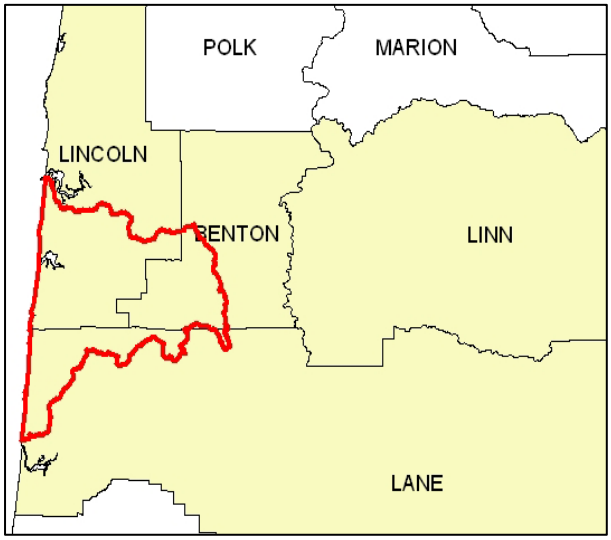
Alsea – 17100205

8-Digit Hydrologic Unit Profile

FINAL

NOVEMBER 2005



Introduction

The Alsea 8-Digit Hydrologic Unit Code (HUC) subbasin is comprised of 438,000 acres, of which about 48 percent is in Lincoln County, 26 percent in Lane County, and 25 percent in Benton County. Sixty-six percent of the subbasin is public land, and 97 percent is forested. The remaining land is mostly pasture and small acreage farms. Some resource concerns include streambank erosion; declining fish habitat; lack of adequate pasture, grazing, and woodlot management; and chemical contamination of the soil and water.

There are 234 farms and 395 farmers in the subbasin. About 60 percent are less than 50 acres in size and 30 percent are 50 to 179 acres in size. Many of small acreage landowners are aware of local resource concerns and have a positive stewardship attitude, but they are new to agriculture and have limited resource management experience. If conservation adoption is to increase, substantially more technical and financial resources need to be available to these landowners.

Conservation assistance is provided by an NRCS satellite office, Lincoln and Benton Soil and Water Conservation Districts, Cascade Pacific Resource Conservation and Development (RC&D) office, Mid Coast Watersheds Council, Alsea Watershed Group, and other local conservation organizations.

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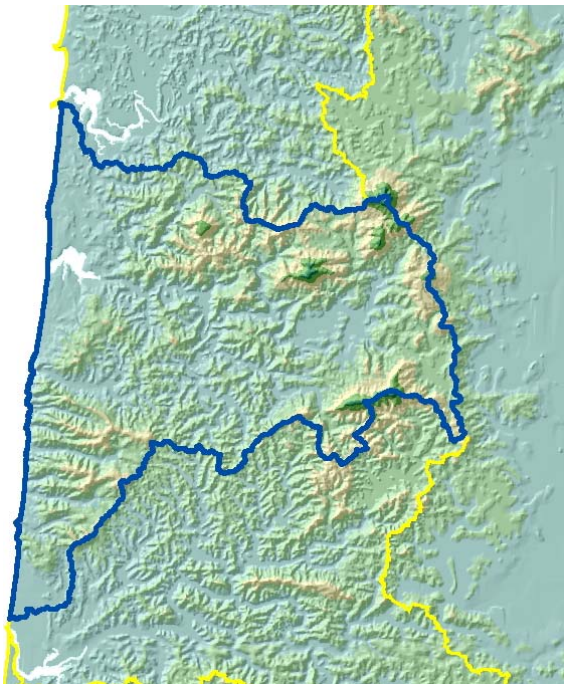

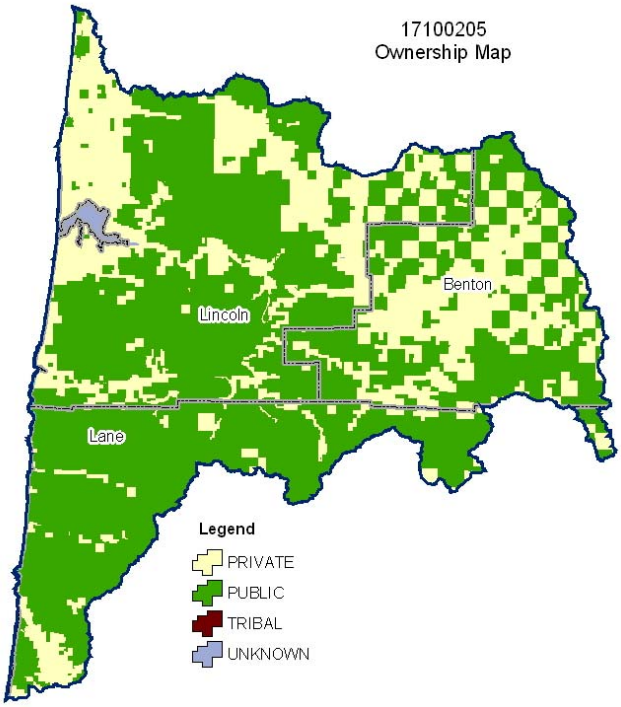

Produced by the Water Resources Planning Team Portland, OR

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Physical Description

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ALL NUMBERS IN THIS PROFILE ARE FOR OREGON ONLY

Land Cover/Land Use (NLCD[12])	Ownership - (2003 Draft BLM Surface Map Set[11])							
	Public		Private		Tribal		Totals	%
	Acres	%	Acres	%	Acres	%		
Forest	287,100	66%	136,600	31%	0	0%	**424,000**	**97%**
Grain Crops	0	0%	0	0%	0	0%	**0**	**0%**
Conservation Reserve Program Land [a]	*	---	*	---	0	0%	*****	**---**
Grass/Pasture/Hay	*	---	6,800	2%	0	0%	**9,500**	**2%**
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	*	---	*	---	0	0%	*****	**---**
Oregon HUC Totals [b]	**291,200**	**66%**	**146,200**	**33%**	**0**	**0%**	**438,000**	**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 63 percent of private forestland is under industrial forest ownership (OSU, Forestry Sciences Laboratory).
- Pasture occurs on small farms and ranchettes.

Irrigated Lands (1997 NRI[13] 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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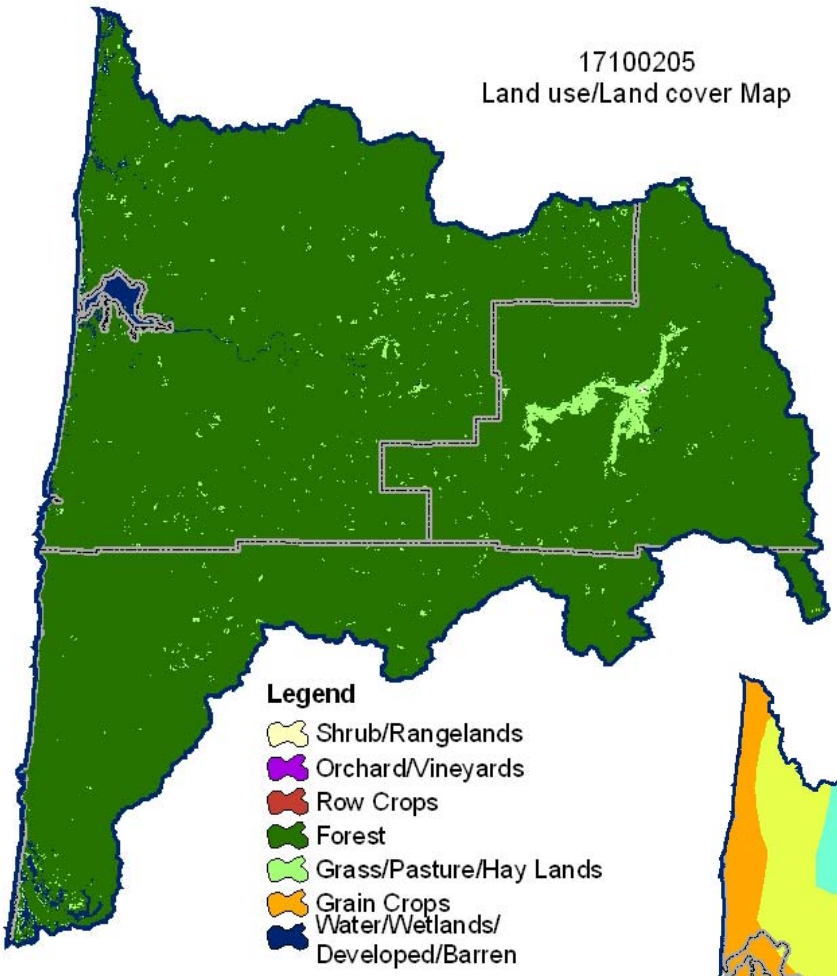

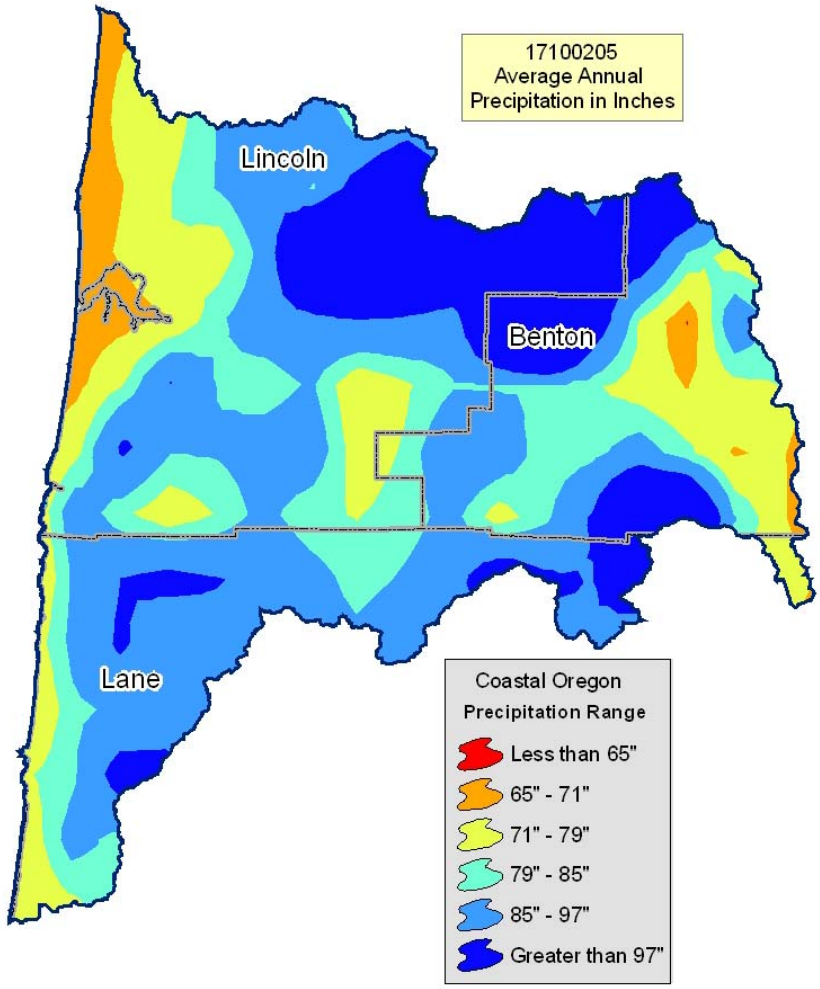

Common Resource Area Map

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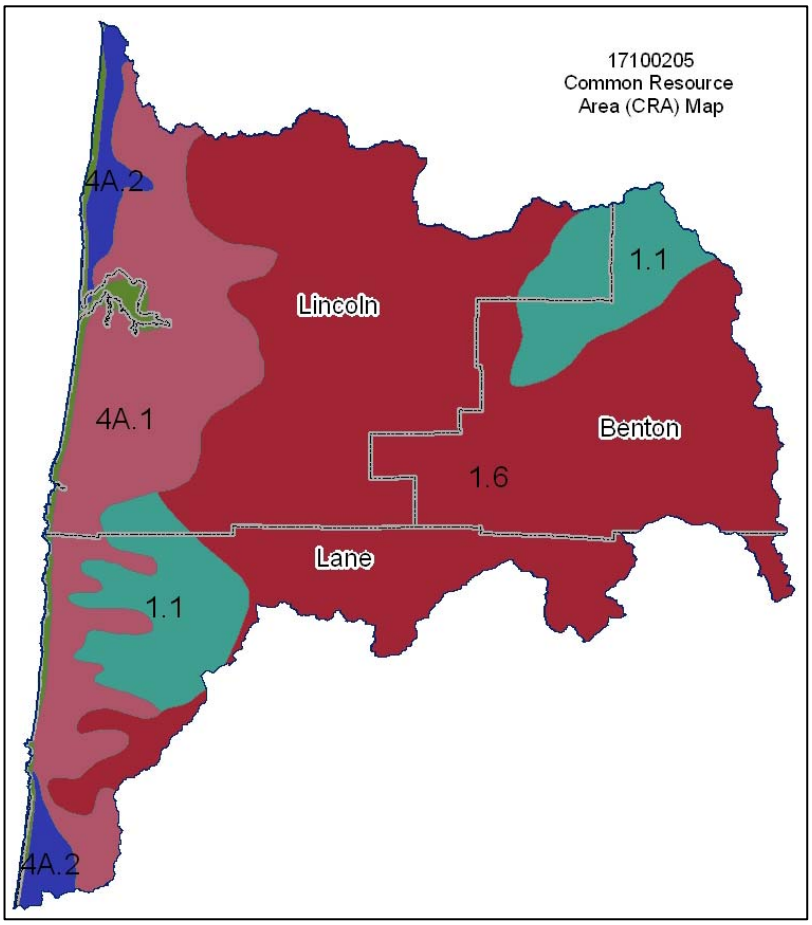
Only the major units are described below - for descriptions of all units within the HUC, go to: http://ice.or.nrcs.usda.gov/website/cra/viewer.htm



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 is typically 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, and it separates this unit 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.

Physical Description – Continued

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		ACRES	ACRE-FEET
Irrigated Adjudicated Water Rights *(OWRD[4])*	Surface	2,979	7,448
	Well	3	8
	Total Irrigated Adjudicated Water Rights	2,982	7,456
Stream Flow Data	USGS 14306500 ALSEA RIVER, NEAR TIDEWATER, OR	**Total Avg. Yield**	1,064,856
		May – Sept. Yield	99,965
		MILES	**PERCENT**
Stream Data[5] **Percent of Total Miles of Streams in HUC*	Total Miles – Major (100K Hydro GIS Layer)	543	---
	303d/TMDL Listed Streams (DEQ)	145	27%
	Anadromous Fish Presence (StreamNet)	169	31%
	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	18,976	94%
	Grain Crops	0	0%
	Grass/Pasture/Hay	719	4%
	Orchards/Vineyards	0	0%
	Row Crops	0	0%
	Shrub/Rangelands – Includes CRP Lands	32	0%
	Water/Wetlands/Developed/Barren	565	2%
	Total Acres of 100-Foot Stream Buffers	**20,291**	**---**
Land Capability Class *(Croplands & Pasturelands Only)* *(1997 NRI[3] Estimates for Non-Federal Lands Only)*	**1** – slight limitations	0	0%
	2 – moderate limitations	1,500	11%
	3 – severe limitations	6,100	45%
	4 – very severe limitations	0	0%
	5 – no erosion hazard, but other limitations	1,700	13%
	6 – severe limitations; unsuitable for cultivation; limited to pasture, range, forest	4,300	32%
	7 – very severe limitations; unsuitable for cultivation; limited to grazing, forest, wildlife habitat	0	0%
	8 – miscellaneous areas; limited to recreation, wildlife habitat, water supply	0	0%
	Total Croplands & Pasturelands	**13,600**	**---**

Confined Animal Feeding Operations – Oregon CAFO Permit – 12/2004

Animal Type	Dairy	Feedlot	Poultry	Swine	Mink	Other
No. of Permitted Farms	0	0	0	0	0	1
No. of Permitted Animals	0	0	0	0	0	50

Resource Concerns

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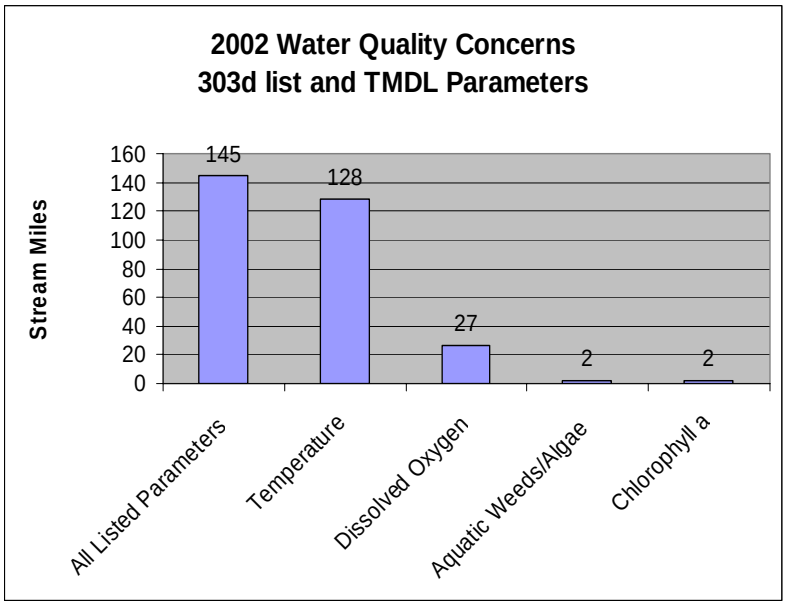
Tons of Soil Loss by Water Erosion: Due to the limited amount of non-Federal cropland and pastureland within this HUC, no reliable NRI soil loss estimates are available.

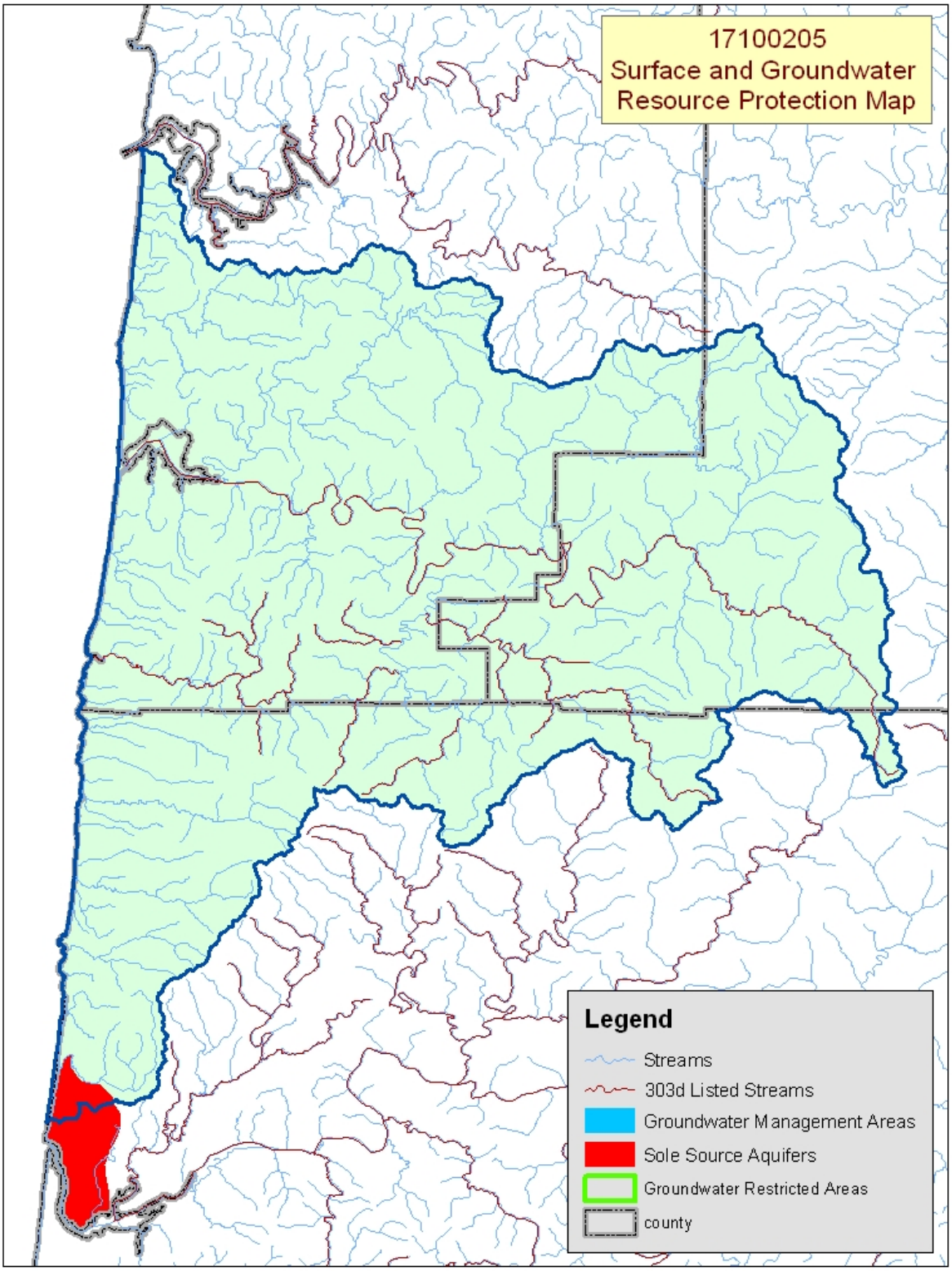


- Eighty-eight percent all of the listed stream miles exceed State water quality standards for temperature. Elevated stream temperatures may be due to inadequate riparian shade, stream channel widening, and other anthropogenic or natural causes.
- Conservation practices that can be used to address these 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 Alsea Basin Council	Mid Coast Sixth Field Watershed Assessments	None

(Continued on page 8)


17100205
Surface and Groundwater
Resource Protection Map
Legend
Streams
303d Listed Streams
Groundwater Management Areas
Sole Source Aquifers
Groundwater Restricted Areas
county

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**
Mammals- Canada lynx, Columbian white-tailed deer **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 HABITAT[13] - Chinook, Coho	

Census and Social Data[14]

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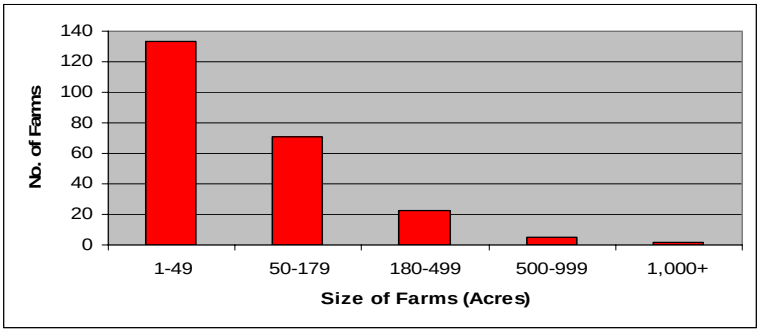


Number of Farms: 234

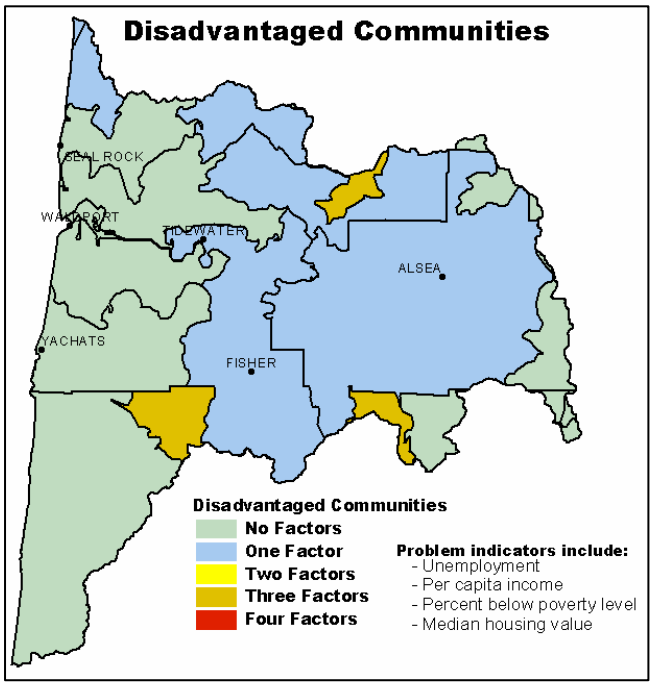
Number of Operators: 395

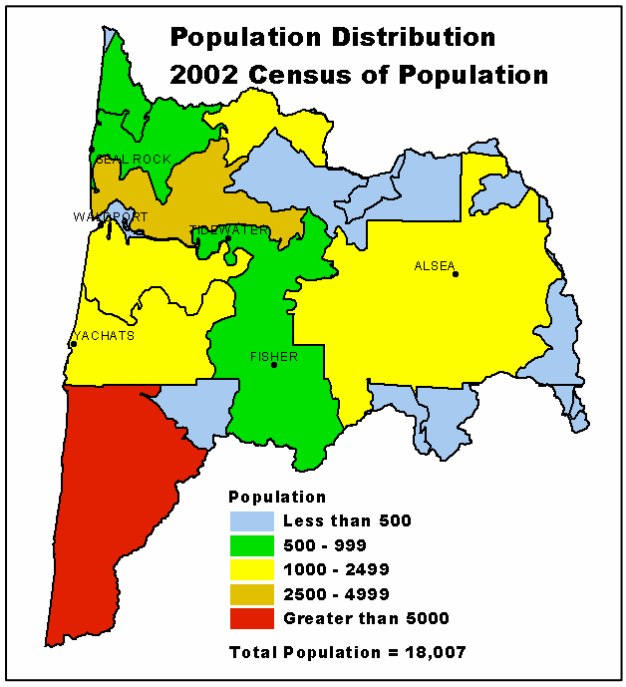
- Full-Time Operators: **117**
- Part-Time Operators: **278**

Estimated Level of Willingness and Ability to Participate in Conservation[15]: LOW

Most of the 234 farms in the Alsea subbasin consist of small acreage pastures that commonly are grazed by only a few animals. The operators are relatively new to agriculture and have limited 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, there needs to be significant enhancements to the technical and financial assistance available and a dedicated marketing effort to motivate and enable these operators. Public and private, large acreage forestland managers tend to follow the State Forest Practices Act requirements and are doing an adequate job of managing the resources under their control.

Evaluation of Social Capital[16]: There is not a strong agricultural- or land-management-centered community in the Alsea subbasin. The communities are mainly coastal towns and are centered on tourism and recreational activities. The communities generally are supportive of and effective in addressing issues it regards as important to their well-being. Natural resource management will have to be perceived as a significant issue for the subbasin communities before conservation will become widely diffused among the landowners.





Progress / Status

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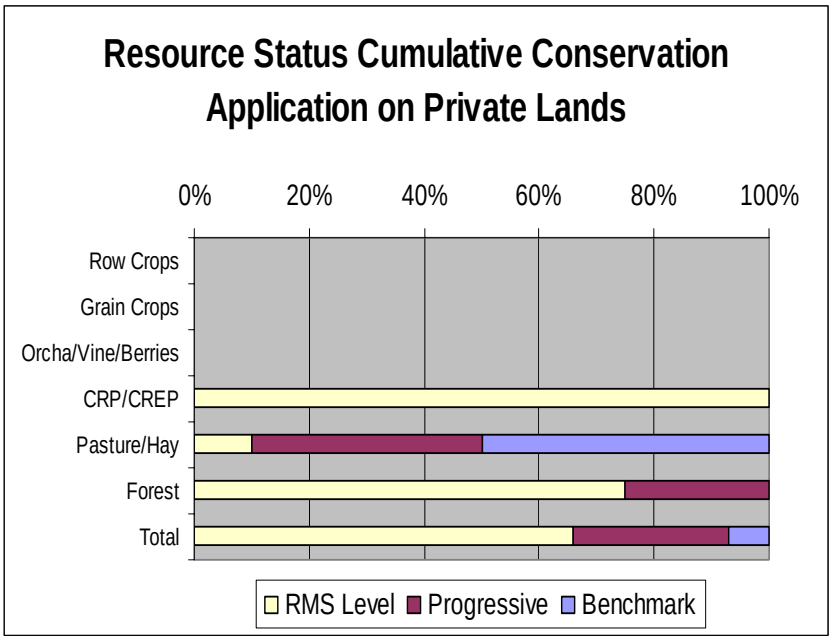
PRMS Data	FY99	FY00	FY01	FY02	FY03	Avg / Year	Total
Total Conservation Systems Planned (Acres)	505	141	253	50	229	236	1,178
Total Conservation Systems Applied (Acres)	4	304	1	0	189	100	498
Conservation Treatment (Acres)							
Waste Management	0	4	0	0	0	1	4
Buffers	18	67	4	24	4	23	117
Erosion Control	0	0	0	0	0	0	0
Irrigation Water Management	0	0	0	0	0	0	0
Nutrient Management	0	1	0	0	0	0	1
Pest Management	0	17	0	0	0	3	17
Prescribed Grazing	0	250	0	0	0	50	250
Trees & Shrubs	0	12	35	10	0	11	57
Conservation Tillage	0	0	0	0	0	0	0
Wildlife Habitat	5	178	7	37	47	55	274
Wetlands	0	4	7	7	9	5	27



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.
  - Prescribed grazing on pastureland.
- 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): **14 acres**
- Wetland Restoration Program (WRP): **None**
- Conservation Reserve Enhancement Program (CREP): **109 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/wrexport.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.