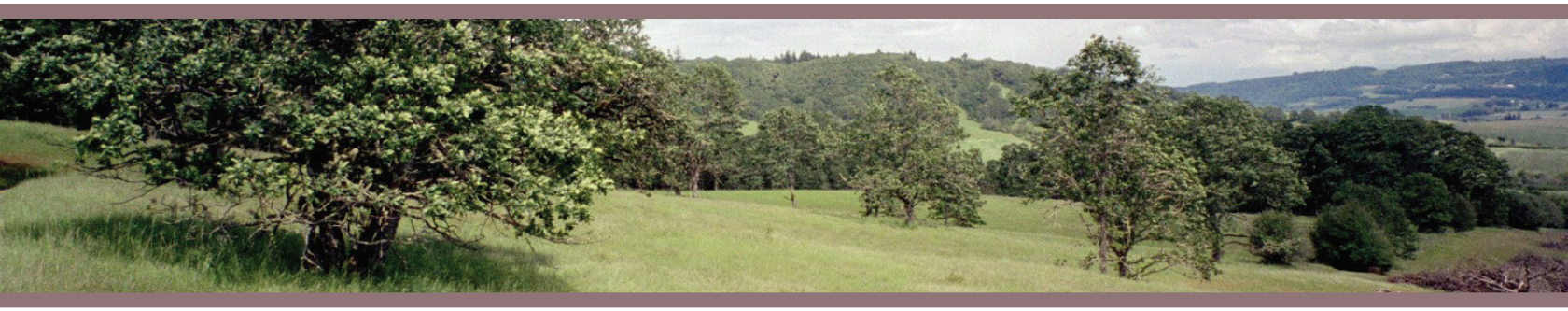


Photo © Bruce Taylor

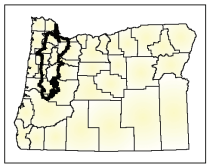
Willamette Valley Ecoregion

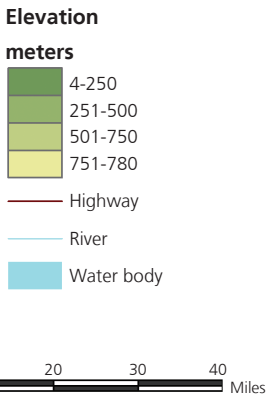
Getting to Know the Willamette Valley Ecoregion

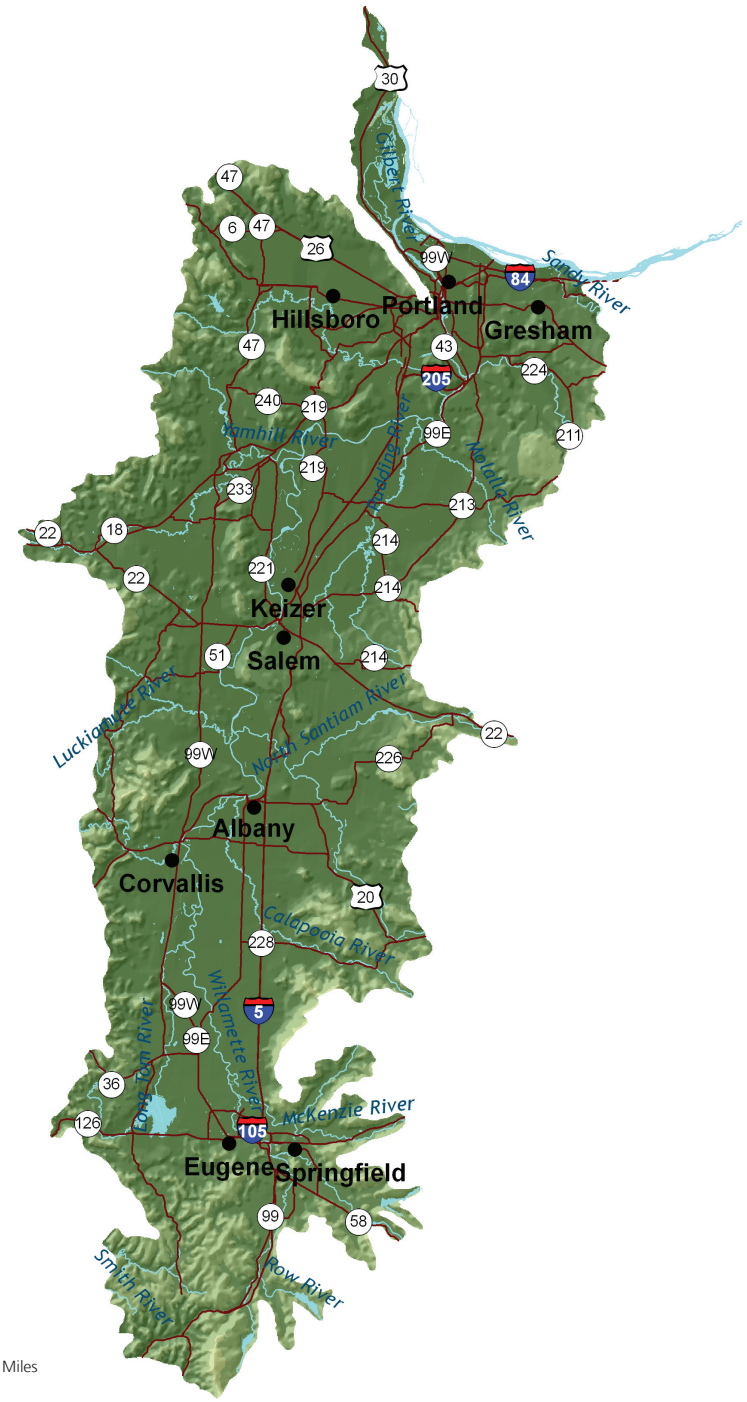
Description

Bounded on the west by the Coast Range and on the east by the Cascade Mountains, this ecoregion encompasses 5,308 square miles and includes the Willamette Valley and adjacent foothills. Twenty to 40 miles wide and 120 miles long, the valley is a long, level alluvial plain with scattered groups of low basalt hills. Elevations on the valley floor are about 400 feet at the southern end near Eugene, dropping gently to near sea-level at Portland. The climate is characterized by mild wet winters and warm dry summers. Fertile soil and abundant rainfall make the valley the most important agricultural region in the state.

Culturally, the Willamette Valley is a land of contrasts. Bustling urban areas are nestled within productive farmland. Traditional industries and high technology contribute to the vibrant economy. With Interstate 5 running its length, the Willamette Valley's economy is shaped by the transportation system and the flow of goods. With nine of the ten largest cities in Oregon, the Willamette Valley is the most urban ecoregion in Oregon. It also is the fastest-growing ecoregion. Pressure on valley ecosystems from population growth, land-use conversion, and pollution is likely to increase.







"At a Glance"- Characteristics and Statistics

Land use (% of ecoregion):

Agriculture	41%
Forest and woodland	34.8%
Other (lakes, wetlands, cliffs, etc.)	3%
Range, pasture, and grassland	9.2%
Towns and rural residential	1.7%
Urban and suburban	10.3%

Land ownership:

Private	96%
Public, federal	3%
Public, state and local	1%

Human population, government and transportation statistics:

Estimated population in 2000	2,300,000
% of Oregon's population in 2000	68.1%
Number of cities	91
Number of counties	10
(includes parts of Benton, Clackamas, Douglas, Lane, Linn, Marion, Multnomah, Polk, Washington, Yamhill counties)	
Number of watershed councils	36
(A watershed council is considered present if at least 10% of its area is located within the ecoregion.)	
Miles of road	20,746

Economics:

Important industries: agriculture, manufacturing, high technology, forest products, construction, retail, services, government, health care, and tourism.

Major crops: nursery and greenhouse plants, grass seed, wine grapes, Christmas trees, poultry, dairy, vegetables, small fruits and berries, nuts, grains, and hops.

Important nature-based recreational areas: Forest Park; Bybee and Smith Lakes; Willamette River; Willamette Valley National Wildlife Refuge Complex; Fern Ridge Reservoir.

Ecology:

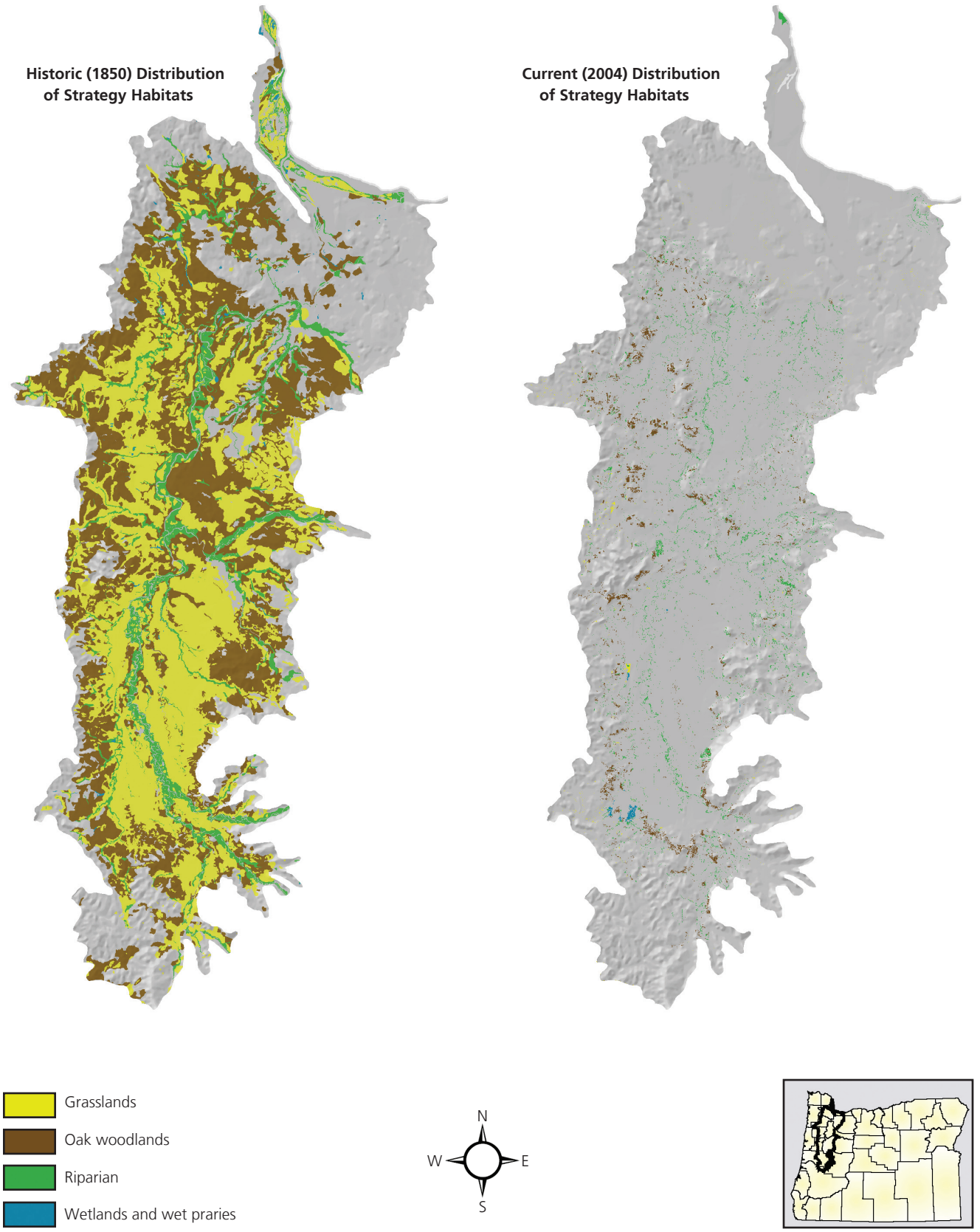
Average annual precipitation	37" - 59" (snowfall 1.7" – 6.0")
Average July high temperature	75ºF - 83 ºF
Average January low temperature	31ºF - 35 ºF
Elevation	4 feet (Columbia River) – 780 feet (near Lowell)
Number of regularly occurring vertebrate wildlife species	approx. 250
Important rivers	Willamette, McKenzie, Santiam, Sandy, Mollala, Clackamas, Tualatin, Yamhill, Luckiamute, Long Tom

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).

Summary List of Strategy Habitats

Strategy Habitats in the Willamette Valley ecoregion include: oak woodlands, grasslands (including oak savanna), wetlands (including wet prairies), riparian, and aquatic habitats.

Change in Willamette Valley Strategy Habitats



Data Source: Oregon Natural Heritage Information Center, 2004.

Conservation Issues and Actions

Overview

The Willamette Valley ecoregion is both the fastest growing ecoregion in Oregon and the most densely populated, containing the states' three largest urban centers (Portland, Salem, Eugene). The population projected for 2050 is approximately four million, nearly double today's population. The ecoregion also provides about half of the state's agricultural sales and includes six of the top 10 agricultural-producing counties. Also,16 of top 17 private sector employers (manufacturing, high technology, forest products, agriculture, and services) are located in this ecoregion.

Historical accounts indicate that prior to European settlement, much of the Willamette Valley was covered by native grasses and forbs. The Calapooia people regularly set fires to improve hunting and travel. The fires helped maintain the valley's mosaic of grasslands, oak savannas, wet prairies and other open habitats.

Since the 1850's, much of the Willamette Valley ecoregion has been altered by development (agricultural or urban), particularly affecting oak woodlands, oak savanna, grassland, riverine, and wetland habitats. The Willamette River has been disconnected from its floodplain, and much of the historic habitats have been fragmented. About 96 percent of the Willamette Valley ecoregion is privately owned, presenting challenges to conservation management. "Fine-filter" conservation strategies that focus on needs of individual at-risk species and key sites are particularly critical in this ecoregion.

Ecoregion-level limiting factors and recommended approaches

All six of the key conservation issue apply statewide, as do the approaches outlined in the Statewide Perspectives and Approaches chapter. However, land use changes, altered disturbance regimes (both fire and floodplain function) and invasive species are described further in this section, considering the Willamette Valley's ecoregional characteristics. In addition to the statewide factors, habitat fragmentation is of concern.

Summary List of Strategy Species

Mammals

- California myotis (bat)
- Townsend's big-eared bat
- Western gray squirrel

Plants

- Bradshaw's desert parsley
- Golden paintbrush
- Howellia
- Kincaid's lupine
- Nelson's checker-mallow
- Peacock larkspur
- Wayside aster
- White rock larkspur
- White-topped aster
- Willamette daisy

Amphibians & Reptiles

- Northern red-legged frog
- Foothill yellow-legged frog
- Northwestern pond turtle
- Western painted turtle
- Western rattlesnake

Invertebrates

- American grass bug
- Fender's blue butterfly
- Taylor's checkerspot (butterfly)
- Willamette floater (freshwater mussel)

Fish

- Bull trout (Columbia Distinct Population Segment [DPS])
- Chinook salmon (Lower Columbia River ESU, spring run)
- Chinook salmon (Lower Columbia River ESU, fall run)
- Chinook salmon (Snake River ESU, spring/summer run)
- Chinook salmon (Snake River ESU, fall run)
- Chinook salmon (Upper Willamette River ESU, spring run)
- Coastal cutthroat trout (Oregon coast ESU)
- Coastal cutthroat trout (Southwestern Washington/Columbia River ESU)
- Coastal cutthroat trout (Upper Willamette River ESU)
- Coho salmon (Oregon Coast ESU)
- Coho salmon (Lower Columbia River/SW Washington Coast ESU)
- Oregon chub
- Pacific lamprey
- 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)

Fish Cont.

- Steelhead (Oregon Coast ESU, summer run)
- Steelhead (Oregon Coast ESU winter run)
- Steelhead (Snake River Basin ESU)
- Steelhead (Southwest Washington ESU, winter run)
- Steelhead (Upper -Willamette River ESU, winter run)
- Western brook lamprey

Birds

- Acorn woodpecker
- Chipping sparrow
- Common nighthawk
- Dusky Canada Goose
- Grasshopper sparrow
- Little willow flycatcher
- Oregon vesper sparrow
- Short-eared owl
- Slender-billed nuthatch
- Streaked horned lark
- Western bluebird
- Western meadowlark
- Western purple martin
- Yellow-breasted chat

Factor: Land use conversion and urbanization. Habitat continues to be lost through conversion to other uses.

Approach: Because 96 percent of the Willamette Valley ecoregion is privately-owned, voluntary cooperative approaches are the key to long-term conservation using tools such as financial incentives, Candidate Conservation Agreements with Assurances, and conservation easements. Careful land use planning also is essential. Work with agency partners to support and implement existing land use regulations to preserve farmland, open spaces, recreation areas, and natural habitats. Monitor changes in land uses across the landscape and in land use plans and policies.

Factor: Altered fire regimes. Maintenance of open-structured Strategy Habitats such as grasslands, oak savannas and wet prairies, are dependent in part on periodic burning. Fire exclusion has allowed succession to more forested habitats. Reintroduction of fire poses significant management problems in many areas of the Willamette Valley. These problems include conflicts with surrounding land use, smoke management and air quality, and safety.

Approach: Use multiple tools, including mowing and controlled grazing, to maintain open-structured habitats. Ensure that tools are site-appropriate and implemented to minimize impacts to native species. Re-introduce fire at locations where conflicts such as smoke and safety concerns can be minimized. Work with local communities to ensure that local concerns such as air quality are addressed.

Factor: Altered floodplain. The floodplain dynamics of the Willamette River have been significantly altered. Multiple braided channels dispersed floodwaters, deposited fertile soil, moderated water flow and temperatures, and provided a variety of slow-water habitats such as sloughs and oxbow lakes. The Willamette River has largely been confined to a single channel and disconnected from its floodplain.

Approach: While restoration of multiple channels may be neither practical nor desirable, cooperative efforts are needed to restore floodplain function and critical off-channel habitats. Approaches are discussed in Restoring a River of Life, Willamette Restoration Initiative (2001).

The Willamette River

With a watershed of more than 11,200 square miles, the Willamette River is the longest river in Oregon and the primary waterway in the valley. From the junction of the Coast Fork and Middle Fork near Springfield, the Willamette meanders more than 185 miles north to its confluence with the Columbia. Along the way, the river swells with the waters of numerous tributaries flowing out of the Cascades and the Coast Range. Prior to European settlement, the Willamette River system dominated the landscape, occupying braided, shallow channels that moved constantly across a broad floodplain with numerous sloughs and extensive marshlands. The river's flows varied with the seasons, rising slowly from late August through the winter, peaking during spring snowmelt in the Cascades, then falling sharply until the rains returned. During times of peak flow, the river frequently flooded large portions of the valley, at times attaining widths of two to six miles. Over the past 150 years, the river has been transformed into a deeper, straighter, and narrower channel, and flows have been regulated by a number of dams in the upper watersheds of the Willamette's tributaries. These modifications resulted in a complex web of unintended secondary changes that have fundamentally altered the river system's natural ecological processes and functions. Recently, there have been coordinated efforts to address concerns such as clean water, water quantity, and habitat loss.

Photo © Bruce Newhouse

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, wildlife and their habitats. This section identifies the species with the greatest current and potential impact in the Willamette Valley. 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

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.

Documented Invasive Animals

- Bluegill
- Brook trout
- Brown bullhead
- Brown trout
- Bullfrog
- Carp
- Catfish
- Crappie
- Eastern fox squirrel
- Eastern gray squirrel
- Eastern snapping turtle
- European starling
- Fathead minnow
- Feral pig
- Fox squirrel
- Goldfish
- Grass carp
- House sparrow
- Largemouth bass
- Mosquito fish (*Gambusia*)
- Norway rat
- Nutria
- Red eared slider
- Shad
- Smallmouth bass
- Sunfish
- Tench
- Virginia opossum
- Walleye
- Yellow bullhead

Documented Invasive Plants

- Armenian (Himalayan) blackberry
- Butterfly bush
- Curly leaf pondweed (aquatic)
- Elodea (Brazilian waterweed) (aquatic)
- English ivy
- Eurasian milfoil (aquatic)
- False brome
- Fragrant water lily (aquatic)
- Garlic mustard
- Giant hogweed
- Herb Robert
- Knotweeds (Japanese, giant)
- Kudzu
- Meadow knapweed
- Mouse ear hawkweed
- Parrot's feather (aquatic)
- Portuguese broom
- Purple loosestrife
- Purple starthisle
- Reed canarygrass
- Rush skeletonreed
- Scotch broom
- Shining crane's-bill
- Spotted knapweed
- Tall oat grass
- Tansy ragwort
- Traveler's joy
- Watercress (aquatic)
- Yellow flag iris (aquatic, riparian)
- Yellow starthistle

Non-native animals and plants of potential concern

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 fish and 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.

Potentially Invasive Non-native Animals

- Asian carp (bighead, silver)
- Banded killfish
- Black carp
- Mute swan
- New Zealand mudsnail
- Oriental weatherfish
- Round goby
- Ruffe
- Rusty crayfish
- Shimofuri goby
- Snakeheads
- Spiny waterflea
- Threadfin shad
- Zebra mussel

Potentially Invasive Non-native Plants

- African waterweed
- Awl-leaf arrowhead
- Brass buttons
- Camelthorn
- Coltsfoot (Tussilago)
- European water chestnut
- Giant salvinia
- Hydrilla
- Marsh dewflower
- Pondwater starwort
- Puncture vine
- Purple nutsedge
- Uruguay seedbox
- Water mint

Factor: Habitat fragmentation. Habitats for at-risk native plant and 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. Barriers to large-scale ecosystem restoration include: existing development, growth pressures, high land costs, and the fragmented nature of ownerships and remaining native vegetation types.

Approach: Broad-scale conservation strategies will need to focus on restoring and maintaining more natural ecosystem processes and functions within a landscape that is managed primarily 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 river-floodplain connections and wetland and riparian habitats. "Fine-filter" conservation strategies that focus on needs of individual Strategy Species and key sites are particularly critical in this ecoregion.

Factor: Invasive species. Invasive plants and animals disrupt native plant and animal communities and impact populations of at-risk native species.

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 non-native species. Prioritize efforts that focus on key invasive species in high priority areas, particularly where Strategy Habitats and Species occur. Work with the Oregon Invasive Species Council and other partners to educate people about invasive species issues and to prevent introductions of potentially high-impact species such as zebra mussel. Provide technical and financial assistance to landowners interested in controlling invasive species on their properties. Promote the use of native "local" stock for restoration and revegetation.

Conservation Success Story: Fescue farm supports wetlands restoration in the Willamette Valley

Located several miles west of Salem off Route 22 are 400 acres of restored wetlands owned by landowners Mark and Debora Knaupp, second generation Oregonians whose voluntary decision to convert a portion of his farmland to wetland is producing ecological, recreational and financial benefits.

The Knaupps are commercial grass seed growers who, with technical assistance from ODFW and others, have nurtured back to life a mosaic of shallow seasonal marshes and wet prairies. As a result, wildlife, waterfowl and rare plants along Mud Slough in Polk County have returned in full splendor. Knaupps' wetlands also help purify local drinking water by removing pollutants that might otherwise percolate into the local watershed of Rickreall.

In 1996, the Knaupps retired 320 acres of grass seed production by enrolling this land in U.S. Department of Agriculture Department's Wetlands Reserve Program (WRP). Under this program, private landowners agree to take agricultural land out of production and place those acres into a conservation easement. In exchange they are paid the agricultural value of their land, which in the Willamette Valley has increased to $2,500 per acre since 1999. Landowners maintain complete ownership of the land enrolled in WRP and the right to pursue undeveloped recreational uses such as hunting and fishing. Indeed, the Knaupps operates a duck-hunting club to take advantage of plentiful waterfowl drawn to their wetland.

The Knaupps have found another way for the wetland to pay for itself and diversify his business. They created a 57-acre mitigation bank that offers wetland credits to area landowners who develop their property but must offset any loss of wetlands under federal law. Purchasing credits from the Knaupps' Mud Slough Mitigation Bank enables landowners to meet wetland regulatory requirements without developing a detailed mitigation plan or paying for new wetlands construction.

For Mark and Debora Knaupp, restoring marginal farmland to a healthy, fully functional wetland was as much a personal desire as it was a business decision. After all, Mark Knaupp says "supporting wildlife conservation by participating in USDA's Wetland Reserve Program and selling mitigation credits has resulted in economic benefits for our business and brought our family tremendous personal satisfaction."

Deciding Where to Work

Conservation Opportunity Areas Map and Profiles

Landowners and land managers throughout Oregon can contribute to conserving fish and 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 are landscapes where broad fish and wildlife conservation goals would be best met. Conservation Opportunity Areas 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 Conservation Opportunity Areas were developed, see Appendix IV, "Methods" (beginning on page a:34).

Conservation actions in the Willamette Valley 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
Maintain and restore oak habitat	Oak woodlands and savannas	OR-WA Partners in Flight Landbird Conservation Strategy (Altman 2000) [recommended target: maintain all large oak trees (more than 22in. dbh) and all oak woodland patches more than 100 ac (40 ha)]
Initiate restoration private lands in partnership with willing landowners	All Strategy Habitats throughout ecoregion	Oregon Biodiversity Project; NWPCC Subbasin Plans 2004
Secure conservation status through willing partnerships	Oak woodlands, grasslands and savannas; wetlands and wet prairies; floodplain habitats throughout ecoregion	Pacific Coast Joint Venture Willamette Valley Implementation Plan (Roth et al. 2002); Willamette Restoration Initiative
Maintain or restore riparian habitat in each major watershed. Ensure sufficient habitat complexity for wildlife (basking structures, nesting areas, snags near water, large expanses of wetlands and wet prairies, etc)	Riparian habitat throughout ecoregion	PIF Landbird Conservation Plan (Altman 2000)
Improve fish passage. Modify barriers or use spans where appropriate.	All locations (as appropriate)	Willamette Restoration Initiative; NWPCC Subbasin Plans 2004
Restore and enhance stream channel complexity in lowlands throughout the Willamette Basin	All locations (as appropriate)	Willamette Restoration Initiative; Willamette Subbasin Plan (2004)
Restore river and floodplain interactions	All locations (as appropriate)	Willamette Restoration Initiative; Willamette Subbasin Plan (2004)
Work with forestry, agricultural, and urban interests to provide large woody debris, reduce sedimentation and reduce point and nonpoint source pollution, improve water flows, and extend fish passage by removing barriers	All locations (as appropriate)	Willamette Restoration Initiative; Willamette Subbasin Plan (2004)
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. - 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 guide for specific technical recommendations, sources of information and assistance, and other guidelines.*
Maintain riparian and wetlands function: - 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 guide for specific technical recommendations*
Upslope erosion control: - 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 guide for specific technical recommendations*

**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).*

The Conservation Opportunity Area 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 Conservation Opportunity Areas, 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 also will be appropriate, as influenced by local site characteristics and management goals. Actions need to be compatible with local priorities, local comprehensive plans and land use ordinances, as well as other local, state, or federal laws. Actions on federal lands must undergo federal planning processes prior to implementation to ensure consistency with existing plans and management objectives for the area.

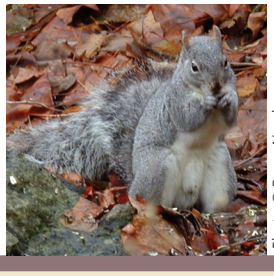


Photo © Bruce Newhouse

Photo © Bruce Newhouse

Comprehensive, Collaborative Assessments of Willamette Valley Economies and Environmental Issues

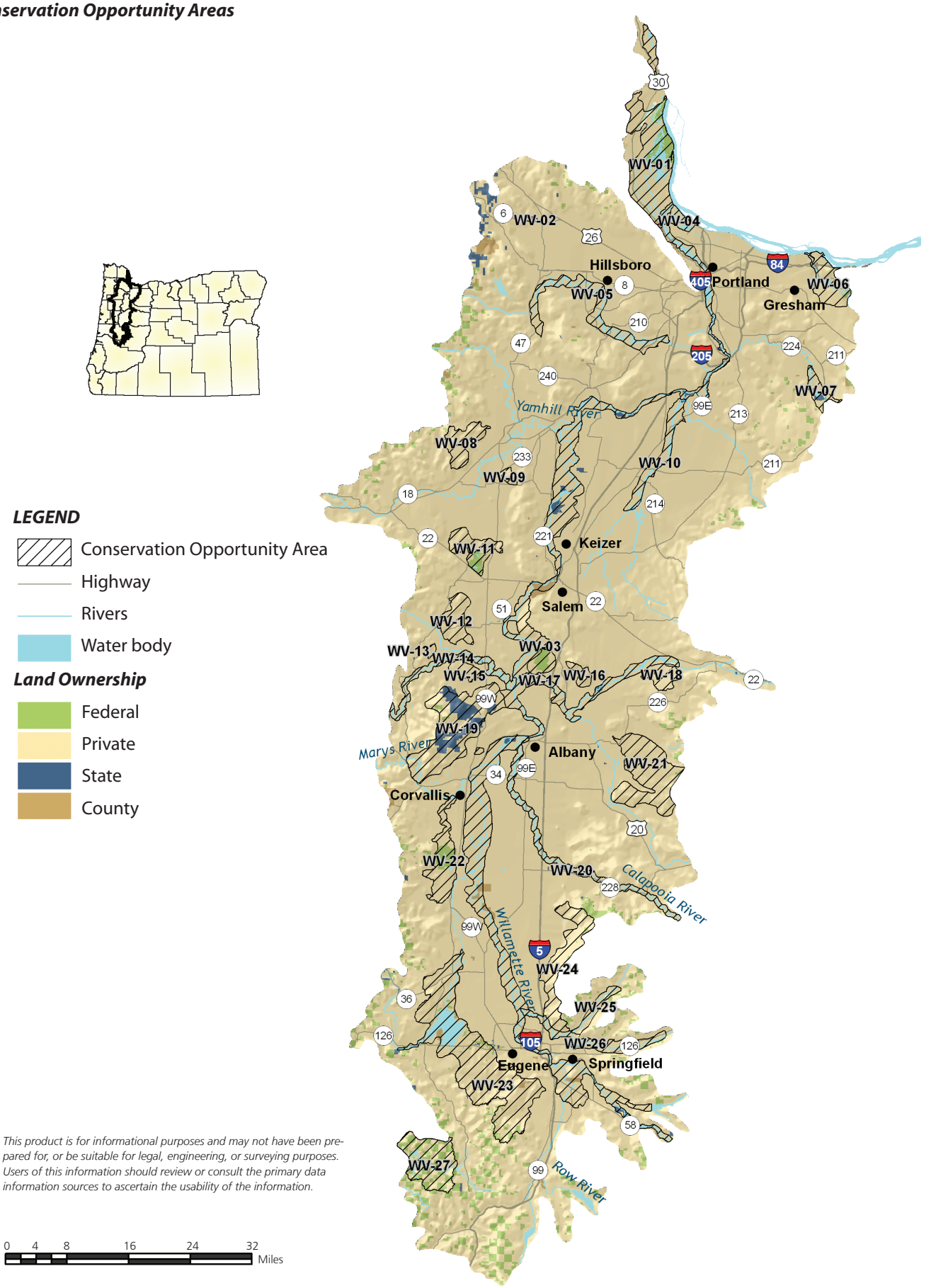
The Willamette Valley of Oregon is a lush, productive landscape that supports diverse wildlife habitats and highly productive agriculture, with expanding urban areas as residents are attracted by the outstanding quality of life. The resulting potential for conflict between economic and environmental interests has been addressed by several collaborative, comprehensive planning efforts: the Willamette Valley Livability Forum; the Pacific Northwest Ecosystem Research Consortium and Willamette Futures Analysis; the Willamette Restoration Initiative and subbasin planning efforts.

The Willamette Valley Livability Forum is a citizen-focused group comprised of individuals from business, citizen interest groups, and government programs. The Forum was initiated by former Governor John Kitzhaber in 1996 and includes both an Advisory Board to guide the group and a Resource Group of individuals to provide research and other insights. The Forum helps residents to understand important issues facing the Valley so that wise decisions can be made that will maintain and enhance livability. More information about the Willamette Valley Livability Forum can be found at: *www.lcog.org/wvlf*. Working from a more scholarly perspective, The Pacific Northwest Ecosystem Research Consortium is a group of researchers working to scientifically assess ecosystem condition and change and to evaluate the potential outcomes, ecological consequences, and associated uncertainty of various societal decisions. Quantitative models have been developed to identify and analyze the results of ecological and socio-economic influences on ecosystem structure and function in the Willamette Valley, resulting in detailed maps and assessments of the results of different policy decisions. The results from this Willamette Futures Analysis have been presented in a variety of media, including scholarly articles, video, technical and public work groups. More information and several maps depicting future scenarios for the Willamette Valley can be found at: *http://oregonstate.edu/Dept/pnw-erc/*.

Finally, the Willamette Restoration Initiative brought together many diverse organizations, jurisdictions, and interests and has developed strategies to protect and restore fish and wildlife habitat, increase populations of declining species, enhance water quality, and properly manage floodplain areas, including a comprehensive document published in 2001. Willamette Restoration Initiative was closely involved in the development of the Willamette Subbasin Plan, as part of efforts initiated by the Northwest Power and Conservation Council. This document presents extensive background and expertise of the status of fish and wildlife populations in the Willamette, and the factors that limit those populations. Based on the need to be able to receive private, tax deductible donations, the Willamette Restoration Initiative disbanded in early 2005 and was replaced with a new organization called the Willamette Partnership. Although there are some overlapping board members, the Partnership has a new, more focused mission: to increase the pace, scope, and effectiveness of conservation in the basin. An early emphasis is on the creation of a "marketplace" to facilitate strategic investments in high priority areas to produce multiple ecological benefits, while streamlining development in appropriate areas. The organization is looking at water quality trading (for temperature) as a pilot test of the market-based approach.

Although there are several different initiatives addressing economic and environmental issues in the Willamette, extensive coordination and mutual sharing of information ensures that the goals and objectives of each effort can best be addressed. Taken together, these efforts are an example of outstanding collaboration and cooperation among many diverse groups.

Willamette Valley Ecoregion
Conservation Opportunity Areas



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Conservation Opportunity Area Profiles

WV-01. Columbia River Bottomlands

Special Features:

- *Includes 12,000-acre Sauvie Island Wildlife Area managed by ODFW and almost 1,000 acres along Multnomah Channel owned by Metro and Bonneville Power Administration.*
- *One of the most important habitat complexes in the Pacific Flyway for migrating and wintering waterfowl. The mixture of sloughs, lakes, ponds, marshes, woodlands, and cropland attract peak concentrations of more than 150,000 ducks and geese in the fall, and more than 250 bird species use the area.*
- *There are ongoing projects by partners (ODFW, Ducks Unlimited, Natural Resources Conservation Service, USFWS, and Oregon Duck Hunters Association) to restore and enhance wetlands in this area.*
- *Area used by significant numbers of waterfowl and shorebirds.*

Key Habitats:

- Oak Woodlands
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Bald Eagle
- Peregrine Falcon
- Shorebirds
- Waterfowl
- Coho Salmon
- Fall Chinook Salmon
- Winter Steelhead
- Northwestern Pond Turtle
- Western Painted Turtle

Identified in other planning efforts:

- Joint Venture Plan
- Oregon Biodiversity Project Conservation Opportunity Areas
- Oregon's Important Bird Areas
- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Improve water delivery system on Sauvie Island Wildlife Area to enhance effectiveness of wetlands management
- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife
- Restore or enhance seasonal wetlands

WV-02. Banks Swamp

This area is comprised of a willow/ash wetland located along the Highway 6 west of Banks, OR.

Key Habitats:

- Willow/ash Wetland

Key Species:

- Riparian Birds
- Willow Flycatcher
- Winter Steelhead

Identified in other planning efforts:

- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

WV-03. Willamette River floodplain

This area spans almost the entire length of the ecoregion encompassing the floodplain of the Willamette River from south of Springfield to the confluence with the Columbia River.

Special Features:

- *Restoration of the Willamette floodplain has important implications not only for wildlife habitats, but also for the social and economic factors resulting from restoring ecological function such as flood control and improvement of water quality.*
- *This broadly defined area includes a number of important sites for wildlife including many river confluences, Ankeny Wildlife Refuge, and Willamette Mission State Park.*
- *There are many restoration opportunities in this area, and many willing partners including the Willamette Conservation Network (formerly Willamette Restoration Initiative), ODFW, Defenders of Wildlife, The Nature Conservancy, USFWS, and others.*
- *The McKenzie River Trust purchased most of 1,300-acre Green Island, a key floodplain site at the confluence of the McKenzie and Willamette rivers in 2003 and is planning for large-scale habitat restoration involving multiple public and private partners.*
- *Oregon Parks and Recreation Department owns and manages significant portions of the floodplain as part of its Willamette Greenway network of properties.*
- *Floodplain wetlands provide valuable habitat for large numbers of wintering waterfowl*
- *The section from the McKenzie River north to the Calapooia River has the greatest potential to return natural river functions along the mainstem Willamette. This extensive reach supports the greatest aquatic biodiversity, with actively moving channels and extensive floodplain and forests. This reach has the largest acreage of hydric soils that could be potentially restored to high*

quality wetland and riparian habitats. It also holds significant value for numerous rare and endangered species including nesting bald eagles, western pond turtles, and red-legged frogs, and provides important seasonal habitat for salmon and steelhead. Ninety percent of the remaining rearing habitat for native spring chinook salmon is found between the McKenzie River confluence and Harrisburg.

Key Habitats:

- Aquatic
- Bottomland Hardwoods
- Riparian

Key Species:

- Foothill Yellow-legged Frog
- Northern Red-legged Frog
- Riparian Birds
- Coho Salmon
- Fall Chinook Salmon
- Oregon Chub
- Winter Steelhead
- Northwestern Pond Turtle

Identified in other planning efforts:

- Oregon Biodiversity Project Conservation Opportunity Areas (Willamette River floodplain)
- The Nature Conservancy Ecoregional Assessment (many sections of the floodplain)
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Ensure sufficient habitat complexity for wildlife
- Maintain or restore riparian habitat and ecological function
- Promote early detection and suppression of invasive weeds
- Restore or enhance wetlands
- Restore river and floodplain interactions

WV-03A. Mt. Pisgah area

A section of the Willamette River floodplain COA south of Springfield near the Coast Fork - Middle Fork confluence.

Special Features:

- *This area supports a number of at-risk species.*
- *The land on and around Mt. Pisgah represents some of the area's largest tracts of native habitats.*
- *Mt. Pisgah is a designated Oregon Important Bird Area*
- *The floodplain here contains some of the largest northwestern pond turtle populations in the ecoregion*
- *Area contains a great blue heron rookery.*

Key Habitats:

- Aquatic
- Grasslands and Oak Savanna
- Oak Woodlands
- Riparian

Key Species:

- Great Blue Heron
- Northwestern Pond Turtle

Recommended Conservation Actions:

- Actively manage uplands to promote and maintain oak savanna and prairie habitats
- Maintain or enhance in-channel watershed function, connection to riparian habitat, flow and hydrology
- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife
- Promote early detection and suppression of invasive weeds

WV-04. Smith-Bybee Lakes

Located north of Portland, adjacent to the confluence of the Willamette and Columbia Rivers.

Special Features:

- *Includes 2,000-acre wildlife area managed by Metro.*
- *New water control structure installed in 2004 allows active management of water levels in wetlands.*
- *Seasonally dry lakes provide emergent wetland and mudflat habitats.*
- *The Columbia sedge meadows here are listed by Oregon Natural Heritage Program as "critically imperiled" in Oregon.*
- *Area provides a wintering site for significant numbers of waterfowl.*

Key Habitats:

- Grasslands And Oak Savanna
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Bald Eagle
- Peregrine Falcon
- Waterfowl
- Western Meadowlark
- Willow Flycatcher
- Coho Salmon
- Fall Chinook Salmon
- Winter Steelhead
- Northwestern Pond Turtle
- Western Painted Turtle

Identified in other planning efforts:

- Joint Venture Plan
- Oregon Biodiversity Project Conservation Opportunity Areas
- Oregon's Important Bird Areas
- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Actively manage wetlands to optimize habitat values for diversity of species
- Restore floodplain forest habitats

WV-05. Tualatin River

Area includes the Tualatin River and floodplain from the Tualatin National Wildlife Refuge to Wapato Lake, east of Gaston.

Special Features:

- *Area includes the Tualatin National Wildlife Refuge, Jackson Bottoms Preserve, and Wapato Lake.*
- *Ongoing land acquisition and restoration efforts by the Wildlife Refuge, Tualatin River Watershed Council, USFWS, Ducks Unlimited, Bureau of Reclamation, Metro, Friends of the Refuge, Tualatin Riverkeepers, Friends of Trees, and Portland Bureau of Environmental Services.*
- *Wapato Lake was historically one of the most important waterfowl sites in the Willamette Valley and is still used extensively in the winter by dabbling ducks, Canada geese, and swans. The U.S. Fish and Wildlife Service manages 150 acres of land in the ancient lake bed. The entire lake bed, approximately 1,000 acres, has high potential for wetland restoration.*
- *Jackson Bottom Wetlands Preserve has restored 650 acres of the Tualatin floodplain. The master plan for Jackson Bottoms sets a goal of 3,000 acres of restored habitat containing six river miles.*
- *The Tualatin River National Wildlife Refuge, with an authorized boundary encompassing 3,058 acres along 10 miles of the meandering river, currently includes almost 1,100 acres. More than 500 acres of seasonal, permanent, and forested wetlands and riparian habitat have been restored.*
- *This is a significant breeding area for migratory songbirds, as well as a great blue heron nesting site.*
- *Overwinter site for waterfowl.*

Key Habitats:

- Aquatic
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Northern Red-legged Frog
- Bald Eagle
- Great Blue Heron
- Peregrine Falcon
- Waterfowl
- Winter Steelhead
- Northwestern Pond Turtle

Identified in other planning efforts:

- Joint Venture Plan
- Oregon's Important Bird Areas (Tualatin NWR, Jackson Bottoms Preserve)
- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife
- Restore floodplain wetlands and riparian forests

WV-06. Sandy River area

Special Features:

- *Area encompasses the Sandy River Gorge Preserve.*
- *Forested upland terraces provide a corridor for wildlife coming out of the West Cascades ecoregion.*
- *There are ongoing activities on the Preserve by The Nature Conservancy and volunteers which include monitoring, invasive plant removal, and educational outreach.*
- *The Sandy River Basin Watershed Council is actively involved in watershed enhancement, restoration, and planning projects.*
- *Includes Sandy River Delta, a 1,400-acre area at the mouth of the Sandy River managed by the Columbia River Gorge National Scenic Area that contains extensive seasonal wetlands, grasslands and floodplain forest.*
- *Area provides spawning habitat for several species of salmonids.*

Key Habitats:

- Aquatic
- Floodplain Forests
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Oregon Slender Salamander
- Coho Salmon
- Fall Chinook Salmon
- Winter Steelhead

Identified in other planning efforts:

- Joint Venture Plan
- The Nature Conservancy Ecoregional Assessment

Recommended Conservation Actions:

- Maintain or enhance in-channel watershed function, connection to riparian habitat, flow and hydrology
- Maintain or restore floodplain wetlands and forests
- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife

WV-07. Clackamas River area

Special Features:

- There are ongoing restoration and planning efforts by the Clackamas River Basin Council in this area.

Key Habitats:

- Aquatic
- Grasslands And Oak Savanna
- Riparian

Key Species:

- Coho Salmon
- Fall Chinook Salmon
- Pacific Lamprey
- Winter Steelhead

Identified in other planning efforts:

- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Maintain or enhance in-channel watershed function, connection to riparian habitat, flow and hydrology
- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife

WV-08. Yamhill Oaks

Located east of McMinnville in the foothills paralleling Hwy 18.

Special Features:

Area contains large tracts of oak woodland habitat.

Key Habitats:

- Oak Woodlands

Key Species:

- Associated Oak Species

Identified in other planning efforts:

- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Remove invading conifers and non-native vegetation from oak woodlands

WV-09. Amity Oaks

Special Features:

- *Area contains large tracts of oak woodland habitat.*

Key Habitats:

- Oak Woodlands

Key Species:

- Associated Oak Species

Identified in other planning efforts:

- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Remove invading conifers and non-native vegetation from oak woodlands

WV-10. Lower Little Pudding River

Area extends from Mt. Angel to the confluence with the Willamette River.

Special Features:

- *Ongoing conservation actions by the Pudding River Watershed Council include water quality monitoring, river cleanup events, riparian enhancement, invasive species removal, and the development of a watershed assessment.*
- *Once an important breeding area for wood ducks, the restoration of forested wetlands, seasonal wetlands and riparian areas along the Pudding River would once again create habitat for waterfowl and improve water quality in the river.*

Key Habitats:

- Aquatic
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Cutthroat Trout
- Spring Chinook Salmon
- Winter Steelhead

Identified in other planning efforts:

- Joint Venture Plan
- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife
- Restore floodplain wetlands and riparian forests

WV-11. Basket Butte

Located north of Dallas along Highways 22 and 99. Area includes Basket Slough National Wildlife Refuge and the upland oak-dominated foothills.

Special Features:

- *This area supports a rare community of upland prairie and Oregon white oak woodland/oak savanna. [Oregon Important Bird Areas website]*
- *Wetland restoration at Baskett Slough National Wildlife Refuge (2,500 acres) has increased the refuge's seasonal wetland habitat, resulting in dramatically increased waterfowl and shorebird use. Nearly 2,400 acres of land adjacent to the refuge has been identified as providing exceptional wetland restoration values. The refuge also provides valuable habitat for Fender's blue butterfly and Willamette daisy.*
- *One private landowner has already restored more than 400 acres of farmland to seasonal wetlands. The only known site of nesting black neck stilts in the Willamette Valley is found in the private restoration area.*
- *The refuge is currently managing woody vegetation on the prairie through repeated burning and prescribed fire.*
- *Conifer encroachment threatens the oak habitats here.*
- *One of the ecoregion's largest concentrations of streaked-horned lark.*
- *Area provides migratory habitat for waterfowl and shorebirds, as well as wintering habitat for waterfowl.*
- *High quality prairie in the upland portions of Basket Slough Refuge*

Key Habitats:

- Grasslands And Oak Savanna
- Oak Woodlands
- Wetlands And Wet Prairie

Key Species:

- Dusky Canada Goose
- Shorebirds
- Streaked-horned Lark
- Waterfowl
- Fender's Blue Butterfly
- Kincaid's Lupine
- Willamette Daisy

Identified in other planning efforts:

- Joint Venture Plan
- Oregon's Important Bird Areas
- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Maintain and enhance remnant native wet prairie and upland prairie
- Promote early detection and suppression of invasive weeds
- Remove invading conifers and non-native vegetation from oak woodlands
- Restore seasonal wetlands

WV-12. Habeck Oaks

Located north of the Little Luckiamute River along Hwy 223.

Special Features:

- Area contains large tracts of oak woodland habitat.

Key Habitats:

- Oak Woodlands

Key Species:

- Associated Oak Species

Identified in other planning efforts:

- The Nature Conservancy Ecoregional Assessment

Recommended Conservation Actions:

- Remove invading conifers and non-native vegetation from oak woodlands

WV-13. Airlie Savanna

Key Habitats:

- Grasslands And Oak Savanna

Key Species:

- Oak And Grassland Associates

Recommended Conservation Actions:

- Remove invasive and non-native vegetation

WV-14. Luckiamute River

Special Features:

- *A finalized watershed assessment was completed by the Luckiamute Watershed Council in June 2004.*

Key Habitats:

- Aquatic
- Riparian

Key Species:

- Riparian Birds
- Winter Steelhead

Identified in other planning efforts:

- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Maintain or enhance in-channel watershed function, connection to riparian habitat, flow and hydrology
- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife

WV-15. Airlie Oaks

Located south of the Luckiamute River just west of Hwy 99.

Special Features:

- *Area contains large tracts of oak woodland habitat.*

Key Habitats:

- Oak Woodlands

Key Species:

- Associated Oak Species

Identified in other planning efforts:

- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Remove invading conifers and non-native vegetation from oak woodlands

WV-16. Salem Hills-Ankeny NWR

This area is comprised of the Ankeny National Wildlife Refuge, located south of Salem, and the surrounding foothills.

Special Features:

- *Ankeny NWR contains extensive restored shallow-water seasonal wetlands that are heavily used by migrating and wintering waterfowl and shorebirds.*
- *Just east of the refuge, a private landowner began work in 2003 to restore a large block of oak savanna and woodland and riparian habitats.*
- *Wintering site for waterfowl and shorebirds.*

Key Habitats:

- Grasslands And Oak Savanna
- Oak Woodlands
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Dusky Canada Goose
- Riparian Birds
- Shorebirds
- Waterfowl
- Willow Flycatcher

Identified in other planning efforts:

- Joint Venture Plan
- Oregon Biodiversity Project Conservation Opportunity Areas
- Oregon's Important Bird Areas (Ankeny NWR)
- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Maintain and enhance remnant native wet prairie and upland prairie
- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife
- Promote early detection and suppression of invasive weeds
- Remove invading conifers and non-native vegetation from oak woodlands
- Restore seasonal wetlands

WV-17. Lower and North Santiam Rivers

Special Features:

- *Ongoing conservation actions by the North Santiam Watershed Council include water quality monitoring, the development of a watershed assessment, culvert replacement projects, riparian enhancement, and education and outreach.*
- *Along the North Santiam, the City of Stayton is restoring riparian forest and wetland braided channels and acquired a key 55-acre property in 2003.*
- *At the lower end of the North Santiam River, Wiseman Island represents one of the largest blocks of relatively intact floodplain habitat in the valley. The Oregon Department of Fish and Wildlife and Marion County own the bulk of this area, which encompasses about five miles of river.*

Key Habitats:

- Aquatic
- Floodplain Forests
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Riparian Birds
- Oregon Chub
- Winter Steelhead

Identified in other planning efforts:

- Joint Venture Plan
- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Maintain or enhance in-channel watershed function, connection to riparian habitat, flow and hydrology
- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife

WV-18. Kingston Prairie area

Located south of the North Santiam River.

Special Features:

- *Area contains The Nature Conservancy's Kingston Prairie Preserve, where there are ongoing efforts to maintain the native prairie vegetation.*
- *Biologists use the preserve to study the habitat needs for the Western meadowlark and other songbirds.*
- *Area contains several rare plant species including Bradshaw's lomatium, Willamette daisy, Oregon larkspur and white-topped aster.*

Key Habitats:

- Grasslands And Oak Savanna
- Oak Woodlands
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Western Meadowlark
- Bradshaw's Lomatium
- Oregon Larkspur
- White-topped Aster
- Willamette Daisy

Identified in other planning efforts:

- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Initiate or continue wet meadow conservation and restoration efforts

WV-19. Corvallis area

Special Features:

- *Area includes several important places for wildlife including McDonald Forest, Soap Creek, Dunn Forest, Maxfield Creek, Jackson-Frazier wetland, and EE Wilson Wildlife Refuge.*
- *There are ongoing habitat restoration and protection efforts for wetland, oak, and prairie habitats by the City of Corvallis, Benton County, and the Greenbelt Land Trust, including the recent purchase of Owens Farm north of Corvallis.*
- *The Newton Creek watershed on the north side of Philomath, includes more than 400 acres of wetland with good restoration potential. The Greenbelt Land Trust has been working to protect and restore this large wetland complex, including a 65-acre private parcel to the northwest containing wet prairie, ash swales and riparian corridor along Newton Creek.*
- *Area contains some of the best yellow-breasted chat habitat in the ecoregion (EE Wilson).*
- *Area provides migratory stopover areas for waterfowl and shorebirds (EE Wilson; ephemeral wetlands).*
- *Area contains several locations of upland prairie including Bald Hill Park, Carson Prairie (within Dunn Forest), and Butterfly meadows*

Key Habitats:

- Aquatic
- Grasslands And Oak Savanna
- Oak Woodlands
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Shorebirds
- Waterfowl
- Yellow-breasted Chat
- Winter Steelhead
- Nelson's Checkermallow
- Willamette Daisy

Identified in other planning efforts:

- American Fisheries Society Aquatic Diversity Areas
- Joint Venture Plan
- Oregon Biodiversity Project Conservation Opportunity Areas
- Oregon's Important Bird Areas (EE Wilson)
- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Maintain and enhance remnant native wet prairie and upland prairie

- Maintain or enhance in-channel watershed function, connection to riparian habitat, flow and hydrology
- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife
- Remove invading conifers and non-native vegetation from oak woodlands
- Restore floodplain wetlands. Promote early detection and suppression of invasive weeds

WV-20. Calapooia River

Special Features:

- *The corridor along the Calapooia River contains some of the best riparian forests remaining in the valley, and the river supports small populations of native spring chinook salmon and summer steelhead. Studies of wintering shorebird use in the Willamette Valley found the Calapooia drainage to be extremely valuable habitat for killdeer and dunlin.*

Key Habitats:

- Aquatic
- Riparian

Key Species:

- Riparian Birds
- Winter Steelhead

Identified in other planning efforts:

- Joint Venture Plan
- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife
- Work with farmers to maintain winter ponding and soil saturation on farmed fields to protect wintering shorebird habitat

WV-21. One Horse Slough - Beaver Creek

Area is located along the ecoregion boundary east of Albany adjacent to South Santiam River. The majority of the area is located in the Onehorse Slough quad.

Special Features:

- *This area may serve as an important transition zone between the West Cascades and Willamette Valley ecoregions. Historically, it contained a diverse mixture of habitats including ponderosa pine, deciduous swamp, and wet prairie. It currently has a number of Strategy habitats.*
- *This area, adjacent to the South Santiam River, provides habitat to some of the last known populations foothill yellow-legged frog in the Willamette Valley.*

Key Habitats:

- Aquatic
- Grasslands And Oak Savanna
- Oak Woodlands
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Foothill Yellow-legged Frog
- Northern Red-legged Frog
- Chipping Sparrow
- Slender-billed Nuthatch
- Willow Flycatcher

Identified in other planning efforts:

- The Nature Conservancy Ecoregional Assessment (Golden Valley site, Crabtree Wetlands site)

Recommended Conservation Actions:

- Control key non-native species
- Maintain large oaks with open understories
- Maintain natural water flow patterns and streamside vegetation for yellow-legged frogs; protect from other impacts at priority breeding sites
- Maintain wetland habitat and adjacent woodlands for red-legged frogs

WV-22. Finley-Muddy Creek area

Located around Finley Wildlife Refuge south of Corvallis along the west side of Hwy 99. Area extends up Muddy Creek to its confluence with Mary's River.

Special Features:

- *Area contains Finley National Wildlife Refuge.*
- *There are ongoing efforts to eventually provide a connection corridor of restored and protected habitats along Muddy Creek between Finley Refuge and Mary's River. Partners include Greenbelt Land Trust, USFWS, ODFW, City of Corvallis, Natural Resources Conservation Service, and private landowners.*
- *Area includes high-quality remnants of native wet prairie, oak, and riparian habitats.*
- *Habitat for migratory waterfowl*
- *Area contains several threatened and endangered plants including Nelson's checkermallow, Bradshaw's lomatium, and peacock larkspur*

Key Habitats:

- Grasslands And Oak Savanna
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Band-tailed Pigeon
- Dusky Canada Goose
- Short-eared Owl
- Waterfowl
- Western Bluebird
- Western Meadowlark
- Oregon Chub
- Bradshaw's Lomatium
- Nelson's Checkermallow
- Peacock Larkspur

Identified in other planning efforts:

- Joint Venture Plan
- Oregon Biodiversity Project Conservation Opportunity Areas
- Oregon's Important Bird Areas
- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife
- Restore or maintain floodplain wetlands and wet prairie

WV-23. West Eugene

This site extends from Camas Swale north along the foothills to Cox Butte, including the West Eugene wetlands.

Special Features:

- *This area contains many important sites including Camas Swale, Fern Ridge Reservoir, and the West Eugene Wetlands.*
- *There is ongoing acquisition and restoration in the West Eugene wetlands by the following partners: BLM, City of Eugene, Lane Council of Governments, The Nature Conservancy, Corps of Engineers, Natural Resources Conservation Service.*
- *Area contains some of the largest remaining fragments of the Willamette Valley's native wet prairies (West Eugene wetlands)*
- *Area provides an important habitat for migratory birds.*

Key Habitats:

- Aquatic
- Grasslands And Oak Savanna
- Oak Woodlands
- Wetlands And Wet Prairie

Key Species:

- Waterfowl
- Fender's Blue Butterfly
- Northwestern Pond Turtle

Identified in other planning efforts:

- American Fisheries Society Aquatic Diversity Areas (Camas Swale Watershed)
- Oregon Biodiversity Project Conservation Opportunity Areas (West Eugene Wetlands)
- Oregon's Important Bird Areas (Fern Ridge Reservoir)
- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Continue active management of restored habitats to conserve ecological values
- Minimize impacts of development on oak woodlands
- Restore and maintain wetland and riparian habitats along Long Tom and Coyote creek corridors

WV-24. Coburg Ridge area

Ridgeline and foothills bordering the east side of the ecoregion from Coburg Ridge to Indian Head.

Special Features:

- *This area provides important transition habitat from the West Cascades into the Willamette Valley lowlands.*
- *Lower portions of the Coburg Hills include remnant grasslands, oak savanna and woodlands that provide important habitat for a variety of landbirds. This area has been designated as a Grassland Bird Conservation Area and supports the highest concentrations of several grassland bird species in the Willamette Valley. The lower slopes of the Coburg Hills also contain some of best remnant oak habitats on the east side of the valley.*
- *The valley floor has high potential for restoration of seasonal wetlands. A 600-acre property enrolled in the Wetlands Reserve Program in 2005 is the largest in the Willamette Valley.*

Key Habitats:

- Grasslands And Oak Savanna
- Oak Woodlands
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Acorn Woodpecker
- Vesper Sparrow
- Western Bluebird
- Western Meadowlark
- Fender's Blue Butterfly

Identified in other planning efforts:

- Joint Venture Plan
- The Nature Conservancy Ecoregional Assessment
- Willamette Basin Alternative Futures

Recommended Conservation Actions:

- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife

WV-25. Mohawk River

Special Features:

- *The Mohawk Watershed Partnership, part of the McKenzie Watershed Council, is an active organization here that participates in ongoing conservation activities including habitat restoration and enhancement, water quality monitoring, and education and outreach.*
- *Primary spawning area for one of the strongest populations of cutthroat trout in the Willamette Basin*

Key Habitats:

- Aquatic
- Oak Woodlands
- Riparian

Key Species:

- Cutthroat Trout

Identified in other planning efforts:

- Oregon Biodiversity Project Conservation Opportunity Areas

Recommended Conservation Actions:

- Maintain or enhance in-channel watershed function, connection to riparian habitat, flow and hydrology
- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife
- Restore river and floodplain interactions

WV-26. McKenzie River

Special Features:

- *There are ongoing conservation actions in this area by the McKenzie Watershed Council.*
- *McKenzie River Trust holds conservation easements on several floodplain properties with high value for fish and wildlife.*

Key Habitats:

- Aquatic
- Grasslands And Oak Savanna
- Riparian
- Wetlands And Wet Prairie

Key Species:

- Western Meadowlark
- Bull Trout
- Oregon Chub
- Northwestern Pond Turtle

Identified in other planning efforts:

- Oregon Biodiversity Project Conservation Opportunity Areas

Recommended Conservation Actions:

- Maintain or enhance in-channel watershed function, connection to riparian habitat, flow and hydrology
- Maintain or restore riparian habitat and ecological function; ensure sufficient habitat complexity for wildlife
- Restore river and floodplain interactions

WV-27. Upper Siuslaw area

Located at the southern end of the ecoregion, this area is a mixture of public and private land, comprised largely of BLM late successional reserves.

Special Features:

- *This area contains the only streams in this ecoregion that were identified in the Coastal Salmon Restoration Initiative.*

Key Habitats:

- Aquatic

Key Species:

- Chipping Sparrow
- Slender-billed Nuthatch
- Western Bluebird
- Willow Flycatcher
- Coho Salmon
- Winter Steelhead

Identified in other planning efforts:

- Coastal Salmon Restoration Initiative (CSRI)
- The Nature Conservancy Ecoregional Assessment
- The Oregon Plan Core Salmon Areas

Recommended Conservation Actions:

- Maintain or enhance in-channel watershed function, connection