

Mr Gary Casady

Mr. Carl Keller
Project Environmental Lead
P.O. Box 14428
Portland, OR 97293-4428

August 7, 2007

Dear Mr. Keller:

Thank you very much for the opportunity to comment on UPC Wind Management 's request to connect to the BPA 115kv The Dalles - Hood River transmission line as per NEPA requirements for an environmental analysis.

I am opposed to this connection simply because I firmly believe that siting the Cascade Wind Project in the location proposed on Seven Mile Hill is too great a cost on the environment for the gains realized in renewable energy generated.

Perhaps the dominant factor to consider regarding the environment is the habitat type within and surrounding the proposed Cascade Wind Project. (The site map submitted with the UPC application for Site certification shows that the substation, interconnection facility and O & M building are in the midst of forested area, even though this is, I think, land owned by GE.) The habitat is primarily a significant part of what both the ODFW Conservation Strategy of January 2006 and the Oregon Habitat Joint Venture for Bird Conservation in Eastern Oregon of 2005 have identified as Wasco Oaks.

Quoting from the journal "Oregon Habitat", Sept. 2004, "Oak Savanna is mostly in private hands, and is so threatened that 99% of it is now gone."

The Oregon Habitat Joint Venture for Bird Conservation in Eastern Oregon comprised of members representing US Fish and Wildlife Service, US Forest Service, ODFW, American Bird Conservancy, BLM, ODOT, Audubon Society, Natural Resources Conservation Service, and others gives Oak Woodland and particularly Wasco Oaks the highest priority for conservation and cites Lewis' woodpecker a resident of Wasco Oak habitat, as declining and thus listed as sensitive-critical. They recommend that existing White Oak habitat be maintained and enhanced.

The ODFW Oregon Conservation Strategy Jan. 2006 identifies Wasco Oaks as an important habitat type for as many as 200 species not mentioning numerous wildflowers, and plants some of which are species of concern. The area extends

from the Columbia River up through Mt. Hood National Forest. "This area contains over 80% of the areas limited oak habitat. The strategy recommends: 1) Limit development in oak habitats and 2) Maintain and restore oak woodlands.

Upon even a casual observation of this habitat type on Seven Mile Hill one notes that the oak woodlands there are like islands in the midst of open areas. Wildlife habitually moves back and forth from "island" to "island" in search of food and cover.

Of importance to the future of this habitat on Seven Mile Hill is the extent to which the Cascade Wind Project will permanently impact it. (The appendices and tables quoted below are from Exhibit P of UPC's application to the DOE for a Site Certificate.)

- Appendix C Land Cover and Wildlife Habitat within Two Miles of Cascade Wind Project in Exhibit P of the UPC application to DOE for a site certificate states that 60.5% of the area is forested (p. 62).
- Appendix P-2 Table 1 lists locations of turbines associated with various habitat types. This reveals that at least nine of the turbines are proposed to be sited within the oak forest.
- The application plan calls for 9.64 miles of new roads and 4.56 miles of improvements to existing roads. We are not yet shown where these will be, but it is certain that some of this 14.2 miles of road construction will occur in the oak woodland itself.
- Appendix P-4 Draft Revegetation Plan Table 1 shows that 32.02% of the forested area will be temporarily impacted and that 27.65% of the forested area will be permanently impacted. This plan further states, "A variety of environmental conditions in the study area make successful establishment of desirable plants in revegetation efforts a challenge. . . Competition with weeds for limited resources will also certainly be of concern with respect to the long-term success of the revegetation effort. In addition, meteorological concerns such as desiccation due to high winds and stochastic events in the area may further complicate the ability for desirable vegetation to establish properly."

I applaud UPC's efforts to help our earth by investing in renewable sources for our energy needs. However, given:

- 1) The importance of this habitat type for a plethora of species
- 2) The fact of this being home to several species of concern – Lewis woodpecker, Pileated woodpecker, mountain quail, several raptors, silver-haired hoary bat, Townsend bat, Mt Hood vetch, Nevius' onion to name some
- 3) The limited amount of this habitat type remaining
- 4) The classification of a substantial portion of the area as a sensitive wildlife area, namely big game winter range

- 5) The recommendation by every management and conservation group that knows anything about oak woodland that the remaining White Oak habitat be preserved and enhanced.

It seems clear that we should be working to preserve this limited habitat rather than facilitating development that will in fact destroy significant portions of it forever. It is insensitive at best to even think of siting an industrial wind energy generation facility where proposed. Seven Mile Hill is simply not the right location. I hope we all realize this sooner rather than later.

Selected pages from the cited sources are enclosed. URL's for those sources are:

<http://iwjv.org/IWJVImplemPlan2005.pdf>

http://www.dfw.state.or.us/conservationstrategy/document_pdf/b-eco_ec.pdf

I am also concerned with the cumulative effect of what seems to be an unending add-on of more and bigger wind generators within the Klondike Wind Regime and the resultant impact upon the environment and also on the energy system overall. Please review the **BPA Renewable Energy Technology Roadmap from BPA Technology Innovation Office Sept 2006 Section 2.3.1 pp. 19-24.**

Again, thank you for your serious consideration of these comments.

Respectfully,

/s/ Gary L. Casady

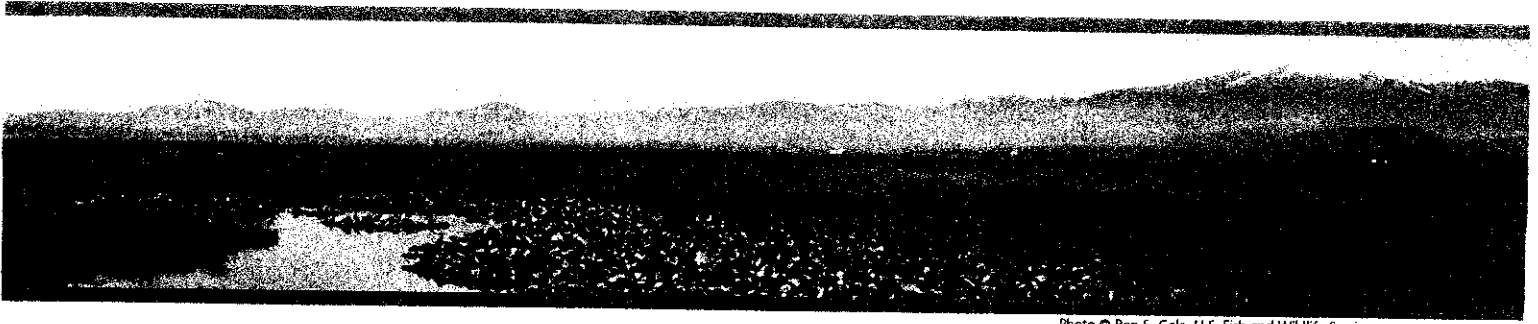


Photo © Ron S. Cole, U.S. Fish and Wildlife Services

East Cascades Ecoregion

Getting to Know the East Cascades Ecoregion

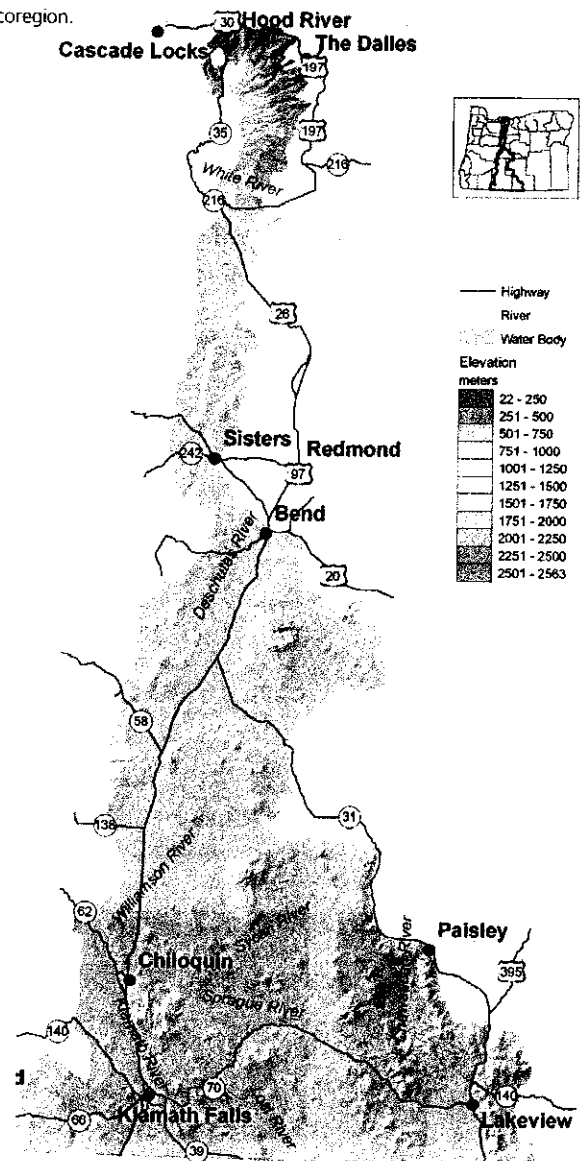
Characteristics

The East Cascades ecoregion extends from just east of the Cascade Mountains summit to the warmer, drier high desert to the east. Stretching the full north-to-south length of the state, the East Cascades is narrow at Columbia River but becomes wider toward the California border. This ecoregion varies dramatically from its cool, moist border with the West Cascades ecoregion to its dry eastern border, where it meets sagebrush country in some regions. The climate is generally dry, with wide variations in temperature. The East Cascades includes several peaks and ridges in the 6,000-7,000 foot range, but, overall, the slopes on the east side of the Cascade Mountain range are less steep and cut by fewer streams than the Western Cascade Ecoregion. The East Cascades' volcanic history is evident through numerous buttes, lava flows, craters, and lava caves, and in the extensive deep ash deposits created by the explosion of historical Mt. Mazama during the creation of Crater Lake.

Terrain ranges from forested uplands to marshes and agricultural fields at lower elevations. The northern two-thirds of the East Cascades ecoregion is drained by the Deschutes River, ultimately flowing into the Columbia. Most of the southern portion of the East Cascades ecoregion is drained by the Klamath River, with a small portion draining into Goose Lake, a closed basin. In general, the East Cascades is drier than the West Cascades, with fewer rivers flowing over the mountain slopes. However, the East Cascades is characterized by many lakes, reservoirs and marshes, providing exceptional habitat for aquatic species and wildlife closely associated with water, including waterbirds, amphibians, fish, aquatic plants and aquatic invertebrates. In fact, the East Cascades ecoregion supports some of the most remarkable aquatic biological diversity in the United States.

When compared to Oregon's other ecoregions, the East Cascades has the second-highest average income (the Willamette ecoregion supports the highest per-capita income). Much of this income is related to tour-

ism and recreation, with forestry and agriculture also important components. Towns include Bend, Klamath Falls, Lakeview, and Hood River; many of these towns are experiencing rapid population growth. Most of the Warm Springs Indian Reservation is found in the East Cascades ecoregion.



"At a Glance"-- Characteristics and Statistics**Land use (% of ecoregion):**

Agriculture	3.5%
Forest and woodland	67%
Other (lakes, wetlands, cliffs, etc.)	11.6%
Range, pasture, and grassland	17.1%
Towns and rural residential	0.5%
Urban and suburban	0.2%

Land ownership:

Private	39%
Public, federal	59%
Public, state and local	<1%
Native American	<2%

Human population, government and transportation statistics:

Estimated population in 2000	140,000
% of Oregon's population in 2000	4.1%
Number of cities	11
Number of counties	7
<i>(includes parts of Deschutes, Hood River, Jackson, Jefferson, Klamath, Lake, Wasco counties.)</i>	
Number of watershed councils	18
<i>(A watershed council is considered present if at least 10% of its area is located within the ecoregion.)</i>	
Miles of road (approx.)	36,709

Economics:

Important industries: Recreation (tourism and hospitality); lumber and wood; agriculture

Major crops: Fruit (Hood River valley); wood; potatoes, onions, barley (Klamath basin), alfalfa and cattle (Lake County)

Important nature-based recreational areas: Klamath Marsh; Goose Lake; Newberry Crater National Monument; high Cascade lakes along Century Drive; Pine Mountain; Warner Mountains; Wilderness Areas (Gearhart, Badger Creek); Metolius and Deschutes subbasins

Ecology:

Average annual precipitation (1971-2000)	9.8" -89.6 " (snowfall 19.7" -420 ")
Average July high temperature (1971-2000)	92°F -104°F
Average January low temperature(1971-2000)	-20°F -10°F
Elevation	ranges from 70 feet above sea level (in the Columbia River Gorge area) to over 7,700 feet (peaks in the eastern portion of the ecoregion)
Number of regularly occurring vertebrate wildlife species	390
Important rivers	Deschutes, Hood, Klamath, Metolius, Link, Williamson, Sycan, and Sprague

Information Sources: Oregon Blue Book (2003-04), Oregon Climate Service data (1971-2000), Oregon State of the Environment Report (2000), Oregon Watershed Enhancement Board (2001), Oregon Wildlife Diversity Plan (1993), U.S. Census Bureau (2000).

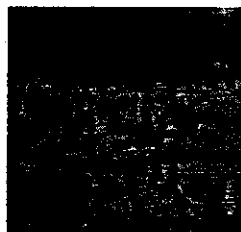
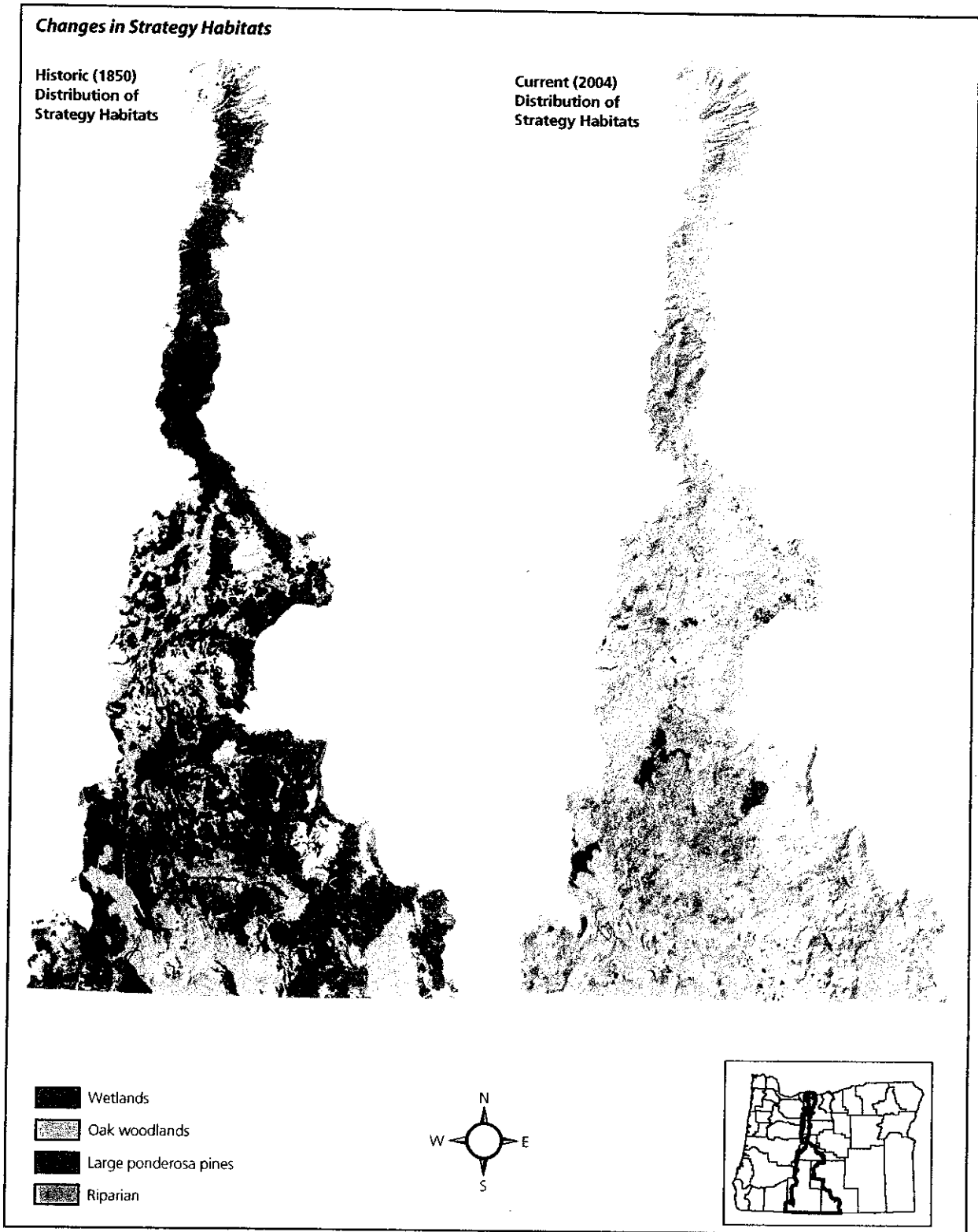


Photo © Tupper Ansel Blake

Summary List of Strategy Habitats

Strategy Habitats in the East Cascades ecoregion include ponderosa pine woodlands, oak woodlands, riparian, wetlands, and aquatic habitats.



Source: Oregon Natural Heritage Information Center, 2004.

Conservation Issues and Actions

Overview

Habitats of the East Cascades ecoregion present much variation, from sagebrush flats to alpine fields. The conservation issues are similarly diverse, as well as complex. Timber harvest practices, grazing and fire suppression have altered the distribution and structure of much of the ecoregion's historic ponderosa pine forests and oak woodlands, and many riparian and wetland habitats have been degraded. Rapidly expanding urban and rural residential development is another major emerging conservation issue, resulting in development within ripar-

ian zones, the loss of big game winter range, and water diversions to support development. Along with this development, Highway 97 traffic volume continues to increase, creating a major barrier to wildlife movement. Lastly, a high percentage of wetlands have been converted in the Klamath Basin and water continues to be complex and challenging issue in the area.

Ecoregion-level limiting factors and recommended approaches

All six of the key conservation issues apply statewide, as do the approaches outlined in the Statewide Perspectives and Approaches chap-

Summary List of Strategy Species

Mammals

American marten
California myotis (bat)
Fringed myotis (bat)
Hoary bat
Long-legged myotis (bat)
Pallid bat
Silver-haired bat
Townsend's big-eared bat

Amphibians & Reptiles

Cascades frog
Oregon spotted frog
Western toad
Northwestern pond turtle
Western painted turtle

Birds

American three-toed woodpecker
Barrow's goldeneye
Black-backed woodpecker
Bufflehead
Flammulated owl
Great gray owl
Greater sandhill crane
Lewis' woodpecker
Northern goshawk
Olive-sided flycatcher
Red-necked grebe
White-headed woodpecker
Yellow rail

Plants

Applegate's milk-vetch
Dalles Mountain buttercup
Oregon semaphore grass
Peck's milk-vetch
Pumice grape-fern

Invertebrates

Evening fieldslug
Montane peaclam
Aquatic snails:
Turban pebblesnail
Scalloped juga
Scale lanx
Archimedes springsnail
Dall's ramshorn
Lined ramshorn
Klamath ramshorn
Sinitzin ramshorn
Siskiyou Hesperian
Crater Lake tightcoil
Great Basin ramshorn
Highcap lanx

Fish

Bull trout (Columbia Distinct Population Segment [DPS])
Bull trout (Klamath population)
Chinook salmon (Lower Columbia River ESU, spring run)
Chinook salmon (Lower Columbia River ESU, fall run)
Chinook salmon (Snake ESU, spring/summer run)

Fish Cont.

Chinook salmon (Snake ESU, fall run)
Coastal cutthroat trout (Southwest Washington Columbia River ESU)
Coho salmon (Lower Columbia /Southwest Washington Coast ESU)
Goose Lake lamprey
Goose Lake sucker
Goose Lake tui chub
Inland Columbia Basin redband trout
Jenny Creek sucker (= Jenny Creek population of Klamath smallscale sucker)
Lost River sucker
Miller Lake lamprey
Modoc sucker
Oregon Basin redband trout (Goose Lake SMU)
Oregon Basins redband trout (Jenny Creek redband trout)
Pacific lamprey
Pit-Klamath brook lamprey
Shortnose sucker
Slender sculpin
Steelhead (Lower Columbia River ESU, summer run)
Steelhead (Lower Columbia River ESU, winter run)
Steelhead (Middle Columbia River ESU, summer run)
Steelhead (Middle Columbia River ESU, winter run)
Steelhead (Snake River Basin ESU)
Upper Klamath Lake lamprey
Western brook lamprey

ter. However, invasive species, altered disturbance regimes and land use changes are described further in this section, considering the East Cascades ecoregional characteristics. In addition to the statewide issues, habitat fragmentation and increasing recreational use is of concern in this ecoregion.

Factor: Altered fire regimes. Past forest practices and fire suppression have resulted in young, dense mixed-species stands where open, park-like stands of ponderosa pine once dominated. These mixed conifer forests are at increased risk of forest-destroying crown fires, disease, and damage by insects. Shading from encroaching trees and fire suppression has reduced the vigor of shrubs, particularly bitterbrush, an important forage plant for mule deer. Efforts to reduce fire danger and improve forest health may help restore habitats but require careful planning to provide sufficient habitat features that are important to wildlife (e.g., snags, down logs, hiding cover for big game.) Similarly, wildfire reforestation efforts should be carefully planned to create stands with tree diversity, understory vegetation and natural forest openings.

Increasing home and resort development in forested habitats makes prescribed fire difficult in some areas and increases risk of high-cost wildfires. Although many urban-interface “fire proofing” measures can be implemented with minimal effects to wildlife habitat, some poorly-planned efforts have unintentionally and unnecessarily harmed habitat.

Approach: Use an integrated approach to forest health issues that considers historic conditions, wildlife conservation, natural fire intervals, and silvicultural techniques. Evaluate individual stands to determine site appropriate actions, such as monitoring in healthy stands or thinning, mowing, and prescribed fire in at-risk stands. Where appropriate, thin smaller trees in the understory and develop markets for small-diameter trees.

Implement fuel reduction projects to reduce the risk of forest-destroying wildfires, considering site-specific conditions and goals. Fuel reduction strategies need to consider the habitat structures that are needed by wildlife, such as snags and down logs, and make an effort to maintain them at a level to sustain wood-dependent species. For example, design frequency and scale of prescribed fire to maintain and allow establishment of native shrubs. However, lower log and shrub densities may be desirable in priority white-headed woodpecker areas, so sites need to be evaluated for appropriate understory vegetation management. Maintain areas of multi-species, dense woody plant hiding cover in patches.

Monitor forest health initiatives efforts and use adaptive management techniques to ensure efforts are meeting habitat restoration and forest-destroying fire prevention objectives with minimal impacts on wildlife.

Work with homeowners and resort operators to reduce vulnerability of properties to wildfires while maintaining habitat quality. Highlight successful, environmentally sensitive fuel management programs.

In the case of wildfires, maintain high snag densities and replant with native tree, shrub, grass, and forb species. Manage reforestation after wildfire to create species and structural diversity, based on local management goals.

Factor: Land use conversion and urbanization. The East Cascades ecoregion includes some of the fastest growing areas of the state (e.g., Bend, Klamath Falls, Hood River). Rapid urban and rural residential development contributes to habitat loss, and can threaten traditional land uses such as agriculture and forestry. Urban and rural residential development also can fragment habitat into small patches, isolating wildlife populations. Increasing traffic volumes and road density associated with development creates barriers to animal movements, especially along Highway 97. Residential development is increasing in sensitive habitats such as wetlands, riparian areas, and close to cliffs and rims where raptors nest.

Approach: Cooperative approaches with both large and small private landowners are critical. Work with community leaders and agency partners to encourage planned, efficient growth. Support existing land use regulations to preserve forestland, farmland and rangeland; open spaces; recreation areas; wildlife refuges; and natural habitats. Work with community leaders and agency partners to identify wildlife movement corridors and to fund and implement site-appropriate mitigation measures such as drift fences to overpasses or underpasses. In forested habitats, maintain vegetation to provide screening along open roads, prioritize roads for closure based on transportation needs and wildlife goals, and/or manage road use during critical periods.

Factor: Habitat fragmentation. In non-forested areas, habitats for at-risk native plants and some animal species are largely confined to small and often isolated fragments such as roadsides and sloughs. Opportunities for large-scale protection or restoration of native landscapes are limited, particularly in the Klamath Basin. Existing land use and land ownership patterns presents challenges to large-scale ecosystem restoration.

Invasive Non-native Species

Invasive species currently are considered to be one of the primary causes of species becoming threatened and endangered, second only to habitat conversion. Many species are as threatening to people's livelihoods as they are to fish and wildlife and their habitats. This section identifies the species with the greatest current and potential impact in the East Cascades Ecoregion. They were determined through an analysis of Oregon Department of Agriculture's Noxious Weed List, ODFW's Wildlife Integrity Rules, ODFW's Introduced Fish Management Strategies report, information from Portland State University Center for Lakes and Reservoirs, and local expert review. Although some of these species also cause significant economic damage to farms, ranches, and managed forests, this list is focused on those that cause the most severe ecological damage. Impacts from introduced game fish vary from species to species and within ecoregions. As a result, the impacts need to be evaluated more locally (ODFW Introduced Fish Management Strategies Report).

Known invasive non-native animal and plant species		Non-native animals and plants of potential concern	
<p>These species are established or documented in this ecoregion, and are known to impact native fish and wildlife populations and habitats. They may range from small, controllable populations to widespread infestations.</p>		<p>Preventing the establishment of invasive non-native species is far more cost-effective and practical than trying to eradicate them once they are established. To make the best use of financial and personnel resources, prevention efforts need to be prioritized to address the greatest threats, especially since many non-native species do not pose a significant threat to wildlife populations and habitats. Potentially harmful non-native species can be identified by examining biological factors, potential impacts and invasion patterns in similar climates. The species listed here are included because: 1) they are not known to occur in this ecoregion, but could pose a threat to fish and wildlife populations and habitats if they become established; or 2) they are known to occur in this ecoregion but the extent to which they impact native species and disrupt ecological processes is unclear at this time.</p>	
Documented Invasive Animals	Documented Invasive Plants	Potentially Invasive Non-native Animals	Potentially Invasive Non-native Plants
Alligator gar Atlantic salmon Bluegill Brook trout Brown bullhead Brown trout Bullfrog Carp Channel catfish Crappie Crayfish (eastern) European starling Fathead minnow Feral pig Golden shiner Goldfish House sparrow Hybrid bass Lake trout Largemouth bass Mosquito fish (<i>Gambusia</i>) Mute swan Norway rat Nutria Red eared slider Virginia opossum Walleye Yellow perch	Armenian (Himalayan) blackberry Canada thistle Cheatgrass Curly leaf pondweed (aquatic) Dalmation toadflax Diffuse knapweed Dyers woad False brome Leafy spurge Matgrass Musk thistle Orange hawkweed Perennial pepperweed Purple knapweed Quackgrass Reed canarygrass Rush skeletonweed Scotch thistle Spotted knapweed Squarrose knapweed St. John's wort Tansy ragwort Whitetop Yellow flag iris (aquatic) Yellow starthistle	Asian carp (bighead, silver) Black carp Feral goat Muskelluge, northern pike New Zealand mud snail Round goby Ruffe Rusty crayfish Sacramento perch Smallmouth bass Snakeheads Zebra mussel	Common toadflax Knotweeds (Japanese, giant) Ovate goatgrass Patterson's curse Puncture vine Purple loosestrife Russian knapweed Syrian bean caper Tansy ragwort Texas blueweed Tree of Heaven

Approach: Broad-scale conservation strategies will need to focus on restoring and maintaining natural ecosystem processes and functions within landscapes that are often managed for other values. This may include an emphasis on more “conservation-friendly” management techniques for existing land uses and restoration of some key ecosystem components such as riparian function.

Factor: Invasive species. Non-native plant and animal invasions disrupt native communities, diminish populations of at-risk native species, and threaten the economic productivity of resource lands.

Approach: Emphasize prevention, risk assessment, early detection and quick control to prevent new invasives from becoming fully established. Use multiple-site appropriate tools (mechanical, chemical and biological) to control the most damaging invasive species. Prioritize efforts to focus on key invasive species in high priority areas, particularly where Strategy Habitats and Species occur. Promote the use of native “local” stock for restoration and revegetation.

Factor: Increasing recreational use. Increasing recreational use can impact wildlife directly (e.g., mortality from off-highway vehicles) or indirectly (e.g., new road construction interferes with migration pathways). Increasing numbers of recreationalists, including mountain bicyclists and rock climbers, can impact sensitive areas.

Approach: Increase education and outreach for recreationalists and associated businesses. Where needed, direct activities to particular seasons or away from sensitive habitat.

Factor: Water distribution in arid areas and wildlife entrapment in water developments. In arid areas, water availability can limit animal distribution. Water developments established for cattle, deer, and elk can significantly benefit birds, bats, and small mammals as well. However, some types of these facilities, particularly water developments for livestock, can have unintentional hazards. These hazards include over-hanging wires that act as trip lines for bats, steep side walls that act as entrapments under low water conditions, or unstable perches that cause animals to fall into the water. If an escape ramp is not provided, small animals cannot escape and will drown.

Approach: Continue current efforts to provide water for wildlife in arid areas. Continue current design of big game “guzzlers” that accommodate a variety species and retrofit older models where appropriate to make them compatible with newer design standards. Use and maintain escape devices on water developments where animals can become trapped. Remove obstacles that could be hazardous to wildlife from existing developments.

Collaborative Conservation Story: Klamath water crisis and the Klamath Basin Rangeland Trust

Conflict over water brought national attention to the Klamath Basin in 2001, when the U.S. Bureau of Reclamation discontinued irrigation water to more than 1300 farms and ranches to protect endangered fish. OSU researchers estimate the lost revenue at approximately \$157 million in agricultural sales, and more than \$79 million in additional reduced employment, income, and property value. The climate of economic uncertainty affected communities, including social service agencies, schools, and local businesses. Following the conflict, multiple conservation and community partners have been working to implement mutually beneficial solutions to the water crisis. One example is the Klamath Basin Rangeland Trust.

Created in response to the water crisis, the KBRT works to provide more water for both farmers and fish by conserving irrigation water in the Upper Klamath Basin and Wood River Valley. Examples of how the KBRT achieves these objectives are by pursuing methods to manage cattle grazing in a manner that improves water quality and also requires less water for irrigation. The KBRT also pioneered a market-based approach to conserve water that could otherwise be directed toward irrigation, to instead go to fish habitat.

In 2002, KBRT started a project to evaluate the Wood River Valley, which provides much of the water flowing into Upper Klamath Lake. Ecological assessments using state-of-the-art Geographic Information Systems technology identified specific locations for stream flows and irrigation diversions. Results emphasized a need to improve water quality and provide fish and wildlife habitat, recognizing that water quality and quantity are interrelated.

To address these goals, the KBRT works in collaboration with many additional partners and planning efforts, including the USDA-NRCS, Klamath River Basin fisheries task force, Upper Klamath working group, USFWS recovery planning for listed species, groundwater management plans, and water quality plans (i.e., ODEQ’s Total Maximum Daily Load planning for temperature and nutrient loads in the Upper Klamath Lake and its tributaries).

Continuing the momentum, the federal budget for 2005 provides increased funding for the Klamath, emphasizing the need for collaborative on-the-ground partnerships. In fact, James Connaughton, chairman of the White House Council on Environmental Quality, stated that the budget commitment to the Klamath Basin reflects a federal commitment for agencies to “...encourage stakeholders to take voluntary measures that benefit the fish.”

Conservation actions in the East Cascade ecoregion identified through other planning efforts

Landowners and land managers can benefit a variety of fish and wildlife species by managing and restoring Strategy Habitats. The following recommendations are relevant to Strategy habitats They were identified through a review of existing plans.

Actions	Strategy Habitat and General Location	Source Document
In partnership with private and public landowners, restore/maintain at least 30% of the potential vegetation of large landscape units (e.g., watersheds or greater) in late-successional habitat suitable for white-headed woodpecker	East-slope Cascades ecoregion	OR-WA Partners in Flight – East-slope Cascades Conservation Strategy (Altman 2000) [recommended target: more than 30% late-successional forest, with a minimum of three patches more than 5,000 acres]
In partnership with private and public landowners, maintain "high-quality old-growth" ponderosa pine woodlands in conservation status	Metolius	Eastside All-Bird Implementation Plan (Ivey 2000) [recommended target: 25,000 acres]
Use plantings and restoration to enhance patch size and connectivity and to reduce fragmentation of oak and oak-pine woodlands	East Cascades ecoregion	OR-WA Partners in Flight – East-slope Cascades Conservation Strategy (Altman 2000)
Maintain high quality oak and oak-pine woodlands in tracts more than 100 ac in a mosaic of habitat conditions	East Cascades ecoregion	OR-WA Partners in Flight – East-slope Cascades Conservation Strategy (Altman 2000) [recommended target: tracts more than 100 ac]
Work in partnership with private landowners to maintain oak woodlands in conservation status	Wasco Oaks Klamath River Canyon	Eastside All-Bird Implementation Plan (Ivey 2000) [recommended targets: Wasco Oaks 30,000 ac; Klamath River Canyon 5,000 ac]
In partnership with landowners, maintain emergent wetland habitats in conservation status	Upper Klamath Lower Klamath Sprague/Sycan Goose Lake	Eastside All-Bird Implementation Plan (Ivey 2000) [recommended targets: Wasco Oaks 30,000 ac; Klamath River Canyon 5,000 ac]
In partnership with landowners, maintain wet meadow habitats in conservation status	Upper Deschutes Upper Klamath Lower Klamath Sprague/Sycan Goose Lake	Eastside All-Bird Implementation Plan (Ivey 2000) [recommended targets: Upper Klamath 50,000 ac; Lower Klamath 20,000 ac; Sprague/Sycan 15,000 ac; Goose Lake 5,000 ac]
In partnership with private and public landowners, manage and restore riparian shrub habitats	Deschutes River Upper Deschutes River Upper Klamath River Lower Klamath River Sprague/Sycan Rivers Goose Lake	Eastside All-Bird Implementation Plan (Ivey 2000) [recommended targets: Upper Deschutes 15,000 ac; Upper Klamath 40,000 ac; Lower Klamath 10,000 ac; Sprague/Sycan 25,000 ac; Goose Lake 10,000 ac]
In partnership with private and public landowners, manage and restore riparian woodland habitats	Goose Lake	Eastside All-Bird Implementation Plan (Ivey 2000) [recommended target: 500 ac]
Consider the impact of recreational activities (e.g., motorized watercraft; shoreline activities; road usage) on watersheds and water quality	All locations (as appropriate); particular concern in Hood River and Deschutes River areas	State of the Environment Report; Oregon Plan (OWEB)
Focus conservation attention on critical aquatic habitats identified via American Fisheries Society and other standards	Upper Klamath and Agency Lakes; Wood River valley; Williamson River; Metolius River; Sprague and Chewaucan rivers; other locations as identified.	Oregon Biodiversity Plan
Improve fish passage. For example, modify barriers or use spans where appropriate. Providing passage around dams might benefit other wildlife (frogs, salamanders, reptiles, mammals)	All locations (as appropriate); particular concern for Klamath River and its tributaries (Scott, Shasta and Trinity River sub-basins); Chewaucan River	NWPCC Subbasin Plans, 2004; State of the Environment Report; Oregon Biodiversity Project; Oregon Plan (OWEB)
Habitat restoration and habitat likely to benefit several species (including redband trout, Modoc sucker, Pit-Klamath lamprey, Goose Lake lamprey, California pit roach, Goose Lake tui chub)	Thomas Creek (tributary of Klamath River)	ODFW; USFWS
Improve monitoring for irrigation projects; Continue work on basin-wide water conservation plan	Klamath basin. Innovative GIS methodologies developed to assist in locating areas of concern for water flow and monitoring.	Klamath Basin Rangeland Trust

Actions	Strategy Habitat and General Location	Source Document
Modify practices in forests and agriculture to meet large wood levels, reduce sediment, and continue to prevent warming.	All locations (as appropriate)	NWPPCC Subbasin Plans; Oregon Plan (OWEB)
Establish integrated framework for wetland restoration assessment, priority setting, and actions at three scales: watersheds, ecoregions and project sites	Wetlands	Recommendations for a nonregulatory wetland restoration program for Oregon. J.W. Good and C.B. Sawyer. 1998. Prepared for Oregon Division of State Lands and U.S. EPA Region X.
Increase incentives for proactive, nonregulatory wetland restoration and enhancement on private land, focusing on a combination of financial assistance, tax benefits, technical assistance, and education	Wetlands	Recommendations for a nonregulatory wetland restoration program for Oregon. J.W. Good and C.B. Sawyer. 1998. Prepared for Oregon Division of State Lands and U.S. EPA Region X.
Maintain or enhance in-channel watershed function, connection to riparian habitat, flow and hydrology. <ul style="list-style-type: none"> - Plant vegetation to stabilize banks; leaving stumps, fallen trees and boulders in waterways - Maintain or enhance off channel or side channel meanders, habitat and pools 	Aquatic habitats (streams, pools)	Oregon Aquatic habitat restoration and enhancement guide. The Oregon Plan for Salmon and Watersheds May 1999. See <i>guide for specific technical recommendations, sources of information and assistance, and other guidelines.</i>
Maintain riparian and wetlands function: <ul style="list-style-type: none"> - Manage grazing, riparian vegetation planting and fencing, and livestock water facilities according to best practices, current techniques and with respect to natural hydrological conditions. 	Riparian and wetlands habitats	Oregon Aquatic habitat restoration and enhancement guide. The Oregon Plan for Salmon and Watersheds May 1999. See <i>guide for specific technical recommendations</i>
Upslope erosion control: <ul style="list-style-type: none"> - Create water and sediment control basins to contain runoff, wastewater - Use windbreaks (tree and shrub rows - using native plants) to reduce erosion and deposition - Upland terracing 	Aquatics, riparian and wetland habitats	Oregon Aquatic habitat restoration and enhancement guide. The Oregon Plan for Salmon and Watersheds May 1999. See <i>guide for specific technical recommendations</i>

*Note: Conservation Strategy monitoring indicators, linked with OSOER Key indicators, targets, and methods, will be identified in a statewide approach (See Monitoring chapter for more information).



To implement these goals, organizations like the NRCS and the KBRT work to identify landowner needs and provide essential assistance in planning and implementation. In the Klamath Basin, NRCS has held workshops on conservation and the Farm Bill with more than 250 attendees, provided newsletters and brochures to answer common questions, and provided technical assistance to numerous individuals interested in improving watershed management and enhancing conservation buffers.

The KBRT is continuing restoration work with several ongoing projects that restore habitat to benefit many species. For example, a project to restore hydrological function to Crane Creek will provide critical habitat for bull trout, and support shortnose sucker, Lost River, yellow rail and Oregon spotted frog. Guiding all of this work is the continuing goal of ensuring reliable water supply for both agriculture and the environment.

Deciding Where to Work

Conservation Opportunity Areas Map and Profiles

Landowners and land managers throughout Oregon can contribute to conserving wildlife by maintaining, restoring, and improving habitats. Conservation actions to benefit Strategy Species and Habitats are important regardless of location. However, focusing investments in

certain priority areas can increase likelihood of long-term success over larger landscapes, improve funding efficiency, and promote cooperative efforts across ownership boundaries. Conservation Opportunity Areas (COAs) are landscapes where broad wildlife conservation goals would be best met. COAs were developed to guide voluntary, non-regulatory actions. This map and the associated data should only be used in ways consistent with these intentions. For more information on how COAs were developed, see the Appendix IV, "Methods" (beginning on page a.34).

The COA Profiles include information on recommended conservation actions, special features, key species, key habitats, and if the area has been identified as a priority by other planning efforts. These profiles highlight some priority actions to implement in individual COAs, which can range from restoration projects to monitoring for invasive species. These recommendations were identified through existing plans, spatial analysis, and expert review. They are not meant to be exhaustive, so other actions will also be appropriate, as influenced by local site characteristics and management goals. Actions need to be compatible with local comprehensive plan and ordinance requirements and other state, federal and local laws. Actions on federal lands must go through the federal planning process and be consistent with the requirements of federal land management plans.



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Conservation Opportunity Area Profiles

EC-01. Hood River

Special Features:

- *The Hood River Watershed Action group has completed conservation projects throughout the Hood River Watershed. Additionally, they have developed a prioritized list of proposed projects for fish passage, water quality enhancement, stream flow restoration, habitat restoration and protection, and education.*

Key Habitats:

- Aquatic
- Riparian

Key Species:

- Riparian Birds
- Bull Trout
- Coastal Cutthroat Trout
- Coho Salmon
- Fall Chinook Salmon
- Summer Steelhead
- Winter Steelhead

Identified in other planning efforts:

- Interior Columbia Basin Ecosystem Management Project (plant endemism area)

EC-02. Wasco Oaks

Extends from the Columbia River up through the Mt. Hood National Forest

Special Features:

- *Area contains the ODFW White River Wildlife Management Area.*
- *Area provides winter range for mule deer.*
- *This area contains over 80% of the ecoregion's limited oak habitat*

Key Habitats:

- Oak Woodlands

Key Species:

- Lewis' Woodpecker
- Coastal Cutthroat Trout
- Winter Steelhead

Identified in other planning efforts:

- American Fisheries Society Aquatic Diversity Areas
- Eastern Oregon Bird Conservation Plan

- Oregon Biodiversity Project Conservation Opportunity Areas (North Wasco County)

Recommended Conservation Actions:

- Limit development in oak habitats
- Maintain and restore oak woodlands

EC-03. Warm Springs River

Special Features:

- *Naturally spawning spring chinook*

Key Habitats:

- Aquatic
- Oak Woodlands
- Riparian
- Wetlands

Key Species:

- Olive-sided Flycatcher
- Bull Trout
- Summer Steelhead

Identified in other planning efforts:

- American Fisheries Society Aquatic Diversity Areas

EC-04. Metolius River area

Area includes the Metolius River basin, Green Ridge, and the valley east of Green Ridge; it extends north to encompass the Whitewater River and south into the Mount Washington Wilderness.

Special Features:

- *The Metolius is a designated Wild and Scenic River with outstanding natural resource values*
- *Green Ridge is an important corridor for migrating raptors*
- *Various butterfly species located in the Prairie Farm Creek area*
- *Includes some of region's highest quality ponderosa pine forests*
- *Deschutes Basin Land Trust purchased 1,200+ acres (2004) to protect largest private landholding in the Metolius basin from development.*
- *Winter range habitat for mule deer.*

Key Habitats:

- Ponderosa Pine Woodlands
- Riparian

Key Species:

- Raptors
- White-headed Woodpecker
- Bull Trout
- Wolverine

Intermountain West Joint Venture

Coordinated Bird Conservation Plan

Version 1.0



September 2005

III. Joint Venture Partner Accomplishments (1994-2004)

Well over 360 partners have come together to accomplish bird conservation in a voluntary and non-regulatory fashion in the first ten years of the Joint Venture's existence. Table 1 lists the wide array of partners who have joined forces to protect, restore and enhance wetland, riparian and upland bird habitats throughout the Joint Venture. Private landowners, non-government conservation organizations, state and federal agencies and local governments are the mainstays of our partnerships.

Table 1 – Partner Categories Working in the Intermountain West Joint Venture, 1994-2004

Corporate and Business	29	NGOs & Foundations	53
Local Government	41	Sportsmen Groups	17
Private Landowners	69	Civic Organizations	20
Private Individuals	23	Federal Agencies	50
Native American Tribes	10	Universities	2
State Agencies	48		

Joint Venture partners have collaborated to conserve more than 430,000 acres (Table 2) of avian habitat since our inception in 1994. We suspect the total acreage is significantly greater because we have only recently improved reporting procedures to upgrade our data base. We anticipate greater accuracy will be achieved in the future.

Nonetheless, partners have expended significant sums of money to achieve the 430,000 acres of habitat conservation accomplishment. Non-federal partners have contributed more than \$75 million to match with federal partners \$58 million for a total expenditure of more than \$133 million in the last decade. Federal funds include monies from grant programs as well as appropriated funds from a wide variety of federal agencies. Federal grant programs have been matched by non-federal funds at an average of 2.9 to 1 federal dollars throughout the ten-year period.

Most of the work reported early in the mid-1990s was accomplished on wetlands and associated upland habitat through the North American Wetlands Conservation Act (NAWCA). During this period, accomplishments in the first two years of the decade were minimal because our partnership efforts were just beginning. An increasing amount of upland work has been reported in recent years, due to both our expanded mission and improved reporting procedures. This is especially true in 2004, where a large increase in conservation acreage was reported.

IV. Biological Planning Process

The Purpose of the Plan

The purpose of this plan is to guide Joint Venture partners in their avian habitat conservation implementation efforts during the next decade. This Plan attempts to coordinate and plan for the needs of all priority birds (see definition in *Avian Species* section below) which are found in the Intermountain West Joint Venture. The focal point of this planning effort is key geographies where priority birds and priority habitats come together. Conservation projects are intended to be developed and implemented within these areas so partners might work more closely on their stated priorities.

As is explained in the section entitled *Planning Approach*, our basic planning information tends to be imprecise in some habitats. Therefore, we choose to speak of our planning as a *coordinated* effort (rather than an integrated effort) where partners seek to be aware of the needs of all priority species but not be placed in the position to trade-off avian habitat values at the planning level. Nevertheless, we do believe it is appropriate to integrate the needs of birds at the project level where more specific information is known about potential conflicts and conservation opportunities between species.

IWJV Planning Directives

US Fish & Wildlife Service Planning Requirements

The US Fish and Wildlife Service (Service) provides policy guidance for the establishment and organization of joint ventures who receive administrative funding through the Service. Service Director's Order No. 146 was issued to ". . . ensure a logical and coordinated approach for the development and support of joint ventures that are regionally based, biologically driven, landscape oriented partnerships which deliver the full spectrum of bird conservation."

The Director's Order (Appendix 2) provides the authority for this planning effort. Specifically, one of the items noted in Section 6 of this document is, "Biological planning, conservation design and prioritization." Section 8, Item C states that joint ventures are ". . . guided by an implementation plan, developed or adopted by the management board, that identifies the biological planning, conservation implementation, and evaluation process of the joint venture. The bird conservation objectives of joint ventures should be established through a biological planning process that establishes conservation priorities."

Management Board Planning Policies

One key element of their role is the development of broad policy to provide direction for the Joint Venture partnership. Relative to planning, the following policy statements were adopted by the Board at their April 18, 2002 meeting:

1. Policy on IWJV Concept for Biological Planning

The business of the Joint Venture still centers on assistance with partnership efforts to accomplish on-the-ground conservation for important Intermountain avian habitats. To accomplish this objective our strategic planning must be organized to

Development of Planning Priorities

Priority Habitats

All habitats were ranked by the State Steering Committees in each state. The criteria used were (1) statewide importance to priority birds, (2) the relative degree of threat to the habitat, and (3) opportunities for conservation, including feasibility for habitat protection, restoration or enhancement. Habitats were ranked A, B, or C based on the following definitions:

- Priority A: High bird value, high threat, and high conservation opportunity.
- Priority B: One criterion may be high, but habitat is generally of moderate concern.
- Priority C: Relatively low value, low threat, and low conservation opportunity.

Priority A and B habitats are listed for each state in Table 3. Joint Venture Priority A and B habitats were derived from a roll-up of state priorities and the relative comprehensive occurrence of the type in the Joint Venture. In the instance of the Agricultural habitat type, the Joint Venture ranked this as an A priority type because in most cases Priority A types have been converted from native habitat to agriculture and significant opportunities occur with the agriculture industry to restore and protect the avian habitat values there.

Table 3 - Priority A and B Habitats for Each State and the Resultant Priority Designation for the Joint Venture

Habitat	AZ	CA	CO	ID	MT	NV	NM	OR	UT	WA	WY	IWJV
Aspen	A	A	A	A	A	A		A	A	A	A	A
Grassland	A	A	B	B	A		A	A	B	A	A	A
Dry Forest	B	B	A	A	A			A		A	A	A
Sagebrush Steppe	B	A	A	A	A	A		A	A	A	A	A
Riparian	A	A	A	A	A		A	A	A	A	A	A
Aquatic-Wetland	A	A	A	A	A	A	A	A	A	A	A	A
Agricultural		B	B	B	B	B	B	A	B	B	B	A
Mixed Conifer	B	B	B	B	B	B	B	B	B	B	A	B
Pinyon Juniper	B	B	A	B	B	B	B	A	B		B	B
Desert Scrub		B	B	A			B	B	B	B		B
Spruce Fir	B	B	B	B				B	B	B	B	B
Mountain Shrub		B	B	B		B	B	A	B	B	B	B
Pine Oak Woodland							A	A				B
Cedar Hemlock				B	B							B

BHCA Development and Application

One of the key components of the IWJV planning process is the development of Bird Habitat Conservation Areas (BHCAs). These areas are the "lynch pin" of our plans. These areas were identified by our experts in each state and selected by that group because of their inherent value for priority birds and priority habitats.

Intermountain West Joint Venture Coordinated Bird Conservation Plan

Species	Key Seasonal Use	Primary Habitat
Long-billed Curlew	B	Wetland, Grassland
Willet	B	Wetland
Western Sandpiper	M	Wetland
Least Sandpiper	M	Wetland
Long-billed Dowitcher	M	Wetland
Wilson's Phalarope	M	Wetland
Red-necked Phalarope	M	Wetland
Franklin's Gull	B,M	Wetland
Black Tern	B,M	Wetland
Band-tailed Pigeon *	B,M	Mixed Conifer, Pine-Oak
Flammulated Owl	B,M	Dry Forest, Pine-Oak
Elf Owl *	B,M,W	Pine-Oak Woodland
Mexican Spotted Owl	B,M,W	Dry Forest, Pine-Oak
White-throated Swift	B,M	Riparian, Various
Black Swift	B,M	Riparian, Various
Calliope Hummingbird	B,M	Riparian
Rufous Hummingbird	B,M	Riparian, Pine-Oak
Lewis's Woodpecker	B,M,W	Dry Forest, Riparian
White-headed Woodpecker	B,M,W	Dry Forest, Mixed Conifer
Williamson's Sapsucker	B,M,W	Spruce-fir
Red-naped Sapsucker	B,M,W	Aspen, Mixed Conifer
Olive-sided Flycatcher	B,M	Spruce-fir, Mixed Conifer
Willow Flycatcher	B,M	Riparian
Dusky Flycatcher	B,M	Dry Forest, Pine-Oak
Gray Flycatcher *	B,M	Pinyon-Juniper, Sagebrush
Bell's Vireo *	B	Riparian
Gray Vireo	B,M	Pinyon-Juniper, Pine-Oak
Pinyon Jay	Y	Pinyon-Juniper
Clark's Nutcracker	Y	Whitebark Pine
Verdin *	B,M,W	Mountain Brush
Cactus Wren *	B,M,W	Desert Scrub
Black-tailed Gnatcatcher *	Y	Desert Scrub
Mountain Bluebird	B,M,W	Aspen, Agricultural
Bendire's Thrasher	B,M,W	Grassland, Mtn. Brush
Curve-billed Thrasher *	Y	Desert Scrub
Crissal Thrasher *	Y	Desert Scrub
Sage Thrasher	B,M,W	Sagebrush-Steppe
Virginia's Warbler	B,M	Mtn Brush, Dry Forest
Lucy's Warbler *	B	Riparian
Grace's Warbler	B,M	Mixed Conifer
Red-faced Warbler *	B,M	Mixed Conifer, Riparian
Pyrrhuloxia *	Y	Mountain Brush
Canyon Towhee *	Y	Desert Scrub
Green-tailed Towhee	B,M	Sagebrush, Mtn. Brush
Black-throated Sparrow *	B,M	Desert Scrub
Sage Sparrow	B,M,W	Sagebrush-Steppe

Short-term Goals: Improve avian habitat conditions wherever possible through implementation of appropriate Farm Bill programs applied on the maximum possible acreage, and discourage the continued conversion of agricultural land to residential and industrial uses. Through Farm Bill Programs and other incentives, encourage the conversion of agricultural habitat to native grassland, wetland and shrub steppe habitat where possible.

Measurable Objectives: Protect, restore, and/or enhance 4.3 million acres of agricultural lands in the Joint Venture to improve their value to priority bird species.

Strategies:

- Use Farm Bill programs and other incentives to protect, restore and enhance bird habitat with emphasis on native grassland, shrub land, riparian and wetland habitats.
- Work with federal program managers to improve incentive programs to better fit the needs of farmers in the improvement of bird habitat under their ownership.

Priority B Habitats

B-1. PINE-OAK WOODLANDS

Oak habitats which include both oak woodlands and mixed oak and conifer woodlands occur in all Joint Venture states except Nevada and Wyoming. Mean annual precipitation for this vegetation type is 22 inches per year and elevational range of the type is from 5000 to 7000 feet.

The total Pine-Oak Woodland habitat in the Joint Venture is about 2.1 million acres, with 1 million acres mapped in the BHCAs.

Continental Priority Bird Species: Montezuma quail, Band-tailed Pigeon, Flammulated Owl, Elf Owl, Mexican Spotted Owl, Rufous Hummingbird, Dusky Flycatcher, Gray Vireo, Scott's Oriole, Grace's Warbler.

Threats and Opportunities: Altered fire regimes are a significant threat in this type. Fires can be expected to encourage oak and juniper growth and enhance germination of such shrubs as manzanita and deerbrush. Concurrent long-term, season-long grazing practices have generated less desirable shrub and grass species. The other major threat (in Oregon) is by rural residential development.

Long-term Vision for Habitat Condition: Maintain the natural functions of the Pine Oak Woodland. Improve inherent productivity of this habitat for birds.

Short-term Directional Goals: Enter into partnerships which will favor reestablishment of natural fire regimes.

Measurable Objectives: Protect, restore and/or enhance 665,700 acres of these woodlands in the Joint Venture.

Strategies:

- Reintroduce prescribed fire to favor oak and associated shrub species.
- Encourage non-continuous grazing practices to reduce the potential for invasive species.