebirds, bats, and other birds

### Objective 1. Increase seasonal wetland habitats on 30-40 acres.

**Strategy:**
1. Assess site hydrology to understand annual patterns on the site and assist with design.
   - Document the frequency and extent of winter field inundation.
   - Combine onsite hydrologic monitoring data with historic aerials, LiDAR imagery to analyze high-resolution topography, and known habitat requirements to guide development of restoration plan.
**Wetland: Goals, Objectives, and Strategies**

**Objective 2.** Maintain vernal pool and seasonal wetland habitats (30-40 acres).

**Strategy:**
1) Evaluate native plant response following restoration actions to determine extent of native plant enhancement warranted.
2) Encourage native shrubs (Salix sp.) and establishment of emergent vegetation.
3) Maintain vegetation through prescribed fire, herbicide, or mechanical techniques.

**Goal VP2.** Improve seasonal wetland conditions in Fields 1 and 2 to support amphibians, bats, birds, and western pond turtles (approximately 10 acres).

**Objective 1.** Increase the diversity and quantity of native plant species around and within the man-made seasonal pond (approximately 1 acre).

**Strategy:**
1) Remove/control non-native invasive species from banks of pond (e.g. reed canarygrass and blackberry).
2) Monitor native shrubs (e.g. willows & spirea) and emergent establishment vegetation and determine if planting is needed.
3) Provide basking structures (e.g. logs and stumps) for pond turtles.

**Objective 2.** Evaluate the use of water from ditch to increase seasonal inundation.

**Strategy:**
1) Monitor the response of ditch system and site to forthcoming modifications to the FRWA East Coyote Creek Management Unit water control enhancement project.

**Objective 3.** Modify ditch between Fields 1 and 2 to increase water inundation in the wet prairie.

**Strategy:**
1) Design and plan for water control structure (e.g. culvert with flash board) if feasible and warranted.
2) Implement water management techniques water control structure to provide water within the wet prairie habitats.
3) Monitor the response of water after ditch modifications in Field 3 are completed.
4.2 Grasslands

The upland prairie will be restored to native bunchgrasses and forbs. The transition of this area to native cover will entail the complete eradication of the agriculture crops. The upland prairie will be planted with a grass mix of Roemer’s fescue, California oatgrass, meadow barley (*Hordeum brachyantherum*) and blue wildrye (*Elymus glaucus*). Annual and perennial forbs will be planted to attract nectar foraging species and provide structural diversity. Species commonly considered for prairie planting include: yarrow (*Achillea millefolium*), Oregon sunshine (*Eriophyllum lanatum*), common selfheal (*Prunella vulgaris*), slender cinquefoil (*Potentilla gracilis*), common madia (*Madia elegans*) and giant blue eyed Mary (*Collinsia grandifolia*).

The large acreage and assemblage of native grassland prairie plants is anticipated to benefit ground nesting songbirds, including western meadowlarks. Western pond turtle nesting habitat will be available with the low-statured vegetation and ample sun exposure.

Higher elevations of the eastern portion of the prairie will be managed for oak savanna habitat. Oak savannas are grasslands with scattered Oregon white oak trees, generally only one or two trees per acre. Oak trees in savannas are usually large with well-developed limbs and canopies. The natural recruitment of Oregon white oak will be protected from management actions such as mowing and spraying. Seedling plantings may also occur after native ground cover vegetation has been established. Extending the oak savanna from the existing oak woodland on private property to the east habitat for the acorn woodpecker (*Melanerpes formicivorus*) black-tailed deer (*Odocoileus hemionus*) and western grey squirrel (*Sciurus griseus*) will be improved. This habitat will also benefit Crow herd of Roosevelt elk (*Cervus canadensis roosevelti*), which are common in the oak savanna and woodland areas to the south and west of the Coyote Creek Northeast, including the Coyote Creek South site.

Upland prairie habitats will be maintained by regular disturbance. Controlled ecological burns, mowing, haying, herbicide treatments and if needed, limited tilling, disking, or other means of removing unwanted vegetation will be used. Ideally, once restored native vegetation has established sufficiently to carry fire, controlled ecological burns could be implemented on a 3-5 year return interval (local weather conditions and ODFW policies permitting).

**Grassland: Goals, Objectives, and Strategies**

<table>
<thead>
<tr>
<th>Goal UP1. Upland Prairie Habitat – Restore native upland prairie plant communities to support birds, mammals, reptiles.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective 1.</strong> Convert agricultural crop fields to native upland prairie (40 acres).</td>
</tr>
<tr>
<td><strong>Strategy:</strong> 1) Maintain agricultural crop contract to prohibit invasion of non-native plants until upland prairie restoration begins. 2) Conduct a minimum of 2 years of site preparation prior to seeding. 3) Seed native bunchgrass with 10 to 30 percent forb diversity. 4) Facilitate any needed follow-up weed management.</td>
</tr>
</tbody>
</table>
Coyote Creek Northeast Management Plan

5 Public Access and Use

This addition of Coyote Creek Northeast to the FRWA is a key step expanding ODFW’s capacity to protect native Willamette Valley habitats for the enjoyment of people and the benefit of common and uncommon wildlife and plants. Public access and use of Coyote Creek Northeast is welcomed and encouraged. However, during necessary operations and maintenance of transmission infrastructure, ODFW will coordinate with BPA on closures and restricted access within the right of way.

### Public Access and Use: Goals, Objectives, and Strategies

<table>
<thead>
<tr>
<th>Goal PAU1. Provide public access compatible with habitat and species management goals for Coyote Creek Northeast.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective 1.</strong> Provide public access to Coyote Creek Northeast consistent with those uses of Fern Ridge Wildlife Area.</td>
</tr>
<tr>
<td><strong>Strategy:</strong> 1) Provide open space for public to access native habitats and view wildlife. 2) Provide hunting opportunities for waterfowl and big game during designated hunting seasons. 3) Provide site access to school groups, individual students, adult learning classes, etc.</td>
</tr>
<tr>
<td><strong>Objective 2.</strong> Evaluate need for a parking area to facilitate pedestrian access to the property.</td>
</tr>
<tr>
<td><strong>Strategy:</strong> 1) Consider number of parking spots, seasonality, and entry pathways into the site, balanced with the newly established habitat. 2) Evaluate options complimenting and combining public access needs for adjacent properties. 3) Develop plan for BPA approval if parking is deemed compatible and chosen to facilitate management objectives.</td>
</tr>
<tr>
<td><strong>Objective 3.</strong> Provide information to help inform the public of use restriction and management goals for Coyote Creek Northeast.</td>
</tr>
<tr>
<td><strong>Strategy:</strong> 1) Develop outreach materials to be available at FRWA office for the public. 2) Post restricted uses at public entry points to protect conservation values.</td>
</tr>
</tbody>
</table>

Goal OS1. Oak Savanna Habitat – Restore native oak savanna plant communities.

| **Objective 1.** Restore and promote oak savanna habitat (approximately 10 acres). |
| **Strategy:** 1) Protect natural recruitment of Oregon white oak seedlings from management actions. 2) Plant seedlings to promote savanna habitat conditions. |
**Goal PAU2. Evaluate effects of public use on wildlife, habitat and Conservation Values.**

**Objective 1.** Implement a monitoring plan to assess public use and identify potential conflicts with habitat and wildlife conservation values.

**Strategy:**
1) Evaluate public use over the period of this management plan to better understand site use, effects of use on restored habitats and Conservation Values, and to inform the next revision to this plan. Make adjustments to access timing or location if needed for this unit of the FRWA and in consideration of conservation and public use values on other FRWA properties.

**Objective 1.** Prevent trespass and/or vandalism.

**Strategy:**
1) Monitor trespass/vandalism.
2) Administrative access needs including unauthorized/illicit use as needed.
   - Gates are installed similar to those currently found on other management units of the FRWA.
   - Install fencing if needed to establish property boundaries and prevent livestock intrusion.

#### 6 Infrastructure

Infrastructure on the site is limited to the boundary perimeter (fences and gates) and the BPA transmission lines. Maintenance and repair of infrastructure is expected. Replacement of the Lane-Wendson Transmission Line wooden poles is planned for July 2018. ODFW and BPA have communicated and exchanged information regarding this project and will continue as the project progresses. Gates are necessary for site access during restoration and maintenance. New gates will provide better wildlife passage and provide improved access for the public. The removal of all woven wire fence will greatly enhance wildlife access. Installation of smooth wire can protect the boundaries from unwanted trespass (e.g. vehicles and livestock) at the same time improve wildlife access.

**Infrastructure: Goals, Objectives, and Strategies**

**Goal I1. Improve wildlife access by removing, repairing, and installing improved fencing and gates.**

**Objective 1.** Remove fencing adjacent to FRWA East Coyote Unit (approximately 2,500 linear feet).

**Strategy:**
1) Remove all woven and barb wire from the north and eastern boundaries of Field 1.
2) Remove sections of wire fence in Fields 1 and 2 where vegetation is established and provides a natural barrier.

**Objective 2.** Install wildlife friendly fencing (approximately 7,500 linear feet).

**Strategy:**
1) Remove all woven fencing restricting wildlife along Cantrell and Neilson Roads.
2) Install 2-strand smooth wire fencing where needed to protect site from unwanted trespass.
Objective 3. Replace three damaged gates with new gates consistent with other FRWA management access locations.

Strategy: 1) Install three single steel beam gate that provides vehicle and equipment access to the site as well as the public.

7 Management Plan Implementation

7.1 Prioritization of Restoration and Enhancement Actions with Suggested Timeframes

The restoration and enhancement work recommended by this plan for Coyote Creek Northeast provides a framework of short-term treatments to long-term multi-year efforts. Prioritization is needed to focus management actions where they have the most immediate effect, and to build in needed time to plan and secure funds for larger-scale efforts. The prioritization recommended here accounts for these needs as well as the degree of threat to existing plants, wildlife, and habitats, especially listed species; baseline information needed; potential to achieve moderate to high quality habitat conditions; feasibility of projects within the 10-year timeframe of this management plan; availability of funding, and anticipated sequencing of actions.

Considering these factors, the following objectives are the Highest Near-Term Priority:

- Completion of baseline assessments (2015-2017):
  - Hydrologic and field inundation recording and mapping: Goal WP1 Objective 1
- Woody vegetation removal and invasive species control (2017):
  - Field 1 & 2: Goal WP2 Objective 2
- Removal of woven wire and barb wire fencing (2017):
  - Field 1 adjacent to East Coyote Creek Management Area: Goal I1 Objective 1
- Installation of access gates (2017-2018):
  - Fields 1-3: Goal I1 Objective 3
- Complete development design of wet prairie and seasonal wetlands (2017-2019):
  - Goals WP1 Objectives 1, 2 & WP2 Objective 1

Medium Term Priority projects consist of:

- Wet prairie restoration (2020-2025):
  - Goal WP1 Objectives 1-3
- Implementing the upland prairie for wildlife habitat (2020-2025):
  - Goal UP1 Objectives 1 & 2
7.2 Projected Restoration Timeline and Activities

A generalized schedule indicating projected restoration timeline and activities is shown in Table 5. Actual timelines are subject to funding, plant material supplies, weather conditions, site response, schedule adaptations, as well as the progress of the Coyote Creek South Site restoration. Restoration phases are broken out to provide feasible acreages for treatment schedules, supplies, and labor (Figure 10).

Table 5. Restoration Timeline and Activities

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TASK</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2017 – Fall 2020</td>
<td>Spray and mow</td>
<td>• Eradicate/control of encroaching reed canarygrass and woody vegetation in Fields 1, 2 &amp; 3.</td>
</tr>
<tr>
<td>Fall 2017-Spring 2018</td>
<td>Planning</td>
<td>• Wet prairie-vernal pool plan development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Ditch modification plan development</td>
</tr>
<tr>
<td>Spring 2019</td>
<td>Regulatory and Permit Applications</td>
<td>• Obtain necessary permits for earth work</td>
</tr>
<tr>
<td>Spring 2019</td>
<td>Infrastructure improvements</td>
<td>• Remove unwanted fences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Install new fences along road sides</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Install new access gates</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>Broadcast spray - glyphosate</td>
<td>• Field 3: Phase 1 (60 acres)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 1&amp;2: reed canary zones</td>
</tr>
<tr>
<td>Spring 2021</td>
<td>Broadcast spray - glyphosate</td>
<td>• Field 3: Phase 1 (60 acres)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 2: 10 acres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 1&amp;2: reed canary zones</td>
</tr>
<tr>
<td>Summer 2021</td>
<td>Ditch modification &amp; Vernal pool construction &amp; Site re-grading</td>
<td>• Field 3: Phase 1 (15-20 acres of vernal pool development</td>
</tr>
<tr>
<td>Fall 2021</td>
<td>Broadcast spray - glyphosate</td>
<td>• Field 3: Phase 1 (60 acres)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 2: 10 acres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 1&amp;2: reed canary zones</td>
</tr>
<tr>
<td>Fall 2021</td>
<td>Broadcast/drill seed - forbs</td>
<td>• Field 3: Phase 1 (60 acres)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 2: 10 acres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 1&amp;2: reed canary zones</td>
</tr>
<tr>
<td>Fall 2021</td>
<td>Broadcast spray - glyphosate</td>
<td>• Field 3: Phase 2 (90 acres)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 3: Phase 3 (40 acres)</td>
</tr>
<tr>
<td>Spring 2021</td>
<td>Broadcast spray - glyphosate</td>
<td>• Field 3: Phase 2 (90 acres)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 3: Phase 3 (40 acres)</td>
</tr>
<tr>
<td>Fall 2022</td>
<td>Drill - grasses</td>
<td>• Field 3: Phase 1 (60 acres)</td>
</tr>
<tr>
<td>Fall 2022</td>
<td>Broadcast spray</td>
<td>• Field 3: Phase 2 (90 acres)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 3: Phase 3 (40 acres)</td>
</tr>
<tr>
<td>Spring 2023</td>
<td>Broadcast spray - glyphosate</td>
<td>• Field 3: Phase 2 (90 acres)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 3: Phase 3 (40 acres)</td>
</tr>
<tr>
<td>Period</td>
<td>Treatment</td>
<td>Areas</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Fall 2024</td>
<td>Broadcast spray</td>
<td>• Field 3: Phase 2 (90 acres)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 3: Phase 3 (40 acres)</td>
</tr>
<tr>
<td>Fall 2024</td>
<td>Broadcast/drill seed - forbs</td>
<td>• Field 3: Phase 2 (90 acres)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 3: Phase 3 (40 acres)</td>
</tr>
<tr>
<td>Spring 2025</td>
<td>Broadcast spray – grass specific</td>
<td>• Field 3: Phase 2 (90 acres)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 3: Phase 3 (40 acres)</td>
</tr>
<tr>
<td>Fall 2025</td>
<td>Drill seed - grasses</td>
<td>• Field 3: Phase 2 (90 acres)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field 3: Phase 3 (40 acres)</td>
</tr>
<tr>
<td>Spring 2026</td>
<td>Spot spray</td>
<td>• Broad leaf weeds as needed</td>
</tr>
</tbody>
</table>
Figure 10. Restoration Phases
7.3 Adaptive Management

All restoration and enhancement work undertaken by ODFW when implementing this management plan will occur under an adaptive management framework. Adaptive management is based on the principles of monitoring priority site features, conditions, management action effectiveness, benchmarking their progress and status against the stated goals and objectives for the site, and adjusting next steps accordingly.

The adaptive management cycle of planning, implementing, evaluating, and as needed modifying management actions continually improves practitioners’ understanding of treatment effectiveness. Adaptive management helps address uncertainties in ecosystem management, allows for addressing unique conditions found at a specific site, provides opportunities to assess progress, and aids in achieving stated goals.

![Adaptive management framework](image)

The monitoring efforts outlined in this chapter are designed to track the status of the site’s Conservation Values and progress toward achieving the desired future conditions for the site. Monitoring of restoration treatment effectiveness will be part of any grant received for the project. Work completed by contractors will be evaluated and provide real-time feedback on treatment condition and success. The Technical Advisory Group of partner staff will function as a communications structure to provide feedback on how the restored features are developing and functioning; and, recommendations for changes to design, methods, sequencing or monitoring. ODFW’s partners in the Willamette Wildlife Mitigation Program will perform the same role, as will ODFW biologists whose work is focused on habitats or species found on Coyote Creek Northeast. Ultimately, all management and restoration decisions are determined by ODFW staff.
7.4 Monitoring

7.4.1 Effectiveness Monitoring

Effectiveness monitoring for Coyote Creek Northeast will focus on baseline documentation described in Chapter 4, status of the site’s Conservation Values, and restoration effectiveness. Effectiveness monitoring is designed to provide important biological and ecological information about the site, while minimizing duplication of other monitoring efforts. ODFW will share the monitoring data collected at Coyote Creek Northeast with other conservation-oriented groups and the public, with the exception of sensitive species data which will be limited to appropriate government agencies (i.e., USFWS, ODA, ORBIC, etc.), WWMP partners, and the Rivers to Ridges partners who are managing populations of the same species on nearby lands.

Any monitoring will employ scientific principles and professionally accepted techniques. Much of the monitoring is designed to be collected at a rapid assessment level of detail and will be qualitative in nature, however some data (e.g. wildlife monitoring) may be quantitative in nature. All monitoring data generated will be stored electronically and maintained by ODFW.

Four monitoring efforts will occur under this plan:

1. **Photo points.** Four photo points sited to track restoration and enhancement actions were established and will be monitored annually in the spring to document site condition and protection of the site’s Conservation Values over the course of this plan. Photo points will be taken in cardinal directions (i.e. north, east, south and west). See Figure 11.

2. **Wildlife surveys.** Surveys for breeding western meadowlark, streaked horned lark, Oregon vesper sparrow, western pond turtle and northern red-legged frog will be completed within the first 3 years of site ownership. Monitoring of dusky Canada goose use on the property will be ongoing. This effort will utilize accepted protocols and methods for each species, and initial efforts should be designed for detection. Western meadowlark winter usage across the site will be examined as the site undergoes restoration overtime.

3. **Major restoration and enhancement actions.** Pre- and post-project monitoring will occur in wet prairie and vernal pool restoration areas where significant hydrologic modification and native plant seeding occurs. Monitoring may be conducted by ODFW biologists or monitoring staff, by contractors undertaking the restoration work, or by researchers. Habitat extent mapping will be used to track the site’s trajectory toward achieving desired future conditions. Specific monitoring goals and protocols will be utilized for different types of projects.
7.4.2 Compliance Monitoring

Compliance monitoring for Coyote Creek Northeast will be conducted consistent with the WWMP monitoring plan to determine if the terms established in the conservation easement and management plan are being followed and if enforcement action is necessary. Compliance monitoring is a requirement of BPA and intends to identify consistent implementation of conservation easement and management plan restrictions and actions.

Figure 11. Monitoring Photo Points
7.5 Planning Process and Public Participation

The development of this management plan involved several steps. A core team of ODFW biologists, field staff, and program managers met initially to discuss management plan content and ODFW goals and needs for the project. Following initial site visits, ODFW hosted two site tours for partner organizations and requested input on best uses of the site. Representatives from ODFW, including species’ specialists, wildlife area managers, and Willamette Wildlife Mitigation Program staff, USACE, City of Eugene, U.S Fish and Wildlife Service, Long Tom Watershed Council, American Bird Conservancy, and the Confederated Tribes of the Warm Springs, Grand Ronde, and Siletz and attended site tours and provided input into the site’s restoration potential.

The draft plan was made available to the public via the ODFW website. A news release for the draft plan and public meeting was distributed by ODFW in addition to sending letters to neighbors and lessees as well as emails to interest groups and project partners.

The draft plan was then presented to the public at a public meeting on January 11, 2017, via a presentation and discussion with ODFW WWMP and FRWA staff. Comments were received and questions were answered at the meeting. Eight members from the public were in attendance.

The following is a summary of the topics, statements and questions received:

- What type of public access and usage will be available (e.g. trails, parking, and hunting)?
- Concern by adjacent neighbors regarding hunting proximity (consider safety zone).
- What type of herbicides will be used for restoration and management?
- Consider use of livestock in restoration.
- Will the site bring more people to the neighborhood, thus traffic, need for parking and trash?
- What wildlife species are currently using the site?
- What is the timing of the restoration and how long will it take?
- Where will money come from for restoration?
- Consider water retention via wells, ponds, and tanks for fire and drought control.

7.6 Regulatory Requirements

ODFW will comply with all applicable laws, regulations, and other requirements that apply to properties acquired through the WWMP. Federal, State, and local jurisdictional regulations that may require consultation or permitting as a result of management activities at the Coyote Creek Northeast Site, include:

- Cultural Resource Review - Federal and State agencies must factor historic preservation into project requirements
  - National Historic Preservation Act (Section 106)
- State Historic Preservation (ORS 358.635)
- Joint Permit – Required for wet prairie-vernal pool restoration
  - Clean Water Act (Section 404) (U.S. Army Corps of Engineers)
  - Removal-Fill Law (ORS 196.765-990) (Oregon Department of State Lands)
- Federal-and State-listed Endangered Species
  - Endangered Species Act (Section 7) (U.S. Fish and Wildlife Service)
  - Listed Plant Permits (Oregon Department of Agriculture)
- Land Use Compatibility – (Lane County)

ODFW entered into a conservation agreement with the USFWS that requires project implementation for Coyote Creek Northeast conform to all requirements of the USFWS PROJECTS Biological Opinion (2015). Restoration and management actions will be limited between April 1 and July 15 when migratory birds are actively breeding.

### 7.7 Operations & Management

Funds have been provided by BPA to enhance, operate, maintain, and protect the property to preserve or enhance the conservation values described in Section 1.2. These funds will be expended towards the following kinds of activities:

- Regular maintenance of boundaries and signs;
- Monitor surrounding land uses that could adversely affect the conservation values;
- Maintain current photos, maps, and tax information;
- Create and maintain management plans;
- Maintain gates, fences, and locks;
- Facilitate and manage public access;
- Prevent and remove encroachment;
- Habitat mapping and evaluation;
- Outreach to neighbors, stakeholders, and local governments;
- Equipment specific to stewardship needs;
- Invasive species management at a maintenance level

Restoration activities associated with the property will be funded with sources other than the O&M funds provided under the stewardship agreement. All revenue generated from farming leases must be spent on managing or restoring the property.

### 7.8 Management Plan Development and Reporting

This management plan is a working document that will be actively used by ODFW biologists and field staff to direct on-the-ground restoration and management actions, according to the stated goals, objectives, and strategies. The strategies are written as actions with assigned timelines,
and will be used to design a sequence of work over the coming years. In this regard, the management plan will be actively implemented and frequently updated, by design.

The information contained in this plan meets ODFW’s needs and interests, as well as BPA requirements described in the Conservation Easement. The timeline of this management plan was set to coincide roughly at its 5-year interval (2022) with the first major progress review and incorporation into ODFW’s FRWA Management Plan (2009-2019). A review of this plan by ODFW will be conducted at this 10-year point (2027) to determine if an updated set of goals and actions are warranted, if understanding of the site changes significantly, or changes are required as part of the FRWA plan update. Otherwise, in 2027 ODFW will determine whether a revision to this plan is needed, or that the site can transition from a restoration and enhancement mode to an operations and maintenance mode.

Stewardship reports will be completed on an annual basis and will include updates on habitat conditions, surrounding land use, development or changes in the management plan, observed or reported trespass, relationships with surrounding landowners and the potential or observed effect of each of these changes to the property. Any herbicide use will be listed following standards of BPA’s Habitat Improvement Programmatic (HIP) Herbicide and/or the USFWS PROJECTS Biological Opinion (2015) as well as the State or Oregon reporting guidelines.
7.9 Management Staff Contact Information

_Fern Ridge Wildlife Area Manager_, Primary management responsibility of Wildlife Area; responsible for meeting WWMP program goals and implementation of management plans with WWMP staff assistance; oversees property restoration work and ongoing maintenance.

26969 Cantrell Road, Eugene 97402
541-935-2591

_Willamette Wildlife Mitigation Project Restoration Biologist_, Responsible for carrying out and managing the activities related to the restoration design and implementation of the site.

26969 Cantrell Road, Eugene 97402
541-935-2591

_Willamette Wildlife Mitigation Program Coordinator_, Primary contact for WWMP.

4034 Fairview Industrial Drive SE
Salem, OR 97302
503-947-6086
8 References Cited


Oregon Biodiversity Project. 1998. Oregon’s Living Landscape, Strategies and Opportunities to Conserve Biodiversity. Defenders of Wildlife, Lake Oswego OR.

Oregon Department of Fish and Wildlife. 2016. Coyote Creek South Management Plan. Oregon Department of Fish and Wildlife, Salem, OR.

Oregon Department of Fish and Wildlife. 2016. Administration Rules – Division 008 Department of Fish and Wildlife Lands, Oregon Department of Fish and Wildlife, Salem, OR.

Oregon Department of Fish and Wildlife. 2009. Fern Ridge Wildlife Area Management Plan. Oregon Department of Fish and Wildlife, Salem, OR.


APPENDIX 1

BPA CONSERVATION EASEMENT
DEED OF CONSERVATION EASEMENT

THIS DEED OF CONSERVATION EASEMENT is executed by State of Oregon, acting through the Department of Fish and Wildlife ("Grantor"), in favor of the United States of America ("United States" or "Grantee"), acting by and through the Department of Energy, Bonneville Power Administration ("BPA"), headquartered in Portland, Oregon, at P.O. Box 3621, Portland, OR 97208-3621. The Grantor and Grantee together are referred to as the "Parties."

I. RECITALS

A. Grantor’s legislative mandate is to preserve, protect, and perpetuate wildlife and wildlife habitat for the citizens of Oregon. ORS § 496.012. Grantor implements this mandate through the Oregon Conservation Strategy and the Habitat Mitigation Policy.

B. BPA is a power-marketing agency having legal obligations under the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. §§ 839-839h ("Northwest Power Act") to protect, mitigate, and enhance fish and wildlife, including related spawning grounds and habitat, affected by the development and operation of Federal hydroelectric projects of the Columbia River and its tributaries, in a manner consistent with the purposes of the Northwest Power Act, the Fish and Wildlife Program adopted by the Pacific Northwest Electric Power and Conservation Planning Council under subsection 4(h) of the Northwest Power Act (16 U.S.C. § 839b(h)), and other environmental laws, including the Endangered Species Act, 16 U.S.C. §§ 1531-1544 ("ESA"). BPA has the authority pursuant to the Northwest Power Act, 16 U.S.C. §§ 839b(h) and 839f(a), the Federal Columbia River Transmission System Act, 16 U.S.C. § 838i(b), or the Bonneville Project Act, 16 U.S.C. §§ 832a(c) through (f), to acquire real estate or to assist in the acquisition and transfer of real property interests.

C. BPA and the State of Oregon entered into a programmatic Memorandum of Agreement, Willamette River Basin Memorandum of Agreement Regarding Wildlife Habitat Protection and Enhancement between the State of Oregon and the Bonneville Power Administration dated October 22, 2010 ("MOA"),

Conservation Easement – Coyote Creek NE
in which BPA agreed to fund the acquisition of real property interests through the State of Oregon to permanently protect and enhance important fish and wildlife habitat in the Willamette Basin, where it either currently exists or at one time existed, in exchange for supporting BPA’s partial fulfillment of Northwest Power Act and ESA obligations, and in exchange for rights of enforcement, entry, and inspection to the United States and its assigns.

D. BPA in accordance with the mutual commitments of the MOA, a copy of which is available from the BPA Manager, Real Property Services, P.O. Box 3621, Portland, OR 97208-3621, provided funding to the Grantor to acquire fee title ownership of certain real property, the Coyote Creek NE (“Protected Property”) located in Lane County, Oregon. The Protected Property has important features that help BPA meet its statutory obligations to the public under the Northwest Power Act and other environmental laws.

II. AGREEMENT

A. Conveyance and Consideration. The Grantor, for and in consideration of the funding in the amount of $628,000.00 in U.S. dollars, in hand paid, which BPA provided to ODFW to acquire fee title ownership of the Protected Property, hereby voluntarily conveys and warrants to the United States of America and its assigns a perpetual easement for conservation purposes (“Conservation Easement”) in, over, under, upon and across the Protected Property, legally described in Exhibit A (legal description) and shown in Exhibit B (map) together with the right of entry and access, created and implemented under applicable state and federal law, and creating an interest in property intended to be a conservation easement under §§ ORS 271.715-795. The Parties intend this Conservation Easement to be a perpetual and irrevocable easement in gross, and further intend that its terms and conditions, set forth below, create equitable servitudes and covenants running with the land, binding the Grantor and the Grantor’s successors and assigns for the benefit of the United States.

B. Purpose. The purpose (“Purpose”) of this Conservation Easement is to protect and conserve, and as appropriate, to allow for the restoration or enhancement of the Conservation Values (Section C, below) of the Protected Property. As such, the Purpose of this Conservation Easement includes the prevention of any use of the Protected Property that will materially harm or materially interfere with any of the Conservation Values of the Protected Property. The Grantor intends that this Conservation Easement will confine the use of the Protected Property to activities that comply with the Conservation Easement, including the approved Management Plan. BPA shall have the right, but not the obligation, to enforce any and all terms of this Conservation Easement. The Grantor shall only conduct activities on the Protected Property which are consistent with the Purpose of this Conservation Easement. In the event that there is a conflict between the Grantor’s uses or activities and the Purpose of Conservation Easement, the Purpose of the Conservation Easement shall be
construed broadly and shall prevail over any conflicting uses or activities of the Grantor.

C. Conservation Values. The Protected Property, in its present state, comprises approximately 224 acres of grass seed hay fields in agricultural production. The Parties agree that portions of the Protected Property currently include and may include in the future important species, habitat, and other important ecosystem attributes. The Protected Property’s large size and its location near other conservation properties are of landscape-scale importance.

Desired Future Condition. Desired future conditions of the Protected Property include restoring degraded habitats from cropland to wet prairie and upland prairie. At the time of the grant of this Conservation Easement, the Protected Property has been in agricultural use for more than four decades and most of the native constituents, excluding some tufted hairgrass (Deschampsia cespitosa) in the westernmost parcel, have been replaced with grass fields. Approximately 210 acres could be restored to wet prairie and another 40 acres to upland prairie for the benefit of western meadowlark (Sturnella neglecta), streaked horned lark (Eremophila alpestris strigata), and other grassland nesting bird species, as well as for listed plant species. Restoration of the Protected Property will allow for increased habitat connectivity between the on-site wet prairie and large blocks of priority habitats located on adjacent protected sites to the south, the wetlands to the west, and ODFW’s Coyote Creek South property. This landscape level habitat conservation has the potential to greatly benefit other Oregon Conservation Strategy priority species, especially rare plant species and federally listed threatened bird species, including but not limited to the streaked horned lark (E. strigata), which the Protected Property provides the southernmost known nesting population.

The Conservation Values of the Protected Property that currently exist specifically include the following, recognizing that such Conservation Values may periodically fluctuate or trend toward long-term change, due to natural events such as wildfire, floods, interdecadal climate events, and long-term climate change, as well as human-initiated enhancement or restoration actions:

1. The Protected Property will help conserve a key area that includes approximately 224.83 acres of wet and upland prairie habitat. Rare grassland birds such as the western meadowlark have been documented on the site. When restored, there is potential habitat for a variety of wildlife species, including declining grassland birds, amphibians, reptiles, raptors, waterfowl, and other species. Restoration of the Protected Property will also provide opportunities for re-introduction of endangered Willamette Valley plant species associated with wet prairie, such as Bradshaw’s lomatium and Willamette daisy. Willamette daisy populations are present in the immediate vicinity and a portion of the Protected Property has been designated as Critical Habitat (an area essential for the conservation) of this species.

2. The Protected Property is strategically located adjacent to the Fern Ridge Wildlife Part conservation easement.
Area (FRWA) which adds to the larger complex of nearby conservation lands. The Protected Property will contribute to a unique and complex array of prairie and wetlands focused management projects and areas which include the FRWA, ODFW’s Coyote Creek South, and the City of Eugene’s Coyote Prairie. Restoration efforts can be landscape focused and provide the opportunity to utilize the expertise of a number of local agencies, including ODFW, U.S. Fish and Wildlife Service, and City of Eugene.

3. Particular fish and wildlife species, including but not limited to ESA-listed species, species serving important roles in the ecosystem, and species which are of significant importance to the social and economic well-being of the Pacific Northwest and the Nation, and which are dependent on suitable environmental conditions, with an emphasis on native species. The Conservation Values include important habitat, generally characterized by the biological or physical components that support fish and wildlife species, including but not limited to space for individual and population growth, and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, and migration; and often identified as important through regulatory categorical designations such as ESA-designated critical habitat or other important environmental areas identified by local, tribal, state, or federal law.

4. Other Ecosystem Attributes and Services. Ecosystem attributes and services, present as of the Effective Date of this Conservation Easement, include but are not limited to the fish and wildlife habitats described above, biodiversity, clean air and water, maintenance of soil productivity, and carbon sequestration. The Protected Property also provides a scenic resource.

D. Water and Mineral Rights. To the extent Grantor has or after-acquires water rights, Grantee shall ensure that the Grantor shall not abandon any of the water rights appurtenant to the Protected Property by virtue of non-use and that the Grantor may not transfer, change the point of diversion, change the purpose of use, or otherwise significantly change any Protected Property water right without receiving prior written approval from BPA.

Mineral rights to Parcel I and Parcel II of the Protected Property (as legally described in Exhibit A) were released by the State of Oregon, acting by and through its Department of State Lands, and acquired by Grantor to assure no surface disruption from mineral exploration or extraction and for the long-term conservation of the Protected Property. Said rights shall thereafter run with the land, and Grantor may not transfer, abandon, or otherwise encumber the same.

E. Baseline Documentation. The Grantor and BPA agree that the characteristics and conditions of the Protected Property at the time of this grant are documented in a Baseline Documentation Report, signed and acknowledged by the Parties; the acknowledgment is Exhibit C.
F. **Reserved Uses.** The Grantor reserves, for itself and its successors and assigns, the right to use the Protected Property in any and all ways which are consistent with the Purpose of this Conservation Easement and which are not otherwise prohibited by this Conservation Easement, including but not limited to: the right to record title, the right to convey, transfer, and otherwise alienate title to these reserved rights; the right of quiet enjoyment of the rights reserved in Protected Property; and the right to prevent trespass and control access.

G. **Management Plan.** Within 18 months of this grant, the Grantor shall develop a Management Plan for the Protected Property to describe the uses and activities that the Grantor expects to undertake or allow to be undertaken on the Protected Property, including any restoration, enhancement, operation and maintenance, or any other activities or uses. The Grantor shall include in the Management Plan any limitations or prescriptions for these uses and activities necessary to ensure the Purpose of this Conservation Easement. The Grantor shall also identify in the Management Plan the allowable use and access by the public of the Protected Property if public access is appropriate.

In developing the draft Management Plan, Grantor will solicit and incorporate as Grantor deems appropriate the views of interested natural resource management agencies, local governments, and parties. Grantor will submit documentation showing the nature and extent of such coordination with any draft plan to BPA. BPA shall review that Plan and any proposed amendments for conformance with the MOA, this Conservation Easement, and applicable laws. BPA must review the Management Plan or any amendments prior to its implementation for consistency with the Purpose of the acquisition and this Conservation Easement. Prior to review of the Management Plan by BPA, the Grantor shall not undertake any ground-disturbing activities on the Protected Property without prior notice to and written consent of BPA. The Grantor shall make the final Management Plan, and any final amendments, available to the public.

H. **Public Access.** The Grantor shall provide reasonable access to the Protected Property (for example, for undeveloped recreational uses, such as hiking, bird watching, hunting, and fishing) to the general public, unless the Grantor and BPA determine such access may materially impair one or more of the Conservation Values of the Protected Property. The Grantor will address access to the Protected Property in the Management Plan.

I. **Annual Report.** The Grantor shall annually submit a report to BPA that describes, at a minimum any: changes in real property interests (including water rights) in the Protected Property; uses or activities undertaken, in progress, or planned; violations or threatened violations of the Conservation Easement; and enforcement action taken. The Grantor shall provide the initial annual report in the fifteenth month after the closing date of the acquisition of the Protected Property, and then annually on that initial report date anniversary thereafter, unless otherwise agreed by BPA.
J. Rights Conveyed to Grantee

1. **General Rights.** The Grantor has conveyed this Conservation Easement to the United States. BPA is the acquiring federal agency having jurisdiction and control over this Conservation Easement. Subject to valid existing rights of record and those rights specifically reserved to the Grantor, all development rights associated with the Protected Property are vested in Grantee. In addition to any other rights granted to the Grantee pursuant to this Conservation Easement, Grantee has the right to:

   a. Access and inspect the Protected Property at all reasonable times upon reasonable notice (which may be by phone or electronic mail) to assure compliance with this Conservation Easement;
   
   b. To access the Protected Property upon reasonable notice (which may be by phone or electronic mail) to survey the fish and wildlife habitat and evaluate the status of the Conservation Values;
   
   c. Prevent any activity on the Protected Property inconsistent with this Conservation Easement, and to require the restoration of areas or features of the Protected Property that are damaged by any inconsistent activity; and
   
   d. Should the Grantor fail to do so, to retain and maintain the right to use any and all of the water rights associated with the Protected Property, and to protect those rights from threat of abandonment or forfeiture under relevant law; Grantee may, after providing 90 days advance written notice to the Grantor enter upon the Protected Property and take actions reasonably necessary to maintain the validity of the water rights.

2. **Transmission Right-of-Way Easement.** Parties acknowledge this Conservation Easement does not affect or limit prior rights held by the Grantee on the Protected Property for electric power transmission purposes. The easements are recorded in the records of Lane County, Oregon under Book number 369 page 274 recorded January 17, 1966; and under instrument #33404 dated March 3, 1948. These rights include the right to enter and access BPA transmission facilities.

3. **Future Negotiations for Access Easement.**
   If BPA and Grantor decide that a defined route and means of access to BPA’s transmission facilities is necessary or appropriate over the Protected Property, Grantor shall negotiate a perpetual access easement with BPA at no cost to BPA. A condition of siting a new access road easement on the mitigation property is that the road must not have permanent, long-term significant effects on the conservation values protected with the underlying acquisition.

   BPA shall initiate negotiation of the terms and conditions of the access easement by providing draft access easement language. In the negotiations and the final access easement, BPA shall, at a minimum:
a. Recognize the purposes for which the underlying fee or conservation easement was acquired.

b. Use reasonable efforts to accommodate Grantor’s preferences for siting, designing, using, and maintaining any necessary access road.

c. Fund appropriate mitigation measures identified during negotiations or as part of the environmental analysis for the access road under NEPA, the ESA, the Clean Water Act, the National Historic Preservation Act, or any other applicable state or federal laws.

The Parties will negotiate the terms and conditions of the access easement in good faith, in accordance with applicable law. If negotiations fail, or an access easement is not finalized in a timely manner (where “timely” means enough time to accommodate BPA’s need for a final decision, allowing at least 60 business days for negotiation and finalization of an access easement), then BPA’s authorities to pursue a necessary or appropriate access easement are unaffected by this Conservation Easement.

K. Prohibited Uses. The Grantor shall manage the Protected Property to protect its fish and wildlife habitat on behalf of BPA, preventing any and all uses of the Protected Property that are inconsistent with the Purpose of this Conservation Easement. The Grantor may also manage the Protected Property to restore or enhance fish and wildlife habitat, provided the restoration or enhancement activities are approved by BPA, either in an final Management Plan or by prior written agreement. Prohibited uses of the Protected Property include those specifically listed below. The Parties intend that any activity that may materially harm or materially interfere with one or more of the Conservation Values is prohibited, and therefore the list identified below is not exhaustive.

1. Residential, Commercial or Industrial Uses. Any residential, commerical, or industrial uses of the Protected Property is prohibited, including timber harvesting, grazing of livestock, and agricultural production.

2. Construction of Buildings, Facilities, Fences or Other Structures. Construction of new buildings, facilities, fences or other structures is prohibited. Repair, maintenance, or replacement of existing buildings, facilities, fences or other structures identified in the Baseline Documentation Report are permitted at the same location and within the existing footprint of such structures.

3. Utilities. Except as provided for in Section J.2, the installation or relocation of new public or private utilities, including electric, telephone, or other communications services is prohibited. Existing utilities on, over, or under the Protected Property may be maintained, repaired, removed or replaced at their current location as that location is documented in the Baseline Documentation Report.
4. **Signs.** Except for no trespassing signs, for sale signs, signs identifying the owner of the Protected Property, and signs that may be erected by the Grantee identifying the Purpose of the Protected Property, all other signs, advertisements, and billboards of any nature are prohibited. The permitted signs may not exceed 15 square feet in size.

5. **Waste.** Dumping, collecting, recycling, accumulating, or storing of trash, refuse, waste, sewage, bio-solids, or other debris is prohibited.

6. **Mining.** The exploration, development, mining or extraction of soil, sand, loam, gravel, mineral, oil, gas, or other substance from the surface or subsurface of the Protected Property is prohibited.

7. **Topography.** Altering the existing topography of the Protected Property by digging, plowing, diskng, or otherwise disturbing the surface or subsurface is prohibited.

8. **Watercourses/Wetlands.** Draining, dredging, channeling, filling, leveling, pumping, diking, impounding or any other alteration of any watercourses, ponds, seeps, bogs, springs, wetlands, or any seasonally wet area is prohibited, as is altering or tampering with existing water control structures or devices.

9. **Vegetation.** The cutting, trimming, shaping, killing, or removal of any vegetation from the Protected Property, except for noxious weeds, is prohibited.

10. **Exotic Species.** The introduction, cultivation, or use of exotic plant or animal species on the Protected Property is prohibited. Exotic plants include non-native invasive plant species.

11. **Roads and Impervious Surfaces.** Construction of new roads and paving of any existing road not paved or otherwise covered in an impervious material as of the Effective Date is prohibited. Existing roads identified in the Baseline Documentation Report may be maintained and repaired in their current condition and within their existing footprint as identified in the Report.

12. **Vehicle Use.** The use of motorized vehicles is prohibited, except as necessary to carry out activities approved by the Grantee, or for limited, de-minimus, non-commercial recreational uses such as hunting or bird watching if those activities are approved uses in the Management Plan.

13. **Subdivision.** The legal or "de facto" division, subdivision or partitioning of the Protected Property is prohibited.

14. **Grant of Rights.** The granting of any property interest or rights in the Protected Property, including easements, permits, licenses, and leases, without the prior written consent of the Grantee is prohibited.
L. **Permitted Uses.** Uses or activities otherwise prohibited under Section K above may be allowed but only if: (1) the use or activity is, in Grantee’s sole discretion, consistent with the Purpose of this Conservation Easement; and (2) the use or activity and any necessary limits or prescriptions are agreed to by BPA in advance, either in a final Management Plan, or by written consent of BPA.

M. **Enforcement**

1. *Notice of Violation, Corrective Action.* If Grantee determines that the Grantor or its representatives, contractors, successors, or assigns violates or threatens to violate this Conservation Easement, and if such determination or dispute is not resolved by negotiation as set forth in Section N, Grantee will give written notice to the Grantor and demand corrective action sufficient to cure the violation and, where the violation involves injury to the Protected Property resulting from any use or activity inconsistent with the Purpose, sufficient to restore the portion of the Protected Property so injured to its prior condition in accordance with a plan approved by Grantee.

2. *Grantor’s Failure to Respond.* The Grantee may bring an action as provided in Section M.3 if the Grantor fails to cure the violation within thirty (30) calendar days after receipt of a notice of violation, or under circumstances where the violation cannot reasonably be cured within such thirty (30) day period, fails to begin curing the violation within the thirty (30) day period and fails to continue diligently to cure such violation until finally cured.

3. *Grantee’s Action.* Grantee may pursue an action in a court having jurisdiction to enforce the terms of this Conservation Easement: (1) to enjoin the violation, ex parte as necessary, by temporary or permanent injunction; (2) to require the restoration of the Protected Property to the condition that existed prior to any such injury; and (3) to recover any damages to which it may be entitled for violation of the terms of this Conservation Easement. The remedies described in this paragraph shall be cumulative and shall be in addition to all remedies now or hereafter existing.

4. *Grantor’s Action.* In the event that the Grantor seeks a determination as to the legal meaning or effect of this Conservation Easement, or as to any alleged violation hereof by Grantee, and if such determination or dispute is not resolved by negotiation set forth in Section N below, then the Grantor shall be entitled to bring judicial action in a court of competent jurisdiction.

5. *Emergency Enforcement.* Notwithstanding the provisions of M.1 and M.2, if Grantee determines on the basis of substantial evidence that circumstances require immediate action to prevent or mitigate significant damage to one or more of the Conservation Values, Grantee may undertake reasonable actions to remove,
eliminate or mitigate damages to the Protected Property. Grantee shall provide
prior notice to the Grantor of such actions to the extent reasonably practicable and
may seek Grantor participation in such actions, but may proceed with such actions
without permission from the Grantor or without waiting for the Grantor to take
any action.

N. Dispute Resolution. The Parties shall attempt in good faith to resolve any dispute
arising out of or relating to this Conservation Easement by negotiation between
executives or officials who have authority to settle the controversy.

entitles the Grantee to bring any action against the Grantor for any injury to or change
in the Protected Property resulting from causes beyond the Grantor’s control,
including, without limitation, naturally caused fire, flood, storm, and earth movement,
or from any prudent action taken by the Grantor under emergency conditions to
prevent, abate, or mitigate significant injury to the Protected Property resulting from
such causes. Such excuse from performance will be allowed only if such catastrophic
event or other event beyond the Grantor’s control has caused a substantial
degradation of the Conservation Values. The Parties shall make all reasonable efforts
to resume performance promptly once the force majeure is eliminated.

P. Waiver. The failure of any Party to require strict performance of any term of this
Conservation Easement or a Party’s waiver of performance shall not be a waiver of
any future performance or of a Party’s right to require strict performance in the
future.

Q. Conveyance and Assignment. If Grantor chooses to convey the Protected Property,
Grantor will, upon first obtaining authorization from the Oregon Fish and Wildlife
Commission, offer it at no cost as follows: (1) to agencies of the State of Oregon; (2)
to political subdivisions as defined in § ORS 271.005; and then (3) to BPA. If BPA
deleines, then Grantor shall pursue authorization pursuant to Oregon law to assign or
transfer its rights to another qualified entity, subject to BPA approval, which shall not
be unreasonably withheld.

R. Proceeds from Activities on the Protected Property. The Grantor shall use any
proceeds generated from activities on the Protected Property (e.g., leases) towards the
operations, maintenance and restoration of the Protected Property. If proceeds exceed
the operations, maintenance and restoration needs of the Protected Property, the
Grantor may use the proceeds on other BPA-funded properties in the Willamette
River Basin owned by Grantor, or the Grantor may place the proceeds in its
stewardship account for the property and roll the funds over to the next fiscal year
until an operations or maintenance need arises.

S. Termination or Amendment

1. Termination Standard. This Conservation Easement may be voluntarily
terminated by agreement of the Parties only if:
a) a subsequent, unexpected change in the conditions of the Protected Property or the surrounding area makes impossible the continued use of the Protected Property for the Purpose of this Conservation Easement (except that changed environmental conditions related to climate change, or other natural events, for example, wildfire, river channel migration, erosion or avulsion, shall not be grounds for termination); or

b) BPA agrees to exchange this Protected Property for another property proposed by the Grantor; factors that BPA will consider in determining whether to agree to an exchange include whether the new property is at the time of the proposed exchange determined by BPA to supply equal or better Conservation Values to meet BPA’s mitigation needs as compared with the Protected Property; whether the property will be permanently protected pursuant to a conservation easement granted to BPA on terms substantially similar to this Conservation Easement; and the costs to BPA of undertaking the acquisition of the new property, if any.

2. **Termination Process.** If the Parties agree to voluntarily terminate this Conservation Easement and have met the above termination standard, the Parties shall terminate this Conservation Easement by executing and recording an instrument appropriate for the purpose. In the event of termination through an exchange for another property, the Parties must agree on the new property and its conservation easement before this Conservation Easement will be terminated.

3. **Proceeds after any Termination.** If this Conservation Easement is terminated either voluntarily by the Parties, or by involuntary extinguishment by a court of competent jurisdiction and the termination results in proceeds, BPA is entitled to either (1) a share of such proceeds in proportion to the amount BPA contributed to the fee title acquisition, which is 100% of the purchase price or (2) at BPA’s election, to review and approve use of the proceeds by the Grantor to acquire new fish and wildlife habitat for BPA mitigation.

4. **Amendment.** This Conservation Easement may only be amended by agreement of the Parties, and any such amendment shall be properly documented, executed, and recorded. Amendments based on changed conditions may be made only when the effect of the amendment is to benefit the Conservation Values (for example, amending the Conservation Easement to place further restrictions on the use of or activities on the Protected Property). The Parties may not use amendments to impliedly terminate the Conservation Easement or remove any portion of the Protected Property from its terms, except to the extent consistent with the Purpose of the Conservation Easement.

T. **Control.** The Grantor has ownership and control of the Protected Property and is responsible for all incidents of ownership. Such incidents of ownership include, but are not limited to, maintenance and repair of existing structures, hazardous waste
response, endangered species protection, noxious weed and invasive species response, tort liability, compliance with applicable laws, and payment of applicable taxes and assessments.

Notwithstanding anything to the contrary in this Conservation Easement, the Parties acknowledge and agree that Grantor’s authority and obligation to make any payment, grant any warranty, or incur any expense required to be made or undertaken by Grantor for the duration of this Conservation Easement is contingent on Grantor receiving funding as provided in the MOA, Section II.G (BPA Funding of Wildlife Mitigation Projects). If Grantor is unable to fulfill its obligations under the Conservation Easement due to lack of funding, appropriations, limitations, allotments, or other expenditure authority, Grantee, after notice to Grantor, may, but is not required to, fulfill the obligation on behalf of Grantor and if Grantee does so, Grantor shall reimburse Grantee for Grantee’s actual costs incurred in discharging the obligation if Grantor receives funding, appropriations, grant funds, expenditure limitations, allotments, or other expenditure authority sufficient to allow Grantor, in the exercise of its reasonable administrative discretion, to provide such reimbursement. The Parties acknowledge that Grantor’s inability to fulfill its obligations under this Conservation Easement may create additional obligations for Grantor under the MOA.

Nothing in this Conservation Easement is to be construed as permitting any violation of Article XI, section 7 of the Oregon Constitution or any other law regulating liabilities or monetary obligations of the State of Oregon.

U. **Cultural Resources.** The Grantor is responsible for cultural or historic resource mitigation or preservation on the Protected Property in accordance with applicable cultural resource laws.

V. **Hazardous Substances.** To the best of the Grantor’s knowledge, there are no hazardous substances present in, on, or under the Protected Property, including without limitation, in the soil, air, or groundwater, and there is no pending or threatened investigation or remedial action by any governmental agency regarding the release of hazardous substances or the violation of any environmental law on the Protected Property, and that there are no underground storage tanks located on the Protected Property. If, at any time, there occurs, or has occurred a release in, on, or about the Protected Property of any hazardous substances, the Grantor agrees to take all steps necessary to assure its containment and remediation without cost to Grantee, including any cleanup that may be required, unless the release was caused by Grantee, in which case Grantee will be responsible for remediation in accordance with applicable law. Nothing in this Easement shall be construed as giving rise, in the absence of a judicial decree, to any right or ability in Grantee to exercise physical or managerial control over the day-to-day operations of the Protected Property, or any of the Grantor’s activities on the Protected Property, or otherwise become an operator with respect to the Protected Property within the meaning of the Comprehensive Environmental Response Compensation and Liability Act of 1980, as amended.
(“CERCLA”). The Grantor specifically agrees to release and hold harmless Grantee from and against all liabilities for violations or alleged violations of, or other failure to comply with, any federal state or local environmental law or regulation relating to hazardous substances, including, without limitation, CERCLA, by the Grantor in any way affecting, involving, or relating to the Protected Property, except to the extent such violations or alleged violations are caused by the acts or omissions of Grantee.

W. Notice. Any notice permitted or required by this Conservation Easement, unless otherwise specified, must be in writing, delivered personally to the persons listed below, or will be deemed given on the date deposited in the United States mail, certified and postage prepaid, return receipt requested and addressed as follows, or at such other address as any Party may from time to time specify to the other Party in writing. Notices may be delivered by facsimile or other electronic means, provided that they are also delivered personally or by certified mail. The addresses listed below can be modified at any time through written notification to the other Party.

Notices to BPA should be sent to:                  Notices to the Grantor should be sent to:

Director, Fish & Wildlife Program                      Oregon Department of Fish and
Bonneville Power Administration                        Wildlife
P.O. Box 3621                                          4034 Fairview Industrial Avenue SE
Portland, OR 97208-3621                                 Salem, OR 97302

And to to BPA’s Real Property Services:

Manager, Real Property Services                       
RE:WILWF-WL-24; WILWF-WL-25                         
Bonneville Power Administration                      
P.O. Box 3621                                         
Portland, OR 97208-3621

X. Effective Date. This Conservation Easement vests when signed by the Grantor, and accepted by the Grantee.

Y. Schedule of Exhibits. All exhibits are incorporated and made part of this Conservation Easement.

Exhibit A – Legal Description
Exhibit B – Map
Exhibit C – Acknowledgement of Baseline Documentation Report
Exhibit D – Acceptable Encumbrances

Conservation Easement – Coyote Creek NE
Z. GRANT, COVENANTS AND WARRANTIES, SIGNATURE AND ACKNOWLEDGMENTS

To have and to hold the Conservation Easement herein granted unto the United States and its assigns.

The Grantor warrants and covenants to and with the United States that the Grantor is lawfully seized and possessed of the Protected Property in fee simple, with a good and lawful right to grant the same, including a good and lawful right to grant this Conservation Easement; that the Protected Property is free and clear of all encumbrances and restrictions except the encumbrances and restrictions specifically set forth in Exhibit D; that the United States and its assigns shall have the use of and enjoy all the benefits derived from and arising out of this Conservation Easement; that the Grantor shall at the request of the United States execute or obtain any reasonable further assurances of the title to the Property; and that the Grantor will forever warrant the title to the Property and defend the United States against all persons who claim a lawful interest in the Property, except for persons who claim interests under the exceptions described in Exhibit D.

IN WITNESS WHEREOF, the undersigned Grantor has executed this instrument this 25 day of August, 2015.

GRANTOR

William Herber
Acting Deputing Director,
Oregon Department of Fish of Wildlife

ACCEPTANCE BY THE UNITED STATES

Luke Arant
Supervisory Realty Specialist
Bonneville Power Administration

Date: 29 Apr 15

Conservation Easement – Coyote Creek NE
ACKNOWLEDGMENT

STATE OF Oregon )
County of Marion ) ss.

On this 25 day of August, 2015, before me personally appeared William Herber, known to me or proved to me on the basis of satisfactory evidence to be the person who executed the within instrument as the Acting Deputy Director of the Oregon Department of Fish and Wildlife acknowledged to me that he executed the same freely and voluntarily in such capacity; and on oath stated that he was authorized to execute said instrument in such official or representative capacity.

Notary Public in and for the
State of Oregon
(SEAL) Residing at Corvallis
My commission expires 4/29/18
Karen Lee Tofte

ACKNOWLEDGMENT

STATE OF Oregon )
County of Marion ) ss.

On this 31st day of October, 2015, before me personally appeared Luke Arant, known to me or proved to me on the basis of satisfactory evidence to be the person who executed the within instrument as the Supervisory Realty Specialist, Bonneville Power Administration acknowledged to me that he executed the same freely and voluntarily in such capacity; and on oath stated that he was authorized to execute said instrument in such official or representative capacity.

Notary Public in and for the
State of Oregon
(SEAL) Residing at
My commission expires September 12, 2016
Charlene R. Belt

Conservation Easement – Coyote Creek NE
EXHIBIT A

LEGAL DESCRIPTION

PARCELS I AND II

The South half of the South half of Section 36, and the South half of the North half of the South half of Section 36, Township 17 South, Range 5 West, Willamette Meridian, Lane County, Oregon.

LESS AND EXCEPT any portion thereof which is not described in that certain Quitclaim Deed recorded on November 17, 1977 as Instrument No. 7773679, Lane County Official Records, in Lane County, Oregon.

ALSO LESS AND EXCEPT the real property described in that certain Personal Representative’s Deed recorded on August 1, 2014 as Instrument No. 2014-029963, Lane County Deeds and Records, in Lane County, Oregon.

ALSO LESS AND EXCEPT any portion of the real property described in Instrument No. 7773679 lying within the real property described in that certain Warranty Deed recorded on May 21, 1965 as Instrument No. 4311, Lane County Oregon Deed Records, in Lane County, Oregon.

ALSO LESS AND EXCEPT any portion of the real property described in Instrument No. 7773679 lying within the right-of-way of Cantrell Road, which occupies the South line of said Section 36, or within the existing right of way of Nielsen Road, which occupies the West line of said Section 36, in Lane County, Oregon.

PARCEL III:

All of the East 50 rods of the Southeast quarter of Section 35, Township 17 South, Range 5 West of the Willamette Meridian, in Lane County, Oregon.

EXCEPTING THEREFROM the following described premises:

Beginning at the quarter corner between Sections 35 and 36, Township 17 South, Range 5 West of the Willamette Meridian; thence West along the North line of the Southeast quarter of said Section 35, a distance of 640 feet to the intersection with the traverse along the 377-foot contour line and the true point of beginning; thence on the traverse along said 377-foot contour line as follows: South 23° 58’ 32” East 440 feet; thence South 1° 58’ 48” West 1299.95 feet; thence South 64° 13’ 53” West 375 feet to the West line of the property of Annj Merriman; thence North along the West line of said property 1850 feet to the North line of the Southeast quarter of said Section 35; thence East along the North line of the Southeast quarter of said Section 35 to the true point of beginning, in Lane County, Oregon.
EXHIBIT B

MAP

This map is for reference and assistance in locating the subject parcels only. It may not be to scale. Refer to Legal Description on Exhibit A for property boundaries.
EXHIBIT C

ACCEPTANCE AND ACKNOWLEDGEMENT
OF
BASELINE DOCUMENTATION

The undersigned hereby acknowledge and agree that the Baseline Documentation for the Coyote Oaks Northeast located in Lane County, Oregon, prepared by the Oregon Department of Fish and Wildlife’s Willamette Wildlife Mitigation Program and dated June 10, 2015, is an accurate representation of the biological, physical and historical conditions of the subject property as of the Effective Date of the Conservation Easement. All of the undersigned parties have received copies of the Baseline Documentation and is on file with the Bonneville Power Administration.

Grantor:
State of Oregon, acting through the Department of Fish and Wildlife

[Signature]  8/25/15
William Herber  
Acting Deputy Director  

Grantee:
Bonneville Power Administration:

[Signature]  24 Aug 15
Luke Arant  
Supervisory Realty Specialist

Exhibit C  
Conservation Easement – Coyote Creek NE  

Page 18 of 19
EXHIBIT D

ACCEPTABLE ENCUMBRANCES

PARCEL I and PARCELL II

Easements, Notes, Conditions and Restrictions
Purpose: Plat of Lands
Recording Date: Partition Plat Nos. 2014-P2610 and No. 2014-P2611

Easement
In Favor of: United State of America
Purpose: Power Line
Recording Date: March 17, 1948 in Book 369, Page 274
June 11, 1948 in Book 375, Page 44
January 17, 1966, Reception No. 33404

PARCEL III

The rights of fishing, navigation and commerce in the State of Oregon and the Federal Government and the rights of the public in and to that portion thereof lying now or at any time below the ordinary high water mark of Fern Ridge Reservoir.

Subject to right of overflow by the U. S. A. as to any portion below the 377 foot contour line of Fern Ridge Reservoir
APPENDIX 2

BIODIVERSITY REPORT
Brief Biodiversity Survey Report for

Coyote Creek Northeast

Contracted tasks (Salix Associates) for the 224 acre CCNE project area included the following:

1. Completely survey and record species presence/absence.
2. Work directly with ODFW staff to transfer data, incorporate existing survey work, and create GIS shape files with locations of species.
3. Make suggestions for future needed survey work and project management.

Inventory

The Coyote Creek Northeast (CCNE) site was visited eight times, the first time on July 25, 2014 and the final time on May 22, 2015. An unusually warm February and March in 2015 accelerated phenology by 2-3 weeks. The continuation of unusually hot and dry weather rapidly accelerated plant senescence.

Because of differences in weather and associated plant phenology from year to year, and the size and complexity of the two parcels there are more species that likely will appear on future inventories (especially on the more diverse Campbell parcel). Also, movement of plants onto or off of the site with or without direct human intervention (e.g., on goose feet or by wind), has occurred and will continue to occur – also altering the species composition over time.

The Oregon Biodiversity Information Center (ORBIC) was consulted for rare species occurrences in the area. Two occurrences are mapped on the site: a series of reports from 1980–2009 for Willamette Daisy (primarily north of the area; no mention is made of why the population line includes a portion of the northeast corner of the CCNE site) and a 1996 Vesper sparrow sighting at the southwest corner of the site. The Bradshaw’s Lomatium scattered in the Lane County ROW of KR Nielson Road is not mapped even though it is within an “avoidance” area signed by Lane County Public Works. A Grasshopper sparrow sighting was recorded south of the southeast corner of the Jackson site in 1972 and Purple martins have been recorded in flight at many locations in the general area. Their recorded nesting sites are in snags and nest boxes not associated with the CCNE site.

Site description and use

The CCNE site consists of two parcels, one on the west side of KR Nielson Road (Campbell tract), and one on the east side (Jackson tract). Both are bordered by Cantrell Road on the south. The Campbell tract is mostly flat, except for a shallow, constructed pond surrounded by a low berm near the north end, a swale running east-west about in the middle, and a small drainage swale in the southwest portion. Several north-south ditches are present in the northern portion.

The south portion of the Campbell tract appears to be hayed, and has been used as a hobby remote-control airplane field on occasion. The north portion of the site gets little use, and apparently is not mowed as encroaching tree saplings are common. The Jackson tract is used for commercial grass seed production, and thus, has little vegetative diversity over the majority of the site. Small amounts of native wetland plants remain in the east and west sections near the north property line. Remote-controlled airplane use was observed on the southwest corner during one survey. The Jackson tract is mostly flat in the western portion, but the eastern portion has some gently rolling slopes (and a homesite not included in this project).
The CCNE project area is generally much lower in native biodiversity than the Coyote Creek South project area surveyed similarly in a previous project. This may be because the easy access facilitates trampling and introduction of invasive species, and/or intensive farming (Jackson tract; possibly historically on south portion of the Campbell tract), and/or smaller size and lower habitat diversity compared to the Coyote Creek South parcel.

**Habitat observations**

The north portion of the Campbell tract contains the highest quality remnants of native wet prairie and the most habitat diversity – highlighted by the shallow pond in the northwest section. The pond likely was bulldozed in wet prairie as a private waterfowl hunting site. It is surrounded by a berm, likely created from the pond excavations, which contains an old, unmaintained hunting blind. Ant mounds are found on the pond berm and occasionally in other slightly higher ground portions of the northern section of the Campbell tract.

![Photo 1. Woody encroachment into wet prairie in northern half of Campbell tract, as viewed west from Nielson Road.](image)

The pond is seasonal, usually drying up by midsummer. Much of the central area of the dried pond bed dries to cracked mud flats each summer. Tapered Rush and Eastern False Loosestrife dominate the perimeter.

![Photo 2. Bare mud, Eastern False Loosestrife (ground cover) and Tapered Rush (tufts) dominate the shallow pond bed when the water recedes in summer.](image)

One clump of Reed Canarygrass currently is present in the north part of the otherwise open pond bed area.
Photo 3: Bare mud present when shallow pond water recedes. Note clump of Reed Canarygrass by person at right.

The large number of burrows present (and a few shells) indicates Red Swamp Crayfish (an introduced species) are common in the pond. The deep burrows likely allow them to stay moist even though the pond bed dries out in summer. Red Swamp Crayfish are known from a much larger area around and in Fern Ridge Reservoir, and likely have a very significant effect on pond ecology. (See additional information in the invasive species section, below.) Raccoons may prey occasionally on the crayfish.

Photo 4. Shells with cm. scale (left) and burrow (right) of Red Swamp Crayfish in shallow pond.

The northwest corner of the CCNE site contains remnant native wet prairie, but it is being degraded by invasion of Reed Canarygrass and encroachment by Oregon Ash. Control of both could benefit the rare wet prairie habitat.

Photo 5. Oregon Ash encroachment and Reed Canarygrass invasion (back left and right) in northwest portion of site.
Some old ash stumps are visible at ground level, indicating ash control previously occurred. The south half of the tract contains a hayfield and some forest and shrub areas in the southeast corner – all with little native composition remaining in the herbaceous layer. One-sided Sedge, an historical dominant in the region, remains as a dominant in some areas.

Several small fires were set in the area by an arsonist in the fall of 2014 (P. Gordon, City of Eugene), and one of the fires burned the north portion of the Campbell tract and the west part of the south portion.

![Photo 6. Tufted Hairgrass resprouting after fire at CCNE site.](image)

Some ash trees along the west fenceline were killed by the blaze, and in prairie areas, much thatch was burned.

![Photo 7. Burned Oregon Ash on west property line of Campbell tract.](image)

![Photo 8. Note burned area of Tufted Hairgrass wet prairie in left half of photo, unburned area in right half. Photo taken in northwest portion of Campbell tract.](image)
Observations of note: floristics
Altogether, 182 vascular plant species were noted on the site. Of the 99 native species seen, 3 are considered rare. Of the 83 exotic species seen, 43 are considered invasive.
On the Campbell tract, 156 species were observed, while only 92 were observed on the Jackson tract (excluding commercially farmed grasses). See the Floristics spreadsheet for additional details.

Observations of note: native and rare native species

Bradshaw’s Lomatium (*Lomatium bradshawii*)
None were observed on the site, but several were observed on both sides of KR Nielson Road in Lane County right-of-way. (A. Kreager of ODFW recorded GPS points for these locations.) Both this species and the next (Willamette Daisy) previously have been recorded north of the CCNE site, including along the sides of KR Nielson Road. Those areas were not surveyed as a part of this project.

Willamette Valley Daisy (*Erigeron decumbens*)
None was observed on the site or nearby.

The northern part of the Campbell tract was included in an area outlined as a portion of the Willamette Daisy population in USFWS and ORBIC data bases. This likely originated from an old survey that was conducted north of the area, as there is no specific evidence of surveyors inventorying the southern areas (including the subject site), but details of the survey were recorded farther north. It is possible that a view south of suitable habitat from an area north of the subject site at that time (or a view west from KR Nielson Rd.) resulted in inclusion of that area without a survey. Or, it is possible some plants were seen there, but are no longer present. It is also possible that they were missed in the current surveys – but due attention was given to the area during expected flowering periods, and no plants were seen. As this survey year was somewhat unpredictable because of an unseasonably warm late winter, it is possible that the plants are present but simply did not bloom normally. It also may be that exotic and exotic invasive species have out-competed any rare species that might have existed on this site. Weedy, exotic geraniums and vetches now dominate the northern area, where Willamette Daisy may have been present at one time.

Divided-leaf Blister Buttercup (*Ranunculus sceleratus* var. *multifidus*)
One plant of this species was found, in the small east-west running swale just south of the north property line. It is very uncommon in the area, and if possible, should be propagated by seed and introduced in other wet areas on site.
Least Mousetail (*Myosurus minimus*)
This species is not on the Emerald Chapter rare list, but should be. There are only 3 or 4 known sites in Lane County. Ann Kreager found the plant, but the specific place was not relocatable, and no other plants were found. If re-found, propagate as above.

**Photo 11. Least Mousetail inflorescence from the Campbell property.**

Lobb’s Water Buttercup (*Ranunculus lobbii*)
This species is on the Emerald Chapter NPSO rare list; however, it is more common in the Fern Ridge area than previously known. It appears to be secure in the area in ditches and other areas with standing water that do not dry up too early in the growing season.

**Wildlife**
It is possible (or likely) that some Dusky Canada Geese use the site for winter resting and feeding. Large, mixed flocks of subspecies Canada geese and Cackling geese use the Jackson site. Historical sightings of Vesper and
Grasshopper sparrows occurred on or near the site, but were not confirmed as part of this inventory. (One bird seen in profile in young Oregon Ash and hawthorn near the west end of the north boundary of the Jackson site had a Vesper Sparrow “jizz,” but was not plainly visible before disappearing. Grassland and other bird surveys were conducted by others, but incidental bird sightings from this inventory are included in the species lists accompanying this report. In addition to sensitive bird species, Northern Red-legged Frogs may lay eggs on the site, but whether they lay for certain and whether the site would be a population source or sink are not known. An adult and an immature Peregrine Falcon were seen on nearby properties during midwinter.

Observations of note: exotic and invasive exotic species

**American Bullfrog (*Lithobates catesbeianus*)**
Bullfrogs were noted in at least two places on the site, and likely inhabit all aquatic areas at least seasonally. They have a regional distribution in the area, and their impacts on native amphibians and aquatic life are widely known.

**Red Swamp Crayfish (*Procambarus clarkii*)**
These crayfish can change the ecology of an invaded aquatic habitat (see ODFW invasive species fact sheet). They are common in the shallow pond in the northwest portion of the Campbell tract, and survive the drying of that pond by living in deep burrows (see Photo 4). Chris Pearl of the USGS in Corvallis might be a good contact regarding control methods. It is possible that control would not be successful unless undertaken on a regional basis.

**Reed Canarygrass (*Phalaris arundinacea*)**
Reed Canarygrass is extensive in the northern half of the Campbell tract, and around the perimeter (mostly, but some in the interior) of the southern portion. It also occurs on the northwest corner of the Jackson tract, and is scattered elsewhere.

**Pennyroyal (*Mentha pulegium*)**
This plant is an invader of vernal pool and wet prairie habitats. It is found in many areas of both the Campbell and Jackson tracts.

*Photo 13. Pennyroyal is the most dominant plant in this vernal pool on the Campbell property. The white-flowered plant is Popcornflower, and the clumps are Tufted Hairgrass.*
Purple Loosestrife (*Lythrum salicaria*)
Only one plant was found: a mature individual near the west end of the north Jackson property line, about 900 feet east of KR Nielson Road.

![Purple Loosestrife](image)

*Photo 14. One plant of Purple Loosestrife is on the CCNE site.*

Shining Geranium (*Geranium lucidum*)
Shining Geranium is fairly extensive near the west portion of the north end of the Campbell property. It is most often associated with forested (or shrubby) habitats there, but may occasionally occur elsewhere, such as on the pond berms and along the narrow strip of Oregon Ash on the east side of the south portion of the Campbell site.

General management suggestions
Whenever possible, **coordinate planning and management** with:

1) the City of Eugene (particularly Paul Gordon), owner and manager of the Coyote Prairie project area just to the south of CCNE;
2) the Long Tom Watershed Council (particularly Katie MacKendrick) and
3) the Corps of Engineers (particularly Wes Messinger).

Some **findings from the EPA study plots on the Coyote Prairie site might be relevant** to restoration on the CCNE site. Coordinated planning, restoration (such as seed collection and construction/implementation activities) and management could benefit all parties, uncommon native species and overall native biodiversity.

Whenever possible, use locally-sourced plant materials to **protect local genotypes**, which will best maintain critical phenological and/or biochemical relationships with invertebrates – and migrating songbirds dependence on these invertebrates. Locally-adapted material might also maximize long-term survivability of plantings.

Whenever possible, **protect areas with 50% or higher cover of native species. Eradicate invasive species** to the greatest degree possible within these areas, and diligently survey for and control new invasive populations. Where invasive plant species are removed, replant with natives as soon as feasible. Areas with less than 50% cover of native species (unless a significant native element, such as an uncommon species, is present), could be “re-started” by eradicating the existing vegetation and seed bank to the greatest degree possible, and reseeding with native species. Extensive, **ongoing control of non-native invaders** will be needed in these areas.
Invasive crayfish and bullfrog control could be researched and considered, perhaps tested. Surveys for new invasive populations should continue, if possible. Because of the unusually warm and dry conditions preceding and during the 2015 growing season, additional searches for Willamette Daisy and Bradshaw’s Lomatium in the north section of the Campbell tract should be repeated in 2016 if possible.

Electronic files submitted separately:

1. Biodiversity lists
2. GIS files of significant sightings
3. Digital photographs
APPENDIX 3

HISTORICAL AERIALS
APPENDIX 4

PLANT AND WILDLIFE SPECIES INVENTORY
<table>
<thead>
<tr>
<th>STATUS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N Native</td>
<td>Occurring naturally (without human introduction) on or near the site. Historically evolved in the area.</td>
</tr>
<tr>
<td>E Exotic</td>
<td>Non-native, introduced species.</td>
</tr>
<tr>
<td>R Rare</td>
<td>On ORBIC or Emerald Chapter NPSO rare lists.</td>
</tr>
<tr>
<td>I Invasive</td>
<td>An exotic species that significantly alters native habitat.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OCCURRENCE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S Scarce</td>
<td>Fewer than 10 individuals or small patches observed in the habitat</td>
</tr>
<tr>
<td>O Occasional</td>
<td>11-100 estimated</td>
</tr>
<tr>
<td>C Common</td>
<td>101-1000 estimated</td>
</tr>
<tr>
<td>A Abundant</td>
<td>More than 1000 estimated</td>
</tr>
</tbody>
</table>

Species listed in bold font on list/table have rare status.

<table>
<thead>
<tr>
<th>HABITATS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W West</td>
<td>Campbell tract or parcel</td>
</tr>
<tr>
<td>E East</td>
<td>Jackson tract or parcel</td>
</tr>
<tr>
<td>FS Wet forest/shrub</td>
<td>Usually FRALAT and/or ROSNUT dominated</td>
</tr>
<tr>
<td>P Wet prairie, marsh</td>
<td>Large PHAARU monocultures, some native dominated wet and moist prairie communities, some Agrostis-dominated with Carex unilateralis, etc.</td>
</tr>
<tr>
<td>H Hedgerow</td>
<td>Along some fencelines.</td>
</tr>
<tr>
<td>AG Ag field</td>
<td>W of KR Nielson Road: hayed?; E of Rd: ryegrass</td>
</tr>
<tr>
<td>E Edge</td>
<td>Areas between two habitats.</td>
</tr>
<tr>
<td>AQ Aquatic</td>
<td>Shallow water pond or ditch in wet season, dry in dry season.</td>
</tr>
<tr>
<td>RD Road ROW</td>
<td>Lane County road ROW on KR Nielson Rd. or Cantrell Rd.</td>
</tr>
<tr>
<td>Latin Name</td>
<td>Common Name</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><strong>VASCULAR PLANTS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Trees</strong></td>
<td></td>
</tr>
<tr>
<td>W E Fraxinus latifolia</td>
<td>Oregon Ash</td>
</tr>
<tr>
<td>W Pinus contorta</td>
<td>Shore Pine</td>
</tr>
<tr>
<td>E Prunus avium</td>
<td>Sweet, Bird or Mazzard Cherry</td>
</tr>
<tr>
<td>W E Pyrus communis</td>
<td>Garden Pear</td>
</tr>
<tr>
<td>W Rhamnus purshiana</td>
<td>Cascara</td>
</tr>
<tr>
<td><strong>Shrubs, small trees &amp; vines</strong></td>
<td></td>
</tr>
<tr>
<td>W Amelanchier alnifolia var. semiintegrifolia</td>
<td>Pacific Serviceberry</td>
</tr>
<tr>
<td>W Crataegus × cogswellii</td>
<td>Hybrid Hawthorn</td>
</tr>
<tr>
<td>W E Crataegus suksdorfii</td>
<td>Suksdorf’s Hawthorn</td>
</tr>
<tr>
<td>W Rosa eglanteria</td>
<td>Sweetbriar Rose</td>
</tr>
<tr>
<td>W E Rosa multiflora</td>
<td>Multiflower Rose</td>
</tr>
<tr>
<td>W E Rosa nutkana var. nutkana</td>
<td>Nootka Rose</td>
</tr>
<tr>
<td>W Rubus armeniacus</td>
<td>Armenian or Himalayan Blackberry</td>
</tr>
<tr>
<td>W Salix hookeriana</td>
<td>Hooker’s Willow</td>
</tr>
<tr>
<td>W E Barbarea orthoceras</td>
<td>American Wintercress</td>
</tr>
<tr>
<td><strong>Forbs</strong></td>
<td></td>
</tr>
<tr>
<td>W E Acmispon americanus var. americanus</td>
<td>Pursh’s Lotus</td>
</tr>
<tr>
<td>W Agoseris grandiflora</td>
<td>Large-flowered Agoseris</td>
</tr>
<tr>
<td>W Alisma lanceolata</td>
<td>Lanceleaf Water Plantain</td>
</tr>
<tr>
<td>W Alisma triviale</td>
<td>Northern Water Plantain</td>
</tr>
<tr>
<td>W Allium amplexzens</td>
<td>Slim-leaved Onion</td>
</tr>
<tr>
<td>W Anthemis cotula</td>
<td>Mayweed Chamomile</td>
</tr>
<tr>
<td>W E Anthriscus caucalis</td>
<td>Bur Chervil</td>
</tr>
<tr>
<td>W Barbarea sp.</td>
<td>Unid. Wintercress</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>E</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>E</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>Rd</td>
<td>Rd</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>W</td>
<td>Lupinus polyphyllus</td>
</tr>
<tr>
<td>W</td>
<td>Lysimachia nummularia</td>
</tr>
<tr>
<td>W E</td>
<td>Lythrum hyssopifolium</td>
</tr>
<tr>
<td>E</td>
<td>Lythrum portula</td>
</tr>
<tr>
<td>E</td>
<td>Lythrum salicaria</td>
</tr>
<tr>
<td>W</td>
<td>Madia glomerata</td>
</tr>
<tr>
<td>W E</td>
<td>Madia sativa</td>
</tr>
<tr>
<td>E</td>
<td>Mentha canadensis</td>
</tr>
<tr>
<td>W</td>
<td>Mentha pulegium</td>
</tr>
<tr>
<td>W</td>
<td>Micranthes integrifolia</td>
</tr>
<tr>
<td>W</td>
<td>Microseris laciniatus</td>
</tr>
<tr>
<td>W E</td>
<td>Microseris gracilis</td>
</tr>
<tr>
<td>W</td>
<td>Moenchia erecta</td>
</tr>
<tr>
<td>W</td>
<td>Montia fontana</td>
</tr>
<tr>
<td>W</td>
<td>Montia linearis</td>
</tr>
<tr>
<td>W E</td>
<td>Myosotis discolor</td>
</tr>
<tr>
<td>W E</td>
<td>Myosotis laxa</td>
</tr>
<tr>
<td>W</td>
<td>Myosurus minimus</td>
</tr>
<tr>
<td>W</td>
<td>Oenanthe sarmentosa</td>
</tr>
<tr>
<td>W</td>
<td>Parentucellia viscosa</td>
</tr>
<tr>
<td>W</td>
<td>Perideridia montana</td>
</tr>
<tr>
<td>W E</td>
<td>Plagiobothrys figuratus</td>
</tr>
<tr>
<td>W E</td>
<td>Plantago lanceolata</td>
</tr>
<tr>
<td>W</td>
<td>Potentilla gracilis var. gracilis</td>
</tr>
<tr>
<td>W</td>
<td>Prunella vulgaris var. lanceolata</td>
</tr>
<tr>
<td>W</td>
<td>Ranunculus alismifolius var. alismifolius</td>
</tr>
<tr>
<td>W</td>
<td>Ranunculus lobbii</td>
</tr>
<tr>
<td>W E</td>
<td>Ranunculus orthorhynchus</td>
</tr>
<tr>
<td>W</td>
<td>Ranunculus sceleratus var. multifidus</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>W</td>
<td>Ranunculus uncinatus</td>
</tr>
<tr>
<td>E</td>
<td>Raphanus raphanistrum</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>Rumex acetosella</td>
</tr>
<tr>
<td>W</td>
<td>Rumex conglomeratus</td>
</tr>
<tr>
<td>W</td>
<td>Rumex crispus</td>
</tr>
<tr>
<td>W</td>
<td>Rumex salicifolius</td>
</tr>
<tr>
<td>W</td>
<td>Sanicula crassicaulis var. crassicaulis</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>Symphyotrichum hallii</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>E</td>
<td>Veronica perigrina ssp. xalapensis</td>
</tr>
<tr>
<td>W</td>
<td>Vicia scutellata</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
</tr>
<tr>
<td>E</td>
<td>Vicia villosa ssp. glabrescens</td>
</tr>
<tr>
<td>W</td>
<td>Xanthium strumarium var. canadense</td>
</tr>
</tbody>
</table>

Grasses, Rushes & Sedges
<table>
<thead>
<tr>
<th>W/E</th>
<th>Latin Name</th>
<th>Common Name</th>
<th>N/E</th>
<th>R/I</th>
<th>FS</th>
<th>P</th>
<th>H</th>
<th>AG</th>
<th>E</th>
<th>AQ</th>
<th>RD</th>
<th>CCNE Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td><em>Agrostis exarata</em></td>
<td>Spike Bentgrass</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Agrostis gigantea</em></td>
<td>Redtop</td>
<td>E</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Agrostis stolonifera</em></td>
<td>Creeping Bentgrass</td>
<td>E</td>
<td>I</td>
<td>a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Aira caryophyllea var. caryophyllea</em></td>
<td>Silver Hairgrass</td>
<td>E</td>
<td>c</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Alopecurus geniculatus</em></td>
<td>Water Foxtail</td>
<td>N</td>
<td></td>
<td>c</td>
<td>c</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Alopecurus pratensis</em></td>
<td>Meadow Foxtail</td>
<td>E</td>
<td>c</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Anthoxanthum odoratum</em></td>
<td>Sweet Vernalgrass</td>
<td>E</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Beckmannia syzigachne</em></td>
<td>Sloughgrass</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td>s</td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Briza minor</em></td>
<td>Little Quakinggrass</td>
<td>E</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td><em>Bromus carinatus</em></td>
<td>California Brome</td>
<td>N</td>
<td></td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td><em>Bromus diandrus</em></td>
<td>Ripgut</td>
<td>E</td>
<td>I</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Bromus hordeaceus</em></td>
<td>Soft Brome</td>
<td>E</td>
<td>I</td>
<td>s</td>
<td>c</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>o</td>
<td>c</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Bromus secalinus</em></td>
<td>Chess Brome</td>
<td>E</td>
<td>I</td>
<td>s</td>
<td>c</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>o</td>
<td>c</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Carex densa</em></td>
<td>Dense Sedge</td>
<td>N</td>
<td></td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Wet areas</td>
</tr>
<tr>
<td>E</td>
<td><em>Carex leporina</em></td>
<td>Hare Sedge</td>
<td>N</td>
<td></td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td><em>Carex pachystachya</em></td>
<td>Thick-headed Sedge</td>
<td>N</td>
<td></td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Carex scoparia var. scoparia</em></td>
<td>Pointed Broom Sedge</td>
<td>N</td>
<td></td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Carex unilateralis</em></td>
<td>One-sided Sedge</td>
<td>N</td>
<td></td>
<td>a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Cynosurus echinatus</em></td>
<td>Hedgehog Dogtail</td>
<td>E</td>
<td>I</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td><em>Dactylis glomerata</em></td>
<td>Orchardgrass</td>
<td>E</td>
<td>I</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Danthonia californica</em></td>
<td>California Oatgrass</td>
<td>N</td>
<td></td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Deschampsia cespitosa</em></td>
<td>Tufted Hairgrass</td>
<td>N</td>
<td></td>
<td>c</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Deschampsia elongata</em></td>
<td>Slender Hairgrass</td>
<td>N</td>
<td></td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Eleocharis acicularis</em></td>
<td>Needle Spikerush</td>
<td>N</td>
<td></td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Eleocharis ovata</em></td>
<td>Ovoid Spikerush</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td>Small plants; S end of pond</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Eleocharis palustris</em></td>
<td>Creeping Spikerush</td>
<td>N</td>
<td></td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Glyceria × occidentalis</em></td>
<td>Western Mannagrass</td>
<td>E</td>
<td>s</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Holcus lanatus</em></td>
<td>Velvetgrass; Yorkshire Fog</td>
<td>E</td>
<td>I</td>
<td>c</td>
<td>c</td>
<td></td>
<td></td>
<td>c</td>
<td></td>
<td>c</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td><em>Hordeum brachyantherum</em></td>
<td>Meadow Barley</td>
<td>N</td>
<td></td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td><em>Hordeum jubatum ssp. jubatum</em></td>
<td>Squirreltail Barley</td>
<td>N</td>
<td></td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W/E</td>
<td>Latin Name</td>
<td>Common Name</td>
<td>N/E</td>
<td>R/I</td>
<td>FS</td>
<td>P</td>
<td>AG</td>
<td>E</td>
<td>AQ</td>
<td>RD</td>
<td>CCNE Comments</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------</td>
<td>-----------------</td>
<td>-----</td>
<td>-----</td>
<td>----</td>
<td>---</td>
<td>----</td>
<td>---</td>
<td>----</td>
<td>----</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>Juncus acuminatus</td>
<td>Tapered Rush</td>
<td>N</td>
<td></td>
<td>c</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dominant in shallow pond in N section</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>Juncus balticus ssp. ater</td>
<td>Baltic Rush</td>
<td>N</td>
<td></td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>One 30’ x 1’ patch on N shoreline of E-W ditch</td>
<td></td>
</tr>
<tr>
<td>W/E</td>
<td>Juncus bufonius</td>
<td>Toad Rush</td>
<td>N</td>
<td></td>
<td>o</td>
<td>o</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td>Vernally moist areas</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>Juncus effusus ssp. pacificus</td>
<td>Pacific Rush</td>
<td>N</td>
<td></td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>Juncus nevadensis var. nevadensis</td>
<td>Sierra Rush</td>
<td>N</td>
<td></td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SE shore of shallow pond</td>
<td></td>
</tr>
<tr>
<td>W/E</td>
<td>Juncus patens</td>
<td>Spreading Rush</td>
<td>N</td>
<td></td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>s</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W/E</td>
<td>Juncus tenuis</td>
<td>Slender Rush</td>
<td>N</td>
<td></td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>s</td>
<td></td>
</tr>
<tr>
<td>W/E</td>
<td>Lolium perenne</td>
<td>Perennial Ryegrass</td>
<td>E</td>
<td></td>
<td>o</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Phalaris arundinacea</td>
<td>Reed Canarygrass</td>
<td>E</td>
<td></td>
<td>l!</td>
<td>s</td>
<td>c</td>
<td>s</td>
<td>a</td>
<td>a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W/E</td>
<td>Poa annua</td>
<td>Annual Bluegrass</td>
<td>E</td>
<td></td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W/E</td>
<td>Poa palustris</td>
<td>Fowl Bluegrass</td>
<td>E</td>
<td></td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W/E</td>
<td>Poa pratensis</td>
<td>Kentucky Bluegrass</td>
<td>E</td>
<td></td>
<td>l</td>
<td>o</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>Poa trivialis</td>
<td>Roughstalk Bluegrass</td>
<td>E</td>
<td></td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W/E</td>
<td>Schedonorus arundinaceus</td>
<td>Tall Fescue</td>
<td>E</td>
<td></td>
<td>l</td>
<td>s</td>
<td>c</td>
<td>s</td>
<td>a</td>
<td>o</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>Ventenata dubia</td>
<td>Ventenata</td>
<td>E</td>
<td></td>
<td>l</td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Scarce now, but likely expanding rapidly.</td>
<td></td>
</tr>
<tr>
<td>W/E</td>
<td>Vulpia bromoides</td>
<td>Rattail Fescue</td>
<td>E</td>
<td></td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Vulpia myuros</td>
<td>Rattail Fescue</td>
<td>N</td>
<td></td>
<td>o</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

160 94 TOTAL VASCULAR
### VERTEBRATES
#### Amphibians/Reptiles

<table>
<thead>
<tr>
<th>W</th>
<th>E</th>
<th>Name</th>
<th>R/I</th>
<th>RESIDENCY or NAME</th>
<th>FS</th>
<th>P</th>
<th>H</th>
<th>AG</th>
<th>E</th>
<th>AQ</th>
<th>RD</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>E</td>
<td><em>Lithobates catesbeianus</em></td>
<td>I1</td>
<td><em>American Bullfrog</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Birds

<table>
<thead>
<tr>
<th>W</th>
<th>E</th>
<th>Name</th>
<th>R/I</th>
<th>RESIDENCY or NAME</th>
<th>FS</th>
<th>P</th>
<th>H</th>
<th>AG</th>
<th>E</th>
<th>AQ</th>
<th>RD</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td></td>
<td><em>American Crow</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Flyover</td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>American Goldfinch</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Esp. at N end Campbell</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
<td><em>Barn Swallow</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Bewick’s Wren</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Black-headed Grosbeak</em></td>
<td>N</td>
<td>Spring migrant, poss. summer resident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td><em>Brewer’s Blackbird</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Brown Creeper</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Brown-headed Cowbird</em></td>
<td>N</td>
<td>Summer resident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Bushtit</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td><em>Cackling Goose</em></td>
<td>N</td>
<td>Winter resident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Canada Goose</em></td>
<td>N</td>
<td>Some migratory, some year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Flyover</td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Common Raven</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Loose &quot;kettle&quot; of about 30 on 5/18/15</td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Common Yellowthroat</em></td>
<td>N</td>
<td>Summer resident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td><em>Dusky Canada Goose</em></td>
<td>N</td>
<td>Winter resident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td><em>Eurasian Collared-Dove</em></td>
<td>E</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td><em>European Starling</em></td>
<td>E</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
<td><em>Lazuli Bunting</em></td>
<td>N</td>
<td>Summer resident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Lesser Goldfinch</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Mallard</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Mourning Dove</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Northern Flicker</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td><em>Northern Harrier</em></td>
<td>N</td>
<td>Mostly winter; then spring &amp; summer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>western edge of Field 1</td>
</tr>
<tr>
<td>W</td>
<td>E</td>
<td><em>Ring-necked Pheasant</em></td>
<td>E</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
<td><em>Savanna Sparrow</em></td>
<td>N</td>
<td>Mostly summer; some spring &amp; fall</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>E</td>
<td><em>Song Sparrow</em></td>
<td>N</td>
<td>Year-round</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Tree Swallow</em></td>
<td>N</td>
<td>Summer resident; occ. overwinter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td><em>Turkey Vulture</em></td>
<td>N</td>
<td>Summer resident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Flyover</td>
</tr>
</tbody>
</table>
W = west of KR Nielson Rd. (Fields 1&2); E = east of rd. (Field3); Coyote Creek NE

<table>
<thead>
<tr>
<th>W</th>
<th>E</th>
<th>Name</th>
<th>N/E</th>
<th>R/I</th>
<th>RESIDENCY or NAME</th>
<th>FS</th>
<th>P</th>
<th>H</th>
<th>AG</th>
<th>E</th>
<th>AQ</th>
<th>RD</th>
<th>CCNE Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>E</td>
<td>Western Kingbird</td>
<td>N</td>
<td></td>
<td>Summer resident</td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>On fenceline and tall elec. transmission towers</td>
</tr>
<tr>
<td>W</td>
<td></td>
<td>Black-tailed Deer</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td>Coyote</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
<td>Pocket Gopher, unid.</td>
<td>N</td>
<td></td>
<td>Mounds</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Moles may be present, also.</td>
</tr>
<tr>
<td>W</td>
<td></td>
<td>Raccoon</td>
<td>N</td>
<td></td>
<td>Tracks</td>
<td>o</td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**INVERTEBRATES**

**ARTHROPODA: ARACHNIDA**

**ARTHROPODA: CRUSTACEA**

| W | E | Procambarus clarkii               | E   | I  | Red Swamp Crayfish         |    |    |    |     |     |     |     | Highly invasive: [http://www.dfw.state.or.us/conservationstrategy/invasive_species/docs/RedSwampCrayfishFactSheet.pdf](http://www.dfw.state.or.us/conservationstrategy/invasive_species/docs/RedSwampCrayfishFactSheet.pdf) |

**ARTHROPODA: INSECTA**

**Diptera**

| W | E | Tachinidae sp.                     | N?  |    | Tachinid Fly               |    |    |    |     |     |     |     |                |
| W |   | Apis mellifera                     | E   | I? | European Honeybee         |    |    |    |     |     |     |     |                |
| W |   | Andrena sp. cf.                    | N   |    | Mining Bee                 |    |    |    |     |     |     |     |                |
| W |   | Bombus cf. vosnesenskii            | N   |    | Yellow-faced Bumble Bee (or B. caligninsos) |    |    |    |     |     |     |     |                |

**Lepidoptera**

| W | E | Platyprepia virginalis            | N   |    | Ranchman’s Tiger Moth. Generalist feeder. |    |    |    |     |     |     |     |                |
| W |   | Tyria jacobaeae                    | E   |    | Cinnabar Moth. Larvae feed on Senecio jacobaea (Tansy Ragwort). |    |    |    |     |     |     |     |                |
| W | E | Vanessa cardui                     | N   |    | Painted Lady. Migrate north each spring; do not overwinter here. |    |    |    |     |     |     |     |                |

**Neuroptera**

**Odonata**

| W | E | Ischnura cervula                  | N   |    | Pacific Forktail; gynochrome female |    |    |    |     |     |     |     | Dragonflies and Damselflies |
| W |   | Ischnura erratica                 | N   | R  | Swift Forktail; unusual sightings (2) |    |    |    |     |     |     |     |                |
| W |   | Libellula forensis                | N   |    | Eight-spotted Skimmer           |    |    |    |     |     |     |     |                |
| W |   | Lestes disjunctus                 | N   |    | Northern Spreadwing            |    |    |    |     |     |     |     |                |
| W |   | Sympetrum semicinctum             | N   |    | Band-winged Meadowhawk         |    |    |    |     |     |     |     |                |
APPENDIX 5

Coyote Creek Northeast
Oregon Conservation Strategy Species List
### Coyote Creek Northeast - Oregon Conservation Strategy Species List

<table>
<thead>
<tr>
<th>Taxa</th>
<th>Species Common Name</th>
<th>Species Scientific Name</th>
<th>Federal Listing Status</th>
<th>State Listing Status</th>
<th>WC</th>
<th>WV</th>
<th>Special Needs</th>
<th>Limiting Factors</th>
<th>Data Gaps</th>
<th>Conservation Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bird</td>
<td>Acorn Woodpecker</td>
<td>Melanerpes formicivorus</td>
<td>SOC</td>
<td>S</td>
<td>WC</td>
<td>WV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird</td>
<td>Northern Red-legged Frog</td>
<td>Rana aurora</td>
<td>S</td>
<td>WV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird</td>
<td>Chipping Sparrow</td>
<td>Spizella passerina</td>
<td>S</td>
<td>WV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird</td>
<td>Common Nighthawk</td>
<td>Chordeiles minor</td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird</td>
<td>Dusky Canada Goose</td>
<td>Branta canadensis occidentalis</td>
<td>WV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird</td>
<td>Greasemopper Sparrow</td>
<td>Anomodonus savannarum pseudoitus</td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Amphibian - Northern Red-legged Frog**
- **Range:** Oregon
- **Habitat:** Requires shallow-water ponds and wetlands with emergent vegetation. For breeding, they require forested sites with exposed sumps, willow-habitat. Breeding habitat may be seasonal or permanent, provided the water persists at least 5 months in duration. Adult and juveniles also use most riparian and upland forests.

**Special Needs**
- **Loss of egg-laying habitat:** Widely cited as a key limiting factor. Threats to active-season habitat may have more direct effects on populations. Hydrologic modifications, fragmentation by roads, suburban development, and other land use changes are among these impacts. Decreases in nest cavities and associated carrying capacity of different habitat types and conditions. Understand how this species responds to restoration activities and how aerial insect abundances affect population parameters.

**Limiting Factors**
- **Increase knowledge of basic life history:** Including habitat use, phenology, and relationships to hydrology. Clearly impacts of pollutants and parasites on this species. Identify seasonally important habitat components and management areas. Conduct baseline monitoring across a range of reference and other sites to gauge habitat quality and associated carrying capacity of different habitat types and conditions.

**Data Gaps**
- **Reduce wetland hydroperiod requirements for mitigation and other created wetlands in occupied areas to reduce population stress.** Create suitable buffer and aquatic habitat wetland requirements for housing developments to accommodate landowners in the Willamette Valley. Identify regionally important sites to the species and maintain connectivity between them. Maintain wetland habitat with emergent plants and adjacent forest. Address barriers to riparian connectivity at key road crossings to reduce mortality of pond (Willamette Valley and Coast Range) frogs. Control bullfrogs and invasive fish at priority sites.

**Conservation Actions**
- **Work with private landowners to maintain and restore oak woodlands with open understories, especially in large patches. Maintain prairie and other sites with dead limbs.**

**Bird - Acorn Woodpecker**
- **Habitat:** Prefers oak woodlands with high canopies and relatively open understories. They are dependent upon dead limbs or snags for nesting acomas.

**Special Needs**
- **Loss of oak woodlands, particularly in the Willamette Valley, poses a major threat to Acorn Woodpeckers and other oak-forest specialists. Remaining birds are scattered and in small numbers. Acorn Woodpeckers also compete with European Starlings (Sturnus vulgaris) for nest cavities in some areas.**

**Limiting Factors**
- **Evaluate the effects of cowbird parasitism on breeding success. Investigate the affects of how habitat conditions and use changes are among these impacts.**

**Data Gaps**
- **Maintain sparsely-vegetated grassland patches. Restore riparian and wetland habitat to support the insect prey base of nighthawks.**

**Bird - Chipping Sparrow**
- **Habitat:** Typically found in open forests and drier woodland edges. They prefer areas with sparse, herbaceous understories for foraging.

**Special Needs**
- **Loss and degradation of habitat are key limiting factors. Loss of oak woodlands, in particular, due to development, fire suppression, and invasive plant encroachment is a specific concern. Known nest predators include snakes, American Crows (Corvus brachyrhynchos), and domestic cats (Felis catus).**

**Limiting Factors**
- **Evaluate the effects of habitat loss on nesting birds.**

**Data Gaps**
- **Maintain areas of open, herbaceous native plant understory at oak woodlands. Control key invasive plants.**

**Bird - Common Nighthawk**
- **Habitat:** Use gravel bars and other sparsely-vegetated grasslands or forest clearings for nesting. As aerial foragers, they require an adequate prey base.

**Special Needs**
- **Loss and degradation of nest habitat are primary threats to Common Nighthawks. Changes in hydrology due to hydropower dams and wildlife suppression have contributed to habitat losses. Increased predation pressure by corvids, gulls, and house cats as well as reductions in aerial insect abundance have also extremely affected this species.**

**Limiting Factors**
- **Inventory gravel bars along large rivers for nesting birds.**

**Data Gaps**
- **Maintain sparsely-vegetated grassland patches. Restore natural disturbance regimes. Restore riparian and wetland habitat to support the insect prey base of nighthawks.**

**Bird - Dusky Canada Goose**
- **Habitat:** Requires adequate food resources (high-quality, high-protein herbaceous plants) in sufficient spatial and temporal distribution to sustain migratory and overwintering populations.

**Special Needs**
- **Decline of Dusky Canada Geese is primarily due to poor reproduction in their breeding range in Alaska. Currently, wintering habitat in Oregon is being lost due to conversions from agricultural pastures and grass seed crops to other uses (other crops, urban development, etc.). Use of private lands limits management options.**

**Limiting Factors**
- **Evaluate the effects of habitat loss on movements and use of private lands.**

**Data Gaps**
- **Information on conservation strategies is available in the Pacific Flyway Management Plan for the Dusky Canada Goose (2015).**

**Bird - Greasemopper Sparrow**
- **Habitat:** Use dry grassland habitat, generally with low to moderate grass height and low percent shrub cover. They have large habitat area requirements.

**Special Needs**
- **Greasemopper Sparrows are uncommon and locally distributed in Oregon. Loss of grasslands due to conversion and shrub/tree encroachment is a key limiting factor. Nesting failure due to timing of land use practices (e.g., mowing, herb spraying) also impacts this species.**

**Limiting Factors**
- **Access distribution and abundance. Investigate habitat relationship, including the effects of habitat patch size on abundance and productivity. Identify and describe planting-mix strategies that may favor this species. Assess the impacts of grazing and agricultural management on productivity.**

**Data Gaps**
- **Maintain or restore grassland habitat. Increase plant diversity to promote greater insect diversity. Maintain high percent native grass cover and >10% shrub cover in patches >20 acres. Delay mowing and other field management until after July 15 at known nesting areas. Control key invasive plants.**
### Coyote Creek Northeast - Oregon Conservation Strategy Species List

<table>
<thead>
<tr>
<th>Taxa</th>
<th>Species Common Name</th>
<th>Species Scientific Name</th>
<th>Federal Listing Status</th>
<th>State Listing Status</th>
<th>Special Needs</th>
<th>Limiting Factors</th>
<th>Data Gaps</th>
<th>Conservation Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bird</td>
<td>Oregon Vesper Sparrow</td>
<td>Pooecetes gramineus affinis</td>
<td>SOC</td>
<td>S</td>
<td>WC WV Special Needs</td>
<td>Oregon Vesper Sparrows use grasslands with high structural diversity for foraging and nesting. These typically include prairie areas interspersed with trees and shrubs and some bare ground.</td>
<td>Measure Oregon Vesper Sparrow response to restoration activities.</td>
<td>Maintain or restore grassland habitat, increase plant diversity for greater insect diversity. Control key invasive plants. In the Willamette Valley, reduce or avoid mechanical operations during nesting (mid-May to mid-July).</td>
</tr>
<tr>
<td>Bird</td>
<td>Purple Martin (Western)</td>
<td>Progne subis arboricola</td>
<td>SOC</td>
<td>S</td>
<td>WC WV Special Needs</td>
<td>Purple Martins require abundant cavities for colonial nesting. They prefer sites with close proximity to water and large, open areas for foraging.</td>
<td>Evaluate the effects of pesticides on this species.</td>
<td>Retain and promote natural cavities/nests.</td>
</tr>
<tr>
<td>Bird</td>
<td>Short-eared Owl</td>
<td>Asio flammeus flammeus</td>
<td></td>
<td></td>
<td>WC WV Special Needs</td>
<td>Short-eared Owls persist in small numbers in Oregon. Loss of extensive desert (marsh and wet prairie) habitat is a key limiting factor. These owls nest and communally roost on the ground, which makes them particularly vulnerable to disturbance.</td>
<td>Complete breeding season inventory of suitable nesting habitat. Determine habitat associations of breeding and wintering birds.</td>
<td>Maintain and restore wetland habitat, with an emphasis on maintaining large patches and/or expanding smaller ones. Minimize disturbance at communal roost sites.</td>
</tr>
<tr>
<td>Bird</td>
<td>Streaked Horned Lark</td>
<td>Ehrniophila alpestris alpestris</td>
<td>T</td>
<td>S</td>
<td>WC WV Special Needs</td>
<td>Streaked Horned Larks have large area requirements. Loss and degradation of grassland habitat are key limiting factors. Nesting failure due to agricultural practices (e.g., mowing, haying, spraying and predation at nest sites contributes to low reproductive success. Rodenticides (zinc phosphide) can also cause mortality.</td>
<td>Evaluate the appropriate use of reintroduction sites where larks have been extirpated. Conduct demographic studies to determine population viability. Explore alternative approaches to reduce stressors. Investigate transplanting habitat selection and identify components of high-quality wintering habitat. Determine causes of adult mortality. Develop methods for improving fecundity. Examine adult and natal dispersal and movements of adults following nest failure.</td>
<td>Manage habitat by maintaining or restoring large, sparsely vegetated grasslands, creating protected nesting areas. Increasing plant diversity to promote greater insect diversity, and controlling key non-native plants. Designate areas to be managed for core population centers. Minimize disturbance during the breeding and fledging period (mid-April through mid-August). Improving nesting habitat away from active runways may reduce collisions and improve adult survival. If enough suitable habitat exists away from the runway.</td>
</tr>
<tr>
<td>Bird</td>
<td>Western Bluebird</td>
<td>Siala mexicana</td>
<td>S</td>
<td></td>
<td>WC WV Special Needs</td>
<td>Western Bluebirds use grasslands and oak savannahs for foraging. They rely on cavities in trees for nesting and scattered trees or shrubs as hunting perches.</td>
<td>Evaluate the effects of contaminants (pesticides) on insectivorous bird species. Identify locations of natural cavity-nesting pairs and factors affecting their breeding success.</td>
<td>Maintain or restore grassland and oak savannah habitat. Maintain oaks ≥22 inches diameter at breast height. Retain natural and live trees with large, dead branches to improve availability of nest cavities. Maintain nest box programs for cavity habitat in the short-term; design and place nest boxes to minimize use by starlings. Brush/blow piles created as a result of management activities may provide limited, temporary habitat in young conifer forests. Maintain &gt;25% combination of short, herbaceous vegetation and/or bare ground in breeding areas. Monitor and manage for understory vegetation diversity to support an abundance of invertebrate prey.</td>
</tr>
</tbody>
</table>

**Notes:**
- **WC** = Winter Conditions
- **WV** = Winter Vegetation
- **SOC** = Specialized Occupancy Characteristics
- **T** = Territorial

**Limiting Factors:***
- Disease and parasites.
- Predation at nest sites.
- Agricultural grassland habitat.
- Habitat loss.
- Degradation of grassland habitats.
- Nesting failure.
- Predation by non-native predators.
- Human activities and competition from non-native species.

**Special Needs:**
- High structural diversity for foraging and nesting sites.
- Areas with close proximity to water.
- Availability of suitable nesting sites.
- Nesting in trees and shrubs.
- Adequate food sources.

**Data Gaps:**
- Identification of natural cavity-nesting pairs.
- Factors affecting breeding success.

**Conservation Actions:**
- Identify locations of natural cavity-nesting pairs.
- Conduct demographic studies.
- Evaluate the effects of pesticides.
- Assess the effects of contaminants.
- Maintain or restore grassland and oak savannah habitat.
- Manage habitat for core population centers.
- Reduce or avoid mechanical operations during nesting.
- Maintain nest box programs for cavity habitat.
- Retain natural and dead branches.
- Decrease disturbance during the breeding period.
- Increase plant diversity.
- Manage vegetation diversity.
- Maintain natural cavity nesting areas.
- Monitor and manage for understory vegetation diversity.
Coyote Creek Northeast - Oregon Conservation Strategy Species List

<table>
<thead>
<tr>
<th>Taxa</th>
<th>Species Common Name</th>
<th>Species Scientific Name</th>
<th>Federal Listing Status</th>
<th>State Listing Status</th>
<th>WC</th>
<th>WV</th>
<th>Special Needs</th>
<th>Limiting Factors</th>
<th>Data Gaps</th>
<th>Conservation Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bird</td>
<td>Western Meadowlark</td>
<td>Sturnella neglecta</td>
<td>S</td>
<td>WV</td>
<td></td>
<td></td>
<td></td>
<td>Western Meadowlarks require expansive grasslands for foraging and nesting. They may also use pastures or other open areas with foraging vegetation. Special sites with high structural diversity, a mix of grasses and forbs, and vegetation cover &gt;25 cm in height. Sturnella are commonly seen foraging from brush piles, posts, and feeders. Adult meadowlarks are not hunted for sport and are susceptible to nest predation, so they human disturbance and activities (e.g., mowing) can cause meadowlarks to abandon nests.</td>
<td>Conduct comprehensive surveys in the Willamette Valley. Evaluate meadowlark productivity in response to prairie restoration. Conduct demographic studies in altered prairie-oak habitat, such as pastures, hay fields, airports, and urban and residential park-like oak woodlands. and forests.</td>
<td>Maintain and/or restore grassland habitat, especially large expanses (e.g., &gt;100 acres). Promote overall structural diversity in grasslands. Limit the cover of trees and shrubs (&lt;10%), ensure a relatively high percent cover of native forbs (&gt;10%) and bare ground (&lt;5%), and promote good representation of all height classes. Increase plant diversity to promote greater insect diversity. Control key non-native plants, including weed canariesgrass. Minimize disturbance during the breeding season (April 15-July 15).</td>
</tr>
<tr>
<td>Bird</td>
<td>White-breasted Nuthatch (Siberian jay)</td>
<td>Sitta carolinensis carolinensis</td>
<td>S</td>
<td>WV</td>
<td></td>
<td></td>
<td></td>
<td>White-breasted Nuthatches use mature, large-diameter tree trunks for nesting and feeding cavities. They require high canopy cover in connected patches.</td>
<td>Availability of mature oaks and canopies for nesting may limit distribution. Nuthatches are susceptible to nest predation and competition from European Starlings (Sturnus vulgaris) and other cavity-nesters. Assess distribution and trends. Increase understanding of general ecology. Evaluate competition and other impacts from non-native squirrels. Assess dispersal patterns and the need for canopy travel corridors. Evaluate potential for reintroduction into unoccupied sites.</td>
<td>Maintain large oaks. Preserve trees containing cavities whenever possible. Promote development of larger oaks. Where possible, implement controlled burns to maintain oak tree dominance and prevent conifer encroachment.</td>
</tr>
<tr>
<td>Mammal</td>
<td>Western Gray Squirrel</td>
<td>Sciurus griseus</td>
<td>S</td>
<td>WV</td>
<td></td>
<td></td>
<td></td>
<td>Western gray squirrels occupy oak woodlands, oak savannas, and mixed oak-pine-fir woodlands. They prefer older oak trees with large limbs and continuous canopy cover to facilitate movement.</td>
<td>Major threats include habitat loss, alteration, and fragmentation. Vegetation changes due to the suppression and residential and urban development are among these impacts. Populations may also be adversely affected by road mortality and damage control efforts.</td>
<td>Work with private landowners to maintain and restore oak and mixed oak-pine-fir woodlands, especially large patches. Work with landowners experiencing damage to treehopper squirrels. Maintain continuous canopy within 200 feet of road sides. Maintain or plant mast species, such as Oregon white oak and California hazel. Maintain older trees with large limbs.</td>
</tr>
<tr>
<td>Plant</td>
<td>Bradshaw's Desert Pennyroyal</td>
<td>Lomatium bradshawii</td>
<td>E</td>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td>Bradshaw's desert pennyroyal is found in wet prairies with shallow, poorly-drained clay soils, often near creeks or small river banks.</td>
<td>The primary threats to Bradshaw's desert pennyroyal include habitat loss, habitat degradation due to the suppression, and competition from invasive plants. Overstory of hardwoods may negatively impact this species.</td>
<td>Continue implementing actions in the recovery plan. Locate protected sites with suitable habitat for introduction on the east side of the Willamette Valley. Maintain or restore grass-dominated habitat. Maintain or restore hydrology. Control key invasive plants. Use mowing or prescribed fire to control brush and trees. Maintain populations in meadows and ditches.</td>
</tr>
<tr>
<td>Plant</td>
<td>Nelson's Checkermallow</td>
<td>Silene nelsoniana</td>
<td>T</td>
<td>T</td>
<td></td>
<td></td>
<td></td>
<td>Nelson's checkermallow occurs in wet and dry prairies, wetlands, edges of woodlands, and sparsely vegetated areas. Remnant populations occur in meadows and ditches.</td>
<td>The primary threats to Nelson's checkermallow include habitat loss, habitat degradation due to fire suppression, and competition from invasive plants. Overstory of hardwoods and severe weed by weeds are among additional risk factors.</td>
<td>Investigate the ecology of weed-depressing weevils. Conduct seed germination studies. Evaluate genetic diversity.</td>
</tr>
<tr>
<td>Plant</td>
<td>White-topped Aster</td>
<td>Swavocarupos rigidus</td>
<td>SOC</td>
<td>T</td>
<td></td>
<td></td>
<td></td>
<td>White-topped aster occurs in open grasslands including seasonally-wet prairies and oak savannahs.</td>
<td>Primary threats to white-topped aster include habitat loss and habitat degradation due to fire suppression and competition from invasive plants. Overstory of hardwoods may also harm this species.</td>
<td>Conduct pollinator studies. Develop a stewardship protocol.</td>
</tr>
<tr>
<td>Plant</td>
<td>Willamette Daisy</td>
<td>Erigena decumbens</td>
<td>E</td>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td>The Willamette daisy is found in seasonally-wet prairies and drier upland prairie sites, where woody cover is nearly absent and herbaceous vegetation tends to be low in stature.</td>
<td>This species is endemic to the Willamette Valley. The Willamette Valley is threatened by habitat loss and habitat degradation due to lack of fire and encroachment of woody plants, loss of floodplain function, and displacement by invasive plants. Issues of few, mostly small populations may also be important.</td>
<td>Improve understanding of reproductive biology. Conduct long-term demographic monitoring to determine population dynamics and optimal fire regimes to maintain habitat and populations. Investigate genecology and evaluate interesting genetic population; develop seed transfer and augmentation guidelines. Describe pollinator associations and status. Evaluate the effects of climate change on this species. Model predicted effects of climate change.</td>
</tr>
<tr>
<td>Taxa</td>
<td>Species Common Name</td>
<td>Species Scientific Name</td>
<td>Federal Listing Status</td>
<td>State Listing Status</td>
<td>Special Needs</td>
<td>Limiting Factors</td>
<td>Data Gaps</td>
<td>Conservation Actions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>---------------------------</td>
<td>-------------------------</td>
<td>------------------------</td>
<td>----------------------</td>
<td>--------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>----------</td>
<td>-----------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reptile</td>
<td>Western Pond Turtle</td>
<td>Actinemys marmorata</td>
<td>S</td>
<td>WC WV</td>
<td></td>
<td>Western pond turtles are found in marshes, streams, rivers, ponds, and lakes. They use sparsely-vegetated ground nearby for digging nests and moist, shrubby or forested areas for aestivation and over-wintering. They require sunny logs/vegetation for basking and safe movement corridors between aquatic and terrestrial habitat.</td>
<td></td>
<td>Life history traits make this species vulnerable to habitat loss and alteration of potential nesting sites (e.g., conversion, invasive plants). Fluid mortality, predation by raccoons, fish, and bullfrogs on western pond turtles. Evaluate the effects of herbicides, fertilizers, and other chemicals on eggs and hatchlings. Improve understanding of hatchling ecology.</td>
<td>Gather basic life history information. Describe population dynamics. Evaluate genetics. Assess the impacts of raccoons and invasive species (turtles, fish, and bullfrogs) on western pond turtles. Evaluate the effects of herbicides, fertilizers, and other chemicals on eggs and hatchlings. Improve understanding of hatchling ecology.</td>
<td>Identify population centers. Use distribution data to establish priority areas for protection and management. Provide basking structures and nesting habitat. Control invasive plants and animals. Minimize disturbance in nesting areas. Protect adjacent upland habitat. Implement the Oregon Department of Fish and Wildlife's Turtle Best Management Practices. Prevent illegal collection. Prevent release of pet turtles. Reduce risk of mortality from roads.</td>
</tr>
</tbody>
</table>