

**COORDINATED IMPLEMENTATION PLAN
FOR BIRD CONSERVATION IN EASTERN OREGON**



Prepared by
Eastern Oregon Working Group
Oregon Habitat Joint Venture

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Eastern Oregon Working Group

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1. Introduction

In 1986, the North American Waterfowl Management Plan (NAWMP) was adopted by the United States and Canada to address the conservation and restoration of waterfowl, other migratory waterbirds, and the habitats on which they depend. The Plan, as adopted, aims to restore waterfowl populations to 1970-79 levels and establishes specific population objectives for twenty-five species of ducks, five species of geese, plus trumpeter and tundra swans. It was updated in 1994 to include full participation by Mexico, and again in 1998 to include language strongly encouraging Plan partners to improve coordination with other wildlife initiatives, including those directed at other migratory birds, endangered species, fisheries and biodiversity. It will be updated again in 2003.

Six public-private partnerships, or joint ventures, were originally established by the Plan to coordinate the implementation of NAWMP and achievement of population and habitat objectives along flyway lines across North America, with eight more joint ventures having been formed in recent years. These joint venture partnerships include active participation by the U.S. Fish and Wildlife Service, USDA Forest Service, Bureau of Land Management, Natural Resources Conservation Service (USDA) and other federal agencies, as well as state wildlife management agencies and a number of wildlife conservation groups, including Ducks Unlimited Inc., Pheasants Forever, The Nature Conservancy, and National Audubon Society. The North American Wetlands Conservation Act (NAWCA) was set up in 1989 to implement the objectives of NAWMP. This program, re-authorized by Congress in FY/2001 at \$50 million/year, encourages and rewards partnerships among all wildlife conservation initiatives through two matching grant programs, a standard grant program and a small grant program.

The Intermountain West Joint Venture (IWJV) was established in 1994 as the eleventh habitat joint venture. It encompasses parts of eleven Western states, including all of Oregon east of the Cascades. Public agencies and conservation groups work as partners through the Oregon Habitat Joint Venture to identify, protect, restore and enhance wetlands and other important habitats for birds and other native wildlife.

The Oregon Habitat Joint Venture was initially formed in 1991 as the state steering committee for the Pacific Coast Joint Venture and expanded its focus statewide when the Intermountain West Joint Venture was created in 1994. The organization's current steering committee includes representatives from the Audubon Society of Portland, Defenders of Wildlife, Ducks Unlimited, Greenbelt Land Trust, McKenzie River Trust, North Coast Land Conservancy, Oregon Duck Hunters Association, Oregon Trout, South Coast Land Conservancy, The Nature Conservancy, The Trust for Public Land, The Wetlands Conservancy, and Western Rivers Conservancy. Participating state and federal agencies include Oregon Department of Fish and Wildlife, Oregon Division of State Lands, Oregon Parks and Recreation Department, Oregon Transportation Department, Oregon Watershed Enhancement Board, U.S. Army Corps of Engineers, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, U.S. Forest Service, and the U.S. Natural Resource Conservation Service. Other eastern Oregon partners include watershed councils, Indian tribes, a land trust, and several community-based organizations.

In 1995 the Intermountain West Joint Venture Management Board adopted an Implementation Plan intended to provide a framework for implementing the North American Waterfowl Management Plan in Oregon and other states of the Intermountain West, and for developing more specific wetland focus area plans in each of those states. The plan defined six waterfowl and wetland focus areas in eastern Oregon: Klamath Basin, Deschutes Basin, Oregon Closed Basin, Blue Mountains, Upper Columbia River, and Snake River Basin. Plans have been completed for the Klamath Basin and the Oregon Closed Basin. In 2001, the IWJV Management Board decided that the 1995 IWJV Implementation Plan should be updated, as a Strategic Plan, and that it should be completed from the ground up, state-by-state. The

Board also decided that this updated planning process should attempt to coordinate NAWMP objectives with other existing migratory bird initiatives operating within the Intermountain West. That same year, the Board funded a project to work through state steering committees in developing coordinated “all bird” implementation plans in all the states of the Intermountain West Joint Venture. The Oregon Habitat Joint Venture stepped forward to take the lead in developing a state implementation plan.

These coordinated “all bird” implementation plans will not only provide the basis for an updated and expanded overall IWJV Implementation Plan, they will also guide the IWJV Management Board in considering and ranking various habitat protection, restoration and enhancement projects for funding via the North American Wetlands Conservation Act (NAWCA) and other programs.

2. Planning Objectives

1. Create a planning forum, through the Oregon Habitat Joint Venture in which representatives of state and federal conservation agencies and wildlife conservation groups work collaboratively to develop coordinated habitat goals, objectives and projects that address the conservation needs of all bird species in eastern Oregon.
2. Review, merge and synthesize the goals and objectives of existing bird conservation plans into a coordinated planning document that reflects the species and habitat priorities of all bird conservation programs in eastern Oregon. This document is intended to guide the Management Board of the IWJV in implementing and updating statewide IWJV goals and objectives for bird conservation in eastern Oregon.

3. Direction and Connections

By taking a lead role in coordinated implementation planning in the Western states, the IWJV Management Board is following the direction of the NAWMP (1998 Update). The joint venture is also responding to recommendations and direction from other national sources and programs to attempt coordination of waterfowl and wetland habitat planning with the identified goals of other migratory bird programs. These other national sources and programs include the following:

North American Bird Conservation Initiative (NABCI): Formed in 1998 as an international forum for public and private efforts to coordinate international conservation efforts of existing major migratory bird initiatives, NABCI works to increase the effectiveness of, and coordination between, existing and new bird conservation initiatives, including the North American Waterfowl Management Plan. As a recommended framework for coordinated bird management, NABCI has adopted and mapped ecological units called Bird Conservation Regions (BCR), a number of which cover the area of the Intermountain West Joint Venture. Eastern Oregon is included within two BCRs – the Great Basin and the Northern Rockies. Coordinators have been hired for both of these BCRs.

International Association of Fish and Wildlife Agencies: The International Association of Fish and Wildlife Agencies (IAFWA) was founded in 1902 as a quasi-governmental organization of public agencies, including state wildlife agencies, charged with the protection and management of North America’s fish and wildlife resources. The IAFWA received a federal grant in Fiscal Year 2001 to conduct “integrated all bird conservation” planning workshops for state wildlife agencies in FY 2001-2003. The national objectives of this grant closely parallel the IWJV’s coordinated migratory bird

planning effort and the IWJV is working with IAFWA staff to ensure that the workshops are complementary. Workshops have been conducted in Colorado and Arizona in 2002 and Idaho in 2003.

Congress: The US Congress strongly supports a public-private partnership approach to protecting and restoring wetlands and other important migratory bird habitats across North America, and they have signaled their support by increasing the federal funds available for migratory bird initiatives. In FY/2001, Congress re-authorized the North American Wetlands Conservation Act (NAWCA) and increased its authorized annual funding level from \$30 million to \$50 million. It was reauthorized again in FY/2002 at \$75 million per year. Appropriations for NAWCA continue to grow since the authorization level was increased. Congress also recommended a phased-in approach to fully funding the 15 habitat and species joint ventures that were in place in FY/2001, making it clear in budget language that Congress regards these joint ventures as a future primary delivery system for all federally-funded migratory bird programs. In its FY/2002 Interior Appropriations language, the House noted that the joint venture program “continues to be one of the greatest successes of the (Fish and Wildlife) Service, with funding leveraged to a greater extent than all other Service programs combined”.

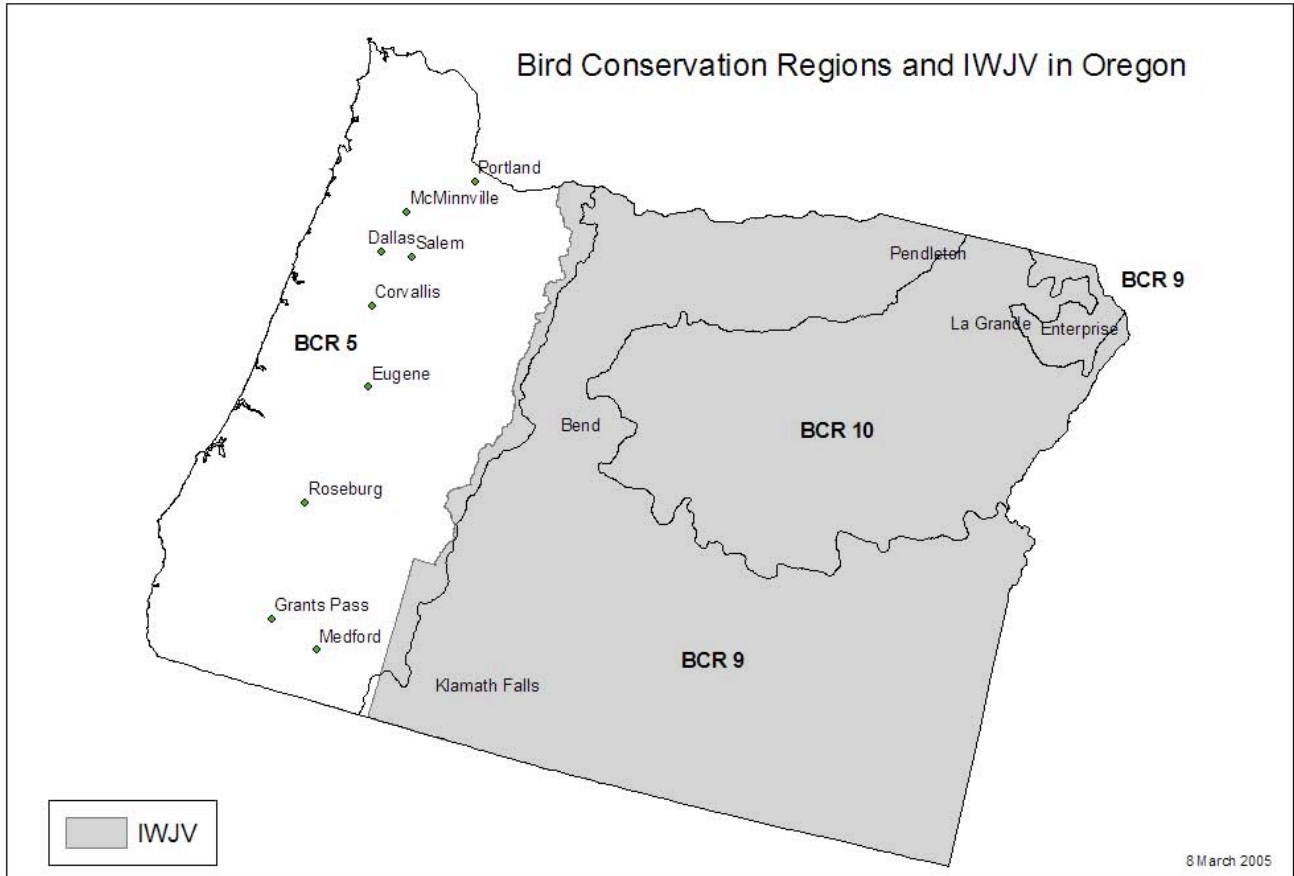
Executive Order 13186 – Protection of Migratory Birds: In January 2001 outgoing President Bill Clinton signed an executive order requiring all federal agencies which might have a measurable negative impact on migratory birds to develop a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service, to promote the recommendations of NAWMP, NABCI and other migratory bird programs, as well as other conservation considerations. The Bureau of Land Management and USDA Forest Service developed a draft MOU with the Fish and Wildlife Service in 2001, which emphasizes a collaborative approach to migratory bird conservation, in cooperation with other agencies and organizations. Because this executive order addresses the integration of bird conservation principles, habitat restoration for migratory birds, and comprehensive planning among various bird conservation programs, these coordinated implementation plans developed by the IWJV should assist these federal agencies with implementation of the MOU. Other federal agencies will presumably also develop MOUs with the Fish and Wildlife Service to implement Executive Order 13186. This presidential Executive Order was reinforced by the Bush Administration on September 12, 2002 when U.S. Fish and Wildlife Service Director Steve Williams issued **Director’s Order No. 146**, which indicates, among other things, that joint ventures should deliver the full spectrum of bird conservation.

4. Migratory Bird Conservation Initiatives

There are four migratory bird initiatives for which national, regional and state plans have been or are being developed. The following programs have different but compatible approaches to planning for bird conservation, but the goals, objectives, and priorities of each will be considered in the IWJV Coordinated Implementation Plan for Bird Conservation in eastern Oregon:

North American Waterfowl Management Plan (NAWMP): Adopted by the United States and Canada in 1986, and by Mexico in 1994, to address the conservation and restoration of waterfowl, other migratory waterbirds, and the habitats on which they depend. The Plan, as adopted, aims to restore

FIGURE 1 - BIRD CONSERVATION REGIONS IN OREGON



waterfowl populations to 1970-79 levels and establishes specific population objectives for 25 species of ducks, five species of geese, plus trumpeter and tundra swans.

The Intermountain West Joint Venture is one of 11 public-private partnerships established to coordinate the implementation of NAWMP and the achievement of population and habitat objectives along flyway lines across North America. Public agencies and conservation groups have been working since 1994 as partners in the Oregon Habitat Joint Venture to identify, protect, restore and enhance wetlands and other important habitats for waterfowl and other migratory birds, as well as native non-migratory birds such as sage grouse.

The Oregon Habitat Joint Venture began developing implementation plans for wetland conservation in eastern Oregon in the late 1990s, and adopted final plans for the Oregon Closed Basin (Harney and Lake counties) in 2000 and the Klamath Basin in 2001. Focused on habitats rather than species, these plans effectively integrated conservation needs for waterfowl, shorebirds, and waterbirds. The plans identified 28 target areas as priorities for conservation action through joint venture partnerships and established habitat objectives for each area. Priority conservation areas identified by the Oregon Habitat Joint Venture are described in **Appendix A**. In addition to these specific geographic priorities, the plans also

recognized the importance of riparian habitats throughout the basins, and highlighted vernal pool/playa wetlands for special consideration in the Closed Basin.

Partners in Flight: The national Partners in Flight (PIF) program began in 1989 as a coordinated effort to document and reverse apparent declines in the populations of neotropical migratory birds, those birds that breed north of Mexico and then migrate to Mexico, Central and South America and the Caribbean in the winter months. The National Fish and Wildlife Foundation took the lead in bringing together federal, state, and local government agencies, foundations, conservation groups, industry and the academic community to address the problem of population declines. The reasons are complex, and include loss of breeding habitat due to fragmentation, alteration, urban expansion and natural disasters; loss or alteration of habitat in non-breeding areas and along migratory routes; and brood parasitism. The PIF program was later expanded to include all non-game land birds.

Today Partners in Flight is an international program, with eastern and western regional coordinators and PIF working groups in each state. In 2000, the American Bird Conservancy (ABC) published the first comprehensive national plan for the program, Partners in Flight: Conservation of the Land Birds of the United States. This plan summarizes the goals and priorities of the various state Bird Conservation Plans, as well as 93 physiographic areas and seven generalized regions of the continental United States. The plan also encourages better coordination with other initiatives such as the NAWMP, U.S. Shorebird Management Plan, and North American Waterbird Conservation Plan. Partners in Flight initially divided eastern Oregon into three physiographic areas, but for purposes of coordinated bird conservation, these have now been replaced by the BCRs. Passage of the Neotropical Migratory Bird Conservation Act in 2001 provided a new federal funding program and commitment to neotropical migrant species addressed by Partners in Flight.

The Oregon-Washington Working Group of Partners in Flight was formed in 1993 to focus resources of partners on the improvement of monitoring, research, management and education programs involving native, nongame landbirds and their habitats. The working group includes many of the same agencies, organizations and people as the Oregon Habitat Joint Venture, as well as a number of other organizations.

The Oregon-Washington Working Group completed three regional landbird conservation plans covering parts of eastern Oregon:

- a. Columbia Plateau (including Oregon portions of the Columbia Basin, High Lava Plains, Basin and Range, and Owyhee Uplands physiographic provinces).
- b. Northern Rocky Mountains (including Oregon portions of the Blue Mountains and the Elkhorn and Wallowa mountains [part of the Northern Glaciated Mountains sub-province]).
- c. East Slope Cascades (including Oregon portions of the Columbia Foothills, Central Oregon, and Klamath Basin sub-provinces).

These plans collectively identified 48 “focal species” as priorities for conservation among Oregon landbirds. The focal species were selected after planners first identified the most important habitat conditions and features used by landbirds; the planners then selected priority species based on their association with those conditions and features. The resulting conservation strategies target both uncommon (even rare) and common species.

“Using this blend of approaches,” the Partners in Flight planners concluded, “there is a much greater likelihood of maintaining key habitat attributes and providing functioning ecosystems for birds... The

rationale for using focal species is to draw immediate attention to habitat features and conditions most in need of conservation or most important in a functioning ecosystem. Although conservation is directed towards focal species, establishment of conditions favorable to focal species also will likely benefit a wider group of species with similar habitat requirements.”

The Partners in Flight plans completed in 2000, remain the best summary of species and associated habitat information for neotropical migrant birds and other native non-game landbirds in eastern Oregon, and are one of primary sources of information used in developing a coordinated implementation plan for bird conservation in eastern Oregon. Priority species listed by Partners in Flight are listed in **Appendix B** of this plan. Priority conservation areas identified by Partners in Flight are described in **Appendix A**.

U.S. Shorebird Conservation Plan: The term shorebird is applied in North America to a large group of birds commonly called sandpipers and plovers but also include oystercatchers, avocets, and stilts. Of 214 species of shorebirds found worldwide, 53 regularly occur in the United States and, although they occur at some time of the year in all 50 states, the biology and ecology of most shorebird species is poorly understood. Technical and regional working groups were convened to address some of the known conservation and research issues for shorebirds and in 2000, the U.S. Shorebird Conservation Plan was published by the Manomet Center for Conservation Sciences, funded by a grant from the U.S. Fish and Wildlife Service. This national plan provides baseline information on shorebird populations and habitat, and addresses some of the known challenges to shorebird conservation, including low reproductive potential and habitat loss. It also articulates hemispheric and national goals for restoring and stabilizing shorebird populations, especially those known to be in decline. These goals emphasize research, monitoring and cooperative landscape management strategies at the international, national, and regional levels. As with NABCI and the PIF plan, the U.S. Shorebird Conservation Plan encourages close coordination with other bird conservation initiatives and implementation of shorebird conservation strategies through the Intermountain West Joint Venture and other habitat joint ventures established by the North American Waterfowl Management Plan. The shorebird plan defines Shorebird Planning Regions across North America, which follows the lines of NABCI Bird Conservation Regions. All of eastern Oregon is within the plan’s Intermountain West Shorebird Planning Region.

The *Intermountain West Regional Shorebird Plan*, released in 2000, notes that perhaps a million shorebirds breed in the Intermountain West and that millions more migrate through the area each year. The plan recognizes that finding ample high quality fresh water will be the greatest challenge faced by shorebirds in the Intermountain West. The regional plan articulates seven goals and associated objectives and strategies related to habitat management, monitoring and assessment, research, outreach and planning. The planning goal includes objectives to coordinate shorebird planning and projects with other migratory bird initiatives and specifically with the Intermountain West Joint Venture.

The Intermountain West plan recognizes eleven Key Shorebird Areas, including five in eastern Oregon: Lake Abert, Summer Lake, Goose Lake, Harney Basin, and Klamath Basin. All of these are also identified as target areas in the joint venture plans.

High priority species found in eastern Oregon include 10 of the 13 species in the Intermountain West with scores of 4 or 5 in the plan’s species scoring process. These high priority species (also listed in **Appendix B**) include Snowy plover, Black-necked stilt, American avocet, Willet, Long-billed curlew, Marbled godwit, Western sandpiper, Least sandpiper, Long-billed Dowitcher, Wilson’s phalarope and Red-necked phalarope. The Intermountain West Regional Shorebird Plan will provide the primary source of information for shorebird species and habitat objectives for the coordinated migratory bird implementation plan for eastern Oregon.

North American Waterbird Conservation Plan: This plan provides a continental framework for conserving and managing colonial nesting waterbirds, including 209 species of seabirds, coastal waterbirds (gulls, terns, pelicans), wading birds (herons, ibises), and marsh birds, such as certain grebes and bitterns. The overall goal of the plan is to ensure that the distribution, diversity and abundance of populations, habitats (breeding, migratory, and non-breeding) and important sites of waterbirds are sustained or restored throughout their ranges in North America. The geographic scope of the plan covers 28 countries, from Canada to Panama, as well as islands and nearshore areas of the Atlantic, Pacific, Gulf of Mexico, and Caribbean Sea. As with NAWMP and Partners in Flight, the waterbird partnership includes federal, state and provincial wildlife agencies, individuals, and nonprofit conservation organizations. The waterbird plan also includes a goal to establish conservation action and exchange information and expertise with other bird conservation initiatives, especially NABCI and the habitat joint ventures such as IWJV established by the North American Waterfowl Management Plan.

Volume One of the North American plan covers 165 species of colonial-nesting birds, as well as three grebes that nest semi-colonially. Volume Two will cover 44 species of marsh birds. In October 2001, a second draft of Volume One was released for review. This draft plan evaluated the conservation status of all North American waterbird species, adapting the protocol from Partners in Flight and U.S. Shorebird Conservation Plan.

Development of a regional waterbird conservation plan for the Intermountain West began in December 2001. The January 2003 version of the draft plan identified 11 waterbird species of “high concern” (also listed in **Appendix B**) in eastern Oregon: greater Sandhill crane (Central Valley Population), lesser Sandhill crane (Pacific Coast Population), yellow rail, Franklin’s gull, black tern, eared grebe, western grebe, snowy egret, American white pelican, common loon. The draft plan also identified five more Oregon species as “moderate concern”: Forster’s tern, black-crowned night heron, white-faced ibis, least bittern, and Clark’s grebe. Priority conservation areas identified by the draft waterbird plan are included in **Appendix A**. When this regional plan is completed, it will articulate conservation and management goals and objectives for waterbirds in eastern Oregon and it will be the primary source of information for waterbird species and habitat objectives for the coordinated migratory bird implementation plan.

5. Other Bird Conservation Programs

In addition to the four migratory bird initiatives described above, there are a number of other important conservation programs and planning efforts that were considered in development of the Coordinated Implementation Plan for Bird Conservation in Eastern Oregon. These include:

Important Bird Areas (IBA) Program: The IBA Program is an international, site-based approach to bird conservation that began in Europe in the mid-1980s, where BirdLife International sponsored a continent-wide inventory of key sites for birds. The effort spread to the United States; and in the mid-1990s the American Bird Conservancy and National Audubon Society completed a pilot project to identify and describe the Important Bird Areas of Pennsylvania. Most states now have IBA programs and a handful have published guides to their IBAs. The IBA program recognizes that there are places on the landscape that provide exceptionally valuable or essential habitat for one or more species of birds, including breeding, wintering or migratory habitat. Identifying, recognizing, monitoring, and stewarding these sites can form the basis of a landscape-level conservation network, not just for birds but for other species of wildlife. The Oregon IBA program is being developed by the Audubon Society of Portland. Sites identified in the initial phase were included in **Appendix A**.

Ecoregional Conservation Planning: The Nature Conservancy (TNC) has adopted ecoregion-based planning as the most effective way to achieve its national mission of preserving a diversity of plants, animals, and natural communities. The planning process used by TNC follows a methodology outlined

in Geography of Hope (2000) that defines a vision of conservation success at an ecoregional scale, and is based on documenting and mapping a list or “portfolio” of biologically outstanding sites that represent a full complement of ecosystems, natural communities, and species characteristics of the ecoregion. The ecoregional plans are based on amended ecoregional units delineated by Bailey et al (1998). Completed plans that include parts of e. Oregon include those covering the Columbia Plateau and Blue Mountains. Relevant sites (i.e., those selected for bird conservation values) identified in these ecoregional plans are included in **Appendix A**.

Range-wide Sage Grouse Conservation Project: The Western Association of Fish and Wildlife Agencies (WAFWA) signed a Memorandum of Understanding in 2000 with the U.S. Fish and Wildlife Service, Forest Service and Bureau of Land Management to develop a strategy for the conservation of Sage Grouse throughout its range. In 2001 the State of Utah and WAFWA received a federal grant to aid sagebrush/Sage Grouse conservation efforts in six or seven Western states and British Columbia. In 2002 a project coordinator was hired with the grant funds and he began coordinating the completion of statewide and province-wide sage grouse databases, including medium-to-fine-scale distribution maps of sage grouse habitat. The project is overseen by a federal-state National Sage Grouse Conservation Framework Team. In 2003, BLM completed its draft map of sage grouse habitat in e. Oregon. This map was used to help identify priority bird conservation areas for this plan.

Endangered Species Act: The federal Endangered Species Act (ESA) of 1973, as amended, mandates the protection of threatened and endangered species of plants and animals and the development of a recovery plan for each species. In eastern Oregon, the only bird listed under the federal ESA is the bald eagle. Due to its legal status under the ESA, this species is automatically included in the list of priority bird species for the IWJV in eastern Oregon. An additional 21 bird species found in e. Oregon are listed as “species of concern” by the U.S. Fish and Wildlife Service; these species are also included in **Appendix B**, the combined list of priority bird species for eastern Oregon.

Oregon Threatened and Endangered Species Act and Sensitive Species List: The bald eagle (threatened), American peregrine falcon (endangered), and the inland populations of western snowy plover (threatened) are the only birds in e. Oregon that are listed under the state’s Threatened and Endangered Species Act of 1987. The act requires state agencies to develop programs for the protection and management of endangered species and, for threatened species, to comply with guidelines adopted by the OR Fish and Wildlife Commission. The OR Department of Fish and Wildlife also maintains a list of sensitive species that are likely to become threatened or endangered throughout all or a portion of their range in Oregon. The sensitive species list includes 43 eastern Oregon bird species. These species are also included in **Appendix B**, the combined list of priority bird species for e. Oregon.

6. Priority Bird Species

This plan recognizes as priority species all of the species identified as priorities under the various bird conservation plans or by federal and state wildlife and land management agencies. The combined list, which totals 125 species, is displayed in **Appendix B** (Eastern Oregon Priority Bird Species).

7. Habitat Classification and Mapping

To provide for consistency in defining and mapping habitats, this plan has adopted the ecological system classification scheme developed by NatureServe, which identifies some 65 different types in e. Oregon. According to NatureServe, “Terrestrial ecological system units provide practical, systematically defined groupings of plant associations, forming the basis of mapping terrestrial communities and ecosystems at multiple scales of spatial and thematic resolution. Applications of ecological systems include their use as units for conservation assessment, ecological inventory, mapping, land management, ecological monitoring, and species habitat modeling.” NatureServe plans to facilitate on-going development and refinement of this classification as part of an International Ecological Classification Standard. Descriptions of the ecological systems are provided in International Ecological Classification Standard: Terrestrial Ecological Systems of the U.S. (Natural Heritage Central Databases) (NatureServe 2003).

For this plan, the Oregon Natural Heritage Information Center assisted in cross-walking the bird conservation plans’ priorities to the ecological systems classification, allowing priority habitats to be mapped and displayed using geographic information systems and existing statewide data on vegetation and land cover. However, for consistency with other states, habitat objectives were established only for a broader set of types under Partners in Flight’s classification system.

8. Priority Habitat Types

The partners involved in developing the Eastern Oregon Bird Conservation Plan used existing bird conservation plans to identify priority habitats, which were then cross-walked to the ecological system classifications described above. The planning group then divided the ecological systems into three categories of priority – high, medium and low – as defined below. Three criteria were used to rank these habitat types: 1) Statewide importance to birds; 2) Opportunities (funding, partnerships, and feasibility for habitat protection, restoration, enhancement); and 3) Degree of threat. The three categories were defined as:

High priority: High value to birds in eastern Oregon combined with high threat and/or high opportunity for conservation action.

Medium priority: One criterion may be high, but the other two are lower; generally the habitat is of moderate concern, with fewer threats or opportunities.

Low priority: Relatively low threat, low opportunity, or low value as habitat.

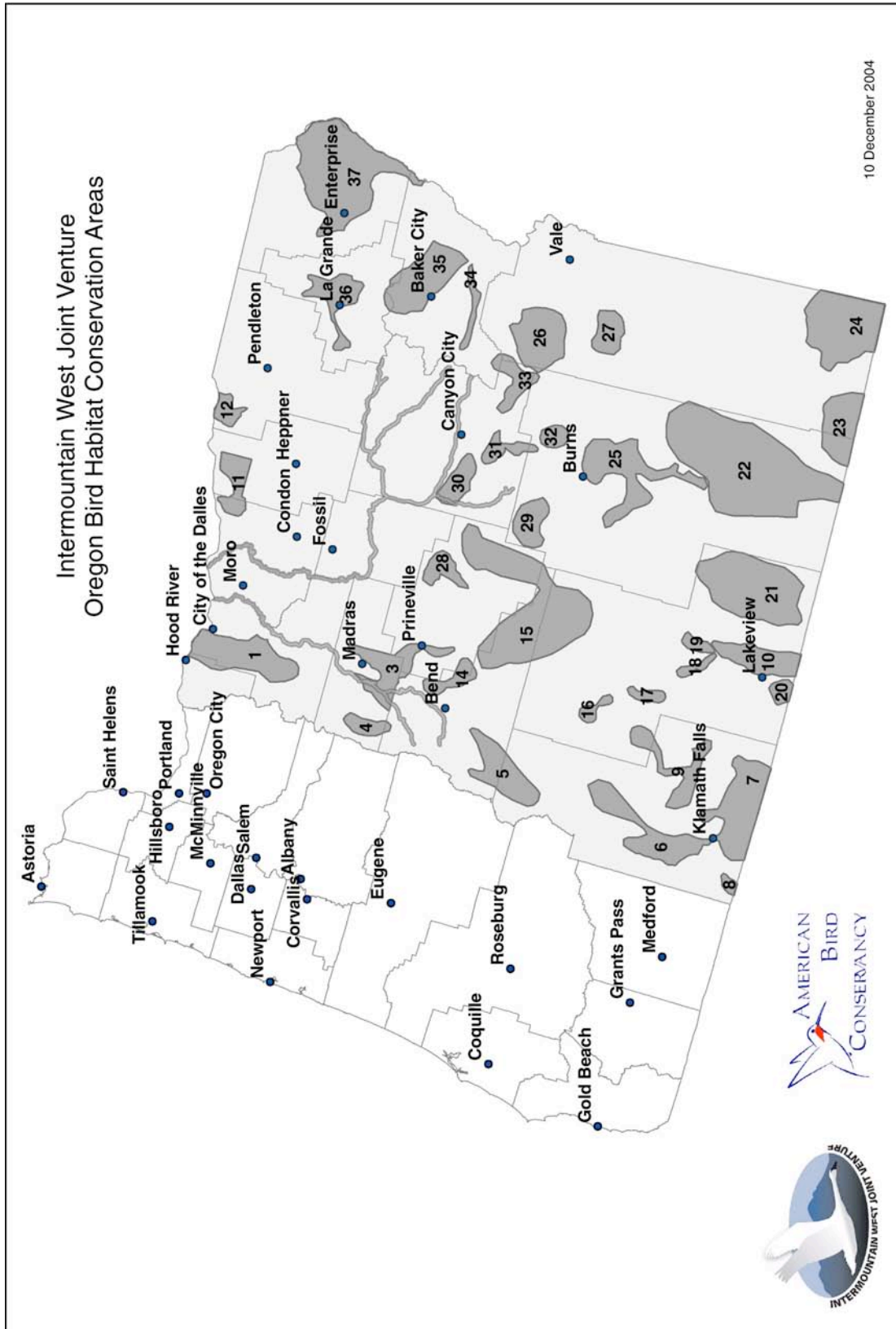
These priority habitat types are listed in **Table One**. They are shown again, associated with Bird Habitat Conservation Areas and Habitat Conservation Objectives, in **Appendix C**.

9. Bird Habitat Conservation Areas

Some 135 priority areas were initially identified for consideration in this all-bird plan, based on information from the four existing bird conservation plans; as well as The Nature Conservancy’s completed ecoregional conservation plans (Columbia Plateau and Blue Mountains only); the Oregon Biodiversity Project’s ecoregional assessments; and Audubon’s initial round of designations for the Important Bird Area program. This combined list of candidate conservation areas is shown here as **Appendix A**. The IWJV Steering Committee added some additional sites to the candidate list and finally selected 37 areas (including some that combined multiple sites) as the highest priorities for this Coordinated Implementation Plan for Bird Conservation in Eastern Oregon. These 37 Bird Habitat Conservation Areas (BHCAs) are shown on a map as **Figure 2** and also described in **Table Two**

It must be understood that Bird Habitat Conservation Areas are intended to display areas where bird habitat conservation projects may take place, where state partners believe the best opportunity exists for effective conservation activities. However, the BHCAs have no official status. In the case of all of these units (private or public) BHCA designation simply notes where conservation activities could occur. Such action would, of course, be predicated on concurrence, collaboration and cooperation with all landowners involved.

FIGURE 2 BIRD HABITAT CONSERVATION AREAS FOR EASTERN OREGON



10. Habitat Goals and Objectives

Habitat goals and objectives were developed based on input at a workshop where joint venture partners used maps and data summaries derived from the GAP vegetation map to recommend acreage objectives for the predominant priority habitats in each bird habitat conservation area. Some cover types, particularly wetlands, are poorly mapped, and distinctions between “emergent marsh,” “wet meadow” and “agriculture” were problematic in many areas where flood-irrigated pasture and hay meadows are mixed with other native wetland types. Other priority habitats, such as riparian, aspen, and mountain mahogany, did not even show up because of the coarse scale of the GAP map. Where the data were inadequate, existing conservation plans and expert judgment were used to establish local objectives. All of the habitat objectives for the individual priority areas were then aggregated to produce the final objectives. Habitat goals and objectives are shown below.

Habitat objectives are shown again in **Appendix C** for each of the 37 Bird Habitat Conservation Areas (BHCAs) selected by the Oregon Steering Committee, as well as **Appendix D**, where they are associated with both the BHCAs and the priority habitat types listed in **Table One**.

The habitat objectives for Eastern Oregon are based on several important assumptions:

- The acreage of priority habitats that are likely to be the major focus of conservation efforts in each area are the primary basis for the objectives. Those numbers were used as a starting point, and adjusted down or up depending on judgments regarding potential opportunities given existing land ownership and land use.
- The habitat objectives are intended to represent only the scale of the “conservation footprint”, or area we want to do conservation on, in each Bird Habitat Conservation Area. We have not attempted to distinguish between acquisition, restoration, and management. In some areas, changes in policy or management strategy to emphasize conservation of bird habitat values may be enough; in others, active restoration or acquisitions may be needed. In some areas, the primary emphasis may be on continuing existing conservation management to maintain habitat values.
- Although nominally intended as 10-year objectives, this is a conservation plan, not a program, and accomplishments will be dependent on a variety of factors, not least being the level of funding available for implementation.

Ponderosa Pine Forests and Woodlands

Ponderosa pine forests and woodlands are the most widely distributed forest type in e. Oregon, currently covering more than 5.1 million acres, primarily in the East Cascades and Blue Mountains ecoregions. Logging, fire suppression and livestock grazing have contributed to profound changes in these dry forests. Formerly open “park-like” stands dominated by large trees are now crowded with smaller, less fire-resistant trees, including shade-tolerant true firs, with significant impacts on bird habitat values. Some 90 species of birds are regularly associated with the ponderosa pine forests of e. OR and WA, including two priority species – white-headed woodpecker and pygmy nuthatch – that are rarely found in other forest types. Eleven of the priority areas identified in this plan offer opportunities to address ponderosa pine habitats. Most of these lands are in national forests, where efforts to reduce fire hazards through thinning and prescribed burning may also improve bird habitat values.

Goal: Increase the amount of healthy ponderosa pine forest and woodland habitats. Protect existing high quality ponderosa pine habitats. Use fire, thinning, and other management strategies to enhance habitat values in degraded stands where feasible and appropriate. Encourage monitoring of management effects on priority species.

Objectives: Protect, enhance, restore, and maintain 370,000 acres of high quality old-growth ponderosa pine habitat in priority areas.

Oak-Pine Woodlands

Oak habitats in e. Oregon, which include both oak woodlands and mixed oak and conifer woodlands, are limited to two disjunct areas in the East Cascades ecoregion, one extending from the Columbia Gorge south to the Warm Springs Indian Reservation, the other southwest of Klamath Falls. The primary threat in these areas is from increasing rural residential development. Lewis's woodpecker, one of the species associated with these oak habitats, is declining throughout its range and classified as sensitive-critical on the state's sensitive species list. Two priority areas, Wasco Oaks and Klamath River Canyon, were selected specifically to address oak habitats.

Goal: Maintain and enhance the quality of existing oak-pine woodland habitats in areas where they currently occur.

Objectives: Protect, enhance, restore, and maintain 35,000 acres of high quality oak-pine habitat in priority areas.

Aspen Forest and Woodlands

With the exception of some large stands on Steens Mountain and Hart Mountain, aspen habitats are limited to small pockets scattered across the higher and wetter areas of e. Oregon. Grazing by livestock, and in some areas wild ungulates, and changes in fire regimes have significantly reduced or degraded aspen habitats in most areas. Aspen forests and woodlands provide important habitat for a number of songbirds. Priority species include red-naped sapsucker and Williamson's sapsucker. At least 12 of the 37 priority areas offer opportunities to address aspen habitats.

Goal: Increase the distribution and improve the health of aspen habitats across their historic range.

Objectives: Protect, enhance, restore, and maintain 25,000 acres of high quality aspen habitats in priority areas.

Juniper Woodlands

Juniper woodlands, while valuable for many bird species, have expanded significantly over the past century across much of E. Oregon and are not a conservation priority. However, mature and old growth juniper woodlands are declining and are vulnerable to strong development pressures in central Oregon, the heart of their historic distribution. Priority species that benefit from this habitat include gray flycatcher, ash-throated flycatcher, and chipping sparrow. Four priority areas in Deschutes and Crook counties offer good opportunities to conserve mature and old-growth juniper woodlands.

Goal: Protect existing old-growth juniper woodlands and manage lands to maintain current distribution of mature and old-growth habitats at existing levels over time.

Objectives: Protect and manage for maintenance of old-growth characteristics existing older stands of juniper on 53,000 acres in priority areas.

Mountain Mahogany Woodlands

Mountain mahogany is found in isolated stands throughout the canyons and mountains of e. Oregon, sometimes in pure, dense patches. PIF's conservation strategy for the Columbia Plateau cites concerns about loss of old-growth mahogany and lack of recruitment. Priority species using these habitats include Virginia's warbler, chipping sparrow, loggerhead shrike, and sage grouse. At least nine of the priority areas identified in this plan include significant amounts of mountain mahogany.

Goal: Maintain and where possible expand mountain mahogany woodlands and shrublands.

Objectives: Protect, restore, and maintain 4,000 acres of high quality mountain mahogany habitats in priority areas.

Cliffs and Rimrock

Cliffs and rimrock in some areas, particularly in central Oregon, have been negatively affected by increasing urbanization and human disturbance on adjacent lands, as well as recreational uses such as rock-climbing, with significant local impacts on cliff-nesting bird species. A number of priority areas include important cliff and rimrock habitats.

Goal: Protect habitat values of cliffs and rimrock from impacts of adjacent development and other incompatible human uses.

Objectives: Protect cliffs and rimrock in priority areas.

Grasslands

Grassland habitats have declined dramatically from historic levels, primarily as a result of conversion to cropland, with losses of up to 90 percent in the Columbia Plateau. Remaining grasslands at lower elevations have been heavily impacted by invasive non-native species such as cheatgrass. Remnants of the once-vast palouse prairie in the Boardman area are particularly important for grasshopper sparrow, burrowing owl, and long-billed curlew, among other priority species. Higher-elevation grasslands in NE Oregon support some of the densest concentrations of breeding raptors in North America. Three priority areas – Boardman, Crooked River and Wallowa – were designated in large part because of their potential to address grasslands conservation needs, and several others provide more limited opportunities.

Goal: Increase the amount of high quality native grassland habitat. Maintain and improve remaining native grasslands, and restore native grassland habitats where feasible and appropriate.

Objectives: Protect, enhance, restore, and maintain 365,000 acres of native grasslands in priority areas.

Sagebrush

The most widespread general habitat type in E. Oregon, sagebrush steppe and shrublands vary significantly in their habitat quality and relative security. Conversion to agriculture has been greatest in lower-elevation areas south of the Columbia River, on the Lava Plains of central, and in the valleys of NE Oregon. Large areas of sagebrush were converted to crested wheatgrass plantings in SE Oregon, and habitat values in many areas have been degraded by excessive livestock grazing. Changes in fire regimes have also permitted invasion by western juniper, reducing habitat values for some bird species. The status of sagebrush habitats is mirrored by one of their signature species, greater sage grouse. Sage grouse have experienced a significant contraction in their historic range as a result of habitat loss and fragmentation and have been extirpated from most of the northern half of E. Oregon. The southeastern corner of the state remains a relative stronghold for this species. Other priority species that are highly associated with sagebrush habitats include sage sparrow, Brewer's sparrow, sage thrasher, loggerhead shrike, lark sparrow, and vesper sparrow. Almost half of the priority areas identified in this plan provide good opportunities to address sagebrush conservation needs. Some of these areas – including the High Desert-South Fork Crooked River, Hart Mountain, Steens-Alvord, Trout Creek Mountains, and West Little Owyhee areas – are likely among the best sagebrush habitats in the intermountain west.

Goal: Increase amount of healthy sagebrush habitats across their historic distribution. Maintain existing high quality sagebrush habitats, and restore or enhance degraded and converted sagebrush habitats where feasible and appropriate.

Objectives: Protect, enhance, restore, and maintain 2,930,000 acres of healthy sagebrush habitats in priority areas.

Playas and Vernal Pools

Most of these habitats are found in a long arc that extends across SE Oregon from the high desert of Deschutes County, with numerous scattered vernal pools, to the large playas of the Alvord Desert. Bird habitat values are highly seasonal and often ephemeral, depending on precipitation levels and timing. Although not well understood, these habitats occasionally support large concentrations of migrating waterfowl and other waterbirds. Vernal pools may also play an important role in the life history of sage grouse in some areas. Most vernal pool habitats have been impacted by livestock grazing and development of water sources. 5 priority areas encompass most of E. Oregon's playas and vernal pools

Goal: Maintain existing playa and vernal pool habitats. Improve habitat values of degraded playas and vernal pools.

Objectives: Protect, enhance, and maintain 55,000 acres of playa and vernal pool habitats in priority areas.

Flood-Irrigated Pastures and Hay Meadows

Flood-irrigated pastures and hay meadows on private lands in Lake, Harney, and Klamath counties provide extremely important seasonal habitat for waterfowl and other waterbirds, particularly during spring migration. Many of the wetlands in these areas are maintained by surface irrigation and managed for native hay production and cattle grazing. Habitat values may be jeopardized by conversion from traditional flood irrigation practices to more efficient irrigation systems. More than a dozen priority waterfowl, waterbird, and shorebird species use these habitats, including tule and Pacific greater white-fronted geese, Wrangel Island snow geese, northern pintail, mallard, redhead, canvasback, American Wigeon, greater and lesser Sandhill cranes, American avocet, black-necked stilt, willet, long-billed curlew, long-billed Dowitcher, and red-necked phalarope. Most of the important wetlands that fall into this category are found in 11 priority areas in Lake, Harney, and Klamath counties.

Goal: Maintain existing habitat values on flood-irrigated pastures and hay meadows where traditional management strategies provide important benefits for priority bird species. Encourage management practices that enhance bird habitat values where feasible and appropriate.

Objectives: Maintain 215,000 acres of flood-irrigated pasture and hay meadows in priority areas.

Alkaline Wetlands

The closed basins of southeastern Oregon support large alkaline wetland systems with high value for many of the priority waterfowl, waterbird, and shorebird species. Most of these wetlands are found in five priority areas – Summer Lake, Lake Abert, Hart Mountain, Steens-Alvord, and Harney Basin – and most are already managed primarily for conservation values.

Goal: Maintain existing alkaline wetlands. Improve habitat values of degraded alkaline wetlands where feasible and appropriate.

Objectives: Protect, enhance, and maintain 95,000 acres of alkaline wetlands in priority areas.

Emergent Marsh

Most of the emergent marshes in e. Oregon are found in the upper portions of the Deschutes and Klamath basins and in the large closed basins of Harney and Lake counties. More than 75% of the lower Klamath Basin's vast marshes have been drained and converted to agriculture. Losses of emergent marshes in other areas have been less pronounced, but most have suffered from water diversions and degradation by livestock grazing. In some areas, such as the Harney Basin, non-native carp have had a profound impact on the quality of wetland habitats. Nonetheless, emergent marshes in e. Oregon still provide some of the most important migratory bird habitat in the intermountain west and play a critical role in sustaining several dozen priority species ranging from tri-colored blackbird and white-faced ibis to eared grebe, American avocet, trumpeter swan and northern pintail. Fifteen priority areas encompass most of the major emergent marshes in southeast Oregon and an important wetland complex (Upper Grande Ronde) in the northeast corner of the state. Substantial portions of these areas are already managed for wildlife values, and large-scale restoration efforts are under way in more than half.

Goal: Increase amount of high quality emergent marsh habitat. Maintain and improve existing emergent marsh habitats. Restore emergent marshes within historic wetlands where feasible and appropriate.

Objectives: Protect, restore, enhance and maintain 175,000 acres of high quality emergent marsh habitats in priority areas.

Wet Meadows

Extensive wet meadows are common in the Blue and Ochoco mountains of central and E. Oregon and in the upper portions of the Deschutes and Klamath basins. Wet meadows in most areas have been degraded by livestock grazing and development of road and irrigation systems, some to the point where they have converted to sagebrush and other drier habitats. Wet meadows in E. Oregon are used by a number of priority species, including sandhill crane, long-billed curlew, Wilson's phalarope, and in a few locations, (primarily Bear Valley and Logan Valley), upland sandpiper. Wet meadows also provide important habitat for sage grouse in SE Oregon. Well over half of the priority areas identified in this plan include significant wet meadow systems.

Goal: Increase the amount of high quality wet meadow habitat. Maintain and improve existing wet meadows. Restore wet meadows that have been degraded or converted to non-wetland habitats where feasible and appropriate.

Objectives: Protect, restore, enhance and maintain 185,000 acres of high quality wet meadow habitat in priority areas.

Riparian Woodland

Riparian woodlands, never widespread, historically occurred in the bottomlands along the major rivers of E. Oregon. Most have been cleared for agriculture or urban uses or submerged by reservoirs. Losses of this habitat type exceed 90 percent in many areas, and riparian woodlands likely have experienced the greatest decline of any major type found in the Interior Columbia Basin. Few large blocks of riparian woodlands remain in E. Oregon, and most of the remnants have been degraded by livestock grazing and invasion by non-native species. Priority species that depend on these habitats include red-eyed vireo, yellow warbler, yellow-breasted chat, willow flycatcher, yellow-billed cuckoo, Veery, and Bullock's oriole. Eight priority areas, most in central and NE Oregon, offer some potential to restore riparian woodlands.

Goal: Increase the amount of riparian woodland habitat. Maintain and where possible expand existing large blocks of riparian woodland. Re-establish riparian woodlands on appropriate floodplain sites where feasible.

Objectives: Protect, enhance, restore, and maintain 7,000 acres of riparian woodland in priority areas.

Riparian Shrub

Riparian shrub is the most common type of riparian habitat in E. Oregon. Losses have been estimated at approx. 75% in the inland Pacific NW and are particularly pronounced at lower elevations where riparian habitats have been more heavily impacted by agricultural and urban development. Remaining riparian habitats have been invaded by non-native plants in many areas and degradation related to livestock grazing is common. Priority species using riparian shrub habitats include willow flycatcher, MacGillivray's warbler, yellow warbler, lazuli bunting, and veery. Two bird habitat conservation areas encompassing the John Day and lower Deschutes river corridors were designated specifically because of the importance of their riparian habitats. More than 2/3 of the priority areas identified in this plan offer good opportunities to conserve important riparian shrub habitats.

Goal: Increase the amount of high quality riparian shrub habitat. Maintain and improve existing riparian shrub habitats. Restore riparian shrub habitats that have been degraded or eliminated along all streams where feasible.

Objectives: Protect, enhance, restore, and maintain 40,000 acres of riparian shrub habitat in priority areas

TABLE ONE - EASTERN OREGON HABITAT TYPES AND PRIORITIES

Bird Conservation Plan Priorities	Ecological Systems	All-Bird Priority
Ponderosa pine	Ponderosa pine savanna (306.826) Ponderosa pine woodland (306.827) Ponderosa pine – Jeffrey pine forest and woodland (206.918)	High
Oak-pine woodlands	Oak Woodland (204.852) Mixed oak evergreen woodland (206.923)	High
Aspen	Aspen forest and woodland (306.813)	High
Juniper woodlands (mature and old growth)	Western juniper woodland (304.771)	High (age 150+)
Mountain mahogany	Mountain mahogany woodland and shrubland (304.772)	High
Cliffs and rimrock	Cliff and canyon (304.779)	High (Deschutes Basin only)
Steppe	Palouse prairie grassland (304.792) Montane grassland (306.836) Foothill and canyon dry grassland (304.993) Semi-desert grassland (304.787)	High
Sagebrush steppe-shrubland	Big sagebrush steppe (304.778) Big sagebrush shrubland (304.777) Montane sagebrush steppe (304.785) Scabland Shrubland (304.770) Xeric mixed sagebrush shrubland (304.774) Semi-desert shrub steppe (304.788)	High
Juniper steppe	Western juniper savanna (304.769)	High
Playas and vernal pools	Playa (304.786) Vernal pools (204.996)	High
Flood-irrigated pasture & hay meadows (Harney & Lake counties)	Alpine-montane wet meadow (306.812) Subalpine mesic meadow (306.829)	High (Harney/Lake counties only)
Alkaline wetlands	Emergent marsh (300.729)	High
Emergent marsh	Emergent marsh (300.729) Depressional fen (103.872)	High
Wet meadows	Alpine-montane wet meadow (306.812) Subalpine mesic meadow (306.829)	High

Bird Conservation Plan Priorities	Ecological Systems	All-Bird Priority
Riparian woodland	Foothill riparian woodland and shrubland (304.768) (304.045) Lower montane riparian woodland and shrubland (306.804)(306.821) Subalpine-montane riparian woodland (306.833)	High
Riparian shrub	Foothill riparian woodland and shrubland (304.768) Lower montane riparian woodland and shrubland Subalpine-montane riparian shrubland (306.832)	High
Subalpine fir	Subalpine dry-mesic spruce-fir forest and woodland (306.828) Subalpine mesic spruce-fir forest and woodland (306.830)	Medium
Mixed conifer (late successional)	Montane mixed conifer forest (306.805)	Medium
Mesic mixed conifer (late successional)	Montane mesic mixed conifer forest and woodland (306.825)	Medium
Ponderosa pine/Douglas fir/grand fir	Montane dry-mesic mixed conifer forest and woodland (306.823)	Medium
Seasonally flooded croplands	NA	Medium (Klamath Basin only)
Forested wetlands	Conifer swamp (306.803) Deciduous swamp (204.865)	Medium
Cliffs and rimrock	Cliff and canyon (304.779), (206.991)(206.902) (306.815)	Medium (outside Deschutes Basin)
Lodgepole pine (old growth)	Lodgepole pine forest (306.820)(206.912)	Medium (EC)
(not identified)	Subalpine dry grassland (306.806)	Medium
(not identified)	Greasewood flat (304.780) Greasewood wash (304.781)	Medium
(not identified)	Mixed salt-desert scrub (304.784)	Medium
(not identified)	Lower montane mesic deciduous shrubland (306.994)	Medium
Whitebark pine (old growth)	Subalpine-montane pine woodland (306.819)	Low

Bird Conservation Plan Priorities	Ecological Systems	All-Bird Priority
Subalpine forest	Subalpine mesic spruce-fir forest and woodland (306.830)	Low
Juniper woodlands (except mature and old growth)	Western juniper woodland (304.771)	Low
Lodgepole pine	Lodgepole pine forest (306.820)	Low (BM,CP)
Alpine	Dry and mesic alpine dwarf-shrubland and meadow (204.862) Alpine ice field (300.728) Alpine bedrock and scree (306.809) Alpine Dwarf shrubland (306.810) Alpine fell-field (306.811) Dry tundra (306.816)	Low
Mesic agricultural fields	NA	Low
(Not identified)	Active and stabilized dunes (304.775)	Low
(Not identified)	Depressional bog (103.871)	Low
((Not identified)	Red fir forest and woodland (206.913)	Low
(Not identified)	Montane woodland and chaparral (206.925)	Low
(Not identified)	Badland (304.789)	Low
(Not identified)	Volcanic rock and cinder land (304.790)	Low
(Not identified)	Avalanche chute shrubland (306.801)	Low
(Not identified)	Subalpine montane fen (306.831)	Low

TABLE TWO – BIRD HABITAT CONSERVATION AREAS BY ECOREGION

EAST CASCADES (EC)

Wasco Oaks

Oak and oak-pine habitats extending from Columbia Gorge south along east side of Cascades to south through White River Wildlife Area to Warm Springs Reservation (PIF, OBP). Deschutes River Riparian. Riparian habitats along river corridor extending from Columbia River up to Pelton Dam; also includes lower reaches of Squaw Creek and Tumalo Creek (PIF).

Crooked River National Grassland / Lower Crooked River

Shrub steppe and grassland habitats with potential for restoration or enhancement on plateau southwest of Madras (PIF), as well as large alluvial floodplain of the lower Crooked River currently in flood-irrigated hay meadows with potential for restoration of cottonwood galleries below Bowman Dam, transitioning to deep canyon riparian habitat down to Round Butte Dam.

Metolius

Ponderosa pine forests with good restoration opportunities, along upper Metolius River (OBP).

Upper Deschutes

Some high quality wetlands, extensive opportunities for restoration of both wetland and riparian habitats; longer-term potential for ponderosa pine. Includes Davis, Crane and Wickiup lakes, Little Deschutes River, Crescent Creek, Big Marsh (JV, Waterbird, IBA).

Upper Klamath Wetlands

Extensive wetland systems; includes Upper Klamath Lake, Agency Lake and Wood River Valley; also extends north up Williamson River to include Klamath Marsh (JV, PIF, Waterbird, Shorebird, TNC, OBP, IBA).

Lower Klamath

Extensive historic wetland systems; includes Klamath River Floodplain, Langell-Poe-Swan Lake-Yonna valleys; includes Lower Klamath NWR and Klamath Wildlife Area (JV, Waterbird, Shorebird).

Klamath River Canyon

Oak habitats in canyon area extending downriver from John Boyle Reservoir to California border (PIF).

Sprague – Sycan

Includes Sprague River Valley and river corridor up to Sycan Marsh. Good potential for restoration of wet meadows, emergent marshes, riparian habitats in Sprague; large wetland system at Sycan Marsh, plus opportunities to restore conifer forest and riparian habitats (JV, Waterbird, TNC, OBP, IBA).

Warner Mountains

Ponderosa pine forests, aspen, wetlands, sagebrush; extends from Crane Mountain east of Lakeview north to Colvin Timbers (PIF, TNC, OBP).

COLUMBIA PLATEAU (CP)

Boardman Grasslands

Sagebrush steppe and grasslands extend from Boardman Bombing Range west across Nature Conservancy's Boardman Grasslands (former state Boeing lease lands) to BLM's Horn Butte holdings (PIF, TNC, OBP).

Lower Umatilla River

Restoration potential for riparian forests, wetlands, sagebrush steppe; includes Echo / Umatilla Meadows, Wanaket Wildlife Area (JV, OBP).

John Day River Riparian

Riparian habitats along river corridor extending from Columbia River to upper reaches of main stem, So. Fork, No. Fork, Middle Fork; also includes extensive canyon grasslands along lower mainstem (PIF).

Badlands

Extensive old growth juniper woodlands off Highway 20 southeast of Bend includes Badlands Wilderness Study Area (BLM) and extends northwest toward Redmond (PIF, TNC, OBP).

High Desert – South Fork Crooked River

Predominantly sagebrush steppe with scattered vernal pool / playa wetlands on high desert area extending south and east along Highway 20 from Millican to Glass Buttes and north through South Fork Crooked River, Twelvemile Creek, to Paulina (JV, OBP, BLM).

Paulina Marsh – Silver Lake

Wetlands in closed basin in northern Lake County (JV, Waterbird).

Summer Lake

Diverse wetland habitats; includes Summer Lake Wildlife Area (JV, Waterbird, Shorebird, TNC, OBP, IBA).

Chewaucan Marsh

Wetlands and flood-irrigated hay meadows on private lands along lower Chewaucan River southeast of Paisley (JV, Waterbird).

Lake Abert

Wetlands (JV, Waterbird, Shorebird, TNC, IBA).

Goose Lake

Wetlands, potential for large-scale restoration (JV, Waterbird, Shorebird, TNC).

Hart Mountain complex

Diverse landscape with relatively high ecological integrity encompasses wetlands, sagebrush steppe, grasslands, aspen, mountain mahogany habitats. Includes Warner Valley, Hart Mountain, High Lakes area, Guano Basin (JV, PIF, Waterbird, Shorebird, TNC, OBP).

Steens – Alvord

Diverse landscape with relatively high ecological integrity includes numerous high priority habitats, including sagebrush steppe, juniper woodlands, high-elevation grasslands, aspen, playa, riparian, and flood-irrigated pasture/hay meadows. Includes Steens Mountain, Catlow Valley, Pueblo Mtns and playa systems extending up east side from Pueblo Valley to Folly Farm (JV, PIF, TNC, OBP).

Trout Creek Mountains

Sagebrush, riparian, aspen, mountain mahogany habitats; includes Oregon Canyon Mountain (PIF, TNC, OBP, IBA).

West Little Owyhee

Sagebrush ecosystems with relatively high ecological integrity; includes mountain mahogany on Battle Mountain (PIF, TNC, OBP, IBA).

Harney Basin Wetlands

Diverse wetlands; includes Silvies River floodplain, Malheur NWR (Malheur and Harney Lakes; Silver Creek (Double O Unit); Blitzen Valley) (JV, PIF, Waterbird, Shorebird, TNC, OBP).

Bully Creek – Castle Rock

Sagebrush, aspen, mountain mahogany, ponderosa pine habitats (PIF, TNC, OBP).

Hoodoo – Cottonwood

High quality bunchgrass habitats on plateaus around Cottonwood Creek south of Highway 20 near Harper Junction in Malheur County (PIF).

BLUE MOUNTAINS (BM)

North Fork Crooked River

Ponderosa pine forests, potential for wetland restoration at Big Summit Prairie (JV, TNC).

Emigrant Creek – Silver Creek

Ponderosa pine forests and important riparian habitats on Malheur NF northwest of Burns (TNC).

Aldrich Mountains

Diverse habitats include grasslands, sagebrush, mountain mahogany, conifer forest, riparian; includes lower South Fork John Day and Murderers Creek (PIF, TNC, OBP).

Silvies – Bear Valleys

Wetlands, riparian habitats (JV, PIF, TNC, OBP).

King Mountain

Ponderosa pine forests; northeast of Burns on Malheur NF, includes Rattlesnake and Pine creeks (PIF, TNC).

Malheur Headwaters

Ponderosa pine and other conifer forests, wet meadows, riparian habitats; area extends east from Logan Valley to include Crane Creek, Monument Rock, Cottonwood Creek (PIF, JV, TNC, OBP).

Burnt River

Riparian and wetlands in valley downriver from Unity in Baker County (PIF, TNC).

Powder River

Wet meadows, wetlands, riparian (including some remnant cottonwood forest), and sagebrush habitats in Baker Valley and downstream along Powder River; includes extensive sagebrush habitat south to Durkee with significant sage grouse population at northern edge of range (JV, PIF, TNC, OBP).

Upper Grande Ronde

Emphasis on wetlands, riparian habitats, but also includes some ponderosa pine, montane meadows; includes Grande Ronde Valley, Ladd Marsh Wildlife Area, and corridor extending up river to Meadow, McCoy creeks (JV, PIF, TNC).

Wallowa Plateau and Canyons

Large, diverse landscape encompasses extensive grasslands, riparian and forest habitats; includes Wallowa Valley, Zumwalt Prairie, Imnaha River, Hells Canyon (PIF, TNC, OBP).

APPENDIX A – EASTERN OREGON CANDIDATE CONSERVATION AREAS

Site Name	Region	JV	PIF	Waterbird	Shorebird	TNC	OBP	IBA	Priority Habitats
Agency Lake	EC	X	X	X	X		X		wetlands
Aspen-Buck-Long-Round lakes	EC	X	X	X					wetlands
Badger Cr Wilderness	EC		X						mixed conifer; p-p/oak
Barnes Rim/Fishhole Lakes	EC		X						p-p; forested wetlands
Big Marsh	EC	*		X					wetlands
Crater Lake NP	EC		X						mixed conifer
Davis-Crane-Wickiup Lakes	EC	*		X				X	wetlands
Deep Creek - Big Valley	EC					X	X		p-p; wetlands
Gerber Reservoir	EC			X					wetlands
Klamath Canyon	EC		X						oaks
Klamath Marsh/Wildhorse Ridge	EC	X	X	X			X		wetlands; p-pine
Langell/Poe/Swan Lake Yonna valleys	EC	X		X					wetlands
Little Deschutes	EC	*		X					wetlands; p-pine
"Lower Klamath wetlands (incl Miller Is., Spring Lake Valley, Klamath R floodplain)"	EC	X		X	X				wetlands
Metolius	EC						X		p-pine
Mill Creek RNA	EC		X				X		p-pine, oak
Pelican Butte	EC		X						mixed conifer
Rock Creek (Mt Hood NF)	EC		X						p-pine
Sprague River Valley	EC	X							wetlands
Sycan Marsh	EC	X		X		*	X	X	wetlands
Upper Klamath Lake	EC	X	X	X	X	*	X	X	wetlands
Warm Springs Reservation	EC		X						oak; p-pine
White River LSR	EC		X						mixed conifer
White River WMA	EC	X							oak; oak-pine
Yamsay Mountain	EC		X						p-pine; mixed conifer
Alvord Basin	CP	X	X			X	X		wetlands
Antelope Creek (Malheur Co)	CP		X			?			riparian
Badlands	CP		X			X	X		juniper
Battle Mountain (Malheur Co)	CP		X					X	mountain mahogany

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN EASTERN OREGON

Site Name	Region	JV	PIF	Waterbird	Shorebird	TNC	OBP	IBA	Priority Habitats
Boardman Grasslands	CP		X			X	X		shrub steppe
Bully Creek (North/South Ridge)	CP		X				X		shrub steppe, aspen
Catlow Valley	CP	X	X						wetlands; shrub-steppe
Chewaucan Basin	CP	X		X					wetlands
Clarno-Pine Cr	CP					X	X		shrub steppe; riparian
Cold Springs/McKay NWRs	CP	*	X	X					wetlands
Crooked River Grasslands	CP		X						juniper steppe
Cow Lakes	CP	*	X	X					wetlands
Desert Playa Wetlands	CP	X		X					wetlands
Deschutes River & tribs	CP		X			X			riparian
Echo/Umatilla Meadows	CP	*					X		riparian / wetlands
Foster Flat RNA	CP	X	X			X			wetlands
Goose Lake Basin	CP	X		X	X	X			wetlands
Guano Basin	CP	X		X		X	X		wetlands; shrub-steppe
Hart Mountain NWR	CP		X			X	X		shrub steppe
Hawk Mountain	CP						X		shrub steppe
High Desert	CP								shrub steppe, vernal pools
High Lakes	CP						X		shrub steppe, wetlands
Hoodoo Ridge	CP		X						grasslands
The Island	CP		X						steppe
John Day R. (mainstem)	CP						X		riparian; shrub steppe
Jordan Valley	CP		X						shrub steppe
Lake Abert	CP	X		X	X	X		X	wetlands
Malheur NWR	CP	X	X	X	X	X	X		wetlands
Malheur NWR/Blitzen Valle	CP	X	X	X		X	X		wetlands
Malheur NWR/Mud Lake	CP	X	X			X	X		wetlands
N Fork Crooked River	CP					X			p-pine
North Warner Mountains	CP		X				X		p-pine
North Winter Rim	CP/EC		X				X		p-pine; mixed conifer
Oregon Canyon Mountains	CP		X			X	X	X	shrub steppe
Owyhee River	CP		X						riparian
Paulina - Beaver Creek	CP	*							wetlands
PGE w. of Crooked River	CP		X						shrub steppe
Pueblo Valley	CP	X	X			X			wetlands

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN EASTERN OREGON

Site Name	Region	JV	PIF	Waterbird	Shorebird	TNC	OBP	IBA	Priority Habitats
Sheepshead Mountains	CP		X			?	X		shrub steppe
Silver Creek Basin (Lake Co)	CP	X		X					wetlands
Silvies River floodplain	CP	X	X	X	X				wetlands
Snake River & Lower Owyhee	CP			X					riparian
Steens Mountain	CP		X			X	X		shrub steppe; aspen
Succor Creek	CP		X			X	X		riparian
Summer Lake Basin	CP	X		X	X	X	X	X	wetlands
Twelvemile (Crooked R)									"shrub steppe, wetlands"
Umatilla NWR	CP	*		X				X	wetlands
Umatilla River nr Gibbons	CP		X						riparian
Wanaket	CP	*	?	X			X		wetlands
Warner Valley	CP	X		X	X	X	X		wetlands
West Little Owyhee (Louse Cyn)	CP		X			X	X		shrub steppe
Willow Creek-Horn Butte	CP					X	X		shrub steppe
Aldrich Mountains	BM		X			X	X		mixed conifer
Balm Cr - Keating Valley	BM		X			X			riparian
Baker Valley	BM	*				X	X		wetlands
Battle Mountain State Park	BM		X						mixed conifer
Bear Valley	BM	X	X			X	X		wetlands
Bear Wallow Creek (Umatilla NF)	BM		X						mixed conifer
Big Summit Prairie	BM	*				X			wetlands
Bird Tracks - Spring ?(Grande Ronde River)	BM		X						riparian
Blue Mountain Summit	BM		X						mixed conifer
Burnt River Canyon	BM		X						riparian
Burnt River Valley	BM					X			wetlands
Castle Rock	BM		X			X	X		diverse
Clear Lake Ridge	BM	*	X			X	X		wetlands; grasslands
Cottonwood Creek (Malheur NF)	BM		X			X			p-pine
Crane Creek (Malheur NF)	BM		X			X	X		riparian
Eagle Creek Mouth (Baker Co)	BM		X						riparian
Emigrant Creek	BM					X			p-pine
Field Springs State Park	BM		X						?
Fish Lake	BM		X						mixed conifer

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN EASTERN OREGON

Site Name	Region	JV	PIF	Waterbird	Shorebird	TNC	OBP	IBA	Priority Habitats
Grande Ronde River / Cottonwood	BM		X			X			riparian
Grande Ronde Valley	BM	*				X			wetlands
Hells Canyon NRA	BM		X			X			mixed conifer
Idlewood CG (Malheur NF)	BM		X						p-pine
Indian Springs - High Lake	BM		X			X			mixed conifer
Izey-Paulina turnoff	BM		X						p-pine
King Mtn-Pine Cr-Rattlesnake Cr	BM		X			X			p-pine
Little Minam R	BM		X						mixed conifer
Logan Valley	BM	*				X	X		wetlands
Lower Baker City watershed	BM		X						p-pine
Lower Imnaha	BM		X			X	X		p-pine
Minam / oldgrowth PP(USFS)	BM		X						p-pine
Minam ODFW	BM		X						riparian
Monument Rock Wilderness	BM		X			X			mixed conifer
Mount Pisgah (Ochoco NF)	BM		X			X			mixed conifer
N Fork John Day @ Camas Creek	BM		X						riparian
N Fork John Day Wilderness	BM		X				X		mixed conifer
Pedro Mountain	BM		X						p-pine
Pine Cr to Oxbow Res (Snake R)	BM		X						riparian
Point Prominence (Wallowas)	BM		X						mixed conifer
Silver Creek (Malheur NF)	BM					X			p-pine
Silvies Valley	BM	X				X			wetlands
Skyline Drive (Tollgate to Bluewood)	BM		X						mixed conifer
S Fork John Day/Murderers Cr	BM					X	X		riparian
Starr Ridge (s of Canyon City)	BM		X						?
Strawberry Mountains	BM		X			X			mixed conifer
Swamp Creek	BM								riparian
Upper Eagle Creek	BM		X						mixed conifer
Upper Imnaha (Hells Cyn NRA)	BM		X			X	X		p-pine
Upper Umatilla River	BM		X				X		riparian
Wallowa R - Hurricane Creek	BM		X			X			riparian; wetlands
Wenaha-Tucannon Wilderness	BM		X						mixed conifer
Zumwalt Prairie	BM					X	X		grasslands

APPENDIX B - EASTERN OREGON PRIORITY BIRD SPECIES

Species	PIF focal	NAWCA	Waterbird	Shorebird	Fed ESA	BCC	Fed So C	State	BLM
Acorn Woodpecker							yes		
American Avocet		"BCR 9, 10"		priority		yes			
American Dipper		BCR 10							
American Golden Plover		"BCR 9, 10"							
American Peregrine Falcon						yes		E	yes
American White Pelican		BCR 9	high					V	yes
American Wigeon		priority							
Arctic Peregrine Falcon									yes
Ash-throated Flycatcher	"EC, CP"								
Bald Eagle					T			T	yes
Bank Swallow								U	yes
Barrow's Goldeneye								Ub	
Black Rosy Finch								P	yes
Black Swift		"BCR 9, 10"				yes			
Black Tern			high				yes		yes
Black-backed Woodpecker	EC							C	yes
Black-bellied Plover		BCR 9							
Black-chinned Hummingbird		BCR 9							
Black-crowned Night Heron			moderate						
Black-necked Stilt				priority					
Black-throated Sparrow	CP							P	yes
Blue Grouse	EC								
Bobolink	CP	BCR 10						V	yes
Boreal Owl								U	
Brewer's Sparrow	CP					yes			
Broad-tailed Hummingbird									yes
Brown Creeper	EC								
Bufflehead								Ub	yes
Bullock's Oriole	CP								
Burrowing Owl	CP					yes	yes	C	yes
Cackling Canada Goose		high							

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN EASTERN OREGON

Species	PIF focal	NAWCA	Waterbird	Shorebird	Fed ESA	BCC	Fed So C	State	BLM
Calliope Hummingbird		"BCR 9, 10"							
Canvasback		priority							
Chipping Sparrow	"BM, EC"								
Clark's Grebe			high						
Clark's Nutcracker	EC								
Columbian Sharp-tailed Grouse	CP						yes		
Common Loon			high						
Eared Grebe			high						
Ferruginous Hawk	CP					yes	yes	C	yes
Flammulated Owl	"BM, EC"					yes		C	yes
Forster's Tern			moderate						
Franklin's Gull			high					P	yes
Golden Eagle						yes			
Grasshopper Sparrow	CP							V (CB)	yes
Gray Flycatcher	CP								
Gray-crowned Rosy Finch	BM								yes
Great Gray Owl								V	yes
Greater Sage Grouse	CP					yes	yes	V	yes
Greater Sandhill Crane	EC	"BCR 9,10"	high (CVP)					V	yes
Hammond's Flycatcher		BCR 10							
Harlequin Duck								U	
Hermit Thrush	"BM, EC"								
Horned Grebe								P	yes
Lark Sparrow	CP								
Lazuli Bunting	CP								
Least Bittern			moderate						
Least Sandpiper				priority					
Lesser Sandhill Crane			high (PCP)						
Lesser Scaup		high							
Lewis's Woodpecker	all	"BCR 9, 10"				yes	yes	C	yes
Loggerhead Shrike	CP					yes		V	yes
Long-billed Curlew		"BCR 9, 10"		priority		yes		V	yes

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN EASTERN OREGON

Species	PIF focal	NAWCA	Waterbird	Shorebird	Fed ESA	BCC	Fed So C	State	BLM
Long-billed Dowitcher				priority					
MacGillivray's Warbler	BM	"BCR 9, 10"							
Mallard		high							
Marbled Godwit		"BCR 9, 10"		priority		yes			
Marsh Wren		BCR 9							
Mountain Quail							yes	U	yes
Nashville Warbler	EC								
Northern Goshawk							yes	C	yes
Northern Harrier		BCR 9							
Northern Pintail		high							
Northern Pygmy Owl								C	yes
Northern Rough-winged Swallow		BCR 10							
Northern Spotted Owl					T			T	
Northern Waterthrush									yes
Olive-sided Flycatcher	"BM EC"						yes	V	yes
Pacific Greater White-front Goose		priority							
Pileated Woodpecker								V	yes
Pine Grosbeak									yes
Prairie Falcon	CP					yes			
Purple Martin							yes	C	
Pygmy Nuthatch	EC					yes		C	yes
Red-eyed Vireo	BM								
Redhead		priority							
Red-naped Sapsucker	all	BCR 10				yes			
Red-necked Grebe								C	yes
Red-necked Phalarope				priority					
Ring-necked Duck		priority							
Sage Sparrow	CP					yes		C(CB)	yes
Sage Thrasher	CP								
Sanderling		"BCR 9, 10"				yes			
Short-eared Owl		"BCR 9, 10"							
Snowy Egret			high					V	yes

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN EASTERN OREGON

Species	PIF focal	NAWCA	Waterbird	Shorebird	Fed ESA	BCC	Fed So C	State	BLM
Solitary Sandpiper		BCR 9				yes			
Spruce Grouse								U	yes
Swainson's Hawk		BCR 10				yes		V	yes
Three-toed Woodpecker						yes		C	yes
Townsend's Warbler	BM								
Tricolored Blackbird		BCR 9				yes	yes	P	yes
Tule Greater White-fronted Goose		high							
Upland Sandpiper	BM					yes	yes	C	yes
Varied Thrush	BM								
Vaux's Swift	BM	BCR 10							
Veery	BM								
Vesper Sparrow	BM								
Virginia's Warbler						yes			
Western Grebe			high						
Western Least Bittern							yes	P	yes
Western Sandpiper				priority					
Western Snowy Plover		"BCR 9, 10"		priority		yes		T	yes
Whimbrel		"BCR 9, 10"				yes			
White-faced Ibis		BCR 9	moderate				yes		yes
White-headed Woodpecker	"BM, EC"					yes	yes	C	yes
Willet				priority					
Williamson's Sapsucker	EC					yes		U	yes
Willow Flycatcher	"CP, BM"	BCR 9					yes	U	yes
Wilson's Phalarope		"BCR 9, 10"		priority		yes			
Wood Duck		priority							
Wrangel Island Snow Goose		priority							
Yellow Rail		"BCR 9, 10"	high			yes	yes	C	yes
Yellow Warbler	CP								
Yellow-billed Cuckoo		BCR 9				yes	yes	C	yes
Yellow-breasted Chat	CP						yes		

APPENDIX C – SUMMARY OF HABITAT OBJECTIVES BY BHCA AND HABITAT TYPE

	Ponderosa Pine	Oak-Pine	Aspen	Juniper (o.g)	Mtn Mahogany	Cliff & Rimrock	Grassland	Sage steppe-Shrub	Playa / Vernal Pool	Pasture / Hay	Alkaline Wetlands	Emergent Marsh	Wet Meadow	Riparian Woodland	Riparian Shrub
Aldrich Mountains	30,000				x		20,000							500	300
Badlands				45,000											
Boardman Grasslands							15,000	55,000							
Bully Creek - Castle Rock			400		x	x		200,000							
Burnt River													5,000		500
Chewaucan Marsh										24,000		5,000	1,000		
Crooked RNG	1,000			5,000		x	20,000	50,000					1,000	100	1,000
Deschutes R				500		x						500	2,000	3,000	2,000
Emigrant Cr-Silver Cr	100,000														500
Goose Lake							500	500				5,000	10,000	500	200
Harney Basin							3,000	5,000	20,000	70,000	20,000	40,000	30,000		2,000
Hart Mountain			1,000		x	x		400,000	2,000	7,000	10,000	10,000	1,000		500
High Desert-SF Crooked								600,000	1,500	5,000		500	5,000		1,000
Hoodoo-Cottonwood								120,000							
John Day R	20,000					x							2,000	1,000	7,000
King Mountain	35,000		300		100										
Klamath R Canyon		5,000													
Lake Abert						x				2,000	35,000		-		
Lower Klamath										10,000		20,000			1,000
Lower Umatilla								10,000					1,000	500	600
Malheur Headwaters	15,000		200		x		9,000	2,000					2,000		200
Metolius	25,000														
N Fork Crooked R	32,000			2,500									7,000		5,000
Paulina Marsh-Silver Lake			50			x		2,000		20,000		3,000	1,000		
Powder River								100,000					10,000		600
Silvies-Bear Valley	2,000		200					1,000		20,000			10,000		500
Sprague-Sycan			500									15,000	25,000		1,000
Steens-Alvord			20,000		2,000	x		650,000	30,000	30,000	10,000	10,000	20,000		1,000
Summer Lake									2,000	3,000	20,000	7,000			50
Trout Creek Mountains			300		x	x		230,000							100
Upper Deschutes	7,000											4,000	30,000		10,000
Upper Grande Ronde												6,000	5,000	500	500
Upper Klamath			500							25,000		50,000	15,000		3,000
Wallowa Plateau & Canyon	15,000		500				300,000							1,000	1,000
Warner Mountains	90,000		2,000		x	x		25,000				100	3,000		1,000
Wasco Oaks		30,000													
West Little Owyhee					x	x		480,000							

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN EASTERN OREGON

	Ponderosa Pine	Oak-Pine	Aspen	Juniper (o.g)	Mtn Mahogany	Cliff & Rimrock	Grassland	Sage steppe-Shrub	Playa / Vernal Pool	Pasture / Hay	Alkaline Wetlands	Emergent Marsh	Wet Meadow	Riparian Woodland	Riparian Shrub
Totals	372,000	35,000	25,950	53,000	2,100		367,500	2,930,500	55,500	216,000	95,000	176,100	186,000	7,100	40,550
													Total:		4,562,300

APPENDIX D - SUMMARY OF HABITAT PRIORITIES AND CONSERVATION OBJECTIVES

Bird conservation plan priorities	Ecological systems	Bird Habitat Conservation Areas emphasized	Conservation Objective (acres)
Ponderosa pine	Ponderosa pine savanna (306.826) Ponderosa pine woodland (306.827) Ponderosa pine – Jeffrey pine forest and woodland (206.918)	Crooked River Natl Grassland/Lower Crooked Metolius Upper Deschutes Warner Mountains John Day Riparian N. Fork Crooked River Emigrant Cr –Silver Cr Aldrich Mountains Silvies-Bear Valley King Mountain Malheur Headwaters Wallowa	370,000
Oak-pine woodlands	Oak Woodland (204.852) Mixed oak evergreen woodland (206.923)	Wasco Oaks Klamath River Canyon	35,000
Aspen	Aspen forest and woodland (306.813)	Upper Klamath Sprague-Sycan Warner Mountains Paulina Marsh-Silver Lake Hart Mountain Steens-Alvord Trout Cr Mountains Bully Cr – Castle Rock Silvies-Bear Valley King Mountain Malheur Headwaters Wallowa	25,000

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN EASTERN OREGON

Bird conservation plan priorities	Ecological systems	Bird Habitat Conservation Areas emphasized	Conservation Objective (acres)
Juniper woodlands (mature and old growth)	Western juniper woodland (304.771)	Deschutes River Crooked River National Grasslands-Lower Crooked Badlands North Fork Crooked River	53,000
Mountain mahogany	Mountain mahogany woodland and shrubland (304.772)	Warner Mountains Hart Mountain Steens-Alvord Trout Creek Mtns West Little Owyhee Bully Creek- Castle Rock Aldrich Mountains King Mountain Malheur Headwaters	4,000
Cliffs and rimrock	Cliff and canyon (304.779)	Deschutes River Riparian Crooked River Grassland Warner Mountains John Day River Paulina Marsh-Silver Lake Lake Abert Hart Mountain Steens-Alvord Trout Creek Mountains West Little Owyhee Bully Creek-Castle Rock	0

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN EASTERN OREGON

Bird conservation plan priorities	Ecological systems	Bird Habitat Conservation Areas emphasized	Conservation Objective (acres)
Grasslands (Steppe)	Palouse prairie grassland (304.792) Montane grassland (306.836) Foothill and canyon dry grassland (304.993) Semi-desert grassland (304.787)	Crooked River Grassland Boardman Grasslands Goose Lake Harney Basin Aldrich Mountains Malheur Headwaters Wallowa Plateau & Canyons	365,000
Sagebrush (Sagebrush steppe-shrubland)	Big sagebrush steppe (304.778) Big sagebrush shrubland (304.777) Montane sagebrush steppe (304.785) Scabland Shrubland (304.770) Xeric mixed sagebrush shrubland (304.774) Semi-desert shrub steppe (304.788)	Crooked River Grasslands Warner Mountains Boardman Grasslands Lower Umatilla High Desert – South Fork Crooked Paulina Marsh-Silver Lake Goose Lake Hart Mountain Steens – Alvord Trout Creek Mountains West Little Owyhee Harney Basin Bully Creek – Castle Rock Hoodoo-Cottonwood Silvies-Bear Valley Malheur Headwaters Powder River	2,930,000
Playas and vernal pools	Playa (304.786) Vernal pools (204.996)	High Desert – Upper South Fork Crooked Summer Lake Hart Mountain Steens –Alvord Harney Basin	55,000

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN EASTERN OREGON

Bird conservation plan priorities	Ecological systems	Bird Habitat Conservation Areas emphasized	Conservation Objective (acres)
Flood-irrigated pasture & hay meadows	Alpine-montane wet meadow (306.812) Subalpine mesic meadow (306.829)	Upper Klamath, Lower Klamath High Desert-South Fork Crooked River Paulina Marsh-Silver Lake Summer Lake Chewaucan Marsh Lake Abert Hart Mountain Steens – Alvord Harney Basin Silvies-Bear Valley	215,000
Alkaline wetlands	Emergent marsh (300.729)	Summer Lake Lake Abert Hart Mountain Steens – Alvord Harney Basin	95,000
Emergent marsh	Emergent marsh (300.729) Depressional fen (103.872)	Deschutes River Upper Deschutes Upper Klamath Lower Klamath Sprague-Sycan Warner Mountains High Desert Paulina Marsh – Silver Lake Summer Lake Chewaucan Marsh Goose Lake Hart Mountain Steens-Alvord Harney Basin Upper Grande Ronde	175,000

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN EASTERN OREGON

Bird conservation plan priorities	Ecological systems	Bird Habitat Conservation Areas emphasized	Conservation Objective (acres)
Wet meadows	Alpine-montane wet meadow (306.812) Subalpine mesic meadow (306.829)	Deschutes River Crooked River Natl Grassland-Lower Crooked Upper Deschutes Upper Klamath Sprague-Sycan Warner Mountains Lower Umatilla John Day River High Desert-South Fork Crooked Paulina Marsh - Silver Lake Chewaucan Marsh Goose Lake Hart Mountain Steens-Alvord Harney Basin N Forked Crooked River Silvies-Bear Valley Malheur Headwaters Burnt River Powder River Upper Grande Ronde	185,000
Riparian woodland	Foothill riparian woodland and shrubland (304.768) (304.045) Lower montane riparian woodland and shrubland (306.804)(306.821) Subalpine-montane riparian woodland (306.833)	Deschutes River Crooked RG- Lower Crooked Lower Umatilla John Day River Goose Lake Aldrich Mountains Upper Grande Ronde Wallowa	7,000

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN EASTERN OREGON

Bird conservation plan priorities	Ecological systems	Bird Habitat Conservation Areas emphasized	Conservation Objective (acres)
Riparian shrub	Foothill riparian woodland and shrubland (304.768) Lower montane riparian woodland and shrubland Subalpine-montane riparian shrubland (306.832)	Deschutes River Crooked River Grasslands-Lower Crooked Upper Deschutes Upper Klamath Lower Klamath Sprague-Sycan Warner Mountains Lower Umatilla John Day River High Desert South Fork Crooked Summer Lake Goose Lake Hart Mountain Steens-Alvord Trout Creek Mountains Harney Basin N. Fork Crooked Emigrant-Silver Creek Aldrich Mountains Silvies-Bear Valley Malheur Headwaters Burnt River Powder River Upper Grande Ronde Wallowa	40,000
Total			4,554,000