Natural Resources Long Range Strategy
Lane County, Oregon

Natural Resources Conservation Service

Eugene, Oregon

March 2017

Section I. Introduction

The **vision** of this plan is to bring the people of Lane County together to achieve effective and sustainable land stewardship.

The **mission** of this plan is to identify and evaluate resource issues, develop and expand partnerships and work together to effectively treat and improve identified resource issues.

The purpose of this document is to provide focus and direction for the USDA Natural Resources Conservation Service (NRCS) in Lane County. This strategic plan provides information on background, trends, and analysis of critical resource needs. This plan encompasses a five to ten year time frame.

The following agencies and entities participated in the development of this plan:

Upper Willamette Soil and Water Conservation District

Oregon Department of Fish and Wildlife

Oregon Department of Forestry

Oregon State University Extension Service

Eugene Water and Electric Board

Partner Plans:

The Long Tom Watershed Council Action Plan

McKenzie River Conservation Strategy 2002 McKenzie Watershed Council

Middle Fork Willamette Watershed Council Action Plan

Coast Fork Willamette Watershed Council Action Plan

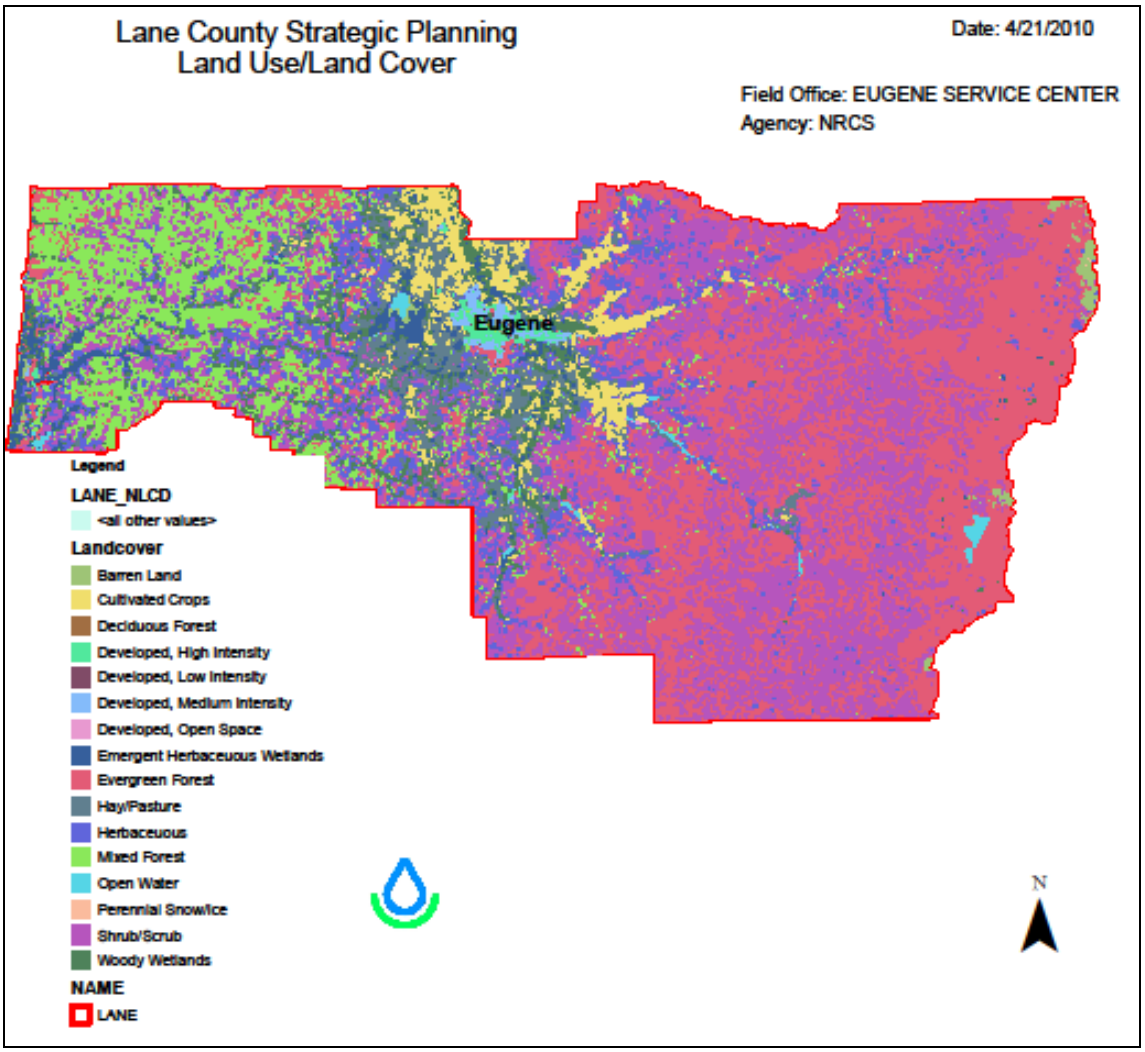
Section II. Natural Resource Inventory

General Overview:

Lane County is in the west-central part of Oregon at the southern end of the Willamette Valley and stretches from the Cascade Mountains to the Pacific Ocean. The county is approximately the same size as the state of Connecticut (4,554 square miles) with a population of about 351,000 or nine percent of the state's total population. Eugene is the county seat and the largest city in the county. The cities of Eugene and Springfield comprise the second largest urban area in Oregon with an estimated 199,990 residents.

The climate of Lane County is greatly tempered by winds from the Pacific Ocean. Summers are fairly warm, but hot days are rare. Winters are cool, but snow and freezing temperatures are not common except at higher elevations. During summer, rainfall is extremely light requiring some crops growing actively during this period to need irrigation. Often several weeks pass without precipitation. During the rest of the year, rains are frequent, especially in late fall and in winter.

Historically, Lane County's economy has been based on timber and agriculture. Agriculture is important because of the fertile soil and moderate climate that exists in the Willamette Valley, making this valley one of the most productive farming areas in the nation. However, with the reductions in timber harvesting, and the continued pressure of population growth on many agricultural areas, these have become less important in the economic development of the county. Economic growth in the next decades is predicted to shift from forestry and agriculture to services, manufacturing of transportation equipment, printing and publishing and trade. Also with access to the mountains and the cost, tourism will continue to grow and add to the county's economy.

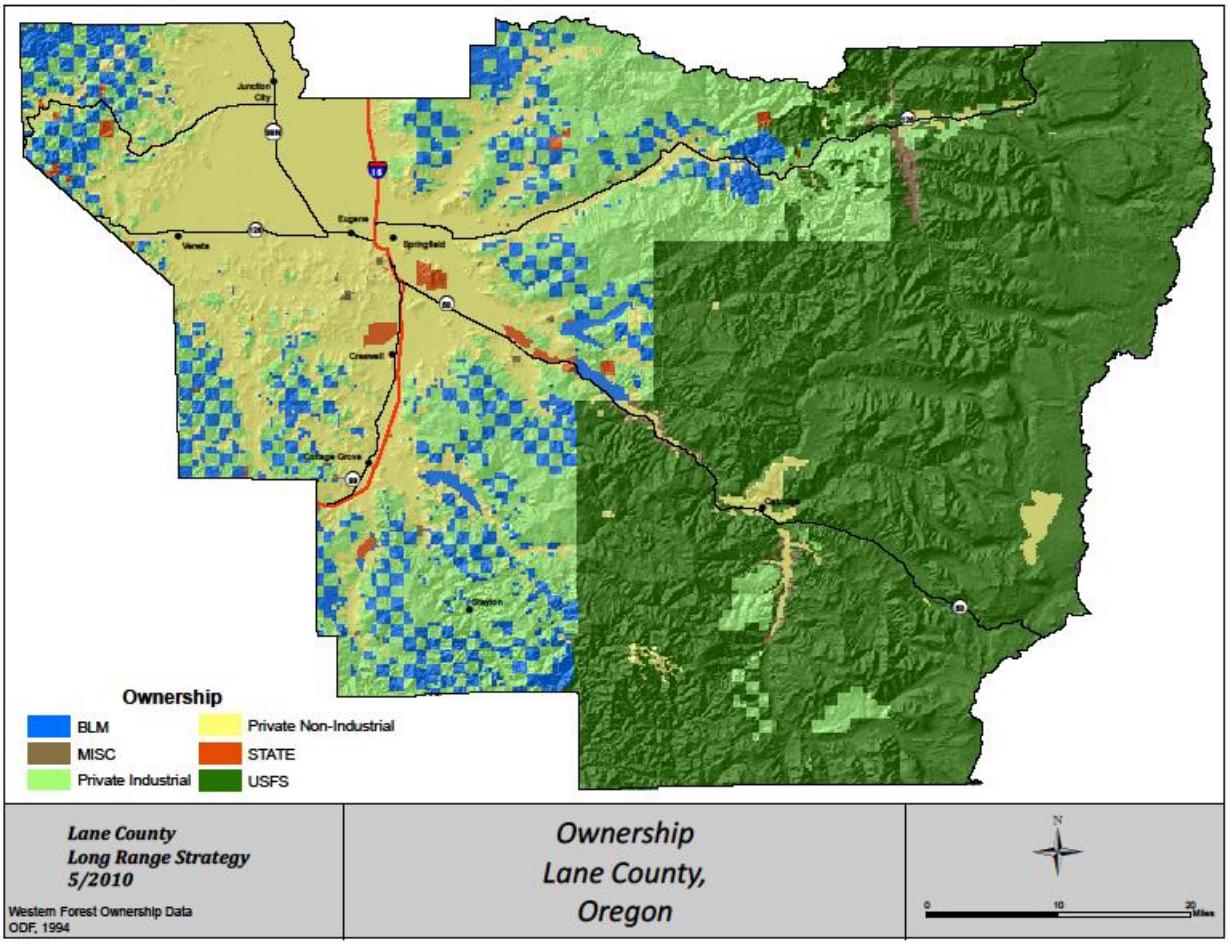


Forestry and agriculture are the predominant land uses in the area. Major forest landowners and managers include Willamette Industries, the Bureau of Land Management, the US Forest Service, Georgia Pacific, Boise Cascade and many other private forest landowners.

Agricultural land covers much of the valley floor and extended into the foothills. A wide variety of commodities are grown in the highly productive agricultural soils. Major crops include grass seed, small grains, fruit and nut orchards, row crops, hay, cattle sheep nursery products, wine grapes, Christmas trees and dairy products.

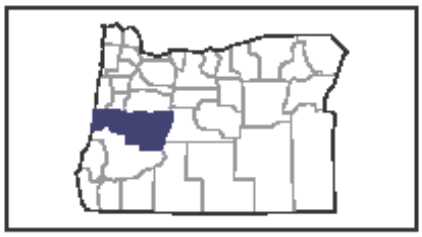
In 2007 there were 3,335 farms in Lane County. Nearly 75 percent of the farms are less than 50 acres in size and 42% have farm sales of less than $1,000 per year. Types of farms are; Cropland 47.4%,

Woodland 26.4%, Pasture 19.7% and Other Uses 6.4% (see 2007 Census of Agriculture Lane County Profile).



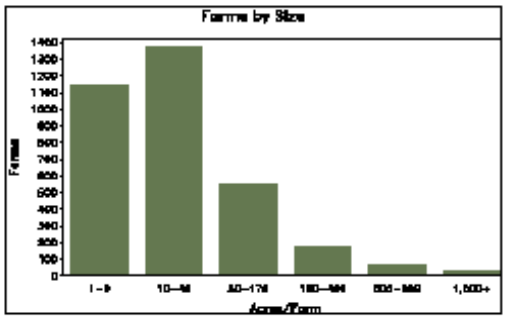
2007 CENSUS OF AGRICULTURE

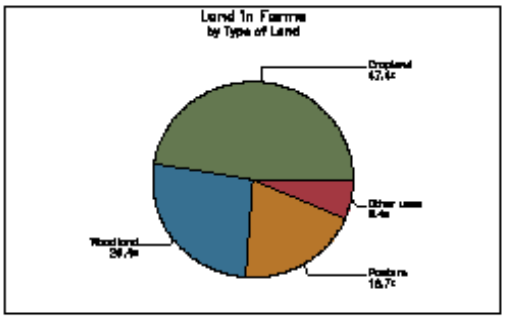
County Profile



Lane County
Oregon

	2007	2002	% change
Number of Farms	3,335	2,577	+ 29
Land in Farms	245,531 acres	234,807 acres	+ 5
Average Size of Farm	74 acres	91 acres	- 19
Market Value of Products Sold	$131,089,000	$87,824,000	+ 49
Crop Sales $92,446,000 (71 percent) Livestock Sales $38,644,000 (29 percent)			
Average Per Farm	$39,307	$34,080	+ 15
Government Payments	$759,000	$674,000	+ 13
Average Per Farm Receiving Payments	$5,343	$7,404	- 28





USDA United States Department of Agriculture
National Agricultural Statistics Service

www.agcensus.usda.gov

Item	Quantity	State Rank	U.S. Rank
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD ($1,000)			
Total value of agricultural products sold	131,089	11	659

Value of crops including nursery and greenhouse	92,446	11	421
Value of livestock, poultry, and their products	38,644	11	976
VALUE OF SALES BY COMMODITY GROUP ($1,000)			
Grains, oilseeds, dry beans, and dry peas	1,523	18	1,863
Tobacco	-	-	-
Cotton and cottonseed	-	-	-
Vegetables, melons, potatoes, and sweet potatoes	5,743	14	301
Fruits, tree nuts, and berries	13,811	11	120
Nursery, greenhouse, floriculture, and sod	32,810	6	105
Cut Christmas trees and short rotation woody crops	3,655	6	16
Other crops and hay	34,904	6	49
Poultry and eggs	12,794	4	511
Cattle and calves	9,895	16	1,203
Milk and other dairy products from cows	11,135	8	441
Hogs and pigs	300	7	1,138
Sheep, goats, and their products	1,833	4	60
Horses, ponies, mules, burros, and donkeys	928	6	232
Aquaculture	1,101	4	195
Other animals and other animal products	658	10	307
TOP CROP ITEMS (acres)			
Field and grass seed crops, all	39,089	6	7
Forage - land used for all hay and haylage, grass silage, and greenchop	33,097	11	608
Hazelnuts (Filberts)	3,698	5	5
Cut Christmas trees	3,668	5	13
Vegetables harvested for sale	(D)	15	380
TOP LIVESTOCK INVENTORY ITEMS (number)			
Broilers and other meat-type chickens	581,193	3	372
Layers	93,402	4	398
Pullets for laying flock replacement	(D)	3	(D)
Cattle and calves	22,657	19	1,303
Sheep and lambs	20,830	3	51

(D) Cannot be disclosed.

Economic Characteristics	Quantity
Farms by value of sales:	
Less than $1,000	1,427
$1,000 to $2,499	605
$2,500 to $4,999	436
$5,000 to $9,999	282
$10,000 to $19,999	197
$20,000 to $24,999	73
$25,000 to $39,999	68

$40,000 to $49,999	22
$50,000 to $99,999	79
$100,000 to $249,999	61
$250,000 to $499,999	32
$500,000 or more	53
Total farm production expenses ($1,000)	130,004
Average per farm ($)	38,982
Net cash farm income of operation ($1,000)	10,914
Average per farm ($)	3,273

Operator Characteristics	Quantity
Principal operators by primary occupation:	
Farming	1,249
Other	2,086
Principal operators by sex:	
Male	2,404
Female	931
Average age of principal operator (years)	57.6
All operators by race 2:	
American Indian or Alaska Native	38
Asian	21
Black or African American	14
Native Hawaiian or Other Pacific Islander	9
White	5,384
More than one race	75
All operators of Spanish, Hispanic, or Latino Origin 2	76

Soil

Hydrogeologic units, Geomorphology, and Soils of Lane County as Summarized From:

Gannett, M. W. and Caldwell, R. R. 1998 Geologic Framework of the Willamette Lowland Aquifer System, Oregon and Washington. Regional Aquifer System Analysis-Puget-Willamette Lowland. U.S. Geological Survey Professional Paper 1424-A. United States Printing Office, Washington.
Patching, W. R. and Parsons, R. B. 1987. Soils Survey of Land County Area, Oregon. Soil Conservation Service. U.S. Department of Agriculture.

The south Willamette Valley is bounded to the west by the Oregon Coast Range and to the east by the Cascade Mountains. It is underlain primarily by marine sediments in the west and volcanic debris and lava flows in the east. Above these more than 1600 feet of post-middle Miocene to Holocene continental sediment has been deposited. The Willamette Silt hydrogeologic unit is found at the surface of the valley floor and contains fine-grained deposits from Pleistocene glacial outburst flooding. The Willamette Silt unit occurs over the Willamette Aquifer hydrogeologic unit, which is comprised of gravelly alluvium derived from valley infilling by ancient braided streams and extensive alluvial fans coming out of the Cascades. The Willamette Aquifer unit was the ground surface prior to the outburst floods and it resides over the Willamette Confining hydrogeologic unit comprised of the finer grained material from basin fill processes. The Miocene aged Columbia River basalt flows terminate just south of Salem and are not included in the hydrogeologic sequence of the south Willamette Valley. The final hydrogeologic unit is the Basement Confining unit, which includes everything that existed prior to the periods of the Columbia River basalt flows and includes the same marine sedimentary and volcanic material that the Coast Range and Cascades are derived from.
There are six recognized geomorphic surfaces that occur in the south Willamette Valley and through the Willamette Silt hydrogeologic unit, which thins to 10 to 15 ft thick at its terminus. Horseshoe is the most recent geomorphic surface and describes the modern stream channel plus associated point bar deposits, channel fillings, and abandoned meanders. Soils on this surface include very young Entisols and, where settlement has controlled channel flow, Nekoma and Newberg, which have developed organic enriched surfaces. Above Horseshoe is the second floodplain geomorphic surface, Ingram. Soils on the Ingram surface include Wapato, Chehalis, Chapman, Newberg, and Camas. These soils range from gravelly loam to silty clay loam and are somewhat excessively to poorly drained. This diversity is indicative of the various alluvial deposits in which they have formed. The oldest geomorphic surface related to the modern drainage system in the south Willamette Valley is the Winkle surface. Soils occurring on the Winkle surface are influenced by ash from Mt. Mazama and include Sifton and Salem, which are rocky and well drained as well as Coburg and Conser, which are finer and less well drained. The Lukiamute surface is recognized in areas where it is too small to separate out the Horseshoe, Ingram, and Winkle surfaces such as flood plains of small drainage ways. Senecal is the next geomorphic surface found by stepping out of the floodplain to the first higher terraces and is formed by minor incision and integration of drainage with the next higher terrace geomorphic surface, Calapooyia. These two surfaces occur as a mosaic across the south Willamette Valley and together include the agriculturally significant Willamette, Woodburn, Hoclomb, and Datyon soils. These soils formed in the finest outburst flood sediments and range from well to poorly drained.

Soil structure, condition and fertility are critical factors for plant productivity on all land uses. Crop and hay production is dependent on soil condition and nutrients that are available for plant growth. Tree growth on forest land can be affected by logging practices and soil compaction.

Common Resource Area (CRA):
CRA regions are characterized by their geographic location, climate conditions, and vegetative body. The following are the CRA's of Lane County.

1.1 This unit is comprised of mountains having sedimentary bedrock outside of the “fog belt”. Temperature regime is mesic; moisture regime is udic. Sitka spruce is typically absent. Dominant vegetation is Douglas-fir and western hemlock. It includes narrow inland floodplains and terraces.

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2.2 This unit is comprised of the floodplain of the Willamette River and its major tributaries. It includes historic riparian areas and intensive row crops. Temperature regime is mesic and the moisture regime is xeric

2.3 This unit is comprised of the terraces in the Willamette Valley. The soils range from well drained to poorly drained. Land use is variable. Temperature regime is mesic and the moisture regime is zeric. There are numerous ponded seasonal wetlands.

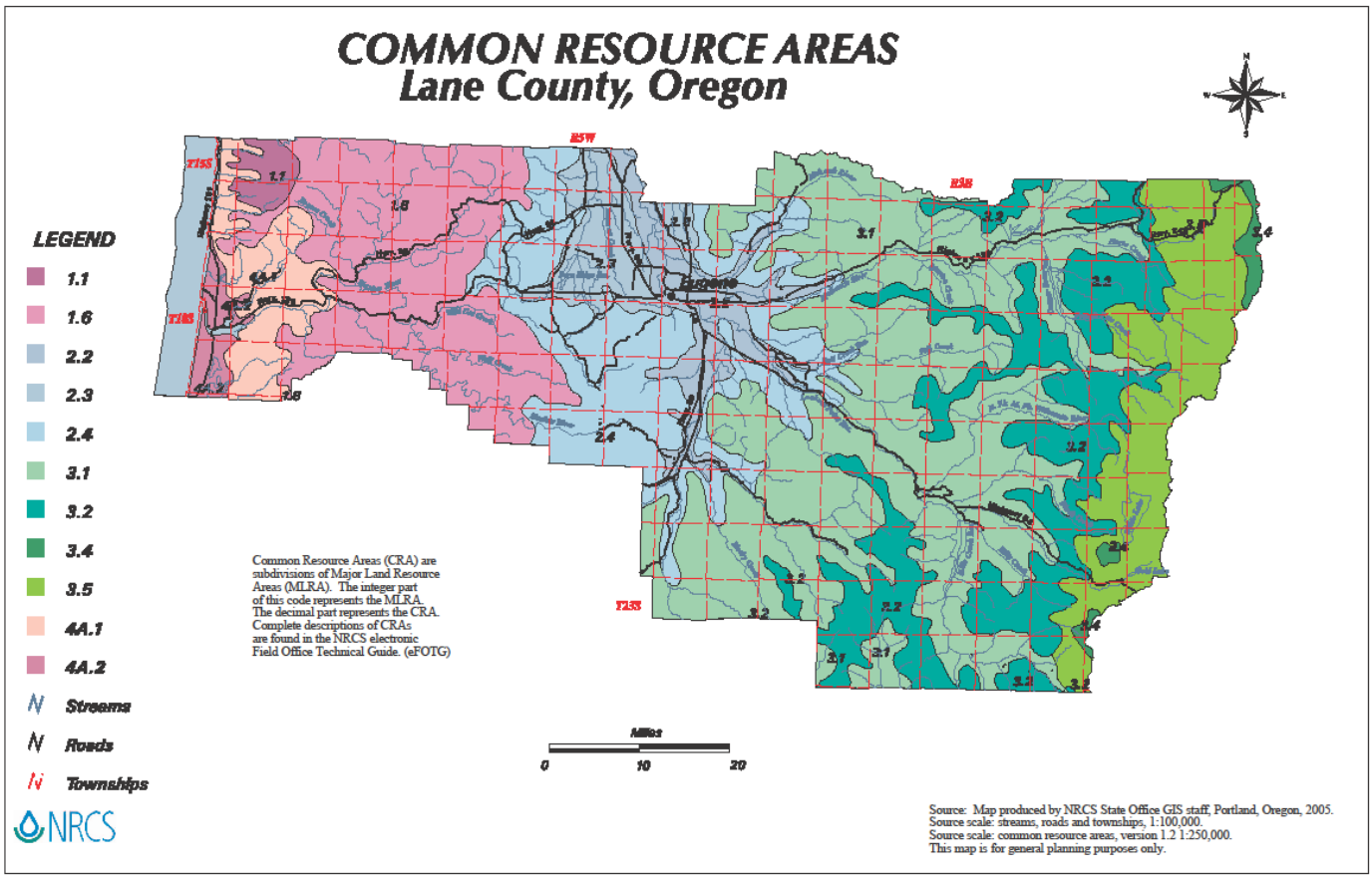
2.4 This unit is comprised of the foothills of the Willamette Valley. The soils are over basalt and sedimentary bedrock and are typically red and clayey. Vegetation is Douglas-fir and Oregon white oak. Temperature regime is mesic and the moisture regime is zeric. The unit lacks western hemlock which is characteristic of the adjacent CRA’s in the Coast and Cascade MLRAs.

3.1 This unit comprises the lower elevations of the Cascade Mountains adjacent to the Valley Foothills CRA. Bedrock is basalt, andesite and rhyolite. Vegetation is Douglas-fir and western hemlock. It is one of the most important timber producing areas in the Northwest. Temperature regime is mesic and the moisture regime is udic.

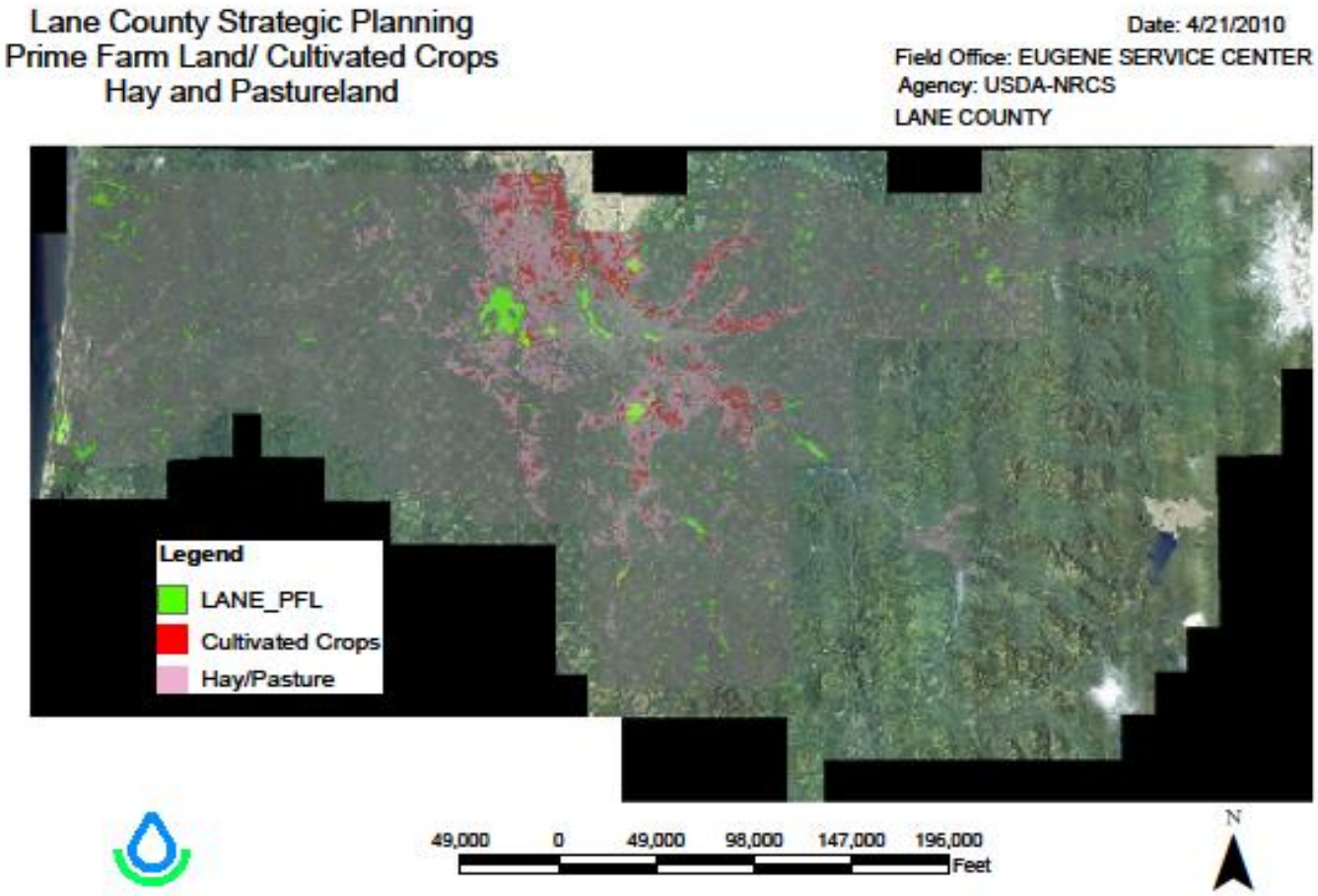
3.2 This unit comprises the mid to high elevation of the Cascade Mountains. Vegetation is Douglas-fir and western and mountain hemlock, Pacific silver fir, and noble fir. Elevation is typically above about 3,000 feet. The mountains are highly dissected with steep slopes. Temperature regime is frigid and “warm” cryic and the moisture regime is udic. It normally has a deep annual snowpack.

3.4 This unit is an area of high, glaciated, volcanic peaks that rise above subalpine meadows. It is characterized by bare rock outcrop, lava flows, and volcanic peaks. Elevations range from 5.600 to 12.000 feet. Active glaciation occurs on the highest volcanoes and decreases from north to south. The winters are very cold and the growing season is extremely short. Flora and fauna adapted to high elevations include herbaceous and shrubby subalpine meadow vegetation and scattered patches of mountain hemlock, subalpine fir, and whitebark pine.

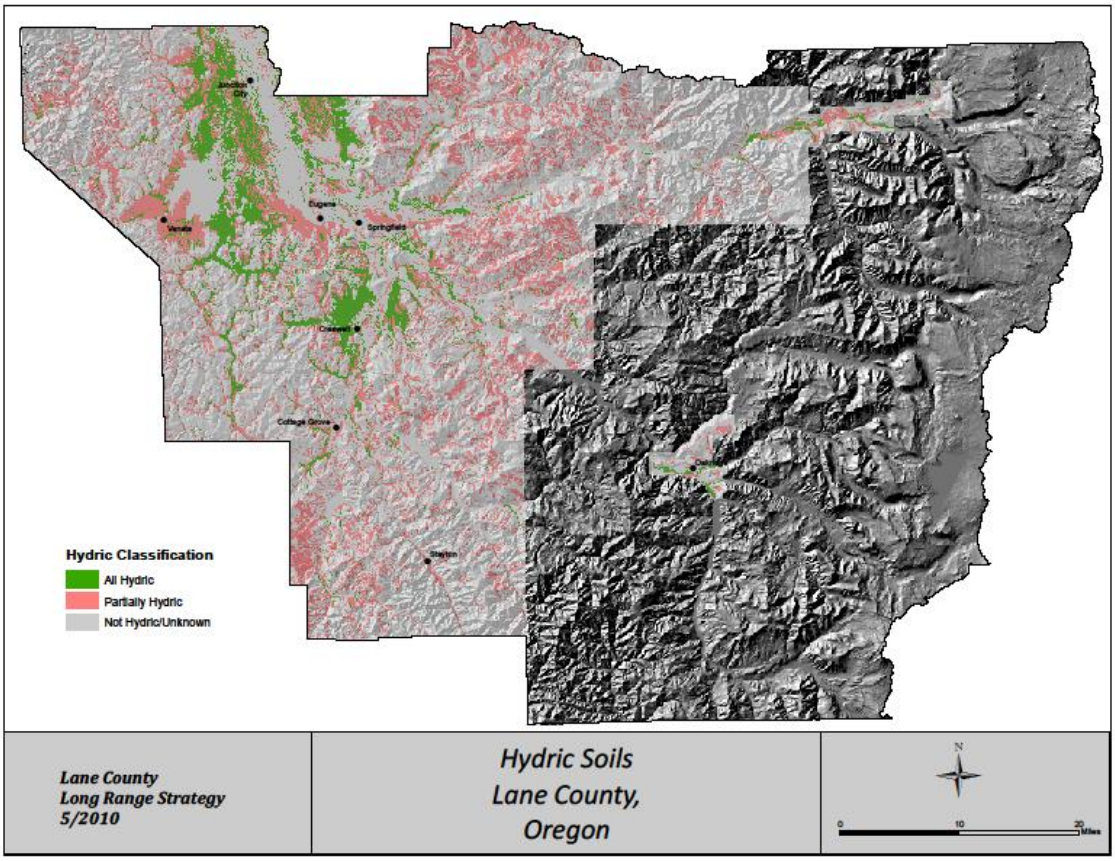
3.5 This unit consists of an undulating plateaus punctuated by volcanic buttes and cones that reach a maximum elevation of about 6,500 feet. There unit is extensively forested with mountain hemlock and Pacific silver fir. Temperature regime is cryic and the moisture regime is udic. Although this unit has the same moisture and temperature regime as the Southern Cascade Crest Montane Forest CRA, it is noticeably more moist, and the break between the Southern Cascade Crest Montane Forest CRA and this unit is transitional.



Prime and unique farmland soils are listed in the electronic Field Office Technical Guide. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land but not urban built-up land or water). It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. These soils are found throughout the county primarily on terraces adjacent to the flood plains of the Willamette and McKenzie Rivers.

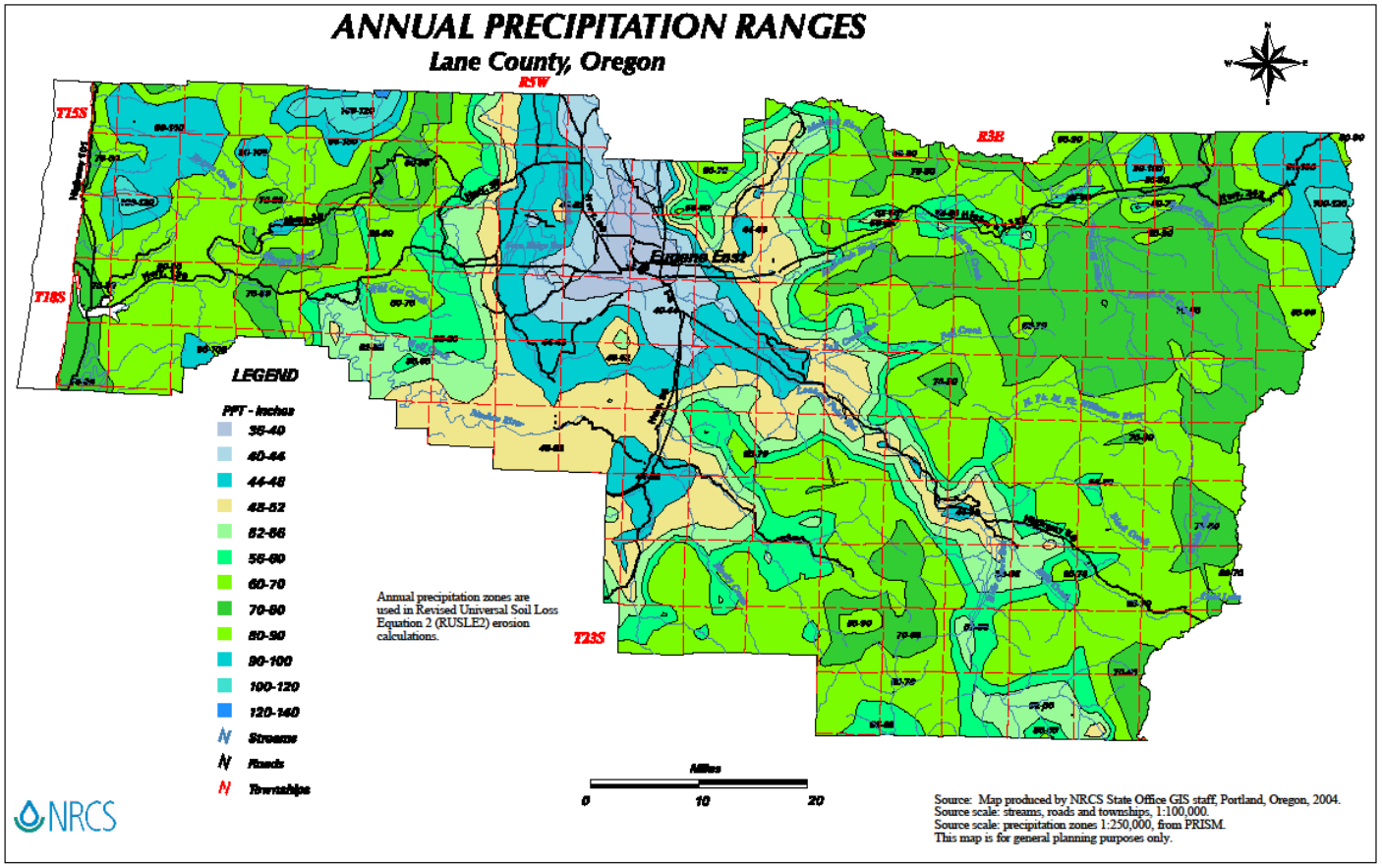


Hydric soils are soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions. Hydric soils along with wetland plants and wetland hydrology are used to define wetlands. Hydric soils are prevalent in the flood plains and digressional areas of the county. Hydric soils lists are maintained in the Field Office Technical Guide.



Water

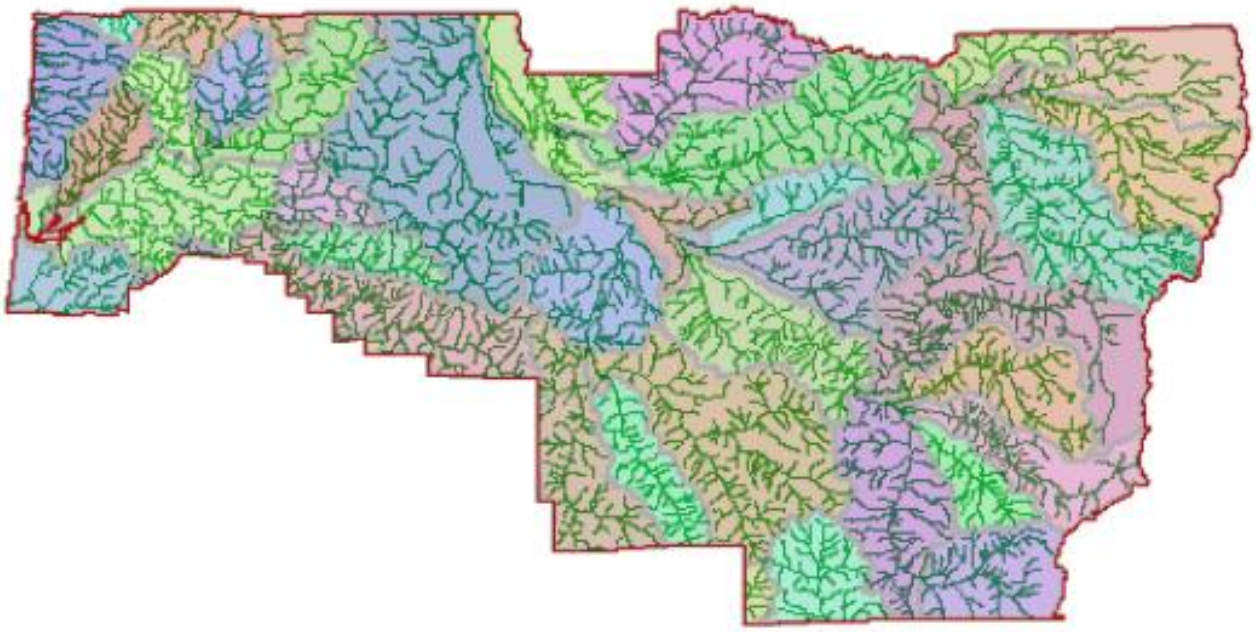
Precipitation varies with the the Coastal and Cascade Ranges receiving more than 100 inches of precipitation annually, much of which is in the form of snow during the winter months. The interior of the Willamette Valley typically receives between 40 and 50 inches of precipitation a year.



Water in some of the streams and rivers in Lane County fail to meet water quality standards, set forth in the Oregon Department of Environmental Quality Clean Water 303d list for temperature, bacteria and other criteria during most of the year. These problems result mostly from non-point source pollution. Non-point pollution is pollution that is washed in to streams and rivers from agricultural fields, gardens, city streets, disturbed areas and roads. In addition a number of chemicals, heavy metals, and other contaminants have been found in water and sediments.

Lane County Strategic Planning
Watersheds and Streams

Date: 4/20/2011
Field Office: Eugene
Agency: USDA-NRCS



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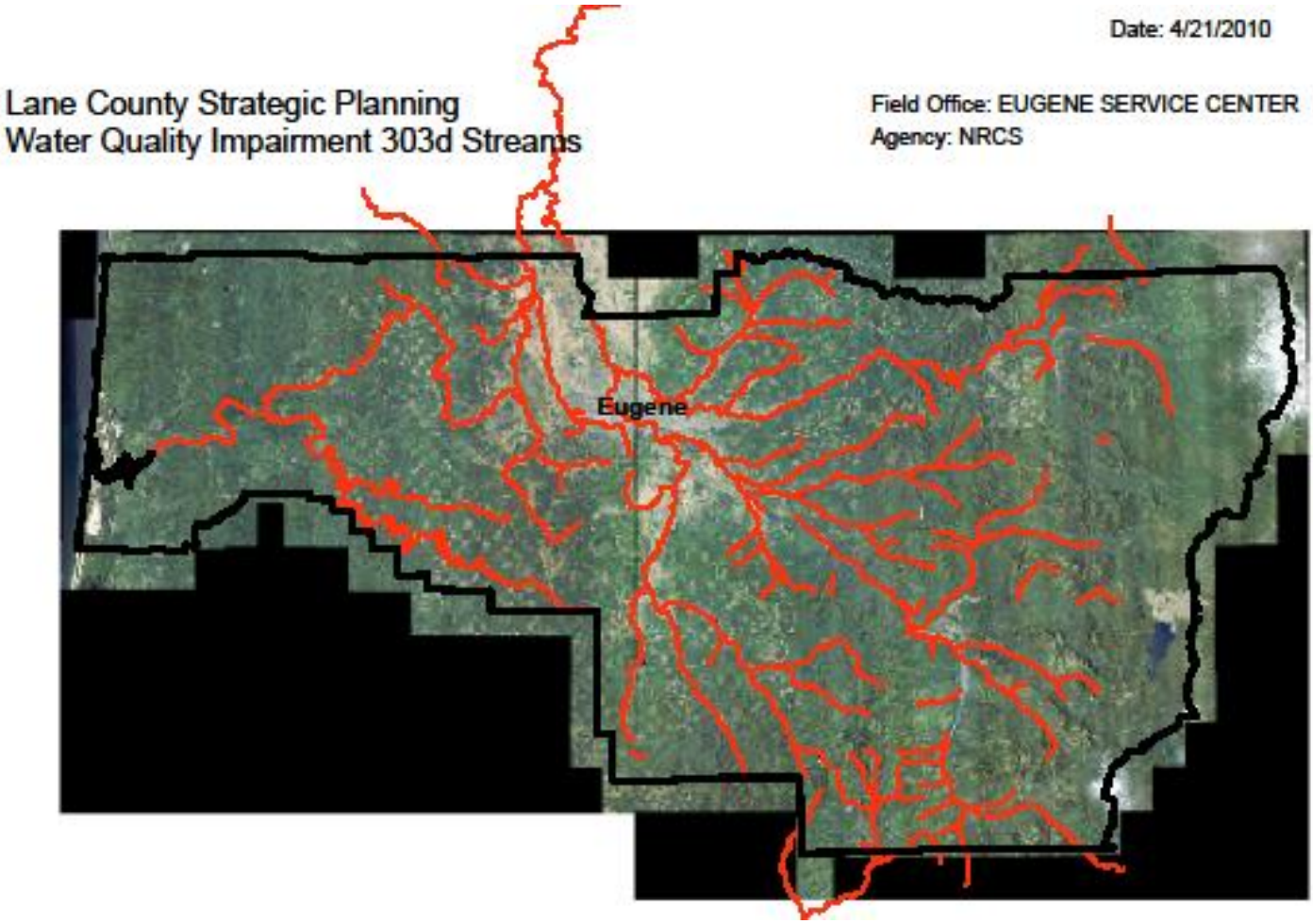
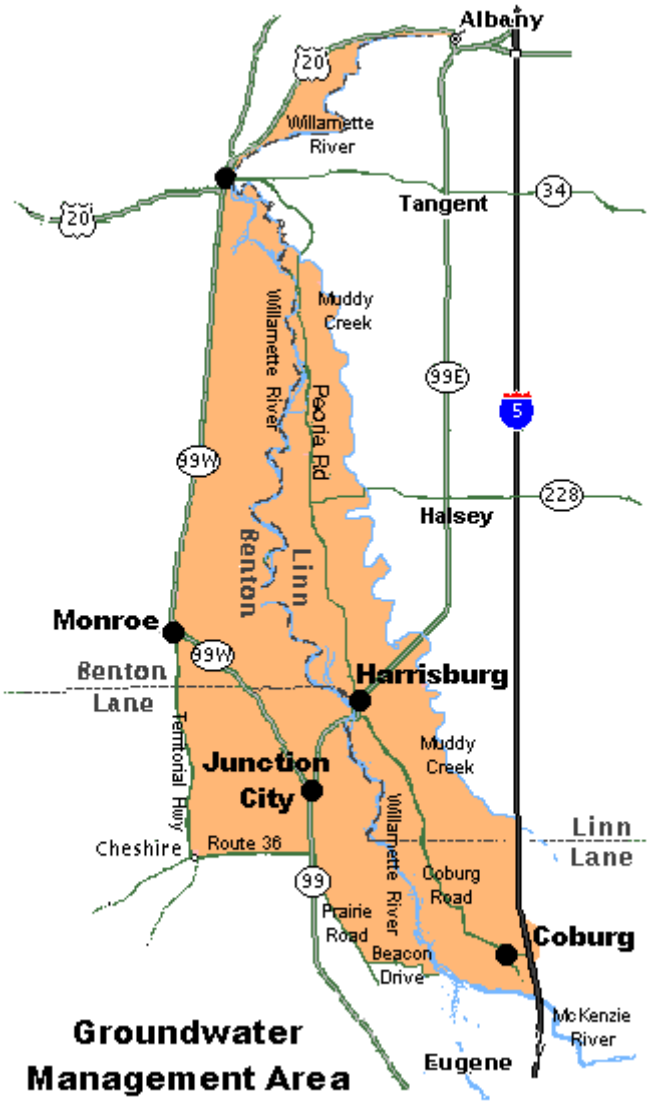


High nitrate concentration levels have been recorded in the shallow aquifers of the Upper Willamette Valley, the impacts on groundwater have been associated with a variety of land uses such as agriculture, animal feeding operations and residential. Water sampling by OSU Extension and DEQ has shown numerous sites over a broad area that have nitrate levels at or above 7 parts per million (ppm). Nitrate levels at or above 7ppm is the "action level" for declaration of a Groundwater Management Area by the State of Oregon. As a result DEQ established the Southern Willamette Groundwater Management Area (GWMA). The GWMA covers portions of Linn, Benton and Lane Counties (see map).



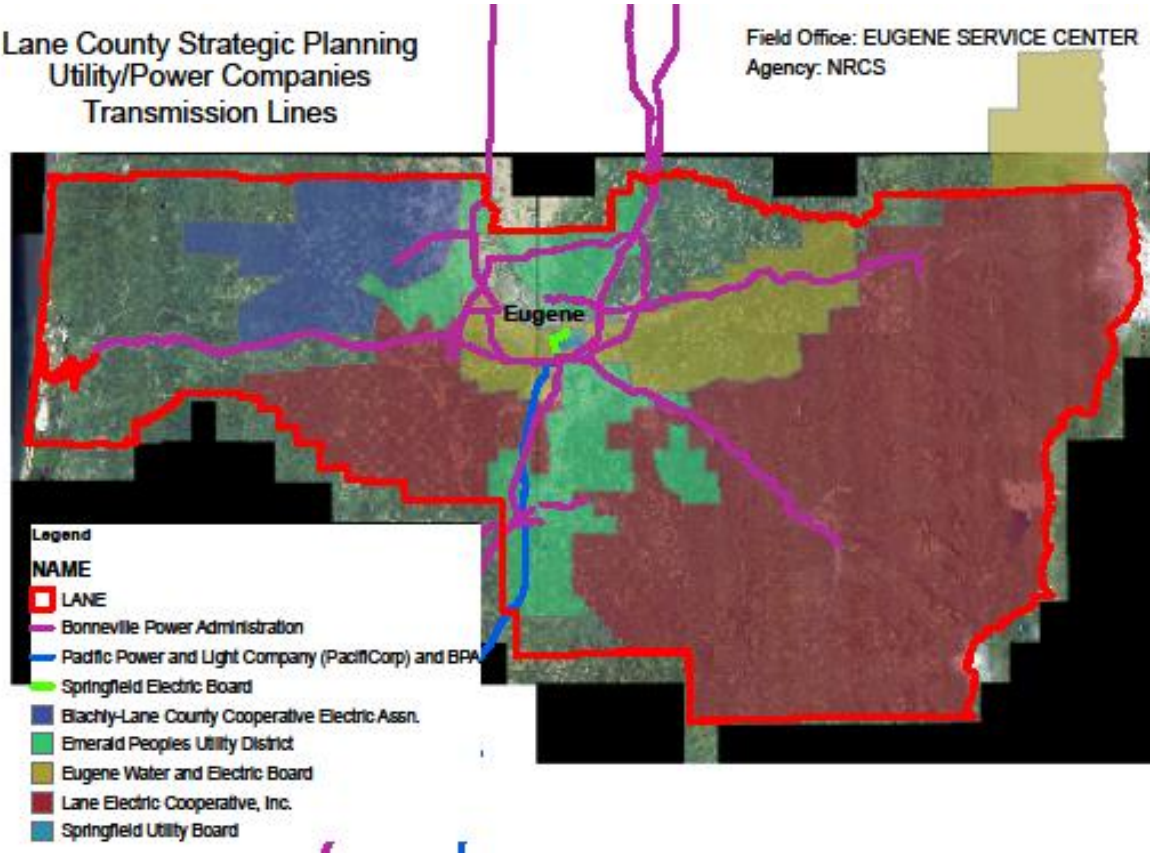
Groundwater Drinking Water

Groundwater pollution can create serious water quality problems for the highly populated rural areas which depend almost exclusively upon groundwater for their drinking water needs. Public drinking water systems are also vulnerable to non-point contamination risks, either by drawing their water directly from shallow aquifers or by interaction between the deeper and shallow aquifers where contaminants are present. The Upper Willamette Basin is already very populated and it is estimated that it will continue to be one of the fastest growing parts of the state. Proactive efforts are needed to identify potential risks to groundwater and take steps to reduce contamination.

Air and Energy

Air quality: In 2009 the Oakridge air shed was designated as a non-attainment area for PM 2.5 emissions. Residential wood stove smoke is a major source of PM 10 and PM 2.5 emissions particularly in the winter.

Energy: Wind power generation is generally not pursued in Lane County. Lane County has not been identified as an area with consistent wind velocities conducive to development of wind power generation. There is some interest in individual small scale solar power generation and individual micro-hydro power generation.



Plants and Animals

Pastureland grazing health issues: Pasturelands in Lane County can be very productive. Invasive brush species are very common including Himilayan Blackberry, English hawthorn, scotch broom and gorse. Improvements in prescribed grazing including cross fencing, livestock water development and rotational grazing will benefit the plant health and productivity of the pastures.
Riparian/Buffer land use: Riparian stream areas are critical habitat for many species including Threatened and Endangered Fish species such as salmon and steelhead. Many riparian areas are in a degraded condition due to multiple factors. Riparian areas suffer invasion of noxious and invasive plants, lack of in-stream habitat, need for improved and diversified riparian tree and shrub canopies. Unmanaged domestic livestock access to streams and rivers may adversely affect riparian conditions. In-stream passage barriers are limiting access by salmonids to historic upstream habitat locations. In-stream habitat will need to be improved to provide good habitat for fish species. Watershed Councils and Soil and Water Conservation Districts are actively involved in riparian area and in-stream restoration. The Farm Service Agency (FSA), Bureau of Land Management (BLM), US Forest Service (USFS) and US Fish and Wildlife (USFW) are supportive also with financial and technical assistance.

Forest Health – overstocked forestlands: Many private non-industrial forestlands have not been managed to obtain the appropriate stand density. As a consequence, these lands are overstocked, growth rates essentially are stalled, and the stands are subject to increased hazards from wildfire. Many of these stands also have problems with invasive brush species. The wildlife benefits are greatly reduced when these stands are overstocked.

Forest Health – understocked forestlands: There are areas of private non-industrial forestlands that have been cut through a number of times and the remaining trees are of very poor quality and undesirable species from a commercial point of view, or, quite a few years ago replanting after harvesting was not required or management after replanting was inadequate to obtain good forest tree stand density. In some cases invasive brush species such as blackberry and scotch broom have invaded the stands. It takes considerable time, effort and financial resources to reclaim these areas and get them into healthy forestlands again.

Forest Health – insect/disease: The most severe insect damage in forestlands is located in upper elevation sites which the US Forest Service manages and involves pine bark beetle in lodgepole pine stands. Other diseases and insect concerns generally are not of a severe nature or having widespread impact.

Forest Health – oak woodland and savannah habitat: Oak woodlands and oak savannah habitat is prevalent throughout most of the lower elevations of the Willamette Valley basin. Many of the oak woodlands are overstocked by many times and are unable to develop the desirable characteristics which provide the greatest wildlife benefit. Some of the overstocking can be attributed to the lack of fire in the forest system. Considerable thinning and control of invasive brush species is needed to gain the desirable wildlife benefits. Douglas fir also is encroaching into many oak stands. Many agencies and entities and landowners are interested in improving oak woodlands. Recently considerable technical and financial assistance has been available to assist landowners.

Soil Health: Many current agricultural practices used in the county are detrimental to soil health. Many landowners/farmers do not understand soil health principals and therefore misapply fertilizer applications, allow unnecessary erosion, do not manage manure and over till the soil.

Salmonids: Many streams in Lane County are potential habitat for salmonid species such as salmon and steelhead. Extensive efforts are ongoing in regards to habitat improvements and awareness of management concerns particularly in regards to domestic livestock management affecting water quality. Private lands are generally located below federal lands which may have very good in-stream habitat. Improving habitat on and providing fish access through private lands to access the federal lands will take considerable technical and financial assistance but is critical to the success of the recovery of the salmonid species.

Confined Animal Feeding Operations (CAFOs): The Confined Animal Feeding Operations permit program was developed to assist operators and producers with managing their waste so as not to contaminate ground or surface water. Since the early 1980s, CAFOs have been registered to a general Water Pollution Control Facility (WPCF) permit designed to protect water quality, while allowing the operators and producers to remain economically viable.

Confined Animal Feeding Operations
6 Dairy 5 Poultry 2 Beef
13 Total CAFO's in Lane County

Threatened & Endangered Species (T&E): Diversity and acreage of natural wildlife habitats in Lane County have been reduced as land was converted from natural forest and grassland to managed forests, cropland, homesteads, and urban areas. An estimated 40% of Willamette Valley wetlands have been lost. As a result, ecological functions of wetlands and riparian areas has been reduced such as: filtering sediment, providing wildlife habitat, regulating high water flows, replenishing groundwater, and providing greater in-stream water flows during summer months. Upland habitats have also been impacted. Oak savannah and oak woodlands have been converted to cropland, pastures and vineyards which has directly affected several species through a loss of suitable habitat. This resource concern has historically been addressed through the use of easement programs, and easement programs such as WRP will continue to play an important role in protecting sensitive habitats.

There are 10 species listed as threatened or endangered that occur in Lane County.

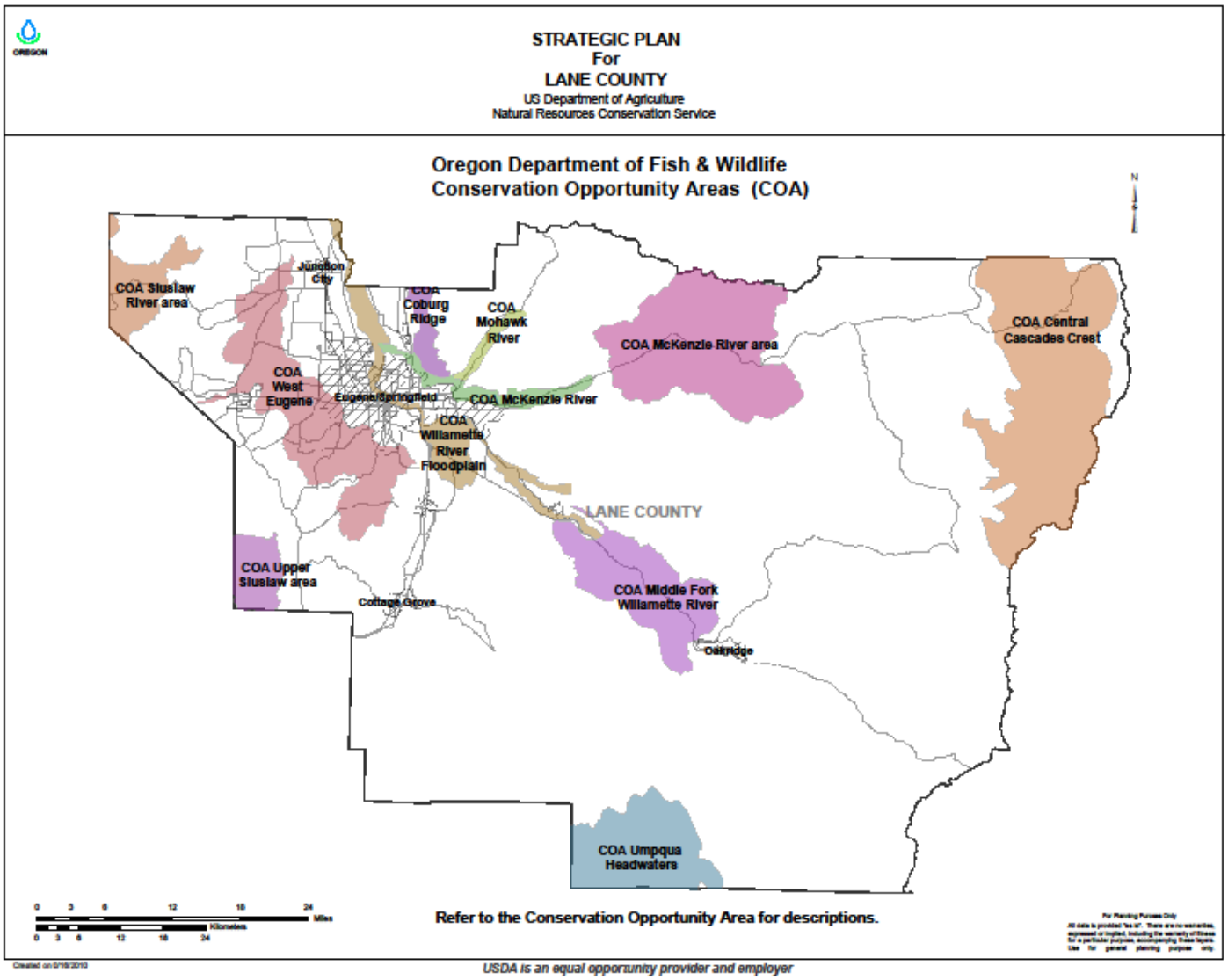
	Federally Listed Species	
Common Name	Scientific Name	Status
Marbled murrelet	Brachyramphus marmoratus	T
Northern spotted owl	Strix occidentalis caurina	T
California Brown Pelican	Pelecanus occidentalis californicus	E
Western snowy plover	Charadrius alexandrines nivosus	PS:T
Fender's blue butterfly	Icaricia icarioides fender	E
Oregon silverspot butterfly	Speyeria zerene hippolyta	T
Willamette daisy	Erigeron decumbens	E
	Lupinus sulphureus ssp. kincaidii	T

Kincaid's lupine		
Bradshaw's lomatium	Lomatium bradshawii	E
Chinook Salmon (Upper Willamette River ESU, spring run)	Oncorhynchus tshawytscha	T
Coho salmon (Oregon Coast ESU)	Oncorhynchus kisutch	T
Steelhead Upper (Willamette River ESU, winter run)	Oncorhynchus mykiss	T
Oregon chub	Oregonichthys crameri	E
Bull trout	Salvelinus confluentus	T
Columbian white-tailed deer	Odocoileus virginianus leucurus	PS:E
Gray wolf	Canis lupus	PS:E
Northern sea lion	Rana aurora aurora	T

T = threatened E= endangered PS = partial status (check with FWS or ORNHIC)

Conservation Opportunity Areas

Although conservation actions taken throughout the state can help fish and wildlife, focusing investments on priority landscapes can increase likelihood of long-term success over larger areas, improve funding efficiency, and promoting cooperative efforts across ownership boundaries. Conservation Opportunity Areas are landscapes where broad fish and wildlife conservation goals could best be met. Working in these landscapes can increase effectiveness of conservation actions at larger scales than can individual projects scattered throughout the state.



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

WC-06. McKenzie River area

Special Features:

Federal land in this area is designated as an adaptive managementarea, designed to emphasize research on ecosystem functionin forested landscapes.

Area encompasses two aquatic diversity areas. Habitat for several amphibian species.

Key Habitats:

Aquatic

Late Successional Douglas-fir Forests

Riparian

Key Species:

Coastal Tailed Frog

Harlequin Duck

Bull Trout (Columbia River Population)

Identified in other planning efforts:

American Fisheries Society Aquatic Diversity Areas

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.

WC-07. Middle Fork Willamette River

Special Features:

Area contains the North Fork Willamette Wild and Scenic River.

Key Habitats:

Aquatic

Late Successional Douglas-fir Forests

Key Species:

Oregon Slender Salamander

Bull Trout (Columbia River Population)

Oregon Chub

American Marten

Fisher

Fringed Bat

Recommended Conservation Actions:

Maintain or enhance in-channel watershed function, connection to riparian habitat, flow and hydrology.

WC-08. Central Cascades Crest

Special Features:

Containing parts of several wilderness areas, this large area is almost entirely managed for conservation values.

Key Habitats:
Late Successional Douglas-fir Forests
Montane Grasslands
Wetlands And Wet Meadows
Key Species:
Cascade Torrent Salamander
Cascades Frog
Coastal Tailed Frog
Oregon Slender Salamander
Oregon Spotted Frog
Black Swift
Bufflehead
Northern Goshawk
Sandhill Crane
American Marten
Fisher
Identified in other planning efforts:
American Fisheries Society Aquatic Diversity Areas
Recommended Conservation Actions:
Initiate or continue wet meadow conservation and restoration efforts.

WC-09. Umpqua Headwaters
Area includes the headwaters of the North and South Umpqua Rivers.
Special Features:
This area encompasses some of the ecoregion's most important
salmonid habitat, including 11 American Fisheries Society aquatic diversity areas.
Much of this area has been designated by the US Forest Service as a Late Successional Reserve.
The northwestern pond turtle can be observed in low elevation lakes and streams throughout this area, particularly in the South Umpqua area. There are documented nesting sites and observed hatchlings here.
Key Habitats:
Aquatic
Late Successional Douglas-fir Forests
Key Species:
Cascades Frog
Foothill Yellow-legged Frog
Larch Mountain Salamander
Great Gray Owl
Northern Goshawk
Coastal Cutthroat Trout
Coho Salmon
Summer Steelhead
Umpqua Oregon Chub
Winter Steelhead
American Marten
Fisher
Fringed Bat
Townsend's Big-eared Bat
Northwestern Pond Turtle
Identified in other planning efforts:
American Fisheries Society Aquatic Diversity Areas
Oregon Biodiversity Project Conservation Opportunity Areas

The Oregon Plan Core Salmon Areas

Recommended Conservation Actions:
Consider the impact of recreational activities (e.g., motorized watercraft; shoreline activities; road usage) on water quality and watershed function

CR-23. Siuslaw River Area
Special Features:
Significant for aquatic resources
One of the highest concentrations of core salmon areas in the state
Many American Fisheries Society Aquatic Diversity Areas
Key Habitats:
Late Successional Conifer Forests
Riparian
Key Species:
Marbled Murrelet
Northern Spotted Owl
Chum Salmon
Coho Salmon
Winter Steelhead
Identified in other planning efforts:
American Fisheries Society Aquatic Diversity Areas
Oregon Biodiversity Project Conservation Opportunity Areas
Siuslaw National Forest High Priority Restoration Areas
The Nature Conservancy Ecoregional Assessment
The Oregon Plan Core Salmon 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
Manage young forests on public lands to accelerate development of late-successional characteristics

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
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

Section III. Natural Resources Analysis

The Lane County local work group has identified the major resource issues/opportunities in the county as:

Small Land Owners

- Outreach and education for development of best management practices
- Noxious and invasive plants
- Nutrient management
- Waste management
- Pasture management
- Heavy use area
- Water quality on head quarters

Forestland:

- Fuel Reduction
- Forest roads & EPA
- Fish Passage
- Longer age rotations (60-100 years)
- Forest health
- Wildlife habitat restoration

Cropland:

- Variable Rate application

- **Pastureland:**

  - Livestock rotation
  - Noxious and invasive plants

The top ten conservation practices applied with NRCS assistance for the years 2007 thru 2012 were; Tree and Shrub Establishment, Upland Wildlife Habitat Management, Nutrient Management, Prescribed Grazing, Fence, Irrigation Water Management, Integrated Pest Management, Forest Stand Improvement, Reduced Tillage, Pasture Planting.

Conservation systems applied by land use:

Forest Land: The primary focus has been on forest improvement practices such as thinning for release and pre-commercial thinning along with slash treatment practices that reduce or eliminate smoke and reduce wildfire hazard. In addition the Healthy Forest Reserve Program is being utilized to restore T&E wildlife habitat.

Cropland: Water quality and quantity have been the main emphasis on cropland. Treatment on cropland has included practices that reduce surface and ground water contamination and improve irrigation efficiency, such as nutrient management, reduced tillage and irrigation water management.

Pastureland/Hayland: Improvements to pasture/hayland have included practices that facilitate improved pasture management include prescribed grazing, fencing and stock water development. Hayland improvement practices include nutrient management and pasture planting.

Headquarters: Resource problems associated with headquarters areas are contaminants from animal waste and soil compaction. Heavy use protection and manure storage and conservation nutrient management plans are the main practices used to treat these areas.

NRCS Conservation Programs:

Environmental Quality Incentives Program (EQIP): The Environmental Quality Incentives Program is a voluntary conservation program that provides assistance to landowners and agricultural producers in a manner that promotes agricultural production and environmental quality as compatible goals. Through EQIP, farmers and ranchers receive financial and technical assistance to implement structural and management conservation practices that optimize environmental benefits on working agricultural land. The EQIP cost share program is the most utilized NRCS conservation program in Lane County and has been utilized on all land uses.

Wildlife Habitat Incentives Program (WHIP): The Wildlife Habitat Incentives Program is a voluntary program that provides both technical and financial assistance to non-federal landowners and tribes to create, restore, and enhance fish and wildlife habitats. In Lane County the WHIP program has been utilized to improve upland and wetland wildlife habitat.

Conservation Reserve Enhancement Program (CREP): The CREP program is jointly managed by NRCS and The Farm Service Agency. The purpose of the program is to improve and restore riparian forest buffers along stream banks. There are currently 32 contracts for 174 acres.

Conservation Security Program (CSP): The Conservation Security Program is a voluntary program that provides financial and technical assistance to promote the conservation and improvement of soil, water, air, energy, plant and animal life, and other conservation purposes on Tribal and private working lands. Working lands include cropland, grassland, prairie land, improved pasture, and range land, as well as forested land that is an incidental part of an agriculture operation.

Wetland Reserve Program (WRP): The purpose of the program is to restore, protect and enhance wetlands for the benefit of migratory birds and other wetland-dependent wildlife and plants, including species of concern and those that are state and federally listed. In addition to providing benefits to wildlife, WRP helps restore active floodplains along creeks and rivers, aids in flood control, and improves water quality by restoring environmentally sensitive, frequently-flooded cropland back to permanent vegetation.

Healthy Forest Reserve Program (HFRP): HFRP is a working lands easement program established for the purpose of restoring and enhancing forest ecosystems to promote the recovery of threatened and endangered species improve biodiversity; and enhance carbon sequestration while promoting forest conditions that improve habitat for the threatened Northern Spotted Owl.

Resource Concerns by Program:	Acres Reported Applied
EQIP	
Compaction	67.1
Excessive Nutrients and Organics in Surface Water	51,253.1
Inadequate Water	3.7
Inefficient Water Use on Irrigated Land	5,961.0
Productivity, Health and Vigor	12,033.5
Road, Road Sides and Construction Sites	2,565.7
Sheet and Rill	46,789.4
Streambank	986.7
T&E Species: Declining Species, Species of Concern	34,252.0
Threatened and Endangered Fish and Wildlife Species	1,386.7
Total Acres Reported Applied	**155,298.9**
CSP	
Excessive Nutrients and Organics in Surface Water	5,029.6
Inefficient Water Use on Irrigated Land	59.1
Productivity, Health and Vigor	152.5
Sheet and Rill	87.4

T&E Species: Declining Species, Species of Concern	4,595.4
Threatened and Endangered Fish and Wildlife Species	1,363.9
Total Acres Reported Applied	**11,287.9**

WHIP

Excessive Nutrients and Organics in Surface Water	1.0
Productivity, Health and Vigor	23.8
T&E Species: Declining Species, Species of Concern	1,010.0
Threatened and Endangered Fish and Wildlife Species	14.5
Total Acres Reported Applied	**1,049.3**

WRP

Threatened and Endangered Fish and Wildlife Species	4,722.7
Total Acres Reported Applied	**4,722.7**

CRP

Excessive Nutrients and Organics in Surface Water	441.3
Productivity, Health and Vigor	1,410.6
Streambank	2,381.1
T&E Species: Declining Species, Species of Concern	26.4
Threatened and Endangered Fish and Wildlife Species	63.8
Total Acres Reported Applied	**4,323.2**

Conservation Partner Efforts:

Soil and Water Conservation Districts (SWCD): The Upper Willamette SWCD has been and a leader in conservation efforts in Lane County and is an important partner for NRCS. The district works directly with private landowners and operators including assisting USDA-NRCS with implementing a variety of programs that encourage resource protection and enhancement. The district provides outreach, education and works with cooperators to obtain and manage grants for conservation activities. The district has taken an active role in conservation of productive soils by establishing a soil testing program to assist landowners in managing nutrients and improving soil productivity. Current work includes assisting small farms with manure management and storage. The district also has an active riparian buffer program to protect water quality and provide riparian area habitat. In addition the SWCD is working with the Oregon Dept. of Agriculture in a pilot project to focus outreach and technical assistance to landowners in the Getting's creek watershed areas. By focusing some of their resources in a small area it allows the SWCD to contact each landowner individually and offer technical assistance for riparian restoration and other projects. It is hoped that this project will help determine the most effective way to provide assistance to landowners and achieve compliance with regulations.

Farm Service Agency (FSA): works with landowners and producers through various programs to assist with loans, disaster payments, to protect and restore riparian habitat and to protect farmland from erosion. With financial and technical assistance through the Conservation Reserve Enhancement Program (CREP) and Conservation Enhancement Program (CRP), FSA has restored 172 AC of riparian habitat and has protected 55 AC of highly erodible cropland from erosion.

Oregon Department of Agriculture (ODA): works with producers and landowners to 1)ensure food safety and provide consumer protection; 2) to protect the natural resource base for present and future generations of farmers and ranchers, and 3) to promote economic development and expand market opportunities for Oregon agricultural products. With these three goals in mind ODA regularly works with NRCS to ensure that producers and landowners remain in compliance with state law and offers technical assistance and information to assist with conservation. ODA has also partnered with Oregon Department of Environmental Quality (DEQ) in addressing water quality issues in surface water and groundwater in areas that are a source of drinking water.

Oregon Department of Forestry (ODF): routinely works with non-industrial private forestland owners to ensure that these landowners have access to technical resources and to ensure that everyone understands and complies with the Oregon Forest Practices Act. Through their Private Forests Program they provide landowner assistance services and enforcement of resource protection rules on all privately-owned forest in Oregon. Services that the Stewardship Foresters have provided to Lane County landowners include forest health and forest management assistance, preservation of water quality and habitat for fish and wildlife, and regulation of harvest, chemical use and reforestation requirements. ODF is an important partner in the CREP program, providing technical assistance in developing planting plans for riparian habitat.

Oregon Department of Fish and Wildlife (ODFW): has worked with Lane County landowners through the Habitat and Access Program to conserve wildlife habitat and to protect and enhance recreational activities. Habitat and Access Program funds were used to hire 5 Oregon State Police Senior Troopers to patrol private timberlands from Aug. to Dec. The increased law enforcement provides an incentive to private timberland owners to continue to allow hunting access. ODFW has also provided biological information and assistance to NRCS planners on conservation plans. In February of 2006, ODFW published their Conservation Strategy for the whole state. This document has provided useful information to conserve and preserve the wildlife habitat would have the most impact.

US Fish and Wildlife Service (USFWS): works with private landowners through their Partners for Fish and Wildlife Program to efficiently achieve voluntary habitat restoration on private lands, through financial and technical assistance, for the benefit of Federal Trust Species. USFWS has been a valuable partner to NRCS on Wetland Reserve Program (WRP) easements (planning, restoration, permitting, etc) and in the planning and implementation of practices through Wildlife Habitat Incentive Program (WHIP) contracts.

Watershed Councils: There are four watershed councils in the eastern Lane County. The watershed councils primarily focus on in-stream and streamside restoration activities as well as monitoring water quality and habitat issues such as fish passage barriers. NRCS and Watershed Councils have worked together to provide technical and program assistance to landowners in Lane county.

Oregon State University Extension: offers technical assistance and educational opportunities to producers and landowners to ensure them access to the newest and best technology and scientific information that is available. Extension has been an important partner for NRCS particularly in assistance to small farms.

Conservation Opportunities

Cropland:
Cropland in Lane County is some of the most productive in the state. Grass seed production is one of the mainstays of crop production, however due to a steep decline in the housing market prices have been depressed. Many irrigation systems in place are old and inefficient causing surface runoff that delivers high levels of nutrients, sediments and pesticides into adjacent waterways. Because many producers are under severe economic pressure and have had to forgo cropland improvements and conservation practice implementation. With funding assistance under such programs as CSP and EQIP many producers have been able to make improvements to irrigation systems, initiate management practices such as reduced tillage, pest management and nutrient management. It is expected that the demand for technical and financial assistance will continue.

Pasture/Hayland:
Cropland, cattle and hay producers have also had to deal with a depressed economy and low prices. They too have had to forgo improvements and conservation practice implementation. As with crop producers funding assistance under USDA programs for many has become essential. The funding under programs such as EQIP has allowed quite a few producers to make improvements on their land such as cross fencing, livestock water systems and improved pasture and hayland management.

Forestland:
The timber industry has struggled in the last few years and has declined sharply in the last couple years due to the recession. As a result many private non-industrial forest landowners are not logging or maintaining their forest lands. In concurrence the with 2008 Farm Bill the Upper Willamette Soil and Water Conservation District has put an emphasis on providing conservation/program information to small woodland owners. In the last three years there has been a marked increase in participation in the EQIP program for conservation practices such as precommercial thinning, slash treatment, tree and shrub establishment and invasive brush control. There are currently seven landowners in the process of establishing easements under the HFRP program for the purpose of restoring and enhancing forest ecosystems to promote the recovery of Northern spotted owl.

Headquarters:
Throughout Lane County water quality (impairment due to sediment, nutrients and pesticides) was identified as a priority resource concern by the local working group. There are older dairy, poultry, beef, lamb, swine and mink operations in the County. These older operations are interested in

updating their waste storage facilities, composting and better utilization of their waste and need assistance with nutrient management and waste utilization plans. The number of small farms with horses and other livestock is rapidly increasing in the County. Many of these small landowners have limited agriculture experience and awareness of resource conservation and this has led to degraded soil and water quality. In recent years there has been an increase in the number of EQIP received for conservation improvements on headquarters areas. It is expected that the demand for technical and financial assistance will continue.

Section IV. Natural Resource Problems and Desired Future Outcomes

Information for this section was developed using public input from Local Work Groups, conservation partners, landowners and District Conservationist experience.

Description of Resource Concerns:

Cropland:

The local working group has identified water quality (both surface and groundwater) as one of their primary resource concerns, due to sediment, nutrients and pesticides. All areas of cropland share this concern but at this point the area in North Lane County within the Ground Water Management Area exhibits the greatest level of degradation. There are increasing demands on surface water for residential purposes, fish/wildlife habitat concerns, and irrigation water demands for vegetable production and other specialty crops. Many irrigation systems are old and inefficient leading to over irrigation and excessive surface water runoff that carries sediment, nutrients and pesticides into surface and groundwater. This contamination is having an adverse on drinking water quality and fish and wildlife habitat.

Water in some of the streams and rivers in Lane County fail to meet water quality standards, set forth in the Oregon Department of Environmental Quality Clean Water 303d list for temperature, bacteria and other criteria during most of the year. Non-point pollution is pollution that is washed in to streams and rivers from agricultural fields, gardens, city streets, disturbed areas and roads. In addition a number of chemicals, heavy metals, and other contaminants have been found in water and sediments.

Groundwater pollution can create serious water quality problems for the highly populated rural areas which depend almost exclusively upon groundwater for their drinking water needs. Public drinking water systems are also vulnerable to non-point contamination risks, either by drawing their water directly from shallow aquifers or by interaction between the deeper and shallow aquifers where contaminants are present. The Upper Willamette Basin is already very populated and it is estimated

that it will continue to be one of the fastest growing parts of the state. Proactive efforts are needed to identify potential risks to groundwater and take steps to reduce contamination.

Forestland:

The local working group has identified forest health as one of the primary resource concerns on forestlands. Concerns associated with this resource are; overstocked forestland, understocked forestland, insects and disease and oak woodland/savannah habitat.

Overstocked forestlands: Many private non-industrial forestlands, have not been managed to obtain the appropriate stand density. As a consequence, these lands are overstocked, growth rates essentially are stalled, and the stands are subject to increased hazards from wildfire. Many of these stands also have problems with invasive brush species. The wildlife benefits are greatly reduced when these stands are overstocked.

Understocked forestlands: On private non-industrial forestlands there are some lands that have been cut through a number of times and the remaining trees are of very poor quality and undesirable species from a commercial point of view, or, quite a few years ago replanting after harvesting was not required or management after replanting was inadequate to obtain good forest tree stand density. In some cases invasive brush species such as blackberry and scotch broom have invaded the stands and it takes considerable time, effort and financial resources to reclaim these areas and get them into healthy forestlands again.

Insect/disease: The most severe insect damage in forestlands is located in upper elevation sites which the US Forest Service manages and involves pine bark beetle in lodgepole pine stands. Other diseases and insect concerns generally are not of a severe nature or having widespread impact.

In order to address forest health and wildfire hazard resource concerns in Lane County NRCS, ODF and the Upper Willamette SWCD developed a Conservation Implementation Strategy to decrees the risk of fire hazard by creating defensible space, reducing fuel loads and optimizing stand health. To date 1934 acres have been treated in areas of high fire risk. See section 6 for a complete description of the implementation strategy.

Oak woodland and savannah habitat: Oak woodlands and oak savannah habitat are prevalent throughout most of the lower elevations of the Willamette Valley basin. Many of the oak woodlands are overstocked and are unable to develop the desirable characteristics which provide the greatest wildlife benefit. Some of the overstocking can be attributed to the lack of fire in the forest system. Considerable thinning and control of invasive brush species is needed to gain the desirable wildlife benefits. Douglas fir also is encroaching into many oak stands. Many agencies and entities and landowners are interested in improving oak woodlands. Recently considerable technical and financial assistance has been available to assist landowners.

In 2012 NRCS and its partners developed a Conservation Implementation Strategy to increase the health and vigor of oak habitat in Linn, Lane and Benton Counties through plantings and habitat restoration. To date 125 acres of oak habitat have restored through this program. See section 6 for a complete description of the implementation strategy.

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Pasture/Hayland:

Concerns associated with this resource are water quality impairment due to sediment, pathogens and nutrients and noxious and invasive plants. Pasture/Hayland can be very productive and generate significant economic activity, however many landowners have not had sufficient net income or expertise to address the problems. Many pastures lack adequate cross fencing and livestock water developments to successfully implement prescribed grazing. Controlling noxious and invasive weeds in pastures and hayland is essential to maintaining productivity. There has been an influx on landowners on small acreages, many of which have "luxury" (such as horses and llamas) animals. Often times they lack the appropriate experience to recognize resource concerns and manage resources to their highest potential.

Small Landowners:

The number of small farms (lifestyle farms) with horses and other livestock is rapidly increasing in the County. Many of these small landowners have limited agriculture experience and awareness of resource conservation and this has led to degraded soil and water quality. In much of the area invasive brush species such as blackberry and scotch broom have invaded. Many small farms have inadequate manure storage facilities, lack adequate heavy use areas, and have old and inefficient irrigation systems. These factors have led to a significant decrease in water quality and over time have caused many streams to be listed as non-compliant with various water quality parameters.

Wetlands:

The Southern Willamette Valley area in Lane County contains some of the largest remaining fragments of the Willamette Valley's native wet prairies. Willamette Valley wetlands have undergone significant changes since the region was first settled by Euro-Americans. Channelization of the Willamette River for travel and commerce, dam construction, and drainage of wetland prairie for farming have all contributed to loss and conversion of wetlands. Only 1percent of native prairie remains. Today, most Willamette Valley lowland is farmland, primarily for grass seed and vegetables. However, there are many regions where native hydric soils still pond with rainfall on agricultural land. Such wetlands are highly suitable candidates for enhancement given their historical importance and potential for benefiting wintering water birds, many of which are undergoing population declines.

Desired Future Outcomes

Cropland:

Agricultural producers on cropland will address resource concerns associated with water quality (both surface and groundwater). Treatment on cropland will include practices that reduce surface and groundwater contamination by improving irrigation system efficiency and adopting conservation practices such as nutrient management, pest management, reduced tillage and irrigation water management. These improvements will allow for improved productivity, benefit wildlife and improve water quality for aquatic species. With funding assistance from programs such as CSP and EQIP many producers will be able to make improvements to irrigation systems and initiate needed management practices. It is expected that the demand for technical and financial assistance will continue to grow. In order to provide assistance NRCS will need to work closely with our partners

such as the Upper Willamette Soil and Water Conservation District, OSU Extension Service and Oregon Department of Agriculture in order to meet the demand.

Forestland:

Non industrial forest landowners will address resource concerns associated with forest health such as overstocking and understocking, insect/disease outbreaks and improving oak habitat. Timber stands will be managed for proper stocking rates to improve productivity, benefit wildlife and reduce wildfire hazard. Oak woodlands will be managed to develop desirable characteristics for plants and wildlife. Partnerships with others including the Upper Willamette Soil and Water Conservation District and the Oregon Department of Forestry should provide additional resources to allow for additional forestland to be treated.

Pasture/Hayland:

Pasture/hayland owners will be actively working to eliminate resource concerns that effect water quality and productivity. There will be adequate cross fencing and livestock water developments to facilitate prescribed grazing and invasive and noxious weeds will be controlled. Management practices such as nutrient and pest management will be adopted by the majority of landowners. There will be a system in place to provide outreach and resource education to landowners on small acreages and there will be sufficient funding for programs such as EQIP to allow producers the needed improvements on their land. Partnerships with others including the Upper Willamette Soil and Water Conservation District, OSU Extension Service and Oregon Department of Agriculture will be needed to provide adequate assistance.

Small Landowners:

Small landowners will have gained the knowledge needed to properly manage their resources. This knowledge will be acquired from NRCS and our partners through an expanded outreach and

education program. As a result small landowners will be able to recognize resource problems on their land and address concerns in a proper manner. Partnerships with others including the Upper Willamette Soil and Water Conservation District, OSU Extension Service and Oregon Department of Agriculture will be needed to provide adequate assistance.

Section V. Prioritization of Natural Resource Problems and Desired Outcomes

Using input from Local Work Groups, conservation partners, landowners and NRCS experience this section will rank the top three natural resource concerns identified in Section 4. All the below listed priorities support the NRCS vision of Equity for People and Programs and the NRCS mission to "ensure compliance with agency policies for conservation and equal opportunity and accountability for the delivery of quality and timely services to our customers."

Based on annual meetings held over the last several years, and from comments and ideas that NRCS receives on a regular basis, we have been able to identify the natural resource problems that are the most important to Lane County and to define desired outcomes in addressing those natural resource problems. The producers we work with are ready and willing to address these issues on their lands and our partners are ready to collaborate on measures to address the natural resource concerns.

Water quality (both surface and groundwater) on cropland due to sediment, nutrients and pesticides.

Objective: An estimated 15% efficiency could be realized by replacing old inefficient irrigation systems with more efficient systems and implementation of site-specific irrigation water management plans. Implementation of management practices, such as proper grazing, nutrient, pest, and residue management will result in a significant reduction in non-point pollution by sediment, nutrients and pesticides. Encouraging higher levels of organic production and providing economic incentives to small and beginning farmers will benefit organic operations and small/new operators. The use of technical service providers will reduce the planning and design time for field office staff.

Forest health and wildfire hazard due to under and overstocked forests, insects and disease and declining oak woodland/savannah habitat.

Objective: Forest health on private nonindustrial forest land will be improved using a suite of forestry practices including forest stand improvement, forest slash treatment, brush management, access roads and tree site preparation and planting. Forest stands will be thinned to proper stocking rates taken using accepted thinning guide standards. This will

improve productivity and should result in a reduction in insect and disease infestation shown on the Oregon Department of Forestry's insect and disease damage flyovers. These actions will reduce the risk of wild fire and will support air quality efforts in the upper Willamette valley.

D**egraded soil and water quality on small acreages.**

Objective: To improve soil and water quality degradation on small acreages by improved pasture management, controlling invasive weeds, upgrading headquarters areas with manure storage facilities and wintering areas and adoption of appropriate setbacks for water quality. We will develop an education and outreach program using established partnerships between NRCS, Upper Willamette SWCD, OSU Extension, ODA and Watershed Councils. Our goal is to adequately treat 10% of the small acreages within 5 years resulting in a reduction in non-point pollution entering the surface water, increased pasture health and adequate headquarters facilities to manage manure and over winter livestock.

Loss of riparian habitat and degradation of riparian function.

Objective: To restore degraded riparian habitat, through increased agricultural landowner participation in voluntary restoration projects. These voluntary restoration projects would include: Fencing off existing riparian areas from livestock, creating off channel livestock watering facilities, removal and control of invasive species in riparian areas, riparian plantings designed to restore and provide long term protection of riparian areas.

Section VI. Conservation Implementation Strategies and Investment Portfolio

Implementation Strategies:

See attached Lane County Fire Protection Initiative and Oak Habitat Implementation Strategy and Soil Health for Ag. Land.

2013
_Lane_Forest_Fir

FY2013_CCUW_
<_Habitat_Impler

Acrobat Document

Soil Health for Ag. Land

Outreach Plan:

See attached Oregon Outreach Strategy – FY 2013.

OutreachPlan_O
gon_FY2013.pdf

Natural Resources Conservation Service
2014 Local Working Group Meeting

February 26, 2014

Food for Lane County Building
Executive Board Room
770 Bailey Hill Rd, Eugene, OR 97402

MINUTES

ATTENDANCE:

Tom Burnham, NRCS DC
Wallace Jennings, NRCS SC
Heather Medina-Sauceda, NRCS Basin Team Leader
Samantha Bartling, USDA/NRCS
Chris Reidy, USDA/NRCS
Kathy Pendergrass, USDA/NRCS
Gary Jensen, UWSWCD, Chair
Dan Menk, ODF
Katie MacKendrick, Long Tom WC
Abel Kloster, Coast Fork Willamette WC
Andy Petersen, Landowner
Robin Biesecker, ODF
Kevin Fenn, ODA
Jo Morgan, ODA
Dave Downing, Tech. Specialist , UWSWCD

Ralph Perkins, UWSWCD, Vice-Chair
Paul Reed, UWSWCD, Director Emeritus

Sandi McIntosh, District Secretary, UWSWCD

The meeting was called to order at 1:08 pm by Tom Burnham, NRCS DC

I. Welcome & Introductions: Introductions were made by all in attendance.

II. Review of 2014 Conservation Implementation Strategies: Tom Burnham gave a report on the recent Farm Bill that passed and provided a summary of upcoming NRCS programs in Lane County. Tom stated that applications/sign-ups are on-going and NRCS will continue to accept applications. In Lane County, there are several different versions, such as an Organic EQIP, which provides financial and technical assistance to clients. There was a lengthy "round-table" discussion on forest practices and wildlife habitats, small farms and basin-wide program conformity.

III. Proposed Conservation Strategy for the 2015 program year: Wallace Jennings provided a brief explanation of the Small Farm and Soil Health initiative for 2015. He also provided information on the purpose of the new conservation strategy, and detailed some of the resource concerns and conservation priorities that would be available for cost share.

IV. ODF/Private Lands Forestry Assistance: Dan Menk discussed the service foresters' roles, and forest practices are now combined as "Stewardship Foresters." These foresters include Jim Ewing in Benton and Linn County, Jim Hall in the Florence/Coastal area, and Dan Menk and Robin Biesecker in Lane County.

V. Discussion on Potential Focus Areas/Resource Needs and Opportunities in Lane County: Samantha Bartling led this discussion on local resource needs, invasive plants, and the riparian work being conducted under the WRP program. Katie MacKendrick, Long Tom WC, mentioned similar resource concerns in their watershed area. Heather Medina-Sauceda identified NRCS' two Wetland Reserve Programs, Klamath and Willamette basins. If these programs are tied to "partnerships" they can go anywhere in the state.

Tom thanked everyone for attending today's meeting and reminded them to contact him with any ideas, questions, or concerns regarding the issues facing our industry.

Meeting adjourned by Tom Burnham, 2:43 pm

Natural Resources Conservation Service

2015 Local Working Group Meeting

In conjunction with Upper Willamette SWCD

Tuesday, February 10th 12 noon – 2 pm

Location: Lane Electric Cooperative INC Multi-Purpose Room
787 Bailey Hill Road, Eugene, OR.

February 10, 2015

MINUTES

ATTENDANCE:

Tom Burnham, NRCS DC
Wallace Jennings, NRCS SC
Emily Fife, NRCS Basin Resource Conservationist
Samantha Bartling, USDA/NRCS
Kevin Macquoid, USDA/NRCS
Kelly Albers, USDA/NRCS
Gary Jensen, UWSWCD, Chair
Ralph Perkins, UWSWCD, Vice-Chair
Paul Reed, UWSWCD, Director Emeritus
Walt Borntrager, UWSWCD Director
Dave Downing, Tech. Specialist , UWSWCD
Rebecca Ley, District Secretary, UWSWCD
Liz Vollmer-Buhl, Siuslaw Watershed Council
Denise Walters, LCOG
Nancy Toth, EWEB
Adam Novick, University of Oregon
Dan Menk, ODF
Katie Mackendrick, Long Tom WC
Eric Hau, landowner

The meeting was called to order at 12:12 pm by Tom Burnham, NRCS DC

I. Welcome & Introductions: Introductions were made by all in attendance later in the meeting.

II. Review of 2015 Conservation Implementation Strategies: Tom Burnham distributed a packet of information on ACEP, EQIP, and the 2008 Farm Bill review. Highlights include 1,700 practices and 88 completed in Lane County . Tom reviewed conservation programs available to producers: EQIP, CSP, WRP, HFRP. WRE, CREP, GRP, and ACEP. Tom stated that applications/sign-ups are

V. on-going and NRCS will continue to accept applications. Conservation Implementation Strategies are a more efficient way of addressing resource concerns. There are 8 in Lane County

VI. Review of VIP and SWCD Programs: Rebecca gave a brief presentation of the Voluntary Incentives pilot program on the McKenzie. She gave a background, several phases of the pilot, and future steps that need to be taken for full roll out in 2016. Dave Downing gave an overview of district local management areas, partnerships with EWEB, MWC, and the Willamette Valley Clean Water Alliance.

VII. Soil Health for Ag Land: Wallace Jennings talked about NRCS's newest CIS: Soil Health for Local Markets. The goal of this program is to improve the health of the soil with a focus on organic matter depletion. This program is open to producers in the local markets of Lincoln, Benton, Linn and Lane counties. Through soil samples that will enable farmers to monitor microbial activity, soil health can be restored through maximizing living roots, increasing diversity, and managing organic matter depletion. There was a discussion of partnership potentials to improve private land and improve soil health.

V. RCPP: Emily gave an introduction on the Regional Conservation Partnership Program, which is completely driven by NRCS partners. After the application process, the program is either approved at the state level, regional level, or national level. Oregon is one of the most successful states in regards to approved RCPP proposals. Partnerships, outreach, and local non-federal match are the highest ranking aspects of whether a project is awarded RCPP funds or not.

VI. NRCS Easement Programs: Samantha Bartling gave a Powerpoint presentation on Wetland Reserve Easements (WRE) and the Agricultural Conservation Easement Program (ACEP). The WRE offers permanent and 30-year contacts and it is somewhat restrictive for rare habitats in the Willamette Valley. As for ALEs, more time and money must be put in up front, but Samantha explained the ALE has the potential for being an excellent program. Samantha ask for input regarding priority areas for WRE and ALE. It was the consensus of the group not to change the WRE priority area (Long Tom River and Muddy Creek watersheds) and to consider Grazed Oak Habitat as a priority for ALE.

VII. Additional Discussion: Eric H. (landowner) brought up four concerns: water detention, building organic matter in the soil, acidic soils, and Silva-pasture planting densities. Because our climate fluctuates drastically in the amount of precipitation we receive from winter to summer, Erik's concerns are with water rights in relation to digging an irrigation/fire mitigation pond. He also stated that NRCS's CSP does not address winter feeding areas for Ag lands and organic material depletion in the soil. Compost concerns include acidity building up in soils and impracticality with "dumping" lime on the soil. Lastly, Erik brought up pasture grasses beneath timber crops and water retention that is not addressed in the CSP.

There was a brief discussion on air quality in the Oakridge area and outreach and education to address slash burning and wood stoves.

Tom thanked everyone for attending today's meeting and reminded them to contact him with any ideas, questions, or concerns regarding the issues facing our industry.

Meeting adjourned by Tom Burnham, 2:00 pm

Natural Resources Conservation Service

2016 Local Working Group Meeting

In conjunction with Upper Willamette SWCD

Thursday, February 4th 10 am - 12 noon

Location: Lane Electric Cooperative Inc. - Multi-Purpose Conference Room
787 Bailey Hill Road, Eugene, OR.

MINUTES

ATTENDANCE:

Tom Burnham, NRCS DC
Susanna Pearlstein, post USEPA/Benton WC Annie Young-Matthews, NRCS, USDA
Gary Jensen, UWSWCD, Chair
Paul Reed, landowner – former UW director Dave Downing, District Mgr, UWSWCD Lynn Gilliland, Admin Assistant, UWSWCD Tom Synder (NRCS)
Kelly Albers (NRCS)
Edith Roberts (interested citizen)

Dan Menk, ODF
Katie Mackendrick, Long Tom WC Reilly Neuman (LFWWC)
Kim Leval (NW Center for Alternatives to Pesticides)
Robin Biesecker (ODF) Jed Kunl (Long Tom WC) Ginny Cairo (NRCS) Ryan Gordon (ODF)

The meeting was called to order at 10:03 am by Tom Burnham, NRCS DC

1. Welcome & Introductions: Introductions were made by all in attendance later in the meeting. Tom briefly went over items in the 'packet' for today's event.

2. "Is It Working? A look at the changing nutrient practices in the Southern Willamette Valley Groundwater Management Area" by Susanna Pearlstein – Presented a PowerPoint presentation on Groundwater Management in the S Willamette Valley, focusing on RARE (Regionally Applied Research Effort). A new Prenart lysimeter helps with water sampling for landowner field research. She presented an overview of data collected to date for nitrates in various crops. A short video on the installation of a lysimeter was shown.

3. Overview and current projects at the NRCS Plant Material Center (PMC) in Corvallis by Annie Young-Matthews – (PMC is a 50 acre farm leased from OSU) - Projects include cover crop adaption trials, cover crop mixes & soil health…the results are shared with NCRS. Pollinator seed mix trials, seeing for restoration areas, a weed seedling identification guide for the NW, endangered species recovery are part of their curriculum. They work the BLM, US Forest Service and others. Working with private landowners is another good source for research.

4. Roundtable Discussion: partner updates, evaluation of current strategies, input on potential focus areas, resource needs and opportunities in Lane County. *Kim Leval (NWCAP, a non-profit) spoke briefly on their program – mission is pragmatic solutions to alternatives to pesticide use. A large focus is on the nursery business, and salmon and aquatic life health with pesticide alternatives used on agriculture. Peer to peer sharing and education is vital to their mission.* Other concerns – (Dave Downing) Collaborative on the McKenzie Watershed Program with EWEB (Riparian) with regards to interest and funding; (Tom Burnham) Spoke to their specific conservation efforts and programs in our area; (Edith Roberts) Climate change relation to carbon in agriculture and soil health; (Ryan Gordon) looking forward to working with partnership with NRCS; (Katie M) The need for landowners to participate in our efforts and for them to become aware of the opportunities to help them in our area; (Gary Jenkins) spoke to the challenge of funding, time, communication and resources are essential; (Kim Leval) asked about the interest in non- federal funding matches; (Paul Reed) spoke to the consumer/public support and why we do what we do, and small landowners. (Ryan Gordon) ODF is working on a landowner/forest database; (Gary Jenkins) Building permits and county databases are a good source

Summary & Closing – Tom Burnham thanked everyone for attending today's meeting

Meeting adjourned by Tom Burnham, 11:51 am

Natural Resources Conservation Service

2017 Local Working Group Meeting

In conjunction with Upper Willamette SWCD

Thursday, February 4th 10 am - 12 noon

Location: Food for Lane County Board Room
770 Bailey Hill Road, Eugene, OR.

MINUTES

ATTENDANCE:

Tom Burnham, NRCS DC
Annie Young-Matthews, NRCS
Dave Downing, District Mgr, UWSWCD
Kelly Albers, NRCS
Dan Menk, ODF
Robin Biesecker, ODF
Reilly Neuman, Coast Fork WC
Al Hrynyshyn, UWSWCD
Lakeitha Ruffin, NRCS
Kelly Foster, ODF
Brian Peterson, ODF
Lily Leitermann, UWSWCD
Daniel Dietz, McKenzie River Trust
Amanda Gillbert, Coast Fork WC
Suzy Libenberg, NRCS
Joe Morgan, ODA

The Meeting was called to order at 10:03 by Tom Burnham, NRCS DC

Welcome & Introductions: Introductions were made by all in attendance.

Tom briefly went over items in the 'packet' for today's event and presented an overview of NRCS programs and Conservation Implementation Strategies in Lane County.

Lily Leitermann with the UWSWCD reviewed a Conservation Implementation Strategy that the District is developing for the McKenzie River watershed to maintain and improve water quality and fish and wildlife habitat through the restoration of degraded riparian areas along the McKenzie River and its major tributaries. Partners will include NRCS, Eugene Water & Electric Board,

McKenzie Watershed Council, Freshwater Trust and the Mckenzie River Trust

Suzy Liebenberg presented an overview and update on current projects through the Agricultural Conservation Easement Program and Wetland Reserve Easement Program in Lane County.

Roundtable Discussion: Partner updates, evaluation of current strategies, input on potential focus areas, resource needs and opportunities in Lane County. Daniel Dietz spoke briefly on the Mckenzie River Trust's efforts to update their master plan to include protection and preservation of agricultural land. Annie Young-Matthews gave an update of activities at the NRCS Plant Materials Center. Other concerns – (Dave Downing) Collaborative on the McKenzie Watershed Program with EWEB (Riparian) with regards to interest and funding.The group discussed the need for landowners to participate in our efforts and for them to become aware of the opportunities to help them. Also discussed the challenge of funding, time, communication and resources.

Summary & Closing– Tom Burnham thanked everyone for attending today's meeting.

Meeting adjourned by Tom Burnham, 11:51 am