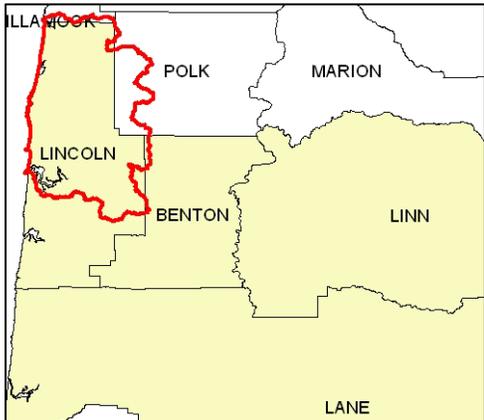


SWCD	Acres
Lincoln	405,112
Polk	62,977
Tillamook	7,380
Benton	4,775



Introduction

The Siletz/Yaquina 8-Digit Hydrologic Unit Code (HUC) subbasin is comprised of 480,000 acres, of which 79 percent is in Lincoln County and the rest is in Polk County. Seventy-seven percent of the subbasin is under private ownership. Ninety-five percent of the subbasin is forested. The remaining agricultural land is largely pasture, small acreage farms, and one permitted dairy operation and several other small beef and horse operations. Some resource concerns associated with these land uses include streambank erosion, degradation of riparian and aquatic habitat, high surface water temperatures and sediment loads, lack of adequate pasture and grazing management, and increasing invasive, noxious weeds.

There are 284 farms and 460 farmers in the subbasin. Only a few operations are large and financially viable, but most of those are well managed. Nearly 70 percent of the farms are less than 50 acres in size. Most of the small farms are operated by new, relatively inexperienced landowners who need considerable technical assistance. Many of these landowners are aware of local resource concerns and have a positive stewardship attitude, but they are new to agriculture and have little resource management experience. To increase the adoption of conservation systems, these landowners need substantially more technical assistance and information about natural resource management.

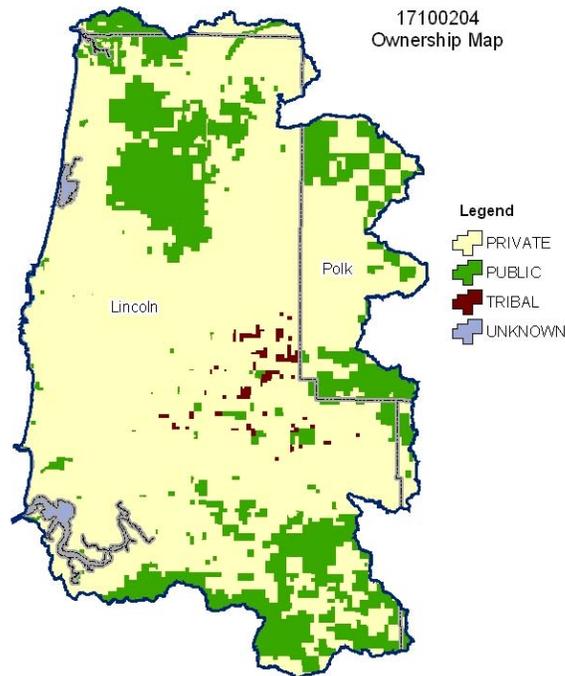
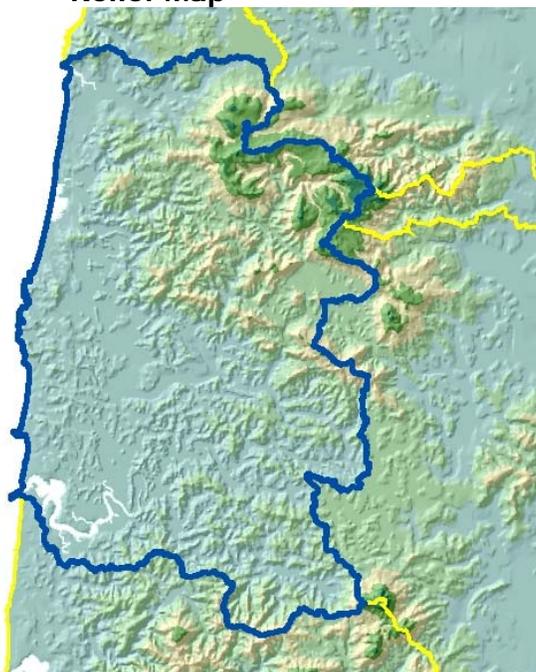
Conservation assistance is provided by an NRCS satellite office, Lincoln Soil and Water Conservation District, Mid Coast Watersheds Council, and other local conservation organizations.

Profile Contents

- [Introduction](#)
- [Physical Description](#)
- [Land Use Map & Precipitation Map](#)
- [Common Resource Area](#)

- [Resource Concerns](#)
- [Census and Social Data](#)
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- [Footnotes/Bibliography](#)

Relief Map



Physical Description

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ALL NUMBERS IN THIS PROFILE ARE FOR OREGON ONLY

Land Cover/Land Use (NLCD ²)	Ownership - (2003 Draft BLM Surface Map Set ¹)						Totals	%
	Public		Private		Tribal			
	Acres	%	Acres	%	Acres	%		
Forest	106,000	22%	347,900	72%	3,500	1%	457,700	95%
Grain Crops	0	0%	0	0%	0	0%	0	0%
Conservation Reserve Program Land ^a	0	0%	*	---	0	0%	*	---
Grass/Pasture/Hay	*	---	10,700	2%	*	---	12,600	3%
Orchards/Vineyards	0	0%	0	0%	0	0%	0	0%
Row Crops	0	0%	0	0%	0	0%	0	0%
Shrub/Rangelands	*	---	*	---	0	0%	*	---
Water/Wetlands/Developed/Barren	*	---	8,600	2%	*	---	9,600	2%
Oregon HUC Totals ^b	108,000	23%	367,300	77%	3,700	1%	480,000	100%

*: Less than 1 percent of total acres. See below for special considerations.

a: Estimate from Farm Service Agency records and includes CRP/CREP.

b: Totals are approximate due to rounding and small unknown acreages.

Special Considerations for This 8-Digit HUC:

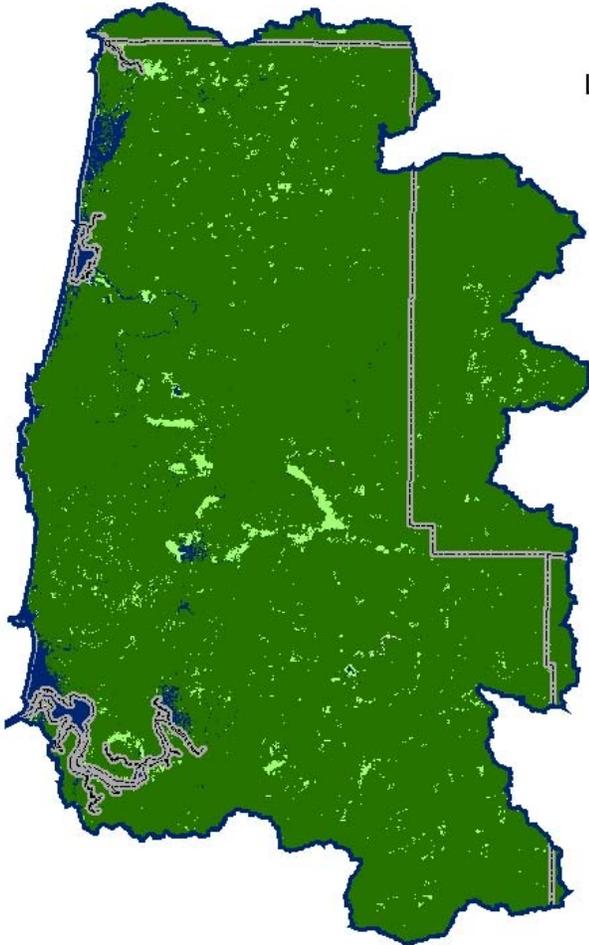
- Approximately 80 percent of private forestland is under industrial forest ownership (OSU, Forestry Sciences Laboratory).
- Pasture includes commercial dairy and beef operations as well as small farms and ranchettes.

Irrigated Lands (1997 NRI ³ Estimates for Non-Federal Lands Only)	Type of Land	ACRES	% of Irrigated Lands	% of HUC
	Cultivated Cropland	0	0%	0%
	Uncultivated Cropland	0	0%	0%
	Pastureland	0	0%	0%
	Total Irrigated Lands	0	0%	0%

(Continued on the following pages)

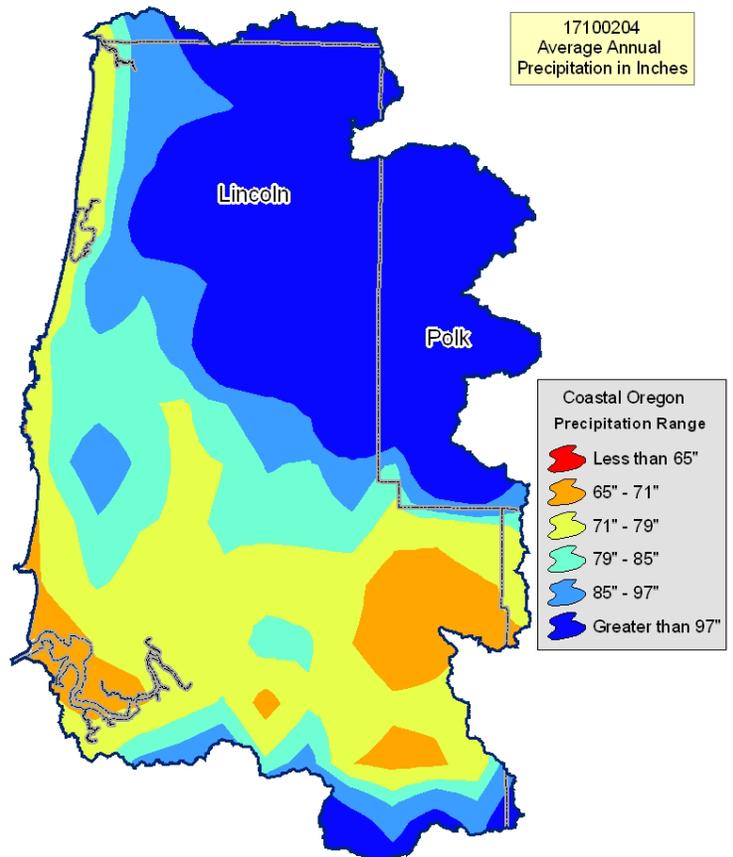
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17100204
Land use/Land cover Map



Legend

-  Shrub/Rangelands
-  Orchard/Vineyards
-  Row Crops
-  Forest
-  Grass/Pasture/Hay Lands
-  Grain Crops
-  Water/Wetlands/Developed/Barren



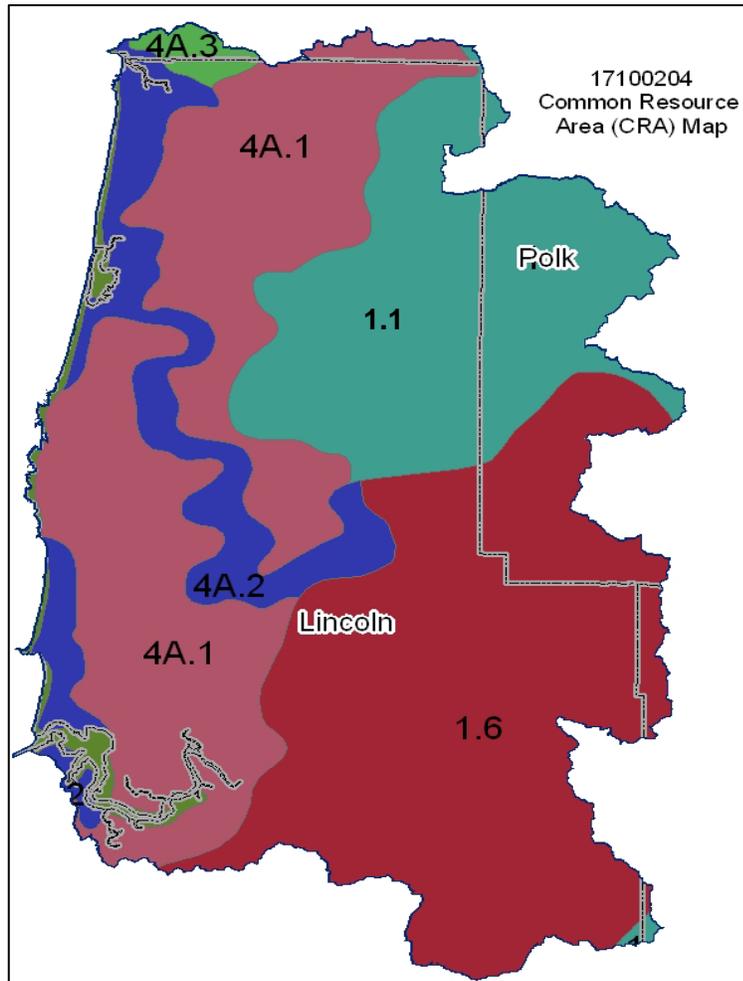
17100204
Average Annual
Precipitation in Inches

- Coastal Oregon
Precipitation Range
-  Less than 65"
 -  65" - 71"
 -  71" - 79"
 -  79" - 85"
 -  85" - 97"
 -  Greater than 97"

Common Resource Area Map

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Only the major units are described below - for descriptions of all units within the HUC, go to: <http://ice.or.nrcs.usda.gov/website/cra/viewer.htm>



1.1 - Northern Pacific Coast Range, Foothills, and Valleys – Volcanics: This unit is comprised of mountains that are basalt and are outside of the "fogbelt." The temperature regime is mesic or frigid with small areas that are cryic, and the moisture regime is udic. The vegetation is dominantly Douglas fir and western hemlock.

1.6 – Northern Pacific Coast Range, Foothills, and Valleys - Mid-Coastal Sedimentary: This unit is comprised of mountains that are sedimentary rock and are outside of the "fogbelt." The temperature regime is mesic, and the moisture regime is udic. Sitka spruce typically is absent. The dominant vegetation is Douglas fir and western hemlock. This unit includes narrow inland flood plains and terraces.

4A.1 – Sitka Spruce Belt - Coastal Sedimentary Uplands: This unit is comprised of mountains that are sedimentary rock and are in the "fogbelt." The temperature regime is isomesic, and the moisture regime is udic. Sitka spruce is present on this unit, which separates it from unit 1.1.

4A.2 - Sitka Spruce Belt - Coastal Lowlands: This unit is comprised of marine terraces, diked and undiked flood plains, and estuaries. The temperature regime is isomesic, and the moisture regime is udic.

4A.3 - Sitka Spruce Belt - Coastal Volcanic Uplands: This unit is comprised of mountains that are basalt and are in the "fogbelt." The temperature regime is isomesic or isofrigid, and the moisture regime is udic. Sitka spruce is present on this unit.

Physical Description – Continued

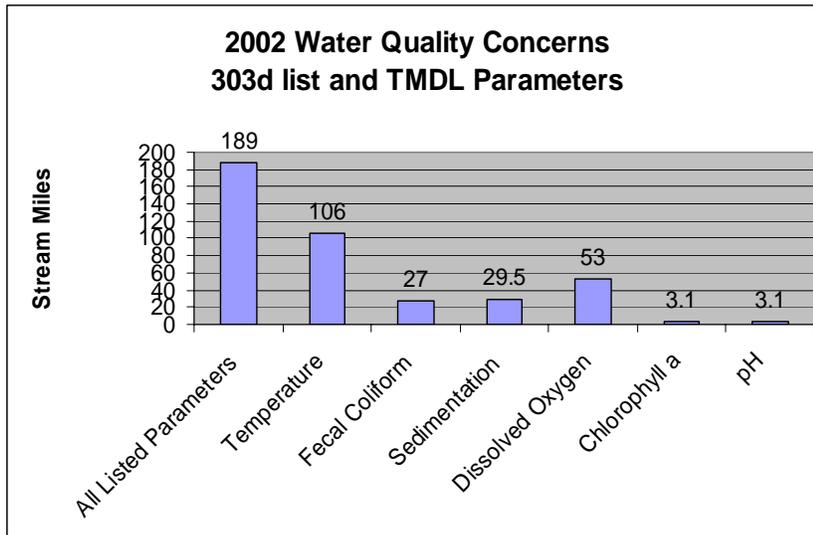
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		ACRES	ACRE-FEET			
Irrigated Adjudicated Water Rights (OWRD ⁴)	Surface	2,940	7,351			
	Well	2	4			
	Total Irrigated Adjudicated Water Rights	2,942	7,355			
Stream Flow Data	USGS 14306030 YAQUINA RIVER, NEAR CHITWOOD,OR	Total Avg. Yield	179,547			
		May – Sept. Yield	17,065			
	USGS 14305500 SILETZ RIVER, AT SILETZ, OR	Total Avg. Yield	1,098,403			
		May – Sept. Yield	114,107			
		MILES	PERCENT			
Stream Data ⁵ <i>*Percent of Total Miles of Streams in HUC</i>	Total Miles – Major (100K Hydro GIS Layer)	981	---			
	303d/TMDL Listed Streams (DEQ)	189	19%			
	Anadromous Fish Presence (StreamNet)	204	21%			
	Bull Trout Presence (StreamNet)	0	0%			
		ACRES	PERCENT			
Land Cover/Use ² Based on a 100-foot stretch on both sides of all streams in the 100K Hydro GIS Layer	Forest	24,814	92%			
	Grain Crops	0	0%			
	Grass/Pasture/Hay	993	4%			
	Orchards/Vineyards	0	0%			
	Row Crops	0	0%			
	Shrub/Rangelands – Includes CRP Lands	30	0%			
	Water/Wetlands/Developed/Barren	1,208	4%			
	Total Acres of 100-Foot Stream Buffers	27,046	---			
Land Capability Class (Croplands & Pasturelands Only) (1997 NRI ³ Estimates for Non-Federal Lands Only)	1 – slight limitations	0	0%			
	2 – moderate limitations	9,200	72%			
	3 – severe limitations	1,300	10%			
	4 – very severe limitations	0	0%			
	5 – no erosion hazard, but other limitations	0	0%			
	6 – severe limitations; unsuitable for cultivation; limited to pasture, range, forest	2,100	16%			
	7 – very severe limitations; unsuitable for cultivation; limited to grazing, forest, wildlife habitat	200	2%			
	8 – miscellaneous areas; limited to recreation, wildlife habitat, water supply	0	0%			
	Total Croplands & Pasturelands	12,800	---			
Confined Animal Feeding Operations – Oregon CAFO Permit – 12/2004						
Animal Type	Dairy	Feedlot	Poultry	Swine	Mink	Other
No. of Permitted Farms	1	0	0	0	0	0
No. of Permitted Animals	200	0	0	0	0	0

Resource Concerns

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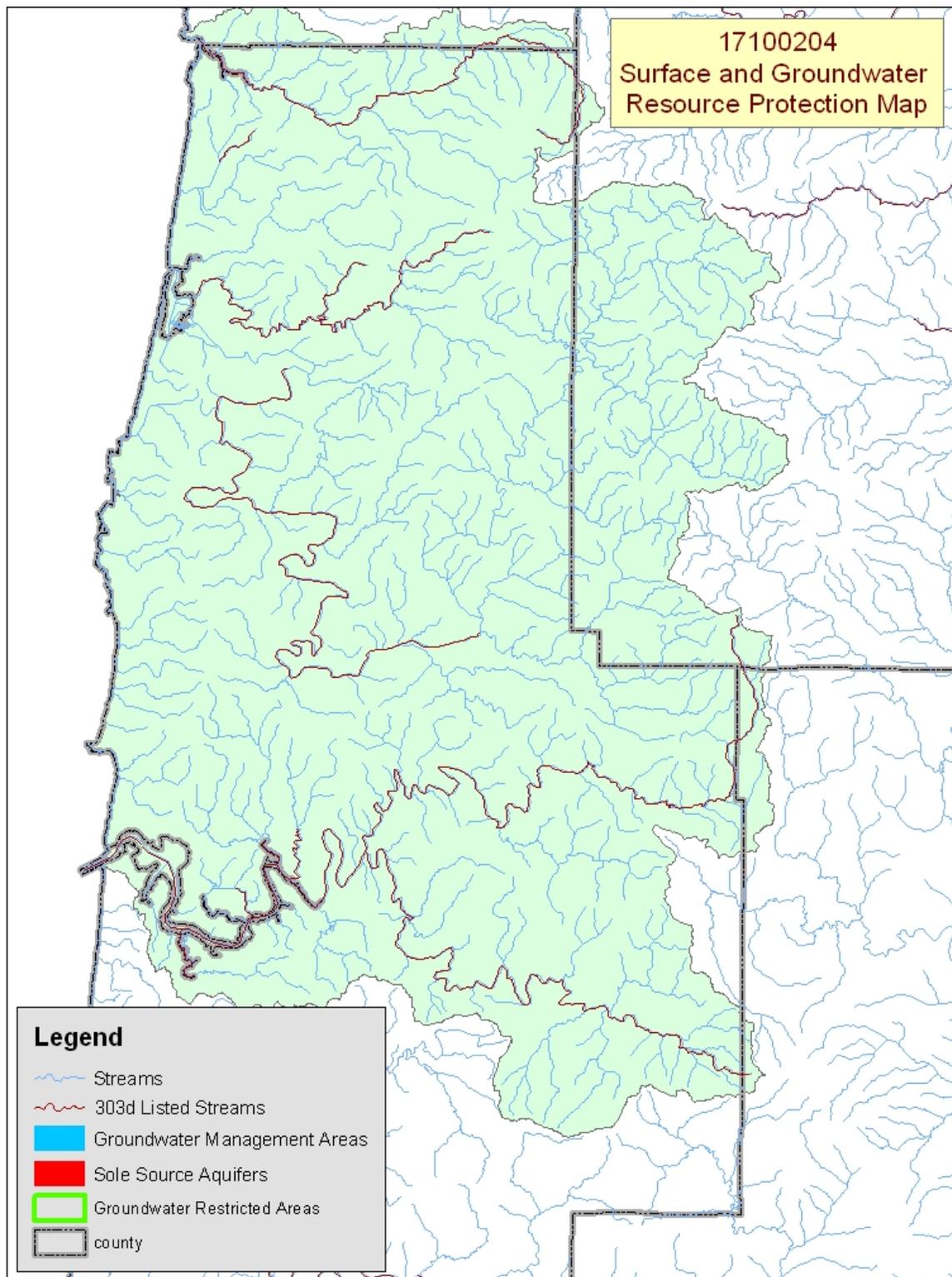
Tons of Soil Loss by Water Erosion: Due to the limited amount of non-Federal cropland and pastureland within this HUC, no reliable NRI soil loss estimates are available.



- ❖ Fifty-seven percent of all of the listed stream miles exceed State water quality standards for temperature. Elevated stream temperatures may be due to inadequate riparian shade, stream channel widening, and other anthropogenic or natural causes.
- ❖ Fecal coliform can be indicative of livestock waste, but it also is associated with improperly operating onsite sewage disposal systems.
- ❖ Sedimentation in coastal streams commonly stems from erosion associated with forest roads and streambanks.
- ❖ Conservation practices that can be used to address these water quality issues include livestock waste management, grazing management, and use of riparian buffers.

Watershed Projects, Plans, Studies, and Assessments			
NRCS Watershed Projects ⁶		NRCS Watershed Plans, Studies, and Assessments ⁷	
Name	Status	Name	Status
None	None	None	None
ODEQ TMDL's ⁸		ODA Agricultural Water Quality Management Plans ⁹	
Name	Status	Name	Status
None	None	Mid Coast	Completed
OWEB Watershed Council ¹⁰	Watershed Council Assessments ¹¹		NWPCC Subbasin Plans and Assessments ¹⁸
Mid Coast Watersheds Council, Salmon-Drift Creek Watershed Council, Siletz Watershed Group, Yaquina Basin Planning Team	Mid Coast Sixth Field Watershed Assessments, Rock Creek (Siletz) Watershed Assessment, Salmon-Neskowin Watershed Analysis		None

(Continued on page 8)



Map Footnote [417](#)

Resource Concerns - Continued

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Resource Concerns/Issues by Land Use							
SWAPA +H Concerns	Specific Resource Concern/Issue	Grass\Pasture\ Hay	Grain Crops	Row Crops	Perennial Crops (Orch/Vine/ Berries)	Shrub/Range	Forest
Soil Erosion	Streambank	X					X
Water Quantity	Ponding & Flooding	X					X
Water Quality, Surface	Suspended Sediments & Turbidity	X					X
	Temperature	X					X
	Aquatic Habitat Suitability	X					X
Plant Condition	Invasive & Noxious Weeds						X
Animal Habitat, Wildlife	Food, Cover, &/or Shelter						X
Human Economics	Land Use Constraints/Restrictions	X					X
	Low or Unreliable Profitability	X					

Grass/Pasture/Hay Lands

- There has been an influx of people from Portland, Eugene, and other areas buying older farm homes and bringing in a few horses or other livestock. As new land managers, they commonly lack knowledge of good pasture and grazing management.

Forest

- Many private, non-industrial forest landowners purchased their property for rural residences or recreation, not for long-term timber production.
- Some landowners have converted pastures to Christmas trees and use little management.
- Invasive, noxious weeds are present in large part because of poor management, especially in areas of small acreage operations.

General

- Since the decline of the forest industry, most of the revenue generated in the region is from tourism and recreation.

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES ¹²	
THREATENED SPECIES	CANDIDATE SPECIES
Marine – Steller (northern) sea lion Birds – Marbled murrelet, Western snowy plover, Bald eagle, Brown pelican, Short-tailed Albatross, Northern spotted owl Fish – Coho salmon Invertebrates – Oregon silverspot butterfly	Fish – Steelhead
	PROPOSED SPECIES None
ESSENTIAL FISH HABITAT¹³ - Chinook, Coho	

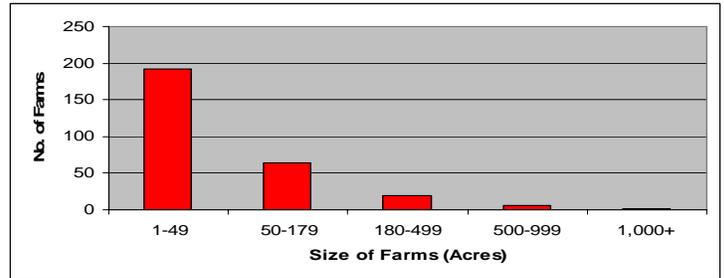
Census and Social Data ^{/14}

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Number of Farms: 284

Number of Operators: 460

- Full-Time Operators: **147**
- Part-Time Operators: **313**

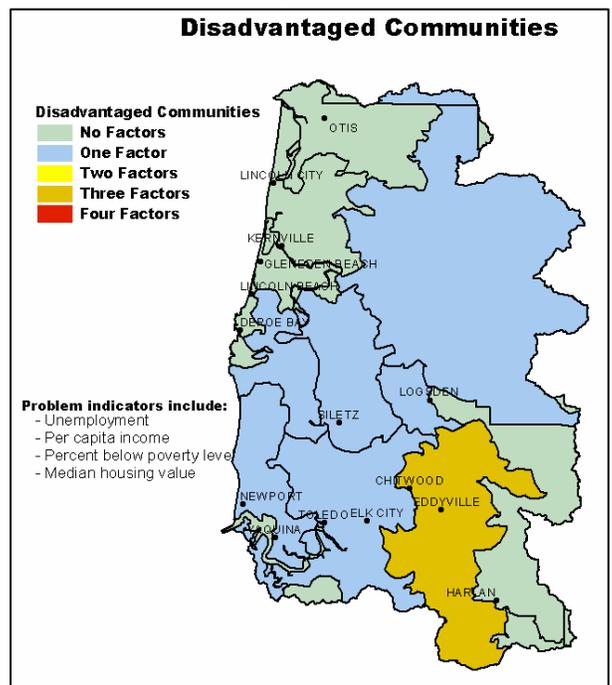
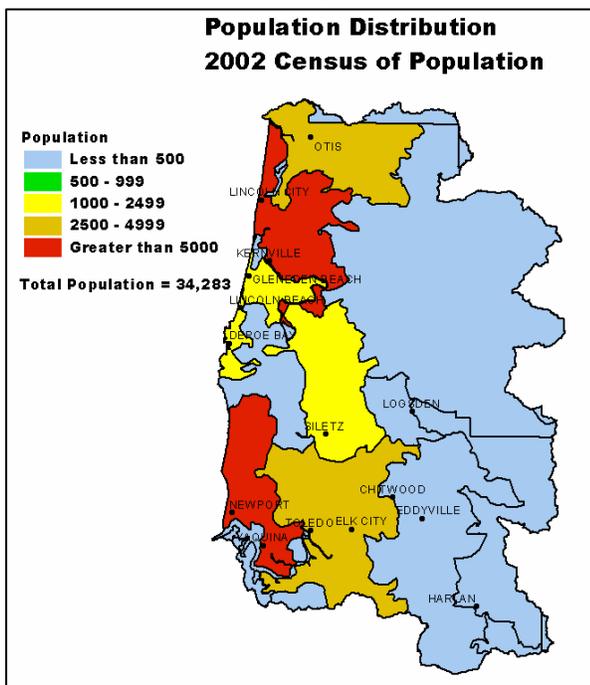


Estimated Level of Willingness and Ability to Participate in Conservation ^{/15}: **Low or Moderate**

Moderate - Operators of large, viable operations in the Siletz/Yaquina subbasin are inclined to adopt conservation systems if they perceive them to be in their best interest. These operators are aware of local resource concerns, but additional technical and financial assistance would help to increase adoption of conservation systems.

Low - Most of the 284 farms in the Siletz/Yaquina subbasin consist of small acreage pastures that commonly are grazed by only a few animals. The operators are relatively new to agriculture and have little resource management experience. These landowners tend to be aware of local resource concerns, but they lack the knowledge and ability to make the needed changes on their farm. To increase resource management and conservation, significant enhancements to the technical and financial assistance available and a dedicated marketing effort to motivate and enable these operators are needed.

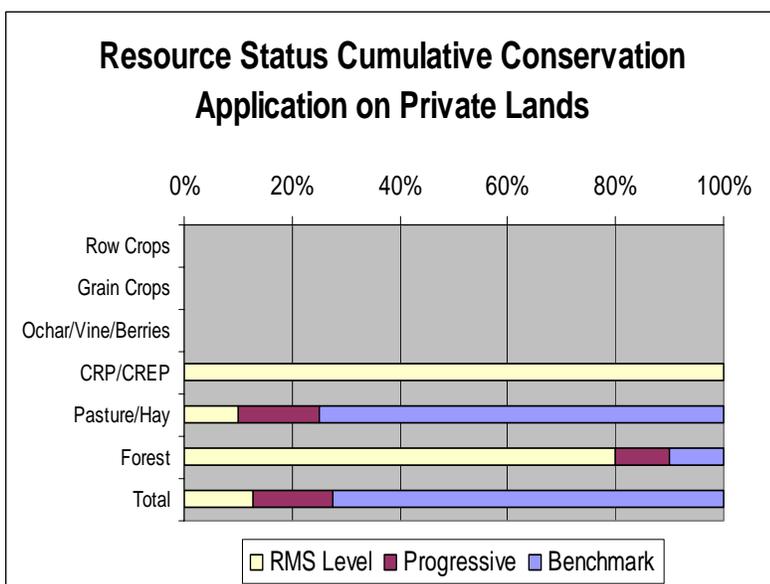
Evaluation of Social Capital ^{/16}: There is not a strong agricultural- or land-management-centered community in the Siletz/Yaquina Subbasin. Most of the communities are coastal towns and are centered on tourism. Communities generally are successful in addressing issues they regard as important. For the communities to actively support conservation on agricultural land, they would have to consider resource management more important to their livelihood than it presently is perceived to be.



Progress/Status

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PRMS Data	FY99	FY00	FY01	FY02	FY03	Avg/Year	Total
Total Conservation Systems Planned (Acres)	40	73	6	49	35	41	203
Total Conservation Systems Applied (Acres)	6	0	46	0	60	22	112
Conservation Treatment (Acres)							
Waste Management	4	0	1	0	0	1	5
Buffers	0	0	67	0	0	13	67
Erosion Control	0	2	0	0	0	0	2
Irrigation Water Management	0	0	0	0	0	0	0
Nutrient Management	0	0	1	0	0	0	1
Pest Management	0	0	0	0	0	0	0
Prescribed Grazing	0	0	1	0	0	0	1
Trees & Shrubs	0	0	62	0	10	14	72
Conservation Tillage	0	0	0	0	0	0	0
Wildlife Habitat	0	70	0	9	10	18	89
Wetlands	0	0	0	0	0	0	0



Estimates are based on information received from local conservationists in the watershed.

- ❖ Progress over the last 5 years has been focused on:
 - ~ Wildlife habitat management, including buffers in riparian and wetland areas.
- ❖ Most of the commercial dairies are at the progressive or RMS level.
- ❖ Poor pasture management is common for non-commercial livestock operations. The operators are people from Portland and other areas that have purchased older farms and have a few horses or beef cattle.
- ❖ Private industrial forest owners typically do not work with NRCS and SWCDs; however, they commonly comply with State Forest Practices Act requirements.
- ❖ Some of the non-industrial, private forestland in the watershed is used for long-term timber production, but most is used as rural homesites or recreational property.

Lands Removed from Production through Farm Bill Programs

- ❖ Conservation Reserve Program (CRP): **None**
- ❖ Wetland Restoration Program (WRP): **None**
- ❖ Conservation Reserve Enhancement Program (CREP): **71 acres**

Footnotes/Bibliography

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All data is provided "as is." There are no warranties, express or implied, including the warranty of fitness for a particular purpose, accompanying this document. Use for general planning purposes only.

1. Ownership Layer – Source: The 1:24,000 scale public ownership layer is the land ownership/management for public entities, including Federal, Tribal, State, and local entities. This is a seamless, statewide Oregon Public Ownership vector layer composed of fee ownership of lands by Federal, State, Tribal, county, and city agencies. The layer is comprised of the best available data compiled at 1:24,000 scale or larger, and the line work matches GCDB boundary locations and ORMAP standards where possible. The layer is available from the State of Oregon GIS Service Center: <http://www.gis.state.or.us/data/alphalist.html>. For current ownership status, consult official records at appropriate Federal, State, and county offices. Ownership classes grouped to calculate Federal ownership vs. non-Federal ownership by the Water Resources Planning Team.
2. National Land Cover Dataset (NLCD) - Originator: U.S. Geological Survey (USGS); Publication date: 19990631; Title: Oregon Land Cover Data Set, Edition: 1; Geospatial data presentation form: Raster digital data; Publisher: U.S. Geological Survey, Sioux Falls, SD, USA; Online linkage: <http://edcwww.cr.usgs.gov/programs/lccp/nationallandcover.html>; Abstract: These data can be used in a geographic information system (GIS) for any number of purposes, such as assessing wildlife habitat, water quality, pesticide runoff, land use change, etc. The State data sets are provided with a 300-meter buffer beyond the State border to facilitate combining the State files into larger regions.
3. ESTIMATES FROM THE 1997 NRI DATABASE (REVISED DECEMBER 2000) REPLACE ALL PREVIOUS REPORTS AND ESTIMATES. Comparisons made using data published for the 1982, 1987, or 1992 NRI may produce erroneous results. This is because of changes in statistical estimation protocols and because all data collected prior to 1997 were simultaneously reviewed (edited) as 1997 NRI data were collected. All definitions are available in the glossary. In addition, this December 2000 revision of the 1997 NRI data updates information released in December 1999 and corrects a computer error discovered in March 2000. For more information: <http://www.nrcs.usda.gov/technical/NRI/>
4. Irrigated Adjudicated Water Rights – Water Rights Information System (WRIS), Oregon Water Resources Department, <http://www.wrd.state.or.us/maps/wrlexport.shtml>
5. StreamNet is a cooperative venture of the Pacific Northwest's fish and wildlife agencies and tribes and is administered by the [Pacific States Marine Fisheries Commission](#). StreamNet provided data and data services in support of the region's fish and wildlife program and other efforts to manage and restore the region's aquatic resources. Official StreamNet website: <http://www.streamnet.org/>
6. Natural Resources Conservation Service, Watershed Projects Planned and Authorized, <http://www.nrcs.usda.gov/programs/watershed/Purpose>.
7. Natural Resources Conservation Service, Watershed Plans, Studies, and Assessments completed, http://www.nrcs.usda.gov/programs/watershed/Surveys_Plng.html#Watershed%20Surveys%20and%20Plan
8. Oregon Department of Environmental Quality Total Maximum Daily Loads, <http://www.deq.state.or.us/wq/TMDLs/TMDLs.htm>
9. Oregon Department of Agriculture, Agricultural Water Quality Management Plans, http://www.oregon.gov/ODA/NRD/water_agplans.shtml

Footnotes/Bibliography Continued

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10. Oregon Watershed Enhancement Board, <http://oregon.gov/OWEB/WSHEDS/index.shtml>
11. Watershed Assessments completed by local watershed councils following the Oregon Watershed Assessment Manual, http://oregon.gov/OWEB/docs/pubs/ws_assess_manual.shtml.
12. NRCS Field Office Technical Guide, Section II, Threatened and Endangered List.
13. Magnuson-Stevens Fishery Conservation and Management Act, Public Law 94-265. As amended through October 11, 1996.
14. Data were taken from the 2002 Agricultural Census and adjusted by percent of HUC in the county or by percent of zip code area in the HUC, depending on the level of data available. Data were also taken from the U.S. Population Census, 2000.
15. Conservation participation was estimated using NRCS Social Sciences Technical Note 1801, [Guide for Estimating Participation in Conservation](#), 2004. Four categories of indicators were evaluated: Personal characteristics, farm structural characteristics, perceptions of conservation, and community context. Estimates are based on information received from local conservationists in the watershed.
16. Social capital is an indicator of the community's ability and willingness to work together to solve problems. A high amount of social capital helps a community to be physically healthy, socially progressive, and economically vigorous. A low amount of social capital typically results in community conflict, lack of trust and respect, and unsuccessful attempts to solve problems. The evaluation is based on NRCS Technical Report Release 4.1, March, 2002: [Adding Up Social Capital: An Investment in Communities](#). Local conservationists provided information to measure social capital. Scores range from 0 to 76.
17. [Surface and Groundwater Resource Protection Map](#)
 - a. 2002 303d Listed Streams designated by Oregon Department of Environmental Quality and approved by the Environmental Protection Agency, Section 303d Clean Water Act, <http://www.deq.state.or.us/wq/303dlist/303dpage.htm>
 - b. Groundwater Management Areas designated by the Oregon Department of Environmental Quality, Oregon Revised Statutes – Ground Water ORS 468B.150 to ORS 468B.190, <http://www.deq.state.or.us/wq/groundwa/wqgw.htm>
 - c. Groundwater Restricted Areas designated by Oregon Water Resources Commission, Oregon Department of Water Resources, http://egov.oregon.gov/OWRD/PUBS/aquabook_protections.shtml
 - d. The Sole Source Aquifer (SSA) Protection Program is authorized by Section 1424(e) of the Safe Drinking Water Act of 1974 (Public Law 93-523, 42 U.S.C. 300 et. seq), <http://www.epa.gov/safewater/ssanp.html>
18. Subbasin assessments and plans are developed by local groups (SWCDs, watershed councils, tribes, and others) as part of the Northwest Power and Conservation Council's fish and wildlife program in the Columbia River Basin. This program is funded and implemented by the Bonneville Power Administration. <http://www.nwcouncil.org/fw/subbasinplanning/Default.htm>.