# SWANSON LAKES WILDLIFE AREA MANAGEMENT PLAN

Washington Department of Fish and Wildlife

Prepared by Wildlife Area Manager, Juli Anderson

**2006**

STATE OF WASHINGTON

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# Washington State Wildlife Area Plan

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Washington Department of Fish and Wildlife
Wildlife Management Program
600 Capitol Way North
Olympia, WA 98501-1091

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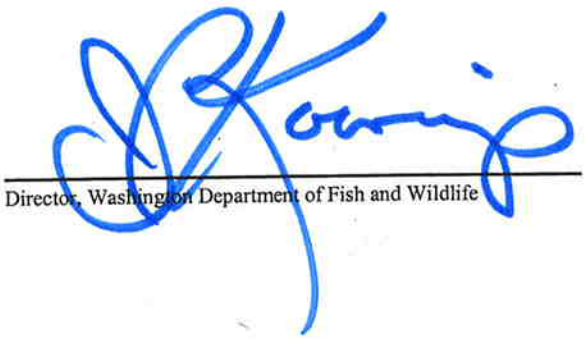
**November 2006**



Director, Washington Department of Fish and Wildlife

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## EXECUTIVE SUMMARY

The Swanson Lakes Wildlife Area (20,065 acres) was established in 1993 for the purpose of protecting and managing sharp-tailed grouse and other shrub-steppe obligates, and shrub-steppe habitat on the Columbia Plateau. Management of the Wildlife Area is 100% funded through Bonneville Power Administration's (BPA's) fish and wildlife mitigation program. The property was acquired through fee title purchases by BPA and WDFW, between 1993 and 2002. Properties purchased by BPA have since been deeded to WDFW.

The primary management emphasis for the property is to provide lekking, nesting, foraging, and winter habitat for the Columbian sharp-tailed grouse, a state-listed threatened species. Prior to WDFW management, the area had been used for agricultural purposes, primarily cattle grazing and production of cereal grains. BPA funded the conversion of several hundred acres of farmland back to grasslands, to improve the quality and quantity of habitat for shrub-steppe obligates.

As of September 30, 2006, the amount of habitat protection and restoration that BPA had agreed to fund had been completed. From that point on forward, BPA is funding only routine operation and maintenance expenses on the Wildlife Area. Swanson Lakes Wildlife Area staff is looking to alternative funding sources, including grants, to implement additional habitat improvements, including establishment of new riparian shrub and tree plantings, and restoration of wetlands along Lake Creek through removal of artificial levees and channelization.

The primary management concerns and public issues identified in the Swanson Lakes Wildlife Area Plan are:

- Protecting remaining shrub-steppe and riparian habitat from further losses.
- Increasing the quality and quantity of shrub-steppe and riparian habitat in existing areas.
- Protecting and increasing the population of sharp-tailed grouse on the Wildlife Area and surrounding lands. Activities include augmentation and monitoring.
- Reducing the impact of public use on shrub-steppe obligates and their habitat, while allowing a multitude of public uses on the Wildlife Area.
- Controlling noxious weeds.

In 2006 WDFW planted its second and third fenced plot of riparian shrubs and trees, with supplemental watering provided by existing wells, using 80 year-old windmills as well as modern solar pumps. 2006 was also the second year of augmentation of sharp-tailed grouse, from out-of-state populations.

A third round of sharp-tailed grouse augmentation is being coordinated for spring 2007. WDFW is also planning for possible re-introduction of sage grouse to Swanson Lakes Wildlife Area within the next two years, due to greatly improved habitat conditions since the 1980's, when sage grouse were extirpated from the area. With funding in place, WDFW, in coordination with the US Bureau of Land Management (BLM) and Ducks Unlimited (DU), will begin restoration of wetlands along Lake Creek, on BLM and Swanson Lakes Wildlife Area property, in 2007. This will, over the long term, improve quality and quantity of winter habitat for sharp-tailed grouse.

The Swanson Lakes Wildlife Area Plan complements the WDFW Sage Grouse, and Sharp-tailed Grouse, Management Plans, which provide a more comprehensive review of prairie grouse management in the larger geographic region.

# CHAPTER I. INTRODUCTION

This plan provides management direction for the Swanson Lakes Wildlife Area. This plan will be updated annually to maintain its value as a flexible working document. It identifies needs and guides activities on the area based on the Washington Department of Fish and Wildlife (WDFW) Agency Mission of "Sound Stewardship of Fish and Wildlife" and its underlying statewide goals and objectives as they apply to local conditions.

## 1.1 Agency Mission Statement

The Washington Department of Fish and Wildlife serves Washington's citizens by protecting, restoring and enhancing fish and wildlife and their habitats, while providing sustainable fish and wildlife-related recreational and commercial opportunities.

## 1.2 Agency Goals and Objectives

The following goals and objectives directly apply to the management of this wildlife area. These goals and objectives are found in the Agency's Strategic Plan.

Goal I: Healthy and diverse fish and wildlife populations and habitats

- Objective 2: Protect, restore and enhance fish and wildlife populations and their habitats.
- Objective 3: Ensure WDFW activities, programs, facilities and lands are consistent with local, state and federal regulations that protect and recover fish, wildlife and their habitats.

Goal II: Sustainable fish and wildlife-related opportunities

- Objective 6: Provide sustainable fish and wildlife-related recreational and commercial opportunities compatible with maintaining healthy fish and wildlife populations and habitats.
- Objective 7: Improve the economic well being of Washington by providing diverse, high quality recreational and commercial opportunities.

Goal III: Operational Excellence and Professional Service

- Objective 11: Provide sound operational management of WDFW lands, facilities and access sites.

## 1.3 Agency Policies

The following agency policies provide additional guidance for management of agency lands.

- Commission Policy 6003: Domestic Livestock Grazing on Department Lands
- Policy 6010: Acquiring and disposing of real property
- Policy 5211: Protecting and Restoring Wetlands: WDFW Will Accomplish Long-Term Gain of Properly Functioning Wetlands Where Both Ecologically and Financially Feasible on WDFW-Owned or WDFW-Controlled Properties
- Policy: Recreation management on WDFW Lands
- Policy: Commercial Use of WDFW Lands
- Policy: Weed Management on WDFW Lands
- Policy: Fire Management on WDFW Lands

## 1.4 Swanson Lakes Wildlife Area Goals

Management goals for the Swanson Lakes Wildlife Area are to preserve habitat and species diversity for wildlife resources, maintain healthy populations of game and non-game species, protect and restore native plant communities, and provide diverse opportunities for the public to

encounter, utilize, and appreciate wildlife and wild areas. Specific management goals and strategies for the Swanson Lakes Wildlife Area can be found in Chapter 3.

### 1.5 Planning Process

A multifaceted approach has been undertaken to identify strategies proposed for management of the Swanson Lakes Wildlife Area. This process included identifying agency goals and objectives that apply to the area; a review of the purpose for purchasing the area; a review of existing habitat conditions and species present; the formation of a Wildlife Area Citizens Advisory Group (CAG); and input and review by an internal District Team consisting of local representatives from each WDFW program. The district team also helped to identify other species or habitat plans and documents pertinent to the management of the area.

Public participation, through the formation of the CAG, will be used as an ongoing means to identify social, cultural, and economic issues important to the people of Washington and the management of the wildlife area. The group will also provide input to help resolve current and future management issues and conflicts. CAG participation in planning will add credibility and support for land management practices and help build constituencies for wildlife areas. The CAG is made up of one representative from each major stakeholder group. CAG members are spokespersons for their interest groups.

**Swanson Lakes Area Citizens Advisory Group Representation**

Environmental Organization – Brian Miller, Spokane Audubon
Neighbor/Rancher – Dave Hubbard
Neighbor/Farmer/Ag Lessee – Gary Maurer
Neighbor/Hobby Rancher – Ed Ladwig
County Weed Board – Kevin Hupp
U.S. Bureau of Land Management – Jason Lowe
Big Game Hunter/Businessman – Charlie Berg
Upland Game Hunter – John Phillips, Pheasants Forever/INWC
County Commissioner – Dennis Bly, Harrington
Spokane Tribal biologist – BJ Kieffer

Plans will incorporate cross-program input and review at the regional and headquarters level by the habitat program, wildlife program, enforcement program, and fish program. Pertinent information from existing species plans, habitat recommendations (including the Comprehensive Wildlife Conservation Strategy), watershed plans, ecoregional assessments, etc., will be used to identify local issues and needs and ensure that the specific Wildlife Area Plan is consistent with WDFW statewide and regional priorities.

The Swanson Lakes Wildlife Area plan will be reviewed annually with additional input from the CAG and district team to monitor performance and desired results. Strategies and activities will be adapted where necessary to accomplish management objectives.

# CHAPTER II. AREA DESCRIPTION AND MAP

## 2.1 Property Location and Size (adapted from Cope and Berger, 1992)

Swanson Lakes Wildlife Area is located in east-central Washington. It lies approximately twenty miles west southwest of Davenport, the county seat and population center of Lincoln County; and approximately 60 miles west of Spokane. Lincoln County encompasses a total of 1,475,520 acres. Fifty percent of the county is presently in small grain production, 40% is rangeland, and 10% supports other miscellaneous uses. The majority of remaining shrub-steppe habitat in Lincoln County is used as rangeland. Swanson Lakes Wildlife Area encompasses approximately 21,000 acres in Central Lincoln County, about 10 miles south of Creston. The three main habitat types within the wildlife area are shrub-steppe, riparian/wetlands and old cropland fields. The majority of this area is rangeland, with some old Conservation Reserve Program (CRP) fields, several hundred acres of restored grassland habitat, and a small amount of leased cropland: cereal grain fields and hay flat.

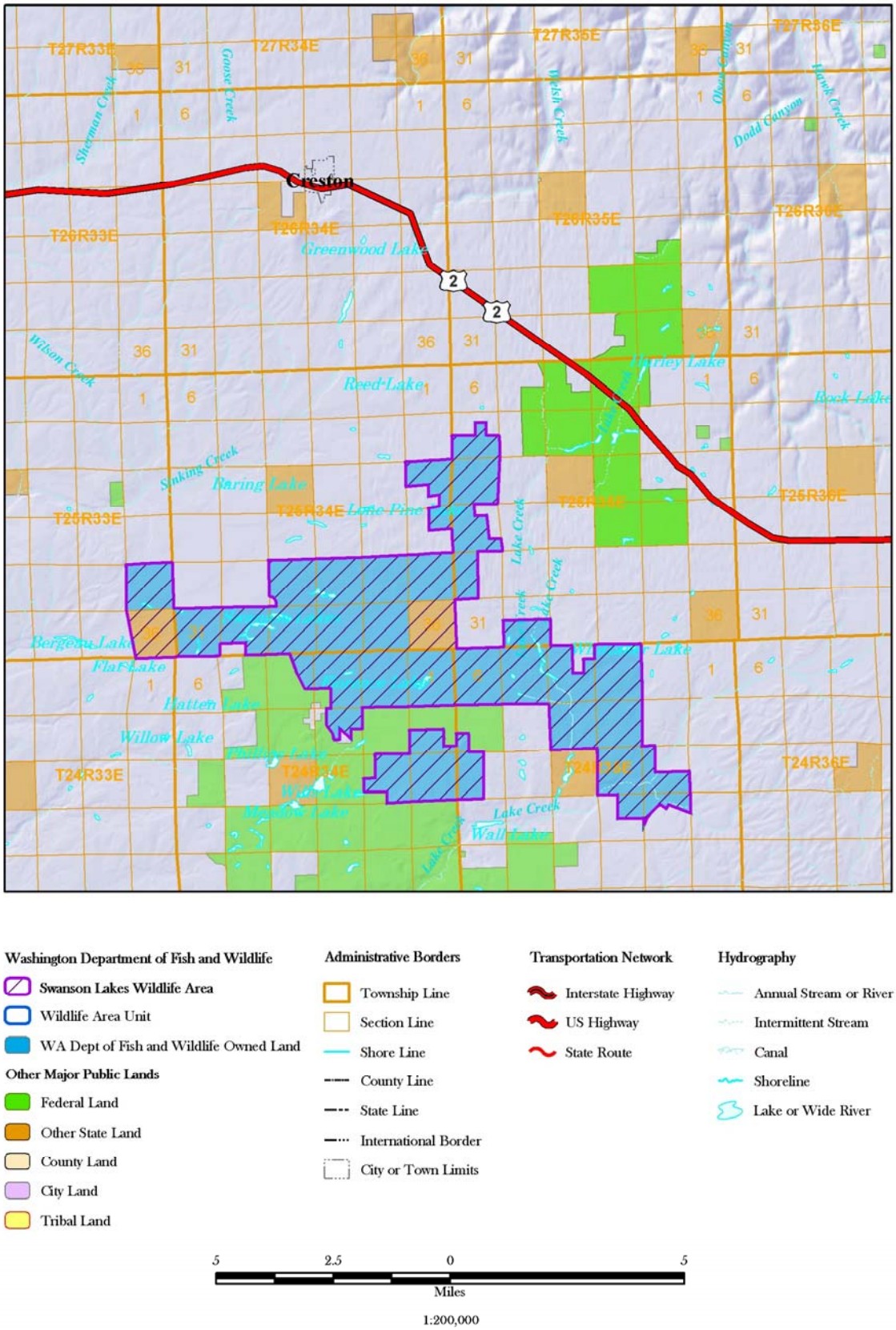
***Chase Hubbard CRP Field, Restored Grassland Habitat, 1994***

The wildlife area (Figure 1-1) includes land located in the following sections:

T25N, R33E: 25, 36(leased from DNR)
T25N, R34E: 13, 24, 25, 26, 27, 28, 31, 32, 33, 34, 35, and 36(leased from DNR)
T25N, R355: 30, 32
T24N, R34E: 1, 2, 3, 4, 10, 12, 13, and 14
T24N, R35E: 3, 4, 5, 6, 7, 9, 10, 14, 15, 18, 22, and 23.

**Figure 1 Map of Swanson Lakes Wildlife Area**

**2**



The development of the hydropower system in the Columbia River Basin has affected many species of wildlife as well as fish. The habitat that was lost because of the hydropower system was not just land; it was home to many different, interdependent species. The Pacific Northwest Electric Power Planning and Conservation Act directs the Bonneville Power Administration (BPA), United States Department of Energy, to protect, mitigate, and enhance fish and wildlife affected by the development and operation of federal hydroelectric projects of the Columbia River and its tributaries. Acquisition of the Swanson Lakes property has also been of interest to WDFW for many years, due to its inclusion of habitats and species that are of high conservation priority. Swanson Lakes Wildlife Area was approved as a BPA wildlife mitigation project in 1993. Most of the project's lands were purchased between 1993 and 1997. Swanson Lakes Wildlife Area is managed primarily for the Columbian Sharp-tailed Grouse, listed by Washington State as a threatened species. However, the property also contains a multitude of shrub-steppe species, both flora and fauna.

Over the past 120 years, the area now known as Swanson Lakes Wildlife Area has undergone significant changes. As working cattle ranches and farms, much of the land was converted from the original native shrub-steppe grassland to fields of barley and wheat, with many of these fields then seeded to crested and tall wheatgrass for livestock grazing. The native rangeland has been overgrazed in some areas, allowing the encroachment of noxious weeds. Another significant vegetation change was removal of deciduous trees along the riparian corridors, primarily due to cattle over-grazing. This practice has reduced wintering habitat for sharp-tailed grouse.

Lek counts and research conducted by WDFW indicate that the sharp-tailed grouse population has declined over time, on this site and throughout its range within the state. Loss of habitat, resulting from excessive livestock grazing, plowing, and conversion to other land uses, area recognized as the primary factors for this decline. Oral histories from long time residents and neighbors of the Swanson Lakes Wildlife Area also indicate that the sharp-tailed grouse population has steadily declined. Management of this site is intended to permit habitat recovery and allow sharp-tailed grouse numbers to stabilize or increase.

In the eleven years since Swanson Lakes Wildlife Area has been first actively managed, cattle grazing has been generally eliminated, trees and shrubs have been planted, and hundreds of acres of non-native wheatgrass fields have been restored to grassland habitat. These activities have been undertaken to improve habitat quality for sharp-tailed grouse. When the Swanson Lakes Wildlife Area was first established, grouse numbers were already low. Earlier on staff recognized that without large-scale habitat improvements, grouse survival would continue to decline.

### 2.3 Ownership and Use of Adjacent Lands

The United States Bureau of Land Management (BLM) purchased property adjacent to Swanson Lakes Wildlife Area in the 1990's and in 2004, providing an opportunity to secure connectivity of habitats among various agencies' lands. BLM's acquisition of the Twin Lakes and Telford Recreation Areas (RA's) was helpful for minimizing habitat fragmentation, due to overgrazing and conversion of shrub-steppe to cropland. Federal and State ownership of these roughly 50,000 acres of shrub-steppe (including Swanson Lakes Wildlife Area), allowed for implementation of a coordinated management strategy that could be implemented throughout the watershed. BLM is actively pursuing acquisition of additional property in the vicinity of Swanson Lakes Wildlife Area/Twin Lakes RA/Telford RA.

Swanson Lakes Wildlife Area leases two sections of land (approx. 1280 acres total) from Washington State Department of Natural Resources (DNR). These sections are fenced into Wildlife Area boundary lines. It is possible that in the next few years, DNR will trade these two sections to WDFW, in return for timberlands received from WDFW elsewhere.

There is a small private in-holding along a county road (Seven Springs Dairy Rd. E.), between Swanson Lakes Wildlife Area and Twin Lakes RA. It consists of two separate parcels, each with a house and a small amount of acreage. Each landowner has, at times, grazed cattle and/or horses on his or her land. Private parties own the remaining adjacent lands, and use the properties primarily to graze cattle and grow small cereal grains.

**2.4 Funding**

Funding for management of the wildlife area comes from one main source, BPA mitigation funds. The budget for the 2005 fiscal year is as follows:

| | |
|---|---|
| Project Expenses | $178,251 |
| Indirect, 29.3% | 52,228 |
| Project Income (subtract) | 19,494 |
| BPA funding total | $210,985 |

Three staff positions are supported:

| | |
|---|---|
| 1.0 fte | Wildlife Area Manager (Fish and Wildlife Biologist 3) |
| 1.0 fte | Assistant Wildlife Area Manager (Fish and Wildlife Biologist 2) |
| 0.5 fte | Laborer |

The Department will, as part of the implementation of this plan, submit grant proposals and applications and identify other strategies to address unfunded management needs on the wildlife area.

**2.5 Climate (Cope and Berger, 1992)**

The daily temperature for the wildlife area varies from a low of -25° C (-13° F) to a high of 38° C (100° F), averaging 8° C (46° F). There are 120 to 160 frost-free days in the growing season, with annual precipitation averaging between 12 and 16 inches.

**2.6 Soils and Geology (Cope and Berger, 1992)**

The wildlife area is located on the Columbia Plateau, which was created by lava flows hundreds of feet thick, modified by glacial action and scoured by repeated floods during the Miocene and Pliocene eras. This fairly level, rough topography is called the Channeled Scablands and includes features such as plateaus, buttes, and channels. Channels are made up of outwash terraces, bars, loess islands and basins. The plateaus contain circular mounds of loess (biscuits) surrounded by cobble-size fragments of basalt. The land increases in elevation from about 500 m in the southwest to about 760 m in the northeast. Soils generally consist of silt loams with varying amounts of rock or gravel, and basaltic rock outcroppings. Specific soil types commonly found include: Anders silt loam, Anders-Bakeoven-Rock outcrop complex, and Roloff-Bakeoven-Rock outcrop complex.

**2.7 Hydrology and Watersheds**

Swanson Lakes Wildlife Area is located in the upper portion of the Crab Creek Watershed.

***Z-Lake: A Classic Rim Rock Lake***

Numerous pothole lakes, and a handful of rim rock lakes are found on the wildlife area. Drainage generally runs from northeast to southwest. Surface water is known to be alkaline. One intermittent stream, Lake Creek, runs through Swanson Lakes Wildlife Area, on its way to Rock Creek. Lake Creeks' headwaters originate a few miles northeast of the wildlife area, and the stream widens into perennial rim rock lakes at several locations. The first of these rim rock lakes, known as "Z-Lake," is located at Swanson Lakes Wildlife Area. Fish are regularly planted in lakes downstream of the Lake Creek drainage, but netting has found no fish on Swanson Lakes, although neighbors report catching Bullhead catfish in the lakes. However, in spring 2004, approximately 10,000 rainbow trout spring fry were planted into Z-Lake. The lake was surveyed in spring 2005 to determine survival rate. Wildlife Area staff found a thriving population of large (10-13 inch long) fish and now Z-Lake is open to the public for fishing. Approximately 5,000 rainbow trout spring fry, were planted in spring 2005.

**2.8 Fire History**

Bunchgrasses are tolerant of low intensity fires but the invasion of weeds such as and cheatgrass can alter the nature of burns. These weedy species can grow in dense stands, filling interspaces between bunchgrasses, and fuel intense fires that kill native forbs and grasses. Weedy invaders tend to out-compete native bunchgrasses after a fire and spread readily throughout severely burned areas, thereby converting native communities to entire stands of exotics that are less palatable to wildlife and diminish the diversity of the plant community.

The 7,200-acre Hatten Road Fire burned in 2003. 875-acres on Swanson Lakes Wildlife Area were burned in this fire. However, when the lands on the wildlife area burned, the fire was low in intensity and moved through swiftly, ideal for revitalizing native shrub-steppe plants, such as rose and wild rye. With funding from WDFW for post-fire habitat restoration, staff was able to identify and reseed a few, small areas that burned heavily, and was also able to reseed the cat trails that were blazed for fire control.

More recently, the 5,200-acre Wall Lake Fire that burned in late July 2005, consumed about 1,585-acres on Swanson Lakes Wildlife Area. We expect to see similar revitalization of habitat after this fire, as well. Again, we will be reseeding cat trails and heavily burned spots, to minimize weed colonization there.

## 2.9 Vegetation Characterization

The Swanson Lakes Wildlife Area terrain is dominated by shrub-steppe communities, with some grassland, interspersed with rock outcrops. The dominant grass and shrub-steppe communities are primarily composed of Bluebunch wheatgrass, Idaho fescue, Wyoming big sage, and rigid sage.

***Z-Lake Upland: Wyoming Big Sage & Rigid Sage***

Common shrub species are snowberry, rose, serviceberry, and Wax currant. Although riparian areas are few, they offer important vertical structure in the vast extent of open grassland. These stands of trees and/or shrubs provide hiding, escape and thermal cover, shade, foraging and nesting sites, perches, and water sources. Often these highly productive communities contain both plant and wildlife species that are endangered or threatened. Overstory trees in riparian zones include quaking aspen, black cottonwood and water birch, while the understory vegetation is composed of hydrophytic shrub species such as mock orange, alder, Rocky Mountain maple, Black hawthorn, and willow.

## 2.10 Important Habitats

Shrub-steppe -The driving force behind the Swanson Lakes Wildlife Area acquisitions has been the protection and restoration of shrub-steppe habitats, for the recovery of sharp-tailed grouse. Swanson Lakes Wildlife Area is largely composed of native shrub-steppe habitat. This critical component of the prairie grouse life cycle is in high demand for agricultural purposes. The shrub-steppe component in the sharp-tailed grouse management areas will be permanently protected. The WDFW Status Report for the Sharp-tailed grouse states that the area of shrub/meadow-steppe habitat in Washington, originally 10.4 million acres, had declined an estimate 60% since the arrival of settlers. In Lincoln County, the estimated loss is 62%, with 189,470 acres left, of 504,013 original acres in shrub/meadow steppe.

***Swanson Lakes WLA: Spring-Fed Riparian Habitat***

Riparian - An equally important habitat for the recovery of sharp-tailed grouse is the deciduous shrubs and trees along all water courses, ponds, springs and seeps. This vegetation is critical for wintering grouse, providing both cover and food when snow levels cover their preferred upland habitats.

## 2.11 Fish and Wildlife

Wildlife diversity is of primary importance to the goals and strategies guiding WDFW's management efforts. Swanson Lakes Wildlife Area contains many shrub-steppe - dependent species of wildlife. The only known fish population at Swanson Lakes Wildlife Area consists of rainbow trout in Z-Lake, near the headwaters of Lake Creek. These fish were placed into Z-Lake as fry in spring 2004 and spring 2005. Their continued survival will depend on the lake level staying reasonably high, and winter aeration.

A diverse mix of wildlife can be found at Swanson Lakes. Big game and upland bird species present include mule deer, Hungarian partridge, pheasant, California quail, and Columbian sharp-tailed grouse. As recently as the 1980's, the area is also believed to have contained sage grouse, now extirpated from Lincoln County. Several reptilian and amphibian species also occur, along with several species of shrub-steppe obligate songbirds. Birds of prey seen at Swanson Lakes include ravens and magpies, various hawks and falcons, and at least three species of owl.

***Swanson Lakes WLA: Badger Research Project***

WDFW is investigating certain areas in Eastern Washington, including Swanson Lakes Wildlife Area, as potential release sites, for future reintroduction of Pygmy rabbits to the wild.

The Columbian sharp-tailed grouse have undergone a dramatic decline throughout Washington. The Washington Fish and Wildlife Commission listed this species as threatened in 1998 and have been petitioned for federal listing. Small, isolated populations are present only in Okanogan, Douglas, Spokane, and Lincoln Counties. Protection measures have been taken by WDFW, since the acquisition of Swanson Lakes Wildlife Area began, in 1993. Habitat enhancements and genetic augmentation through supplementation efforts have been, and are continually being implemented.

Priority species, which are found on the wildlife area include: prairie falcon, ring necked pheasant, White-tailed deer and Rocky Mountain mule deer. (Information on priority Habitats and Species list are available at http://wdfw.wa.gov/hab/phsvert.htm#birds .)

Listed species that occur, or have the potential to use the wildlife area include:

| | |
|---|---|
| Columbian Sharp-tailed grouse | ST |
| Western bluebird | SC |
| Sage thrasher | SC |
| Sage sparrow | SC |
| Burrowing owl | SC, FSC |

Abbreviations: State endangered (SE), State threatened (ST), State candidate for listing (SC), Federal candidate (FC), Federal species of concern (FSC)

**2.12 Cultural Resources.**
Cultural, geological, and other non-renewable resources are protected, and may not be removed unless such removal is beneficial to wildlife, habitat, or the Wildlife Area, or for scientific or educational purposes. WDFW will coordinate with the appropriate agency of jurisdiction for the protection of such resources. Past issues have included the removal of various rock formations, Native American artifacts, plants, seeds, and other items by members of the public.

# CHAPTER III. MANAGEMENT OBJECTIVES, ISSUES & STRATEGIES

Statewide goals and objectives listed in chapter one shape management priorities on wildlife areas. Specific wildlife area information including why the area was purchased, habitat conditions, species present, and public issues and concerns are evaluated to identify wildlife area activities or strategies. *Public issues from past planning efforts and the Citizens Advisory Group are noted in italics and are captured in Appendix 1.* Objectives and associated strategies or tasks specific to the Swanson Lakes Wildlife Area are listed where appropriate under applicable agency objectives. Unfunded needs are underlined.

**Agency Objective: Protect, Restore & Enhance Fish and Wildlife and Their Habitats**

**1. Manage for upland birds**

Swanson Lakes Wildlife Area was purchased primarily to provide habitat for Columbian sharp-tailed grouse, a native upland bird on the state Threatened and Endangered species list. Other, non-native upland birds present on the wildlife area include Hungarian partridge, California quail, and pheasant. Although Swanson Lakes Wildlife Area is closed for hunting sharp-tailed grouse, it is open for taking of partridge, quail and pheasant. Upland birds provide recreational opportunities.

**A.** Strategy: Perform annual lek surveys for sharp-tailed grouse, and as time is available, search for satellite lek sites. Also, as time is available, assist district biologist with fall deer surveys. Timeframe: March-April and possibly also fall.

**B.** Strategy: Convert approximately 70 to 90 acres annually from old soil bank and Conservation Reserve Program (CRP) single-species fields, and other former agricultural fields, back to native-like grasslands. Timeframe: Spring to fall.

**C.** Strategy: Maintain upland birds feeders throughout the winter. Timeframe: Winter.

**D.** Strategy: Maintain food plots, to provide food sources for upland birds and other species. Timeframe: Year-round.

**E.** Strategy: Consider installing in-ground guzzlers, which would provide water not only for upland birds, but also a myriad of other wildlife species in the area. Timeframe: Year-round, as time/guzzlers available.

**F.** Strategy: As appropriate/available, translocate Columbian sharp-tailed grouse to the wildlife area, for genetic augmentation purposes, to improve long-term population viability. Monitor translocated grouse to evaluate the effectiveness of translocation techniques. Grouse have been translocated to Swanson Lakes Wildlife Area in spring of 2005, and at least two more years of augmentation are planned. Timeframe: April for translocation, year-round for monitoring.

**G.** Strategy: To reduce avian predation on upland birds, determine available options and implement them, for removing man-made nesting structures for ravens and hawks. This could include demolition or burning of old unused buildings, removing platforms on unused windmills, and placing netting over openings in other buildings. Timeframe: Any time of year, except when eggs or chicks are in raven/hawk nests.

**2. Manage for species diversity and protection of those species**

Develop and maintain quality habitat that will provide life requisites for a diversity of species. Nearly all activities on the wildlife area benefit a diversity of species.

**A.** Strategy: Management of Spalding's catchfly, a federally protected species, to ensure that weed control activities, and other activities on the ground, do not damage existing colonies of this plant. DNR's catchfly management document should be referenced, for determining these exact locations, before any work is performed in the vicinity of these catchfly plants. Staff will be trained to identify catchfly plants at several life stages. Timeframe: Spring through fall.

**B.** Strategy: Continue to support BLM and WSU in their study of badger movements, by allowing trapping of badgers on the Wildlife Area for insertion of radio transmitters, providing a camp site for the primary researcher while he traps the badgers at the initial stage of the study, and allowing researcher and volunteers to search for transmitter signals throughout the Wildlife Area. Timeframe: Year-round.

**C.** Strategy: Continue to work with Washington State Department of Natural Resources' (DNR's) Natural Heritage Program (NHP) staff, in mapping and managing populations of species of concern, both plant and animal. Timeframe: Year-round.

**D.** Strategy: Assist WDFW and other agency staff in finding and assessing sites at Swanson Lakes or nearby locations, for possible future pygmy rabbit introductions back to the wild. Timeframe: To be determined by needs of biologists doing the primary survey/assessment work.

**E.** Strategy: Continue to support WDFW's comprehensive shrub-steppe study, now possibly in its final year. This support includes providing housing space for seasonal surveyors, and providing locations for survey plots within Wildlife Area boundaries. Timeframe: April through September.

**G.** Strategy: Regularly review PHS information, including maps, to ensure that planned activities do not adversely affect any PHS-listed wildlife species. Timeframe: Year-round.

**H.** Strategy: Protect and maintain waterfowl and shorebird habitats. Timeframe: Year-round.

**I.** Strategy: Assist the District Wildlife Biologist in any non-game activities and surveys of the wildlife area. Timeframe: To be determined by needs of District Wildlife Biologist.

**3. Maintain big game populations**

Swanson Lakes Wildlife Area is managed primarily to protect habitat for Columbian sharp-tailed grouse. However, mule deer are also an important species in shrub-steppe habitat. Many of the activities planned for management of grouse will also benefit mule deer.

**A.** Strategy: See Strategies 3.1.1.2, 3.1.1.4, and 3.1.1.5 for Upland Birds. These same strategies will directly benefit deer. Timeframe: See strategies listed above.

**B.** Strategy: Conduct controlled burns, as appropriate, to improve habitat quality for shrub-steppe dependent wildlife species. Timeframe: Early spring or late fall, as weather/moisture conditions permit.

**C.** Strategy: Maintain springs and distribute water sources such as guzzlers, as appropriate, to supplement mule deer forage quality, and improve habitat suitability for shrub-steppe dependent wildlife species. Timeframe: Spring through fall.

**4. Improve and maintain fish populations**

No native fish populations are know to have existed in the upper reaches of Lake Creek where it runs through Swanson Lakes Wildlife Area, nor in any of the numerous pothole lakes scattered throughout the wildlife area. However, 10,000 rainbow trout spring fry were introduced to Swanson Lakes' Z-Lake, part of Lake Creek, in spring 2004. We have determined that many of these fish have survived and are thriving, and another 5,000 fry were introduced in 2005. Z-Lake is now open to public fishing, currently on a walk-in basis only. Wildlife Area staff were in the early stages of planning trail upgrades and fencing, to allow drive-in access to the lake in the future. However, with the Wall Lake Fire having burned a portion of the access route to the lake, and roadside boundary fences as well, we are re-evaluating whether we will, or should, improve access to the lake. Many members of our Citizen's Advisory Group have also spoken up in favor of leaving access as it is now.

**A.** Strategy: Restore riparian habitat with shrub and tree plantings along Lake Creek, as appropriate. Timeframe: Early April.

**B.** Strategy: Fence restored riparian habitat along Lake Creek as appropriate, to initially protect restoration work from deer and trespass cattle. Timeframe: Spring through fall.

**5. Protect and restore riparian habitat**

The agency has prioritized riparian habitat management and protection. Riparian areas provide habitat for a large diversity of fish and wildlife species, for high densities of animals, for important breeding areas and movement corridors.

**A.** Strategy: see all strategies listed above, under section 3.1.4. Timeframe, See strategies listed above.

**6. Protect and restore shrub-steppe habitat**

The agency has prioritized shrub-steppe habitat management and protection. Shrub-steppe areas provide habitat for a diversity of fish and wildlife species and for comparatively high densities of animals. Shrub-steppe is also very vulnerable to habitat conversion and alteration practices.

**A.** Strategy: Perform shrub-steppe condition surveys to assess habitat quality issues. Monitor existing HEP and vegetation transects, and establish new transects as needed. Timeframe: Mid to late spring.

**B.** Strategy: Continue to coordinate with county weed control board, concerning integrated pest management issues and new methods to determine reason for problems with habitat condition (re: weeds), and be willing to experiment with different techniques to improve condition, perhaps including limited grazing as appropriate. Timeframe: Spring through fall.

**C.** Strategy: Widen our planning efforts to coordinate more with other entities involved in habitat restoration. Also, write-ups and working groups could help the word out to others, about the work being done here. Timeframe: Year-round.

**D**. Strategy: Consider using contracts with local farmers, to grow local plant biotypes for restoration work, both here and on nearby BLM properties. Timeframe: Year-round, with fieldwork spring to fall.

**Agency Objective: Provide Sustainable Fish and Wildlife-Related Recreational and Commercial Opportunities Compatible With Maintaining Healthy Fish and Wildlife Populations and Habitats. Improve the Economic Well-Being of Washington by Providing Diverse, High Quality Recreational and Commercial Opportunities**

**1. Provide commercial opportunities compatible with fish, wildlife and habitat protection**

Commercial opportunities compatible with fish, wildlife and habitat protection are part of WDFW's mission statement. However, commercial opportunities must be controlled to protect fish and wildlife resources and to comply with federal and state regulations. *The strategy listed here is with regards to a grazing permit being implemented as part of a good-neighbor policy, as well as to provide some baseline information on the effects of low-intensity grazing at the Wildlife Area. Low-intensity grazing may be used as a tool to improve wildlife habitat, in certain cases. Data collected from this grazing event will assist Wildlife Area staff with determining the best way(s) to improve habitat on the Wildlife Area.*

**A.** Strategy: As a result of the 2005 Wall Lake Fire, provide one-time, temporary grazing permit on Swanson Lakes Wildlife Area, for adjacent landowner who lost approximately 3,000 acres of pasture grass to the fire. The grazing permit specifies no more than 70 AUM, over four weeks in late summer/early fall 2005. The cows will be moved over approximately four sections of land, or roughly 2,560 acres during the period of the permit. Forage use will be monitored to ensure no over-grazing occurs. Timeframe: Late summer to mid fall.

**2. Provide public access compatible with fish, wildlife and habitat protection**

Access for hunting, fishing, wildlife viewing and other activities is an agency priority. However, access and recreation must be controlled to protect fish and wildlife resources and to comply with federal and state regulations. *Public input clearly emphasizes the importance of providing recreational access, with protections for the resource.*

**A.** Strategy: Provide open roads where no resource issues exist and when there are sufficient resources to maintain them. This includes only the one-mile stretch of road from the county road to the wildlife area headquarters. However, several miles of county roads bisect or border the wildlife area, providing easy public access. Timeframe: Year-round.

**B.** Strategy: Close road access where road conditions are not safe or where conditions have a significant negative impact on fish and wildlife. Ensure public is made aware of these closures, and coordinate with WDFW enforcement officers concerning any proposed or new closures of access roads. Timeframe: Year-round, as needed.

**C.** Strategy: Vehicle-based camping is not allowed at any of the wildlife area's parking lots, or on any other wildlife area grounds. However, BLM has two large parking lots/camping areas on their Twin Lakes Recreation Area, which abuts the wildlife area to the south. Timeframe: Year-round.

**D.** Strategy: Provide hunting and fishing opportunities for persons with disabilities. This may include, on a case-by-case basis, allowing disabled hunters drive-in access to the center of the wildlife area on established trails, or allowing disabled fishers drive-in access to Z-Lake. Timeframe: Year-round, corresponding with variety of hunting and fishing seasons.

**E.** Strategy: Continue to provide fishing opportunity at Z-Lake, on a walk-in basis only. Timeframe: Spring through fall.
**F.** Strategy: Introduce shrub-steppe wildlife and habitat to northeastern Washington schoolchildren, through guided walking tours set up through the Boy Scouts, Lake Roosevelt Forum's Discovery Week, etc. Timeframe: May-June.
**G.** Strategy: Continue to provide opportunities for bird viewing throughout the Wildlife Area. Continue coordination with BLM, for their use of Swanson Lakes during their annual guided birders' tour for International Migratory Bird Day. Timeframe: Year-round.
**H.** Strategy: Update or rewrite a comprehensive Lincoln County bird list, similar to one last completed by Hickman and Adkins of WDFW, many years ago. Also, consider developing "nature maps" for Swanson Lakes, with interesting features noted, for hikers and birders. Time frame: Year-round.

**Agency Objective: Ensure WDFW Activities, Programs, Facilities and Lands are Consistent With Local, State and Federal Regulations that Protect and Recover Fish, Wildlife and Their Habitats**

**1. Manage weeds consistent with state and county rules, and to protect and recover fish and wildlife and their habitats**

Weed control is required by state law to protect public economic and natural resources. Invasive weeds are one of the greatest threats to fish and wildlife habitat quality. Cooperative weed control efforts are encouraged to improve efficacy and to minimize impacts on adjacent landowners as part of the agency's good-neighbor priority.

**A.** Strategy: Produce and implement weed management plan **(Appendix 2)** to include weed identification and inventory, risk/threat, control priorities, and monitoring. Timeframe: Year-round, fieldwork from April to November.
**B.** Strategy: Coordinate weed efforts with federal, state and local entities to improve efficacy and minimize costs. Timeframe: Year-round, fieldwork from April to November.
**C.** Strategy: Control weeds in old agricultural fields, and re-plant to perennial native vegetation as appropriate. Timeframe: April to November.
**D.** Strategy: Control weeds along approximately 35 miles of roadside fence lines, to reduce the spread of weeds from one area to another. Timeframe: April to November.
**E.** Strategy: Control weeds along 2.5 miles of Lake Creek. Follow with riparian or grassland plantings, as appropriate. Timeframe: April to November.
**F.** Strategy: Ensure staff is property trained and licensed, including annual refresher training, to use weed control chemicals. Maintain all required weed control records. Timeframe: Year-round, with refresher training February to March.
**G.** Strategy: In coordination with county weed board, increase our efforts to perform habitat-based weed management, in addition to chemical weed control. Timeframe: April to November.

**2. Manage species and habitats in compliance with the Endangered Species Act and Washington State fish passage, road management and forest practice rules**

Federal law requires the protection and management of threatened and endangered species.

**A.** Strategy: Protect buffers adjacent to wetlands and riparian habitat, as needed: see strategies listed under section 3.1.4, above. Timeframe: Year-round.

**B.** Strategy: Specific strategies associated with ESA species present or potential: see all strategies listed under sections 3.1.1 and 3.1.2, above. Timeframe: Year-round.

**3. Provide fire management on agency lands (Appendix 3)**

Fire suppression agreements must exist for all agency lands to protect the people of Washington, and to protect natural and economic resources of the agency and adjacent landowners.

**A.** Strategy: Contract with local, state or federal entities to provide fire suppression support on Swanson Lakes Wildlife Area. We have contracts in effect, with the three county fire districts in which the WLA is located. Timeframe: Year-round, with fire events expected from summer to fall.

**B.** Strategy: "Red Card" fire training has been completed by wildlife area manager and assistant manager. Continue to keep current with annual refresher training. Keep posted at all times a current list of fire responsible individuals, for the Wildlife Area, BLM, DNR, and local fire districts. Timeframe: June for Red Card initial training, April for refresher training.

**4. Protect cultural resources consistent with state and federal law**

Federal and state law requires an assessment of cultural resources on agency lands prior to activities that may impact those resources. A comprehensive cultural resource survey has been conducted for the wildlife area.

**A.** Strategy: Assess cultural resource value (historic and archaeological) of all structures before renovation or removal. Refer to existing cultural survey report, for initial and/or supporting information. Timeframe: Year-round.

**B.** Strategy: Perform cultural resource review and assessment before digging-including posts for new fence line, parking lots, toilets, buildings, etc. Refer to existing cultural survey report, for initial and/or supporting information. Timeframe: Spring to fall.

**5. Pay county PILT and assessment obligations**

State law requires the agency to pay PILT and county assessments.

**A.** Strategy: Pay PILT and assessments to counties. Timeframe: December to January.

**Agency Objective: Provide Sound Operational Management of WDFW Lands, Facilities and Access Sites**

**1. Maintain facilities to achieve safe, efficient and effective management of the wildlife area**

**A.** Strategy: Maintain office to provide a safe and effective workplace. Provide utilities, phone, computers, etc. Timeframe: Year-round.

**B.** Strategy: Maintain all fences to prevent trespass livestock and unauthorized vehicular traffic, thereby protecting habitat. Timeframe: Year-round.

**C**. Strategy: Survey ownership and build additional fence if needed to protect habitat. This includes fences destroyed in Wall Lake Fire of 2005. Timeframe: Spring through fall.
**D.** Strategy: Maintain roads and trails to prevent resource damage and provide access for staff. This includes activities such as weed control, grading, and re-graveling as appropriate. Timeframe: Year-round.
**E.** Strategy: Demolish structures (of non-historical significance as determined by the Department of Archeology & Historical Preservation) that pose health, safety and liability issues. Timeframe: March 2005.
**F.** Strategy: Maintain parking areas to prevent resource damage and provide access. Sign all parking lots as appropriate. Timeframe: Year-round.

**2. Maintain other structures and physical improvements**

**A.** Strategy: Maintain all signs, gates, culverts, water structures, wells, irrigation systems to perform operation and maintenance of area. Timeframe: Year-round.
**B.** Strategy: Replace/install boundary, unit, and all other signs as appropriate, including those lost in the Wall Lake Fire of 2005. Timeframe: Year-round.

**3. Maintain equipment**

**A.** Strategy: Service all equipment including trucks, tractor and implements, weed sprayers, trailers, etc. Request replacement equipment when needed. Timeframe: Year-round.
**B.** Strategy: Rent equipment when it is more efficient to do so, or when needed. Timeframe: Year-round.
**C.** Strategy: As appropriate, assist other BPA wildlife mitigation project managers with conducting habitat enhancement activities including limited equipment maintenance. Timeframe: Year-round, with primary enhancement work to be done between spring and fall.

**4. Pursue funding opportunities**

**A.** Strategy: Apply for grants and other funding opportunities consistent with planned priorities to supplement funding. Timeframe: Year-round.
**B.** Strategy: Enroll lands in CRP and other federal programs when appropriate, to generate revenue and accomplish desired habitat conditions. Timeframe: Year-round.
**C.** Establish or maintain sharecropping agreements with neighbors, to address artificial cultivation needs and generate additional revenue to support enhanced O&M. Timeframe: Year-round.

**5. Perform administrative responsibilities**

**A.** Strategy: Develop and monitor budgets. Track expenditures when purchasing supplies and materials. Timeframe: Year-round.
**B.** Strategy: Supervise employees. Timeframe: Year-round.
**C.** Strategy: Complete administrative and fiscal reports as required. Timeframe: Year-round.
**D.** Strategy: Attend project/mitigation related meetings and conduct local public outreach activities, as appropriate. Timeframe: Year-round.

**E.** Strategy: For criminal or civil unauthorized activities found to occur or have occurred on the area, take appropriate actions to report/resolve problems. Issue incident reports as necessary. Timeframe: Year-round.
**F.** Strategy: Maintain leases from DNR on two sections of land in the wildlife area. If/when these sections' ownership is turned over to WDFW, assist with the transfer as appropriate. Timeframe: Year-round.

**6. Protect and apply water rights for best use**

Water rights can impact wildlife area operations including food plots, restoration projects, etc. Water use can also reduce instream volumes for fish and other animals.
**A.** Strategy: Identify and record all water rights and uses of water **(Appendix 4)**. Timeframe: As of June 2005, staff believes that all water rights have been identified.
**B.** Strategy: Move all unneeded water rights permanently or temporarily into the State Trust Water Rights Program. Timeframe: Year-round, until completed.

**Other Issues or Concerns:**

**1.** The standard procedure for measuring habitat quality for certain species, such as mule deer and the Columbian Sharp-tailed grouse, at Swanson Lakes is Habitat Evaluation Procedure (HEP). This procedure can be tedious and time-consuming. WDFW lands program staff, including wildlife area managers, may want to standardize habitat evaluation methods state-wide, and perhaps come up with a simpler, faster method which would still produce valid results. Currently, WDFW has an employee whose duty is to investigate completed and current habitat evaluation activities on BPA-funded wildlife areas, and perchance find a better way to accomplish these activities in the future, and to improve documentation, such as storing electronic copies in databases at WDFW headquarters. Timeframe: Year-round, with habitat evaluation activities to be completed in late spring to early summer.
**2.** Many local residents, including business people and farmers, would like Swanson Lakes Wildlife Area to continue to buy supplies and equipment locally, when feasible. They also believe that farm communities are strongly tied to government programs and projects, for survival. This also includes projects such as Swanson Lakes Wildlife Area. Timeframe: Year-round.
**3.** Wildlife area staff is able to assist local farmers, helping some obtain higher scores for bidding into the Conservation Reserve Program (CRP), and providing advice on grassland and riparian restoration. Timeframe: Year-round.

## CHAPTER IV. PERFORMANCE MEASURES, EVALUATION AND UPDATES

Wildlife area plan performance measures are listed below. Accomplishments and desired outcomes will be evaluated to produce an annual performance report. The wildlife area plan is a working document that will evolve as habitat and species conditions change, as new regulations are enacted, and as public issues and concerns change. Plan updates will address these changes.

**1. The Swanson Lakes Wildlife Area performance measures for 2006 include:**

- Appropriate weed control on the wildlife area, with focus on areas adjacent to roads and in the small drainages surrounding Lake Creek.Review the current years weed control activities, using generated reports and compare the efforts and success to the previous years weed control activities.
    - Weeds to be controlled, by species and acres treated:
        - Yellow toadflax – less than one acre
        - Diffuse knapweed – 5 to 10 acres
        - Whitetop – 20 to 100 acres
        - Canada thistle – 50 to 150 acres
        - St. John's wort – fewer than two acres
        - General weeds – 60 to 140 acres
- 70 - 90 acres of old agricultural fields restored to native or native-like habitats, each year, barring unforeseen problems such as drought, major equipment breakdowns, etc.
- In 2006, plant a total of approximately 1,200 riparian trees and shrubs, in three irrigated fenced plots.
- Continue augmentation of sharp-tailed grouse for the wildlife area's current population, and continue to monitor.
- Wildlife Area Management Plan, and all listed appendices, complete and update annually.
- Maintain current fire protection contracts with Lincoln County FPD's # 5,6, and 7.
- Maintain and monitor agricultural leases with two lessees on the wildlife area, one for cereal production and another for hay production.
- Maintain and fill nine upland bird feeders on the wildlife area.
- Maintain approximately 40 bluebird and kestrel boxes on the wildlife area.
- Monitor annual use of the wildlife area, by members of the public. This includes hunters, birders, and other visitors. Work with Lake Roosevelt Forum (LRF) to put on annual spring field trip for regional schoolchildren, at the wildlife area.
- Maintain office complex, including HQ building, shops and outbuildings.
- Maintain one kiosk with parking area/wheelchair accessible trail and toilet, and six additional parking areas located throughout the wildlife area.
- Maintain approximately 10 miles of dirt and gravel roads within the wildlife area.
- As habitat surveys are conducted and analyzed, determine general trend of habitat quality. If quality is declining, attempt to determine cause of decline and develop plan to improve the habitat.
- Compare most recent population numbers of sharp-tailed grouse, to the previous years. If numbers continue to decline, consider additional future emphasis on

habitat improvement and population augmentation, and pursue land purchase opportunities.

- Maintain 60 miles of boundary fence, where fencing occurs on each management unit of the wildlife area. This includes wire, posts, gates and informational and regulatory signs.
- Create BPA-required Statement Of Work (SOW) and budget. Enter SOW and budget into BPA's PISCES program. Enter BPA SOW and budget into WDFW CAPS program. Complete quarterly and annual status reports in PISCES.
- Additional administrative duties to be completed as required: manage budget expenditures, supervise assistant manager and seasonal weed control employee, manage inventory of expendable items and durable goods, meet safety requirements for all activities, ensure all staff meet training and licensing requirements.

**2. Annual Evaluation of Performance.**

Evaluate performance measures and produce an annual report. At the beginning of each calendar year, the manager will convene the CAG and district team to assess wildlife area specific performance measures and accomplishments that will be used to develop the annual plan update. This update will be an attachment to the plan.

**3. Annual Plan Update.**

As projects are completed and new issues arise, this plan will be updated, without needing to be re-written. With CAG and District Team input, the plan will continually reflect the strategies, goals and objectives of the current year.

## APPENDIX 1. PUBLIC ISSUES

The purpose of meeting with the Citizens' Advisory Group (CAG) and District Team (DT) was to obtain input to help guide management actions on the wildlife area. A first and second draft, of the introduction and history of the wildlife area and copies of the Agency's goals and objectives, were distributed for review and discussion. Below is a list of issues and concerns identified by the CAG and DT during the 2005 planning process.

This input will assist in developing strategies to implement management goals and objectives. Issues that are not underlined originated from the CAG. Underlined statements below indicate that the input was received from the DT.

### Issue A. Access/Recreation

- Spokane Audubon members have been interested in SLWA for the last 50 years, and would like to continue birding in the area.
- Public access and the ability for the public to recreate (especially hunting) is a high priority, given that most large private property owners are closing their properties to access.
- Strong opinions on potential future closings to hunting, if sharp-tailed grouse numbers continue to decline. Comments include: we should increase monitoring of hunters/grouse for problems, increase hunter education on bird ID, closure would negatively impact deer hunters, only use closures in dire circumstances, and consider closure of smaller discrete units if possible.
- Hunting at SLWA has increased over the last few years, based on number of hunters coming into area store for supplies. This is a positive economic impact to area towns.
- Concerns about putting in a drivable trail to Z-Lake for fishing: hunters going in would push deer out, additional cost of fencing and maintaining trail, additional weed control problems. Alternate proposals include setting up parking lot at county road so folks can walk to lake, and just running trail improvements part-way, with turn-around at the end.
- Provide and promote opportunities for wildlife and bird viewing at SLWA.
- Determine how best to get fishermen to Z-Lake in Telford unit, as we have found this spring that the 10,000 rainbow trout fry planted there in 2004 have yielded nice catchable fish, some over 13 inches long.
- Additional trail improvements, such as graveling and installing information signs along the trails, are not needed at SLWA, and actually detract from the semi-wild nature of the property.

### Issue B. Wildlife Area Management

- Residents are concerned about possible threatened/endangered federal listing of sage/sharp-tailed grouse in Washington, and its potential impact on farming/ranching activities.
- Concern was expressed, about potential for accidental takes of sharp-tails during upland bird season.
- Numbers of pheasants have dropped, in tandem with loss of hedgerows in farmlands adjacent to SLWA and throughout eastern Washington.

- Sharp-tails like to nest in old "monoculture" CRP fields, yet research suggests it provides less protection from predators than more natural, diverse grassland or shrub-steppe habitat.
- Interest was expressed in predator control, to help sharp-tails survive. Several predator species were discussed, including migratory birds of prey.
- Status of deer populations was discussed. EHD, CWD, numbers and locations of mule deer and whitetail deer, and possible causes for fall bucks to still be in the velvet in 2004 were all discussed.
- CAG member asked about status of pygmy rabbits, re: introduction to Swanson Lakes. We reviewed WDFW procedures if this were to happen; however, we know of no plans to bring the animals to SLWA at this time.
- Include watershed planning and Multiple Species Habitat Conservation Plan (HCP) information in all management plans. Cooperate with Planning Units.
- Recent augmentation of 20 sharp-tails to the current population on and around SLWA is good for improving the genetic diversity of the grouse there. The increase in the sharp-tail population at Scotch Creek, after two years of augmentation, was discussed.

**Issue C. Habitat**

- Protect riparian areas, allowing trees and shrubs to repopulate.
- Importance of forbs in CRP plantings was noted, to attract insects, which provide needed protein for upland birds.
- It seems silly to have to plant sagebrush as part of new CRP requirements, when it encroaches just fine on its own, in this area.
- More sharp-tail wintering habitat would be beneficial for the birds.
- A suggestion was made, for using grazing for grouse habitat improvement. Use of goats, the Savory system, and adapting ungulate management to soil and vegetation responses were all discussed.
- Grazing was further discussed; including experimental prescribed grazing attempted at SLWA in the past. The pro-grazing group dropped the experiment shortly after it was started, due to the hassle involved with intense management/required movement of cattle.
- The effects of the Hatten Road fire in 2003 were discussed. Other fire-related issues were discussed, including natural fire cycles, prescribed burns, fire suppression, and re-seeding after fires.
- Consider using contracts with local farmers, to grow local plant biotypes for restoration activities, on both WDFW- and BLM-owned properties.
- Continue to manage newly planted birch/alder grove, and expand groves using irrigation from wells, using either working windmills or solar-powered pumps.
- Continue to restore shrub-steppe and grasslands for sharp-tails.
- Include plants such as silver buffalo berry in new shrub/tree plots.

**Issue D. Roads**

- One CAG member believed Lone Pine Road has been vacated by the county. No confirmation; road remains physically open to the public.
- Control roadside and interior weed infestations to avoid further spreading.
- Several miles of county road bisect SLWA, negating the need for more public access roads within.

**Issue E. Enforcement**

- If part or all of SLWA is closed in the future to upland bird hunting due to falling numbers of sharp-tails, it should be approved by the Fish and Wildlife Commission, not done locally.
- It would be difficult to close only part of SLWA to use, due to the contiguous nature of the majority of SLWA's lands.

**Issue F. Public Information, Education and Involvement**

- Maintain a good avenue for implementing the "good neighbor policy" between private landowners, special interest groups, and the WDFW.
- Widen planning efforts to coordinate with more entities. Write-ups and working groups can also get the word out, about the restoration work being done here.
- Increase public awareness of the area with new nature-oriented maps.
- Update birders' checklists for Lincoln County, from the old Adkins/Hickman list.

**Issue G. Monitor, Survey and Inventory**

- Continue cooperative research projects that involve SLWA lands and wildlife, including BLM's badger-tracking study, and WDFW's comprehensive shrub-steppe study.
- Continue survey projects that involve SLWA, including tracking radio-collared sharp-tails brought from British Columbia and Idaho in 2005, and determining habitat suitability for potential introduction of pygmy rabbits.
- Coordinate with USFWS and Washington DNR's Natural Heritage Program, for locating, monitoring, and protecting state and federal species of concern, including plants such as Spalding's Catchfly. Ensure WDFW, USFWS & NHP all share important data on these species, as needed.
- HEP or other monitoring/evaluation system should be applied on a regular basis at SLWA, to measure changes in habitat quality, for sharp-tailed grouse and other shrub-steppe dependent species. System such as HEP should be used uniformly on Wildlife Areas, be easy to use, and be easily taught to employees. Raw and analyzed data should not only be kept locally, but also recorded electronically and stored in WDFW databases.
- Regular monitoring and evaluation of populations of several animal species should also be done at SLWA.

**Issue H. Other**

- Concern was expressed about the status of taxes paid by SLWA to the county. The county does receive PILT and/or portion of fines and forfeitures; fire districts receive annual payments on fire control contracts; and SLWA purchases and hires locally, when feasible.
- Farm communities are more tied than ever to government programs and projects, for assistance in surviving. This includes projects such as SLWA.

## APPENDIX 2. WEED CONTROL PLAN

### Weed Control Goals on WDFW Lands

The goal of weed control on Department lands is to maintain and improve the habitat for wildlife, meet legal obligations, provide good stewardship and protect adjacent private lands.

Weed control activities and restoration projects that protect and enhance fish and wildlife populations and their habitats on Department lands are a high priority. When managing for specific wildlife species on our lands the weed densities that trigger control are sometimes different than on lands managed for other purposes (e.g. agricultural, etc.). For example, if a weed is present at low densities and does not diminish the overall habitat value, nor pose an immediate threat to adjacent lands, control may not be warranted. WDFW focuses land management activities on the desired plant species and communities, rather than on simply eliminating weeds.

Control for certain, listed species is mandated by state law (RCW 17.10 and 17.26). WDFW will strive to meet its legal obligation to control for noxious weeds listed according to state law (Class A, B-Designate).

Importantly, WDFW will continue to be a good neighbor and partner regarding weed control issues on adjacent lands. Weeds do not respect property boundaries. The agency believes the best way to gain long-term control is to work cooperatively on a regional scale. As funding and mutual management objectives allow, WDFW will find solutions to collective weed control problems.

### Weed Management Approach

State law (RCW 17.15) requires that WDFW use integrated pest management (IPM), defined as a coordinated decision-making and action process that uses the most appropriate pest control methods and strategy in an environmentally and economically sound manner to meet agency programmatic pest management objectives, to accomplish weed control. The elements of IPM include:

Prevention- Prevention programs are implemented to keep the management area free of species that are not yet established but which are known to be pests elsewhere in the area.

Monitoring- Monitoring is necessary to implement prevention and to document the weed species, the distribution and the relative density on the management area.

Prioritizing- Prioritizing weed control is based on many factors such as monitoring data, the invasiveness of the species, management objectives for the infested area, the value of invaded habitat, the feasibility of control, the legal status of the weed, past control efforts, and available budget.

Treatment- Treatment of a weeds using biological, cultural, mechanical, and chemical control serves to eradicate pioneering infestations, reduce established weed populations below densities that impact management objectives for the site, or otherwise diminish their impacts. The method used for control considers human health, ecological impact, feasibility, and cost-effectiveness.
Adaptive Management- Adaptive management evaluates the effects and efficacy of weed treatments and makes adjustments to improve the desired outcome for the management area.

The premise behind a weed management plan is that a structured, logical approach to weed management, based on the best available information, is cheaper and more effective than an ad-hoc approach where one only deals with weed problems as they arise.

**Weed Species of Concern on Swanson Lakes Wildlife Area:**
Yellow toadflax (*Linaria vulgaris*), diffuse knapweed (*Centaurea diffusa*), whitetop or hoary cress (*Cardaria draba*), Canada thistle (*Cirsium arvense*), St. John's wort (*Hypericum perforatum*).

Table 1. Swanson Lakes Wildlife Area weeds including the state weed class listing and approximate number of acres treated.

| Weed Species | Weed Class | 2005 County Weed Class | Wildlife Area Unit(s) |
|---|---|---|---|
| Yellow toadflax | C | C | Roloff |
| Diffuse knapweed | B | B-Non-designate | Tracy Rock, Roloff, Hatten-Finch, Welch-Anderson |
| Whitetop | C | C | Welch-Anderson |
| Canada thistle | C | C | Roloff, Hatten-Finch, Welch-Anderson |
| St. John's wort | C | C | Roloff |
| General weeds | (n/a) | (n/a) | Tracy Rock, Roloff, Hatten-Finch, Welch-Anderson |
| | | | |

B - Designate – in regions where a Class B species is already abundant, control is decided at the local level, with containment as the primary goal.

Detailed descriptions and natural history information for each of the above weed species listed above (with the exception of "general weeds") can be found at the Washington State Noxious Weed Control Board web site: http://www.nwcb.wa.gov/weed_list/weed_listhome.html and The Nature Conservancy's Invasive Species Initiative web site: http://tncweeds.ucdavis.edu/index.html

Management for individual weed species can be found in the following "Weed Species Control Plan" (WSCP) sections.

## YELLOW TOADFLAX CONTROL PLAN

**Scientific Name:** *Linaria vulgaris* **Common Name:** Yellow toadflax

**DESCRIPTION:**
(Following information is taken from the website:
http://tncweeds.ucdavis.edu/esadocs/Linadalm.html):

Yellow toadflax grows to be 0.2 to 0.8 meters tall. Yellow toadflax leaves are soft, linear or linear lanceolate, sessile, and pale green. They are generally 2.5 cm long by 2-4 mm wide (Morishita 1991).

Yellow toadflax flowers from May to August. Yellow toadflax seeds are flattened, winged and 1-2 mm long. A mature plant can produce up to 30,000 seeds annually. A single stem has been reported to contain over 5,000 seeds (Saner *et al.* 1995). *Linaria vulgaris* produces seed from July to October.

**MANAGEMENT INFORMATION:**
Herbicide can be an effective tool for control and applicators should refer to the PNW Weed Management Handbook, or other reputable resources, for product recommendations and timing.

(Following information is taken from website:
http://tncweeds.ucdavis.edu/esadocs/Linadalm.html):

Successful control can be obtained by pulling, or killing the plants with herbicide, before toadflax seed production begins. Since the plant also spreads through vegetative propagation, and the seeds can remain dormant for up to ten years, this process must be repeated every year for at least ten years to completely remove a stand. Competitive perennial grasses and forbs should be planted to utilize water and nutrients that would otherwise be readily available to toadflax.

The key to managing *Linaria vulgaris* is to: 1) eliminate or greatly reduce seed production from established individuals (by cutting or pulling seed stalks prior to seed set, or by using insects to destroy flowers, seeds, or damage plants sufficiently so that no or few seeds are produced); and 2) destroy toadflax seedlings that arise from the soil seed bank before these plants become established (as above, plus herbicide).

Several insect species have been introduced as biological control agents for both toadflax species but none of them completely eliminate infestations. Herbicide treatment, if applied at the right time, can significantly reduce toadflax seed production. Cutting, mowing, and discing of toadflax plants can be effective on agricultural lands if repeated annually.

**CURRENT DISTRIBUTION ON THE SITE**
Roloff Unit, along Grant Road – one to two discrete areas.

**ACRES AFFECTED BY WEED:** ~5 **WEED DENSITY**: Formerly high, now very low.

**GOALS**
Continue to eliminate stray plants that are found on site of eradicated patch.
Prevent new occurrences.

**OBJECTIVES**
Treat all plants found each year, before they produce seed.
Survey nearby areas for pioneering infestations.

**ACTIONS PLANNED**
In 2004, staff aggressively treated the site with herbicide, Tordon 22k. Near-complete eradication was achieved. For 2006, site will be monitored and spot sprayed as needed.

Monitoring will continue on an annual basis.

**CONTROL SUMMARY AND TREND**
2004- Found for the first time on the wildlife area. Approximately 5 acres were treated. Near-complete eradication achieved.
2005- Less than one acre, consisting of a handful of individual plants, was found to be infested. Each plant was treated by spot spraying.

**DIFFUSE KNAPWEED CONTROL PLAN**

**Scientific Name:** *Centaurea diffusa* **Common Name:** Diffuse knapweed

(Note: weed descriptions and management information for diffuse knapweed, St. John's wort, and Canada thistle are taken directly from the Washington State Noxious Weed Control Board's website, http://www.nwcb.wa.gov)

**DESCRIPTION:** Diffuse knapweed is an 8 to 40 inch tall, biennial or short-lived perennial species, with a long tap root. The single, upright stem produces several spreading branches. The basal leaves are short-stalked and divided into lobes on both sides of the center vein. The stem leaves are stalkless, becoming smaller and less divided near the top of the stem. The flowers, which are generally white (sometimes pink or lavender), occur in urn-shaped heads that grow in clusters at the ends of the branches. The bracts of the flower heads are leathery, with obvious veins. The lower and middle bracts are yellowish-green with a buff or brown margin; they are edged with a fringe of spines plus a longer, spreading spine at the tip.

**MANAGEMENT INFORMATION:**
Herbicide can be an effective tool for control and applicators should refer to the PNW Weed Management Handbook, or other reputable resources, for product recommendations and timing.

Cultivation will eliminate diffuse knapweed. Grazing or mowing delays flowering and may increase the number of stems, thereby increasing seed production.

Biocontrol Potential: Five biocontrol agents have been established on diffuse knapweed in Washington. Two seed head weevils, *Bangasternus fausti* and *Larinus minutus*, do not occur in collectable numbers at present. *Urophora affinis (*seed head fly), *Urophora quadrifasciata* (seed head fly), and *Sphenoptera jugoslavica* (root boring/gall beetle) are available for mass collections.

**CURRENT DISTRIBUTION ON THE SITE**
One 5-10 acre patch on Hatten-Finch unit. Several small, scattered infestations found along roadsides each year. We expect these roadside infestations to continue for the foreseeable future regardless of control efforts, due to introduction of seeds from vehicles, hunters' clothing, etc.

**ACRES AFFECTED BY WEED:** ~10 **WEED DENSITY**: Low: widely scattered patches.

**GOALS**
Control expanding populations.
Prevent new occurrences.

**OBJECTIVES**
Annually inspect roadsides and known areas of infestation, for new plants.
Treat all plants found, before they produce seed.
Survey nearby areas for pioneering infestations.

**ACTIONS PLANNED**
In 2006, herbicide application, and hand pulling where appropriate, will be done wherever the plants are found.

Monitoring will continue on an annual basis on all units.

**CONTROL SUMMARY AND TREND**
2000- Approximately 5 to 10 acres were treated. Trend: control only, not eradication.
2001- Approximately 5 to 10 acres were treated. Trend: control only, not eradication.
2002- Approximately 5 to 10 acres were treated. Trend: control only, not eradication.
2003- Approximately 5 to 10 acres were treated. Trend: control only, not eradication.
2004- Approximately 5 to 10 acres were treated. Trend: control only, not eradication.
2005- Approximately 5 to 10 acres were treated. Trend: control only, not eradication.

**WHITETOP CONTROL PLAN**

**Scientific name:** *Cardaria draba* **Common Name:** Whitetop or hoary cress

**DESCRIPTION:**
(Following information is taken from the website:
http://tncweeds.ucdavis.edu/esadocs/Linadalm.html):

*C. draba* is a hardy perennial with stout, erect or procumbent stems that can grow 2-5dm tall. The plant is leafy below and branching above with grayish stems (Jepson, 1953). Plants are glabrous or nearly so at the top and densely hairy below (Mulligan & Findlay, 1974). In general, they have a gray-green, soft hairy appearance (hence the name 'hoary'). *C. draba* blooms in early spring and looks like conspicuous patches of snowy white (Robbins *et al*., 1952; Fischer *et al*., 1978).

**MANAGEMENT INFORMATION:**
Herbicide can be an effective tool for control and applicators should refer to the PNW Weed Management Handbook, or other reputable resources, for product recommendations and timing.

(Following information is taken from the website:
http://tncweeds.ucdavis.edu/esadocs/Linadalm.html):

Because they can regenerate from their extensive root systems, the hoary cresses readily re-establish after eradication measures. Therefore, control must be persistent, and requires at least 2-3 years of follow-up work (Blackman, *et al*. 1939; Garrad, 1923; Willis, 1950). Successful control is most likely achieved with a combination of approaches. Cutting is somewhat effective in controlling *C. draba*. A combination of weed-whacking and applying 2,4-D from a backpack sprayer has provided 50% control at a preserve maintained by The Nature Conservancy (O'Brien & O'Brien, 1994). *Cardaria* root systems can be exhausted through repeated cultivation (Kott, 1966; Barr, 1942), resulting in complete elimination if the follow-up occurs within ten days of weed reemergence (Miller & Callihan, 1991).

Herbicide treatment for *C. draba* is effective, but in most cases a multi-year commitment is required (Blackman *et al*., 1939; Garrad, 1923; Robson, 1919; Willis, 1950). Most recommend application of herbicides at the bud or flowering stage.

**CURRENT DISTRIBUTION ON THE SITE**
Welch-Anderson unit. Scattered, small to large patches found along the Lake Creek drainage in the vicinity of Z-Lake.

**ACRES AFFECTED BY WEED:** ~100

**WEED DENSITY**: High, in scattered patches of various size, from under 1 acre to 50 acres.

**GOALS**
Control expanding populations.
Prevent new occurrences.

**OBJECTIVES**
Survey and map existing populations.
More accurately calculate the acres affected by whitetop.
Treat as many plants as feasible, using ATV, large trailer sprayer, or aerial application, as appropriate, before they produce seed.
Survey nearby areas for pioneering infestations.

**ACTIONS PLANNED**
As this is an early season weed, and spring 2006 has been wetter than in previous years, staff may not be able to access the infested areas to do ground control. Aerial spraying may be needed. Herbicide will be applied in late April/early May.

Monitoring will continue on an annual basis in the Lake Creek drainage, on the wildlife area.

**CONTROL SUMMARY AND TREND**
2000- Approximately 100 acres were treated aerially. Trend: treated areas-good control, but weed is still spreading to untreated low-lying areas.
2001- Approximately 100 acres were treated aerially. Trend: treated areas-good control, but weed is still spreading to untreated low-lying areas.
2002- 0 acres were treated. Trend: weed is still spreading to untreated low-lying areas.
2003- Approximately 6 acres were treated. Trend: treated areas-good control, but weed is still spreading to untreated low-lying areas.
2004- Approximately 20 acres were treated. Trend: treated areas-good control, but weed is still spreading to untreated low-lying areas.
2005- Approximately 84 acres were treated. Trend: treated areas-good control, but weed is still spreading to untreated low-lying areas.

## CANADA THISTLE CONTROL PLAN

**Scientific Name:** *Cirsium arvense* **Common Name:** Canada thistle

(Note: weed descriptions and management information for diffuse knapweed, St. John's wort, and Canada thistle are taken directly from the Washington State Noxious Weed Control Board's website, http://www.nwcb.wa.gov)

**DESCRIPTION:** Canada thistle is a perennial herb with a deep-seated complex system of roots spreading horizontally, which give rise to aerial shoots. The one to four foot tall stems are slender, green, and freely branched. The leaves are alternate, sessile, and deeply lobed. The leaf margins have stiff yellowish spines. The heads are many and relatively small. The plants are dioecious (all flowers on a plant are either male or female). The flowers are purple. The fruits are about 1/8 inch long, somewhat flattened, and brownish with an apical circle of long hairs, these eventually falling. Four varieties of *C. arvense* have been recognized based on variation in leaf characters, texture, vestiture, segmentation, and spinyness.

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**MANAGEMENT INFORMATION:**
Herbicide can be an effective tool for control and applicators should refer to the PNW Weed Management Handbook, or other reputable resources, for product recommendations and timing.

Response to Herbicides: Effective control can be achieved by using several broad-leaved herbicides that do not harm grasses. For more site-specific control recommendations, please refer to the latest edition of the Pacific Northwest Weed Control Handbook.

Response to Cultural Methods: Planting competitive crops, such as alfalfa and forage grasses can be very effective in controlling an infestation of Canada thistle.

Response to Mechanical Methods: Repeated tillage at 21-day intervals for about four months can be effective on minor infestations of Canada thistle. Repeated mowing to weaken stems and prevent seeding is also effective in low-level infestations.

Biocontrol Potentials: Many insects, a few nematodes, and the American Goldfinch have been reported to feed on various parts of Canada thistle. Most of these do very little damage. Three insects from Europe have been studied for biological control - *Altica carduorum* Guer (flea beetle), a leaf feeder, has not established itself well. Adults of the beetle *Ceutorhynchus litura* F. eat young thistle shoots, but do little damage. The fly, *Urophora cardui* L. is the most promising biological control agent. Eggs are laid in the terminal buds and galls develop which divert nutrients and stress

the plant . Many microorganisms have been found associated with Canada thistle, but no potential biocontrol agents are known.

**CURRENT DISTRIBUTION ON THE SITE**
Found on all units of the wildlife area. Heaviest infestations scattered throughout, generally in moister, low-lying areas of native and restored grassland areas.

**ACRES AFFECTED BY WEED:** ~150 to 200

**WEED DENSITY**: Low to high. High in scattered patches of up to 5 acres in size.

**GOALS**
Control expanding populations.
Prevent new occurrences.

**OBJECTIVES**
Survey and map existing populations.
More accurately calculate the acres affected by Canada thistle.
Investigate biological control availability. Monitor areas where biocontrol has previously been applied.
Treat as many areas as possible, which can be reached by ATV or tractor, before they produce seed.
Survey nearby areas for pioneering infestations.

**ACTIONS PLANNED**
Continue spraying with herbicide Curtail. Staff released biocontrol insects, *Larinus planus*, in 2004 on three sites. These sites are being monitored for effectiveness of insect treatment, and NOT sprayed with herbicide.

Monitoring will continue on an annual basis on all units.

**CONTROL SUMMARY AND TREND**
2000- Approximately 130 acres were treated. Trend: controlled, but reduction minimal.
2001- Approximately 165 acres were treated. Trend: controlled, but reduction minimal.
2002- Approximately 10 acres were treated. Trend: some control, but reduction minimal.
2003- Approximately 56 acres were treated. Trend: controlled, but reduction minimal.
2004- Approximately 95 acres were treated. Less than one acre was treated with biocontrol insects. Trend: controlled, and some reduction seen.
2005- Approximately 15 acres were treated. Trend: controlled, good reduction seen is some areas.

## ST. JOHN'S WORT CONTROL PLAN

**Scientific Name:** *Hypericum perforatum* **Common Name:** St. John's wort, goatweed

(Note: weed descriptions and management information for diffuse knapweed, St. John's wort, and Canada thistle are taken directly from the Washington State Noxious Weed Control Board's website, http://www.nwcb.wa.gov)

**DESCRIPTION:** Saint Johnswort is an erect, opposite-leaved perennial herb, ranging from two to four feet tall arising from a taproot. The plant can have single or multiple stems. The reddish stems are smooth, somewhat two-edged, woody at the base, and branching out toward the top of the plant. The narrow, lance shaped leaves are about one inch long, stalkless with pointed tips. Each leaf is spotted with tiny translucent dots. Each flower has five yellow petals and many yellow stamens. The black dots often visible along the petal margins are glands containing hypericin. This red pigment is also visible in glands on leaf margins giving the leaf a perforated look. The inflorescence is a flat-topped cluster of many flowers found at branch ends. The extended flowering period is from May to late September. St. Johnswort spreads both by underground and aboveground creeping stems, and by seed.

**MANAGEMENT INFORMATION:**
Herbicide can be an effective tool for control and applicators should refer to the PNW Weed Management Handbook, or other reputable resources, for product recommendations and timing.

Response to Herbicides: Always refer to Pacific Northwest Weed Control Handbook when using herbicides for noxious weed control to check for timing and rates of application. ALWAYS READ THE LABEL. Repeated applications will be necessary. Biological control agents are recommended for large weed infestation sites.

Response to Cultural Methods: St. Johnswort seedlings will readily establish in disturbed situations that include roadsides, overgrazed pastures, or open rangeland where native or forage species do not offer any competition. The combination of site-specific range management, which includes encouragement of beneficial plants species as well as a grazing management plan, will prevent new infestations and reinfestations. (Piper 1997). A successful control program in Australia included cultivation, sowing a competitive grass species, and fertilization. (Campbell and Delfosse 1984 as cited in Piper 1997; Moore et al. 1989 as cited in Mitich 1994).

Response to Mechanical Methods: Pulling should only be considered an option on new or small infestation sites and repeated pulls will be necessary to ensure removal of the whole plant and any lateral roots. Do not leave plants at the site, since vegetative growth will occur, and the seed source will remain. Tillage is effective when repeated in croplands (Crompton et al. 1988 as cited in Piper 1997). Mowing is a limited option depending both on site accessibility and whether seed formation has occurred. Repeated cuts are necessary (Piper 1997).

Biocontrol Potentials: Two foliage beetles, *Chrysolina hyperici* and *C. quadrigemina* were released in California from 1945 to 1946, and established within two years. This was the first intentional release of biological control agents on a weed population in North America. (Holloway 1957 cited in Piper 1997). A root-boring beetle *Agrilus hyperici* and a leaf bud gall-forming midge

*Zeuxidiplosis giardi* were released in 1950 to help the *Chrysolina* spp. (Holloway and Huffaker 1953 as cited in Piper 1997). These established California colonies became the source for collections and distribution to *Hypericum perforatum* infestations throughout the western United States. Recently released and established is the moth *Aplocera plagiata.* (McCaffrey et al. 1995 cited in Piper 1997).

**CURRENT DISTRIBUTION ON THE SITE**
Found predominately in three to four roadside areas, located on the Roloff unit.

**ACRES AFFECTED BY WEED:** ~45 as of 2000; ~2 as of 2005.

**WEED DENSITY**: Formerly low to moderate; now low.

**GOALS**
Control expanding populations.
Prevent new occurrences.

**OBJECTIVES**
Survey and map existing populations.
More accurately calculate the acres affected by St. John's wort.
Investigate biological control availability. Monitor areas where biocontrol has previously been applied.
Treat as many plants as possible, before they produce seed.
Survey nearby areas for pioneering infestations.

**ACTIONS PLANNED**
Continue with herbicide treatments of infestations in 2006.

Monitoring will continue on an annual basis on all units.

**CONTROL SUMMARY AND TREND**
2000- Approximately 40 acres were treated. Trend: control only.
2001- Approximately 15 acres were treated. Trend: control only.
2002- Approximately 5 acres were treated. Trend: control, strong reduction also seen.
2003- Approximately 16 acres were treated. Trend: control, strong reduction also seen.
2004- 0 acres were treated. Trend: infestations are static.
2005- Approximately 2 acres were treated. Trend: good control/reduction.

## GENERAL WEEDS CONTROL PLAN

**Scientific Name:** *Many* **Common Name:** General Weeds

**DESCRIPTION:** General weeds describe mixed vegetation that interferes with maintenance, agricultural, or restoration activities, where keying plants to individual species is not appropriate. Examples of general weeds may include vegetation occurring along roadsides, parking areas, trails, and structures and include species like, cheatgrass, kochia, Russian thistle, etc. General weeds may also occur in agricultural fields, or comprise the dominant vegetation at a site identified for habitat restoration. These weed species includes cheatgrass, Jim Hill mustard, purple mustard, field bindweed, and others.

**MANAGEMENT INFORMATION**
Herbicide can be an effective tool for control. Applicators should refer to the PNW Weed Management Handbook, or other reputable resources, for product recommendations and timing, depending on the weed and desired management objectives.

Mechanical weed control may include mowing, burning, and/or plowing and disking of entire fields. Plowing and/or disking is required when preparing old farm fields for rehabilitation to native grass stands.

**CURRENT DISTRIBUTION ON THE SITE**
All public accesses and roadsides, and most old agricultural fields, on the wildlife area contain general weeds to varying degrees.

**ACRES AFFECTED BY WEED:** ~300 **WEED DENSITY**: Low to moderate

**GOALS**
Maintain public access
Restore agricultural fields
Reduce fire danger

**OBJECTIVES**
Treat high public use areas with residual herbicide to prevent seed production, and with broad-spectrum/low residual herbicide such as glyphosate to minimize green growth.
Summer fallow fields in preparation for restoration.

**ACTIONS PLANNED**
In 2006, problematic portions of roadsides, parking lots, and access sites, will be treated with appropriate herbicides, to eliminate the production and spread of weed seeds and improve appearance and public access for the entire season.

One agricultural field on the Anderson-Welch unit will be fallowed from spring through fall of 2006, in preparation for a restoration planting in fall 2006.

**CONTROL SUMMARY AND TREND**

2000- Approximately 90 acres were treated. Trend: control in access-type areas, excellent reduction in fallowed fields.
2001- Approximately 60 acres were treated. Trend: control in access-type areas, excellent reduction in fallowed fields.
2002- Approximately 80 acres were treated. Trend: control in access-type areas, excellent reduction in fallowed fields.
2003- Approximately 107 acres were treated. Trend: control in access-type areas, excellent reduction in fallowed fields.
2004- Approximately 146 acres were treated. Trend: control in access-type areas, excellent reduction in fallowed fields.
2005- Approximately 140 acres were treated. Trend: control in access-type areas, excellent reduction in fallowed fields.

Roadside and access management have required a consistent, yearly maintenance effort. In access-type areas, use of herbicides with longer residuals has reduced the effort needed to accomplish the same amount of work, compared to previous use of Roundup, a good general herbicide but one that has a very short residual. Variations in acres of general weed management reflect the restoration work that has occurred in recent years on the wildlife area. There are 300 or more acres of general weed- infested fields that are planned for eventual restoration to native grasslands.

## APPENDIX 3. FIRE CONTROL

Swanson Lakes Wildlife Area maintains fire protection contracts with three local fire districts: Lincoln County #5,6, and 7 (Davenport, Harrington, and Wilbur, respectively). The districts are paid an annual fee based on the assessed value of the Wildlife Area lands within their districts.

It is the Departments policy that Wildlife Area staff are not firefighters and should not fight fires. Wildlife Area staff are trained in fire fighting and fire behavior, however, the training is in order to provide support and information regarding critical habitat values to the Incident Commander of the responding fire district.

Wildlife Habitat Concerns: Swanson Lakes Wildlife Area contains fire-sensitive habitat that is critical to the survival of the Columbian sharp-tailed grouse. Deciduous trees and shrubs provide critical winter habitat, and the cover associated with tall bunchgrasses provides needed hiding and escape cover for sharp-tailed grouse. Due to the very low numbers of prairie grouse on and around Swanson Lakes Wildlife Area, WDFW requests that the Incident Commander or other fire fighting personnel on site notify WDFW personnel immediately in the order listed below. A WDFW Advisor will provide information to the Incident Commander regarding habitat concerns.

Aerial Support: WDFW recommends that fire-fighting entities suppress fires on the wildlife area as rapidly as possible; and in the case of Swanson Lakes Wildlife Area, especially in the case of danger to infrastructure (office, fences, etc). WDFW requests the incident commander to seek aerial support if need0ed to extinguish a fire on its land promptly. If, in the professional judgment of the Incident Commander, a fire on lands adjacent to Swanson Lakes Creek Wildlife Area causes an immediate threat to Swanson Lakes Wildlife Area infrastructure, WDFW requests that he/she seeks aerial support as possible.

Reporting: Report any fire on or adjacent to Swanson Lakes Wildlife Area by contacting the appropriate fire district. If a fire is found on one of the two sections Swanson Lakes Wildlife Area leases from DNR, DNR should also be contacted.

The following page lists emergency telephone numbers in the order of calling priority.

**Fire Districts – DIAL 911**

| NAME | TELEPHONE | FIRE CHIEF |
|---|---|---|
| Lincoln Co. District 5, Davenport | 509-725-1773 | 509-725-5011 |
| Lincoln Co. District 6, Harrington | 509-253-4333 | |
| Lincoln Co. District 7, Wilbur | 509-647-5761 | 509-647-5613 |

**Department of Fish and Wildlife** - contact in order listed

| NAME | TELEPHONE | CELL |
|---|---|---|
| Juli Anderson, Swanson Lakes Manager | 509-636-2344 | 509-641-1327 |
| Mike Finch, WLA assistant manager | 509-636-2344 | 509-641-1118 |
| Todd Baarstad, Upland Habitat Biologist | 509-636-2345 | 509-721-1302 |

| | | |
|---|---|---|
| Curt Wood, Wildlife Officer, Lincoln County | 509-725-3501 (Lincoln. Co Sheriff (Dispatch) | |
| Dan Rahn – Sergeant, Spokane Office | 509-892-1001 | |
| Regional Office - Spokane | 509-892-1001 | |
| Regional WL Program Manager – Kevin Robinette | 509-892-7059 | 509-998-3270 |
| Howard Ferguson, District Biologist | 509-892-1001 | 509-710-3781 |
| State Patrol Dispatch | 911 | |
| Mike Whorton, Enforcement Captain, Spokane | 509-892-1001 | |

**DNR**- contact in order listed and request Operations or Staff Coordinator

| **NAME** | **TELEPHONE** |
|---|---|
| DNR Dispatch (Colville) | 509-684-7474 |
| DNR Omak field office | 509-826-7316 |

**BLM**- contact in order listed

| **NAME** | **TELEPHONE** |
|---|---|
| Fire Dispatch (Spokane) | 509-536-1235 |
| Scott Boyd, Fire Mgmt Officer | 509-826-1237 |
| After Hours, Duty Officer | 509-981-3549 |

# APPENDIX 4. WATER RIGHTS

## Table 1. Water Rights on Swanson Lakes Wildlife Area

| File # | Person | Status | Purpose | IR Acres | TRS | QQ/Q | 1st Source | Comments | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| S3-113302CL | WESDALE FARMS INC | A | DG,IR,ST | | 24.0N 34.0E 10 | | SPRING | | |
| G3-070946CL | ETTER EUGENE M | A | DG,ST | | 24.0N 34.0E 13 | | | | |
| G3-135561 CL | HATTEN LLOYD | | DG,IR,ST | | 24.0N 34.0E 14 | | | | |
| S3-001267 CL | HUTSELL E B | A | | | 24.0N 35.0E 04 | | | | |
| S3-*11027ALCWRIS | HUTSELL/SON | A | IR | 76 | 24.0N 35.0E 04 | NE/NW | LAKE CREEK | | |
| | | | | | 24.0N 35.0E 04 | NE/NW | UNNAMED SPRING | | |
| | | | | | 24.0N 35.0E 04 | NE/NW | UNNMAED LAKE | | |
| | | | | | 24.0N 35.0E 04 | NE/NW | UNNAMED SOURCE | | |
| | | | | | 24.0N 35.0E 09 | NW/NE | LAKE CREEK | | |
| | | | | | 24.0N 35.0E 09 | NW/NE | UNNAMED SPRING | | |
| | | | | | 24.0N 35.0E 09 | NW/NE | UNNAMED LAKE | | |
| | | | | | 24.0N 35.0E 09 | NW/NE | UNNAMED SOURCE | | |
| S3-001268CL | HUTSELL E B | A | DG,ST | | 24.0N 35.0E 09 | | | | |
| S3-002034CL | HUTSELL E B & SO | A | IR,ST | 50 | 24.0N 35.0E 09 | | | | |
| G3-119982CL | MIELKE CARL | A | ST | | 24.0N 35.0E 10 | | WELL | | |
| S3-094467CL | ANDERSON DAN E | | ST | | 24.0N 35.0E 10 | | SPRING | | |
| G3-031186CL | HUCK MARGAREAT S | A | DG,ST | | 24.0N 35.0E 10 | | WELL | | |
| G3-094470CL | ANDERSON DAN E | A | DG,ST | | 24.0N 35.0E 14 | | WELL | | |
| S3-094469CL | ANDERSON DAN E | A | DG,ST | | 24.0N 35.0E 15 | | CREEK | | |
| S3-094468CL | ANDERSON DAN E | A | DG,ST | | 24.0N 34.0E 22 | | POND | | |
| S3-128160CL | RUSTEMEYER ANDY M | A | IR | | 24.0N 34.0E 3 | SW1/4 | | DUG IMPOUNDMENT | |
| S3-128161CL | RUSTEMEYER ANDY M | A | ST | | 24.0N 34.0E 3 | NE1/4 | SPRING | | |

**Abbreviations:** A, Active; DG, Domestic Ground; IR, Irrigation; ST, Stock

## APPENDIX 5. MANAGEMENT PLAN COMMENTS & RESPONSES

Washington State Department of Fish and Wildlife, February 2007

No public comments were received on the Swanson Lakes Wildlife Area Plan.

## REFERENCES


Crab Creek Subbasin Summary (2001)
http://www.cbfwa.org/FWProgram/ReviewCycle/fy2002cp/workplan/010803CrabCreekDraft.pdf)

Draft Crab Creek Subbasin Plan (2004) – NWPPC 2004
(http://www.nwcouncil.org/fw/subbasinplanning/crab/plan/)

Priority Habitat and Species List (http://wdfw.wa.gov/hab/phslist.htm)

Priority Habitat and Species Recommendations (http://wdfw.wa.gov/hab/phsrecs.htm)

WDFW/BPA Swanson Lakes Columbia River Mitigation Project Enhancement Plan

WDFW Strategic Plan (http://wdfw.wa.gov/depinfo/strat_goals_obj.htm)

WDFW policies and procedures (http://wdfw.wa.gov/depinfo/strat_goals_obj.htm)

WDFW Swanson Lakes Wildlife Area Mitigation Management Plan 1997

WDFW Tracy Rock Sharp-tailed Grouse and Douglas County Pygmy Rabbit Site Specific Management Plan Project Report - 1992

WDFW Status Report for the Sharp-tailed Grouse
(http://wdfw.wa.gov/wlm/diversty/soc/status/grouse/fnlsharp.pdf

Wildlife Area Statewide Plan (http://wdfw.wa.gov/lands/lands2020/)