

## Summary of Draft Wildlife Area Management Plan Revisions

Most of the changes to the January 2009 draft management plan were general housekeeping in nature, such as re-formatting to improve readability or correcting grammatical errors. Some important changes however were requested by the Commission and the public, through the public review process. Below is a list of key revisions made to each plan, with the relevant page number of the original draft plan. Insertions are **bold** and underscored, deletions are [bracketed] and ~~strikethrough~~.

### Fern Ridge Wildlife Area Draft Management Plan

- Housekeeping / Corrected Errors:

Cover: changed date to **June** 2009

**Pg. 4:** includes at least [~~286~~] **289** species of birds, [~~50~~] **49** species of mammals, [~~17~~] **19** species of fish and [~~25~~] **22** species of reptiles and amphibians.

**Pg. 4, 37:** changed Objective 1.3 as follows:

**Objective 1.3:** Maintain approximately 1,000 acres of **upland prairie** [~~grassland habitat~~], within 0.5 miles of wetland habitats, for dabbling ducks to provide suitable nesting habitat in association with brood rearing habitat (semi-permanent and permanent wetlands).

**Pg. 4, 38:** changed Objective 1.4 as follows:

**Objective 1.4:** **In cooperation with USACE,** [~~M~~] maintain approximately 1,000 acres of lakebed area that alternates between summer “full pool” condition of open water, submergent, and emergent vegetation zone and winter drawdown mudflat zone.

**Pg. 5, 41:** changed Objective 2.3 as follows:

**Objective 2.3:** Protect and enhance 764 acres of **upland prairie** [~~grassland habitat~~].

**Pg. 5:**

The 25 year license agreement for the remainder of the wildlife area was scheduled for renewal on September 30, 2007 and the review process was extended to October 27, 2008 with a revised acreage total of **approximately** 5,261 acres. **The reason for the word “approximately” in this context is that many of the management units border Fern Ridge lake. The unit boundaries are generally based on the emergent vegetation line as the terrestrial marsh interfaces with the lake. Over the course of years, this line may slightly shift based on plant response to hydrology or other factors, therefore slightly shifting the unit boundaries adjacent to the lake.**

**Pg 14. Described grasslands, upland prairies and wet prairie habitat types in better detail.**

**Pg: 34, in Public Use section:**

Based on the hunt regulation framework in place for the 2008-09 season, all lands owned or controlled by the department and USACE in and around Fern Ridge Lake are open to

hunting during all authorized game bird and game mammal seasons according to the restrictions described below for specific units. **Hunting is not allowed in established recreation areas including Richardson, Orchard, Zumwalt and Perkins parks.** The area is closed to all goose hunting after the September Canada goose season.

**Pg -69- Appendix C: several plans are within the over-arching Pacific Flyway Management Plan.**

**Management and Species Plans**

- The North American Waterfowl Management Plan
- Pacific Flyway Management Plans:
  - **Pacific Population of Western Canada Geese**
  - **Pacific Population of Trumpeter Swans**
  - **Western Population of Tundra Swans**
  - **Pacific White-fronted Goose Plan**
  - **Dusky Canada Goose Plan**
  - **Lesser and Taverner's Canada Goose Plan**
- The Western Waterfowl Initiative
- The Western United States and Canada Cooperative Duck Banding Program
- The Pacific Flyway Fall and Winter Goose Surveys
- The Oregon Conservation Strategy
- Oregon Statewide Waterfowl Plan

**Pg. -75-, Appendix D, Fisher Butte Unit description:**

The western portion of the unit contains low marshlands and woodlands along the Coyote Creek channel. The marshlands consist of submergent or emergent vegetation interspersed with small potholes. Above the lake pool, the unit is vegetated by upland and lowland grasses. A 60-acre parcel on the southeast portion of the unit is wet low prairie designated as RNA. The site contains **one of the largest remaining** populations of endangered Willamette daisy and threatened Bradshaw's desert parsley. **Kincaid's lupine and Fender's blue butterfly occur in a remnant wet prairie parcel at the north end of the unit.** Tufted hairgrass (*Deschampsia caespitosa*) is also present at the site. **Occupied rare plant and insect habitat in this unit is included in the 2006 Critical Habitat designation.**

**Pg. -77-78-, description of Amazon Dike #2 Unit:**

The upland portion of this unit was added to the FRWA during the re-license process with USACE in 2008. Prior to this time, only the wetland portion of this unit was included as part of the wildlife area. The review process supported rationale to include the entire unit in the license, which added approximately 40 acres of important uplands that support [~~endangered~~] **threatened** Kincaid's lupine and **endangered** Fender's blue butterfly **and Bradshaw's lomatium. The RNA portion of the unit is included in the Critical Habitat designation for the Fender's blue butterfly.**

- Changes made to the draft plan due to Commission and/or public comments (particularly USACE and USFWS comments):

The description of the grassland section was provided by USACE staff botanist, Wes Messinger. This section has also been revised to address USFWS comments relating to upland prairie / low prairie reference. Several scientific names throughout the draft plan were corrected because they were obsolete or misspelled.

**Pg. 4:** USFWS NWR staff were unclear as to the department's meaning of the term 'compatible' used in Goals 2 and 3. The following text was added to the Final Draft plan: **For reference, the word "compatible" in this document is used as defined in the 2007-08 Oregon Wildlife And Commercial Fishing Codes Title 41 ORS Chapter 496 General Provision 496.004 which states in "Article (3): "Compatible" means capable of existing in harmony so as to minimize conflict."**

**Pg. 4, in the Implementation Approach section:**

Benefits to wildlife from habitat management on FRWA vary between species. Different species or guilds (group of species with similar habitat requirements) will see higher benefits at different times of year, dependent on many life cycle variables, including migration, production and weather patterns. Recreational opportunities on FRWA will also vary through time. Specific recreational uses when balanced with resource needs, will not be maximized in all cases and will be monitored for compatibility with primary wildlife management goals. **Monitoring will include a range of specific data collection and observational evaluations to establish trends that will help guide management decisions. For example daily hunt permits are used to provide hunter use and harvest information that is evaluated annually as part of the regulatory process. A strategy is identified in this plan to develop a methodology for improved tabulation of other forms of outdoor recreation hosted on the wildlife area. This type of information will be used as baseline data to evaluate levels and types of public use as related to habitat integrity and wildlife disturbance.**

Per USFWS NWR staff suggestion, throughout the Final Draft plan, the term 'upland' was further defined as 'upland prairie'.

**Pg. 5:**

**The acreage amounts used in the habitat focused objectives refer to existing acreage. It is the department's intent to improve the quality of these habitats to benefit wildlife, in particular waterfowl.** Specific objectives and strategies to implement each goal, as well as detailed rationale are provided on pages **38**[34] to **51**[46].

**Pg. 5., in Wildlife Establishment section:**

The 25 year license agreement for the remainder of the wildlife area was scheduled for renewal on September 30, 2007 and the review process was extended to October 27, 2008 with a revised acreage total of **approximately** 5,261 acres. **The reason for the word "approximately" in this context is that many of the management units border Fern Ridge lake. The unit boundaries are generally based on the emergent vegetation line as the terrestrial marsh interfaces with the lake. Over the course of years, this**

**line may slightly shift based on plant response to hydrology or other factors, therefore slightly shifting the unit boundaries adjacent to the lake.**

**Pg. 13-14: Description of wet prairie and grassland habitats were completely re-written per suggested text from USACE botanist.**

#### Wet Prairie

Extensive upland and lowland grassland habitats are located near the eastern shore of the lake, adjacent to Kirk Pond, and on Gibson Island. Upland and wetland grasses in these areas include fescue (*Festuca* spp.), bentgrass (*Agrostis exarata*), brome (*Bromus* spp.), American sloughgrass (*Beckmannia syzigachne*), reed grass (*Phragmites australis*) and a few alkali grasses. Once a common habitat type, few areas of native wet low prairie remain in the Willamette Valley.

#### Grasslands

Remnants of native grasslands exist in significant acreages at Fern Ridge Lake. The dominant species include numerous brome, fescue, hairgrass (*Deschampsia cespitosa*), bentgrass, ryegrass (*Elymus* spp.), and other prairie species. Associated with the grasses are many forb species, some of which are presently listed as threatened or endangered in Oregon including Bradshaw's lomatium (*lomatium bradshawii*), Willamette Valley daisy (*Erigeron decumbens*), and Kincaid's lupine (*Lupinus sulphureus*). The few tracts of grassland meadow and wet prairie surrounding Fern Ridge Lake may represent the last remaining portions of this habitat and do contain some uncommon forbs. This is especially true of the native lowland wet prairie habitats. These native wet prairies are considered a Strategy Habitat as defined in the department's 2006 Oregon Conservation Strategy.]

#### Grasslands

**Of an estimated one million acres of grasslands found in the Willamette Valley in historic times, less than 1% remains. Extensive grassland habitats are located near the eastern shore of Fern Ridge; adjacent to Kirk Pond; Gibson Island; and in the Applegate Units. Most of these grasslands can be considered upland prairie or wet prairie.**

#### Upland Prairies

**Upland prairies at Fern Ridge are dominated by exotic grasses such as tall oatgrass (*Arrhenatherum elatius*) and bentgrass (*Agrostis* spp.), but they support important remnants of native grassland vegetation including California oatgrass (*Danthonia californica*) and forbs such as checkermallow (*Sidalcea virgata*) and wild strawberry (*Fragaria* spp.). These sites support federally listed species as well: Kincaid's lupine (*Lupinus sulphureus* ssp. *kincaidii*) is listed threatened. This lupine is the host of the endangered Fender's blue butterfly (*Icaricia icarioides fenderi*). The lupine-butterfly system at Fern Ridge is the focus of continuing restoration and recovery efforts which will improve habitat for all grassland dependent species.**

#### Wet Prairies

**Wet prairies are dominated by tufted hairgrass (*Deschampsia cespitosa*). Soils are hydric, and are inundated for much of the rainy season due to sheet flow and an**

impermeable clay layer below the surface. These sites support over 200 other plant species, including native bentgrass (*Agrostis exarata*), American sloughgrass (*Beckmannia syzigachne*), and many forb species. Of the wet prairie forbs, two are presently listed as endangered federally: Bradshaw's lomatium (*Lomatium bradshawii*) and Willamette Valley daisy (*Erigeron decumbens* ssp. *decumbens*). Native wet prairies are considered a Strategy Habitat as defined in the department's 2006 Oregon Conservation Strategy. All but about 30 acres of the Fern Ridge wet prairie habitat is included in the Fern Ridge Research Natural Area discussed below.

These tracts of grassland are among last remnants of this habitat. Their importance is emphasized by the presence of rare species, the establishment of the RNA, and the inclusion of most upland and wetland prairie in the 2006 designation of Critical Habitat for Fender's blue butterfly, Kincaid's lupine, and Willamette daisy.

**Pg. 14: added text to address comment from USFWS NWR:**

Himalayan blackberry (*Rubus armeniacus*), evergreen blackberry (*Rubus laciniatus*), several species of rose (*Rosa* spp.), and hawthorn (*Crataegus* spp.) create thickets that occupy many open meadow areas as the woodlands transition into prairie. Blackberries are vigorous and invasive in many areas; however, the acreage is limited and generally linear. The thick thorny vegetation does provide a dense barrier protecting bird life, small mammals, and other species from predators and human impacts. Young fir and hardwood trees are often found in these areas forming a structurally diverse and ecologically dynamic habitat. Control of invasive species including blackberries in and adjacent to woodland habitats is included as a management strategy to improve habitat quality and integrity. Removal of Douglas fir trees in predominantly oak woodlands is also identified as a management option where feasible as a measure to reduce canopy competition for native oaks.

**Pg. 18: added text to address comment from USFWS NWR:**

An overall increase in wintering geese in the Willamette Valley has resulted in a corresponding increase of geese wintering in the vicinity of Fern Ridge Lake. During the past few years, between November and April, a night roost population has established on the lake frequently exceeding 50,000 geese. The majority of the birds depart at daybreak to forage on the wildlife area and surrounding fields or exchange with federal wildlife refuges further north in the valley. The primary attracting feature for geese in the area is the protective sanctuary of Fern Ridge Lake and surrounding winter drawdown mudflats. The entire Fern Ridge project area is closed to goose hunting during the migratory period which provides protection for the large concentration of wintering geese. The lake and surrounding units remain open for duck hunting, however the inaccessible nature of this expansive area provide functional wildlife sanctuary for geese over an area of several square miles.

**Pg: 21, the following paragraph was added to the end of the Fish section:**

Fisheries management potential is not high in the Long Tom River or in streams running through the wildlife area because of the seasonally fluctuating lake levels associated with USACE reservoir management for flood control. Waterways that are deep and slow running during the summer are low in the winter, with periods of

**high water and swift current during extended periods of rainfall. Fish entrapment in impoundment areas during flood events is possible and measures by department staff are taken to prevent this occurrence. All pump intake sources are screened to prevent fish access and rock “fish filters” are in place in several waterways to prevent fish access. During flood events, when water from Coyote Creek overtops levee banks, there is a potential for fish stranding. In years where flood events occur, the adaptive management strategy is to drain impoundment areas by mid-May to prevent fish entrapment.**

Pg. 25, a paragraph describing Plant Monitoring was added:

**Plants**

**Plant species monitoring will range from detailed botanical stem count surveys and recording species composition and trends to more rudimentary general habitat condition assessment and overall evaluations of cover types and condition. Purpose of the monitoring will be to identify species presence and abundance, and to guide management decisions based on management objectives of a particular parcel, determination of highest and best use, and wildlife and habitat interrelations.**

Pg. 32, the following paragraph was added to the Public Access section:

**Recreational use of the wildlife area is weighted consistent with funding. The department supports hunting on state wildlife areas; however there is also significant effort underway at FRWA to continue to expand facilities and opportunities to accommodate and highlight non-hunting and non-angling uses. Partnerships will continue to be pursued to improve facilities for non-consumptive opportunities on the wildlife area, in line with balancing resource protection and public use. In close proximity to the wildlife area, several developed parks are available, in addition to Fern Ridge Lake, to provide year-round access for many forms of outdoor recreation. The goals of the wildlife area are to prioritize wildlife and wildlife habitats in balance with other uses. Fortunately at Fern Ridge there are several nearby parks readily available that reduce the need to convert the wildlife area into a park-like facility to meet all recreational needs of western Lane County.**

Pg. 33, added more text to describe hunting program, sanctuary and goose management, to address USFWS NWR comments:

The entire FRWA and reservoir are open to hunting during all authorized seasons between May 1 and the week prior to the start of duck season, at which time specific unit regulations outlined below apply. **Changes in regulation frameworks have been adopted during past years to separate waterfowl and upland bird hunt season dates on the wildlife area. This has been effective in separating the different types of hunting activities, for example duck and pheasant hunting, and has helped to reduce hunter conflicts as well as reducing disturbance for waterfowl during early fall staging periods.**

Hunting regulations for FRWA were modified beginning with the 2006-07 season to provide increased periods of sanctuary during and after duck season. **Sanctuary as used in this document is defined as “a place of wildlife protection”.** The additional

protection was accomplished by regulating hunting and public access seasonally in five management units **to provide wildlife sanctuary**. The majority of the area including Fern Ridge Lake remains open seven days per week for hunting during all authorized seasons.

Regulation proposals for the 2008-09 season [~~recommended additional~~] **extended** seasonal closures of four units to provide increased post-season wildlife sanctuary specifically intended to benefit wintering geese during a critical spring life cycle period. **This change in regulation provides additional sanctuary for concentrations of wintering geese on public land as part of the effort to minimize agricultural crop depredation by geese on surrounding private lands. FRWA serves an important role in the effort to minimize crop depredation in the South Willamette Valley by providing support for large concentrations of wintering geese through the entire winter and migratory period.**

**While the majority of the wintering geese primarily utilize the lakebed area that is outside of the wildlife area boundary, the cropland and moist soil management units on the wildlife area contribute significantly as a forage and rest area to support all species of waterfowl including wintering geese beginning in the fall and continuing into late spring. Access to this food source and habitat base reduces goose movement off of the area to nearby private agricultural lands. Options to provide additional forage specifically for geese will be considered as part of the overall assessment of goose management and distribution in the Willamette Valley.**

**The four units with seasonal access restrictions comprise approximately 25% of the wildlife area and provide wildlife sanctuary from early October through April 30. The East Coyote, West Coyote, Fisher Butte, and Royal Amazon units have various limited entry and closure dates to provide wildlife sanctuary, even during hunting seasons. For example, during duck season, the Fisher Butte and Royal Amazon units close to hunting each day at 1 PM and are closed to public access at 2 PM. The reservation waterfowl hunt program provides a month of sanctuary during the early duck season and then authorizes hunting access only three mornings each week for the remainder of the season. These types of regulatory provisions provide regular and predictable wildlife sanctuary for wintering birds each day. Every afternoon the birds have a designated safe and undisturbed area to rest and forage. Sanctuary closures are also in effect after the end of waterfowl season in selected units to provide continuity for wildlife use.**

**When hunting for the day ends at 1 PM, an influx of birds is regularly observed returning to the units that were hunted in the morning. This demonstrates the compatibility of providing both hunting and sanctuary in the same units and supports the concept of providing partial-day sanctuary closures in association with managed hunt programs. Waterfowl including geese and other wetland dependent species benefit from crop and moist soil management practices on the wildlife area. The forage and rest areas provided in the impoundments serve as a significant attractant to attract and hold geese, in line with the primary management goal of the wildlife area.**

**The seasonal access restrictions are in place to provide wildlife sanctuary. Of particular importance in the late winter and spring time period is providing rest areas for waterfowl and other wetland dependent species prior to migration and nesting season. Morning fly-off count of Canada geese at Fern Ridge in 2008 and 2009 documented 40,000 to 55,000 geese moving around the wildlife area or flying off the lake at sunrise. The sanctuary closures are in effect to provide access to habitat for life cycle needs and serve as functional wildlife sanctuary to support a sizeable portion of the wintering Willamette Valley goose population.**

**Due to the relatively recent increase of geese present on the Fern Ridge project, a strategy has been identified to collaborate at the Flyway level and locally with agriculture interests, other agencies, Eugene, Airport, and department staff to seek options and opportunities to address goose depredation in the South Willamette Valley.**

**Pg. 34:**

**Educational/Interpretive**

Local schools use the wildlife area for various classroom activities and field trips. Department personnel participate to the extent possible and provide accommodation and access as compatible with wildlife protection and other ongoing public use activities on the wildlife area. Student intern and cooperative education programs are administered by FRWA staff involving students and institutions ranging from elementary school through the university level. Internship programs have been implemented through Lane Community College, University of Oregon, and Oregon State University to provide resource based field experience for college level students. Real-life work experiences and job shadow opportunities have been provided in conjunction with academic coursework to better orient students to careers in wildlife management and natural resource stewardship. **The close proximity of FRWA to the West Eugene Wetland complex provides an important link with potential for expanded wetland study and interpretive opportunities.**

**Pg 35: add paragraph at bottom of Rationale for Objective 1.1:**

**Although it recognizes the loss of wetlands throughout the Willamette Valley, the department is not seeking to increase wetland habitat on FRWA; rather it is focused on improving infrastructure and capability to enhance or restore existing wetlands. Increasing wetlands would be problematic as the wildlife area has a finite landbase and converting other habitat types to wetlands would affect other species particularly those key species identified in the OCS.**

**Pg. 36, added more strategies to Objective 1.1:**

**Strategy 5. To provide additional forage for geese, explore opportunities to restore several acres of upland prairie on Gibson Island. Work will entail clearing brush (e.g. invasive woody plants) and fall mowing to provide spring green-up for goose browse.**

**Strategy 8. Manage impoundments and coordinate drawdowns to minimize fish entrapment with an emphasis on providing fish passage in the East Coyote unit that is subject to annual flood events associated with adjacent Coyote Creek.**

**Strategy 9. Collaborate at the Flyway level and locally with agriculture interests, other agencies, Eugene, Airport, and department staff to seek options and opportunities to address goose depredation in the South Willamette Valley.**

**Strategy 10. Conduct waterfowl census and monitor wildlife population levels, distribution, and use patterns. Maintain database for comparative analysis. Conduct periodic wildlife surveys including mid-winter waterfowl survey, annual Canada goose surveys and other department/USFWS/Pacific Flyway Council coordinated inventories.**

**Strategy 11. Explore research opportunities (i.e. OSU) to address wetland productivity and supporting bird numbers in impoundments, using predictive models, to integrate population and habitat efforts.**

Pg. 38, added text to a paragraph in the Rationale:

**Management of FRWA's adjacent, intensively managed wetlands cannot be disassociated with the lake; rather it capitalizes on the close proximity of the mudflat habitat.** The lake's annual fluctuations create a unique situation that provides important spring and summer habitat for waterfowl and other wetland bird nesting and brood rearing. **This significant mudflat habitat supports an abundance of waterfowl and shorebirds during the winter.**

Pg. 40, added a monitoring component to Objective 2.1, Strategy 1 and Strategy 3:

**Strategy 1.** In cooperation with USACE, manage designated RNA wet prairie sites by maintaining fences, vegetation monitoring and control (tree, shrub and reed canarygrass removal), maintenance of firebreaks, use of controlled burns and by natural drainage protection and/or enhancement. **Monitoring will be conducted to determine species presence and abundance and will be used as a baseline indicator to guide management decisions.**

**Strategy 3.** Monitor and control noxious weeds on wildlife area lands according to state and federal guidelines. Work will include pesticide applications and mechanical control. **Monitoring will be conducted to determine species presence and abundance and will be used as a baseline indicator to guide management decisions.**

Pg. 42: added text to Objective 2.3, Strategy 4 and added a new strategy:

**Strategy 4.** Monitor **and control** noxious weeds on wildlife area lands according to state and federal guidelines. **Monitoring will be conducted to determine species presence**

**and abundance and will be used as a baseline indicator to guide management decisions.**

**Strategy 6. Coordinate with department grassland biologist and OCS staff to pursue funding opportunities and to implement management activities related to native habitat restoration and enhancement.**

**Pg. 44, added another strategy to Objective 3.1:**

**Strategy 12. Implement angling closures, educational outreach, or other strategies to minimize angling impacts to western pond turtles.**

**Pg. 47: added a sentence to end of Staffing/Organization paragraph:**

The wildlife area is staffed by two full time employees and one 5 ½ month seasonal Fish and Wildlife Technician. A dedicated and reliable volunteer crew has been contributing to wildlife area operations for over ten years. On an average year, over 4,000 hours of additional labor and support are provided by this capable team of sportsmen and wildlife supporters. **A wider scope of management activities could be undertaken if the wildlife area was allocated additional operational funding and manpower.**

**Pg. 47, added a paragraph to the Compliance Requirements section:**

**FRWA management activities are authorized and regulated under all applicable local, state, and federal laws and guidelines. Under the USFWS Federal Aid funding process, Section 7 Evaluation forms are submitted annually for USFWS review and approval. An annual management plan is submitted to the USACE as a license requirement which provides another level of Federal review. USACE also coordinates with USFWS and complies with Section 7 requirements for all applicable management actions at Fern Ridge. FRWA and USACE staff participate in ongoing coordination relating to all management activities regarding T&E species on the wildlife area.**

**Pg. 47, identified more partners in the Partnership section:**

A number of other state, federal, and local agencies and interest groups assist with management activities on the FRWA. These partners play an important role helping the department achieve its mission and the FRWA goals. The department will continue to rely on these and other partners in the future to help implement this plan and provide input for future updates. This plan identifies projects that provide new opportunities for existing or new partners. There is a great potential for more public participation and assistance in the management of the wildlife area given its proximity to the **USACE Fern Ridge Lake project**, Eugene/Springfield metropolitan area, **and the West Eugene Wetlands**. The department welcomes and encourages public participation in the administration of the wildlife area.

**Pg. 47, added text to Adaptive Management section:**

Monitoring is an essential component of adaptive management in general, and of this plan in particular; specific monitoring strategies have been integrated into the goals and

objectives described in this plan whenever possible. Where possible, habitat management activities will be monitored to assess whether the desired effects on wildlife and habitat components have been achieved. **Monitoring of wildlife, habitats, public use, and other stewardship issues will be used to identify trends and occurrences that will factor into decision making and sound management recommendations.**

**Pg. -72-, text added to Management Unit descriptions in Appendix D:**

East Coyote Unit:

The East Coyote Unit is located in the very aggressive Coyote Creek floodplain. Each winter, one to seven high water events can be expected during which the entire unit is flooded to diketop level or higher. During these brief flood periods, adjacent county roads are under water for approximately three miles as well as flooding of several hundred acres of adjacent private farmland. The flood events are generally triggered by periods of sustained rainfall and take from three days to three weeks for water levels to moderate to normal. The high water flows and periods of 100% inundation of the unit have a detrimental impact on subsequent late season food availability for waterfowl.

**Impoundment drainage following flood events is conducted by May each year to prevent fish entrapment.**

**Flexibility to make cropland and moist soil habitats available (i.e., flood them) to waterfowl in fall is complicated at Fern Ridge because of the source and timing of availability of water. Pumps draw water from Coyote Creek, and water levels in the creek are influenced by elevations of Fern Ridge reservoir. The USACE rule curve for the reservoir dictates that lake levels be lowered starting October 1. Consequently, by mid October water levels in Coyote Creek have declined and wildlife area pump intakes are above water level. The problem is most extreme in the East and West Coyote units, less so in the Fisher Butte unit.**

**In development of the FRWA long range management plan, a committee was assembled of wetland managers, department staff, and wetland specialists from Oregon State University to review infrastructure and management practices on the wildlife area. The topic of early season flooding to attract waterfowl was thoroughly discussed in relation to other state and nationwide wetland areas and the unique constraints at FRWA with the associated lake water levels. The recommendation supported by the advisory group was to carefully consider timing of field flooding and continue with the framework of water management that had been developed and implemented during the past several years.**

**Current strategy for water level management in impoundments includes flooding ditches and low field areas by October, prior to reservoir drawdown (when pumping becomes impossible). This starts the process to saturate soils and fills borrow areas, helping the area flood faster with the onset of seasonal rains. Once the winter rains arrive, the impoundment fields flood gradually with water levels moderated by flashboard riser drainage structures. Flooding additional acres early in the season, while providing a level of ready food for waterfowl, would speed food depletion by increasing decomposition of agricultural foods during a period of warm temperatures and relatively low bird use. Depending on the growing season,**

many plants are not mature early in the fall and hard seed has not set. Flooding these green or immature plants will prevent plant maturity and reduce overall value as a forage crop. Allowing the plants to grow to maturity would result in a higher quantity of food with a longer shelf life that would provide benefits later in the season when nutritional demands of wildlife are higher. Furthermore, flooding large impoundments entirely will likely reduce food availability by flooding some portions of the impoundment to a depth that prevents access to foods by dabbling ducks. The current practice of flooding fields in stages, with rainfall dictating the pace and level of flooding, echos the natural system to which waterfowl are well attuned in their movements and habits.

Pg. -77-, Amazon Dike #2, at end of section:

The GSA parcel is bordered on the north, east, and south by private land and borders the wildlife area on the west. A public trail for foot access is available from the south and a long circuitous trail through the wildlife area provides limited access from the north via Shore lane. A private roadway, Eaton Lane, provides vehicle access from the north, however access was restricted by the roadway owner from 1996 through 2008. An agreement is now in place to authorize the department and scientist partners access to the unit via Eaton Lane for the purpose of habitat management and monitoring. Public access remains restricted via Eaton Lane.

In the fall of 2008, a grassland restoration project was implemented in the GSA parcel to remove encroaching and invasive trees, shrubs, and blackberries from the unit. Grassland portions were mowed and woody vegetation was manually removed. Remnant native oak trees were released by cutting vegetation below the crowns to reduce competition. A significant stand of Ponderosa pine at the south end of the unit was left in place for the structural habitat value provided at this specific site. The restoration work and renewed access agreement will set the stage for continued management, maintenance, and improvement of this upland prairie parcel.

Pg. -80-, Kirk Park Unit:

This unit supports one of the few remaining high quality habitats for western pond turtles. Through several years of intensive management and monitoring, the USACE has preserved and enhanced a remarkable breeding population of western pond turtles by completing habitat improvements, removing predators and competitors, and implementing other protective measures. Fenced exclosures are in place to protect turtle nesting sites adjacent to shallow ponds on the eastern portion of the unit. Educational outreach is underway and regulatory restrictions on angling will be considered to protect turtles from incidental hooking by anglers.