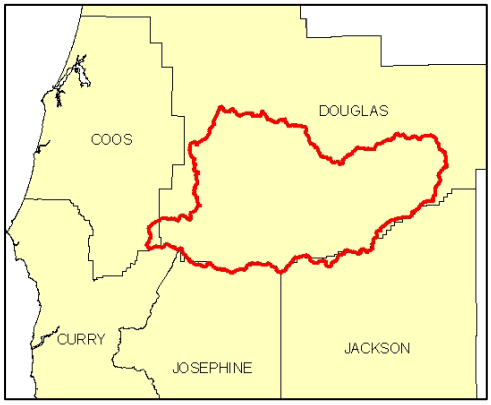
South Umpqua – 17100302

8-Digit Hydrologic Unit Profile

FINAL

SWCD	Acres	SWCD	Acres
Douglas	1,129,834	Josephine	3,485
Coos	10,182	Curry	91
Jackson	8,250		



Introduction

The South Umpqua 8-Digit Hydrologic Unit Code (HUC) subbasin is comprised of 1,152,000 acres, mostly in Douglas County. Eighty-six percent of the subbasin is forestland, and the remainder is primarily small acreage, privately-owned grassland, hayland, and pastureland. The subbasin is about evenly split between public and private land.

The primary resource concern is the impact on fish and wildlife of concentrated flows from roads and landings on forestland. Poor management is a concern on many of the small acreage woodlots. A lack of riparian buffers on hayland and pastureland increases the risk of streambank erosion and diminishes water quality. Invasive weeds are a concern throughout much of the subbasin. High costs and a lack of timely technical assistance limit conservation diffusion in the subbasin.

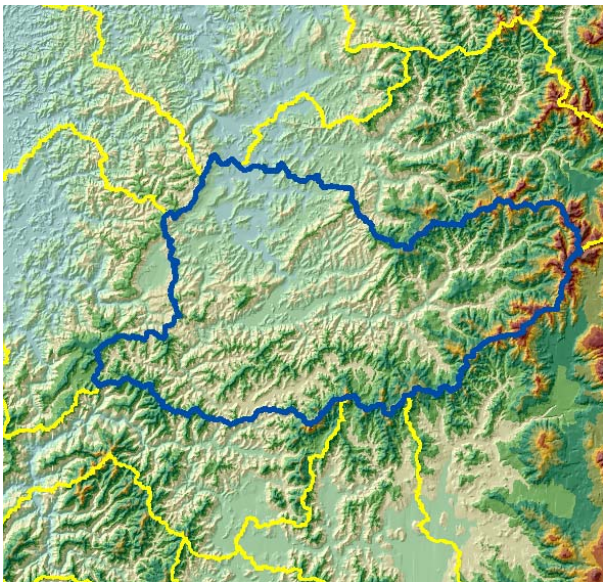
There are about 1,005 operations and 1,680 operators in the subbasin. Operators of the larger, well-established operations tend to adopt conservation if it fits into their current management system without too much effort or risk. Increased technical assistance and a concerted effort by the local conservation partnership is needed to increase the diffusion of conservation among the more numerous, small acreage landowners in the subbasin.

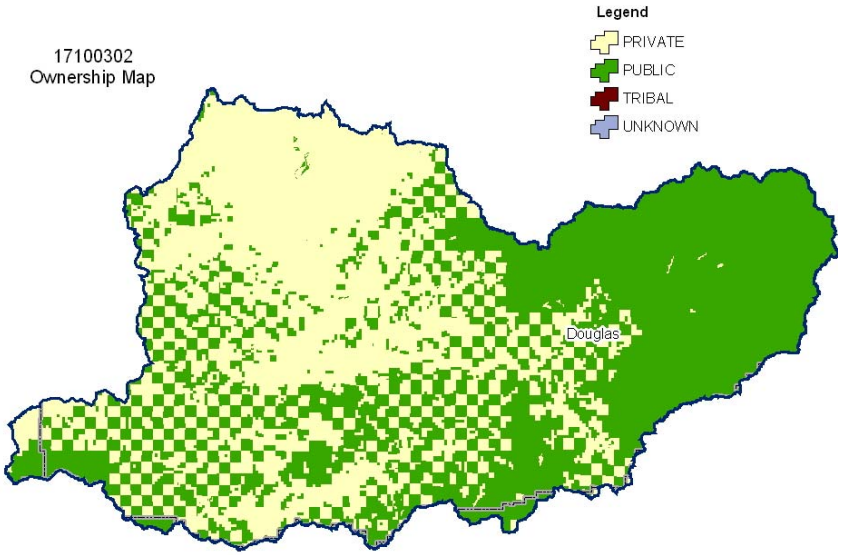
The Roseburg NRCS Service Center, Douglas Soil and Water Conservation District, the Southwest Resource and Conservation Development office, and Umpqua Basin Watershed Council provide conservation assistance in the subbasin.

Profile Contents

Introduction
Physical Description
Land Use Map & Precipitation Map
Common Resource Area
Resource Concerns
Census and Social Data
Progress/Status
Footnotes/Bibliography

Relief Map





Produced by the Water Resources Planning Team Portland, OR

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Avenue, SW, Washington DC 20250-9410, or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Physical Description

Back to Contents

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	573,000	50%	414,700	36%	0	0%	**987,700**	**86%**
Grain Crops	*	---	*	---	0	0%	*	---
Conservation Reserve Program Land [a]	0	0%	*	---	0	0%	*	---
Grass/Pasture/Hay	14,400	1%	110,200	10%	0	0%	**124,600**	**11%**
Orchards/Vineyards	0	0%	0	0%	0	0%	**0**	**0%**
Row Crops	*	---	*	---	0	0%	*	---
Shrub/Rangelands	*	---	17,000	1%	0	0%	**23,200**	**2%**
Water/Wetlands/Developed/Barren	*	---	13,600	1%	0	0%	**14,400**	**1%**
Oregon HUC Totals [b]	**594,500**	**52%**	**557,000**	**48%**	**0**	**0%**	**1,151,500**	**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.

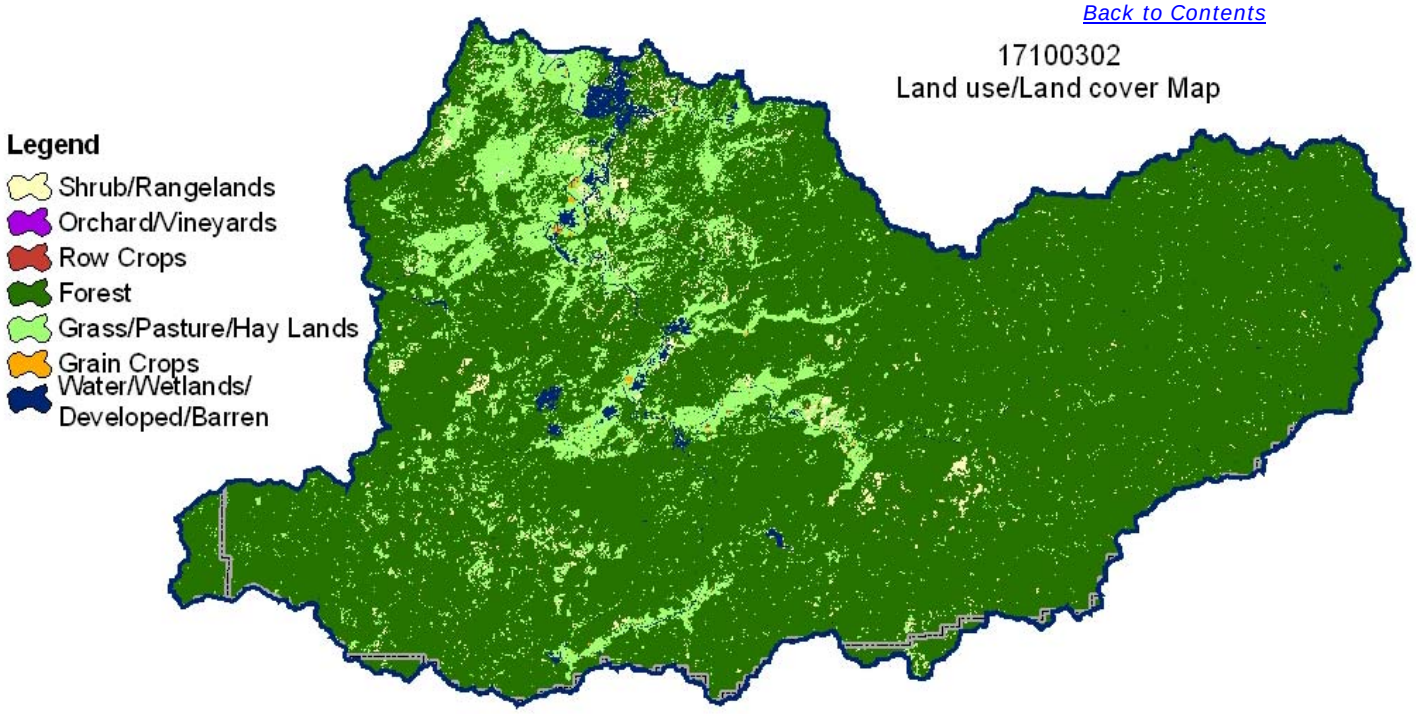
Special Considerations for This 8-Digit HUC:

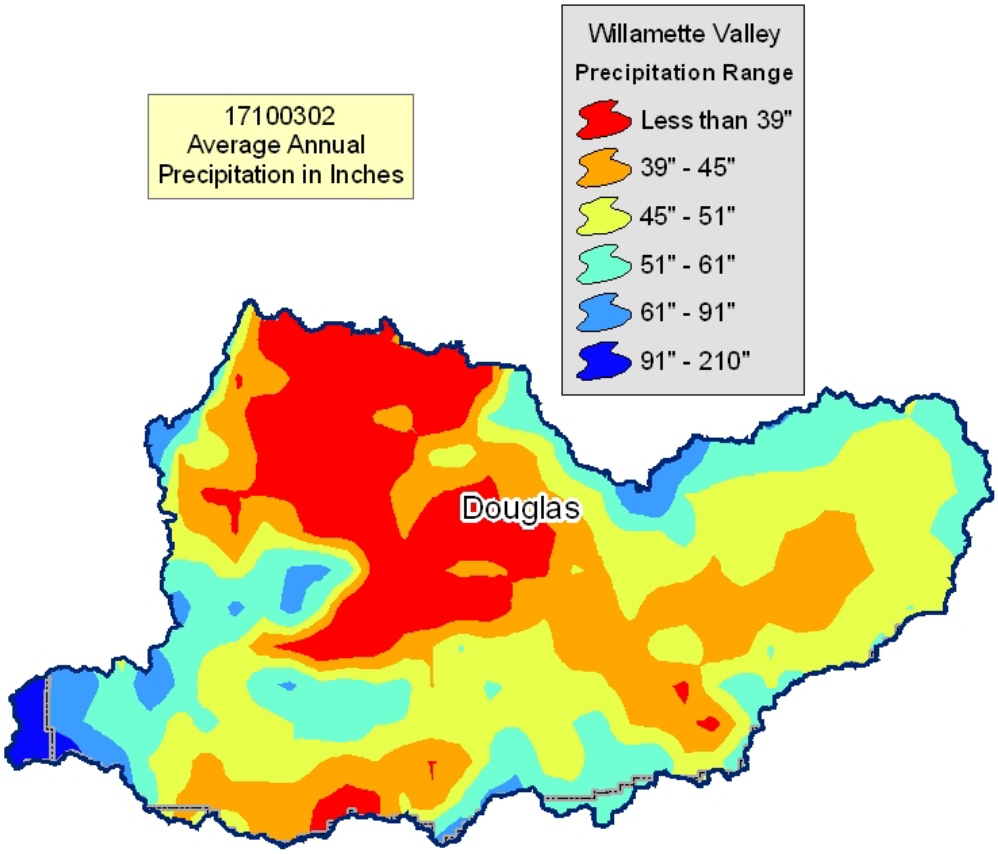
- Approximately 59 percent of private forestland is in industrial forest ownership (OSU, Forestry Sciences Laboratory).
- A majority of the private forestland is grazed.
- Much of the rangeland is oak savannah and is actively managed as forage.
- Pasture occurs on farms, ranches, and ranchettes.
- Approximately 400 acres of specialty crops are grown for fresh market (based on local interviews of staff).
- The Cow Creek/Umpqua Tribe is in the process of acquiring lands not reflected in the ownership acreage above.

Irrigated Lands (1997 NRI[13] Estimates for Non-Federal Lands Only)	Type of Land	ACRES	% of Irrigated Lands	% of HUC
	Cultivated Cropland	1,400	20%	0%
	Uncultivated Cropland	3,300	48%	0%
	Pastureland	2,200	32%	0%
	Total Irrigated Lands	**6,900**	**100%**	**<1%**

(Continued on the following pages)

Back to Contents

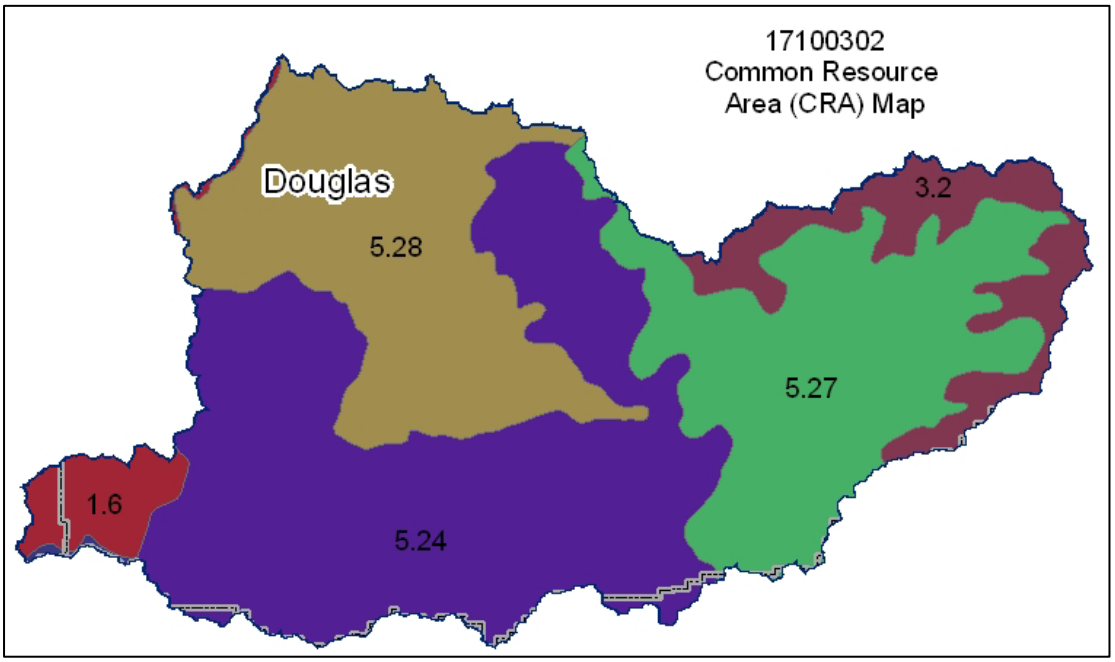




Common Resource Area Map

Back to Contents

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



1.6 - Northern Pacific Coast Range, Foothills, and Valleys - Mid-Coastal Sedimentary: This unit is comprised of mountains that have sedimentary bedrock 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. It includes narrow inland flood plains and terraces.

3.2 – Olympic and Cascade Mountains - Western Cascades Montane Highlands: This unit comprises the middle to high elevations of the Cascade Mountains. The vegetation is Douglas-fir, western hemlock, mountain hemlock, Pacific silver fir, and noble fir. Elevation typically is above about 3,000 feet. The mountains are highly dissected with steep slopes. The temperature regime is frigid and "warm" cryic, and the moisture regime is udic. This unit normally has a deep annual snowpack.

5.24 – Siskiyou-Trinity Area - Inland Siskiyous: This unit comprises most of the MLRA. It is characterized by mountains. The geology consists of metasediment, metavolcanic, and granitic rock. The vegetation is dominated by Douglas-fir, ponderosa pine, madrone, and scattered Oregon white oak. The temperature regime is mesic with small areas that are frigid, and the moisture regime is xeric with some north-facing slopes that are udic. The udic areas adjacent to MLRA 1 and 3 are characterized by western hemlock.

5.27 – Siskiyou-Trinity Area - Umpqua Cascades: This unit is characterized by middle elevation mountains in the southern Cascade Mountains. The temperature regime is mesic and frigid, and the moisture regime is xeric. The vegetation consists of Douglas-fir at the low elevations and white fir at the higher elevations. Western hemlock is absent except in drainageways or in areas that receive additional moisture. This unit is similar to units 3.1 and 3.2 except for the absence of western hemlock and the more moist climatic conditions.

5.28 - Siskiyou-Trinity Area - Umpqua Interior Foothills: This unit is comprised of a complex of flood plains, terraces, and foothills. The significant intermingling of foothill landforms in this unit makes it nearly impossible to separate out units 5.25 and 5.26; thus, unit 5.28 is a complex unit. The vegetation and climate is very similar to those of units 5.25 and 5.26.

Physical Description – Continued

Back to Contents

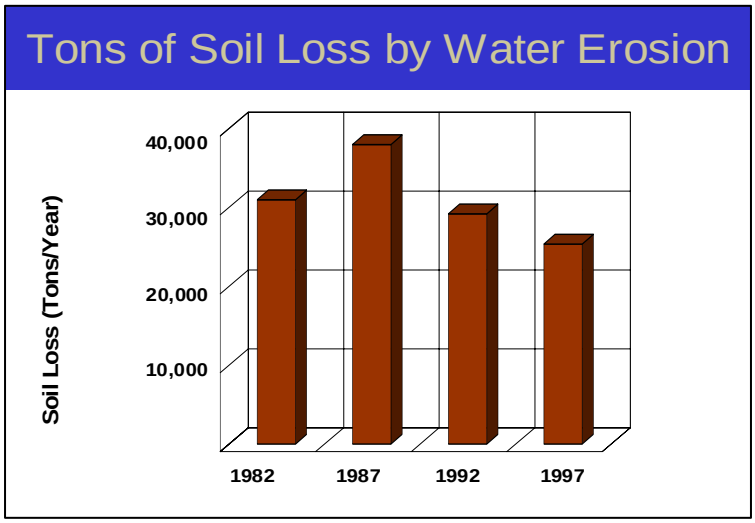
		ACRES	ACRE-FEET
Irrigated Adjudicated Water Rights *(OWRD[4])*	Surface	22,291	58,212
	Well	525	1,312
	Total Irrigated Adjudicated Water Rights	22,816	59,524
Stream Flow Data	USGS 14312000 SOUTH UMPQUA RIVER, NEAR BROCKWAY, OR	**Total Avg. Yield**	1,988,678
		May - Sept Yield	207,995
		MILES	**PERCENT**
Stream Data[5] **Percent of Total Miles of Streams in HUC*	Total Miles – Major (100K Hydro GIS Layer)	1,794	---
	303d/TMDL Listed Streams (DEQ)	606	34%
	Anadromous Fish Presence (StreamNet)	306	17%
	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	38,919	82%
	Grain Crops	43	0%
	Grass/Pasture/Hay	6,546	14%
	Orchards/Vineyards	0	0%
	Row Crops	42	0%
	Shrub/Rangelands – Includes CRP Lands	981	2%
	Water/Wetlands/Developed/Barren	1,100	2%
	Total Acres of 100-Foot Stream Buffers	**47,631**	**---**
Land Capability Class *(Croplands & Pasturelands Only)* *(1997 NRI[3] Estimates for Non-Federal Lands Only)*	**1** – slight limitations	2,000	2%
	2 – moderate limitations	9,600	11%
	3 – severe limitations	19,100	23%
	4 – very severe limitations	36,000	43%
	5 – no erosion hazard, but other limitations	0	0%
	6 – severe limitations; unsuitable for cultivation; limited to pasture, range, forest	8,900	11%
	7 – very severe limitations; unsuitable for cultivation; limited to grazing, forest, wildlife habitat	8,400	10%
	8 – miscellaneous areas; limited to recreation, wildlife habitat, water supply	0	0%
	Total Croplands & Pasturelands	**84,000**	**---**

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

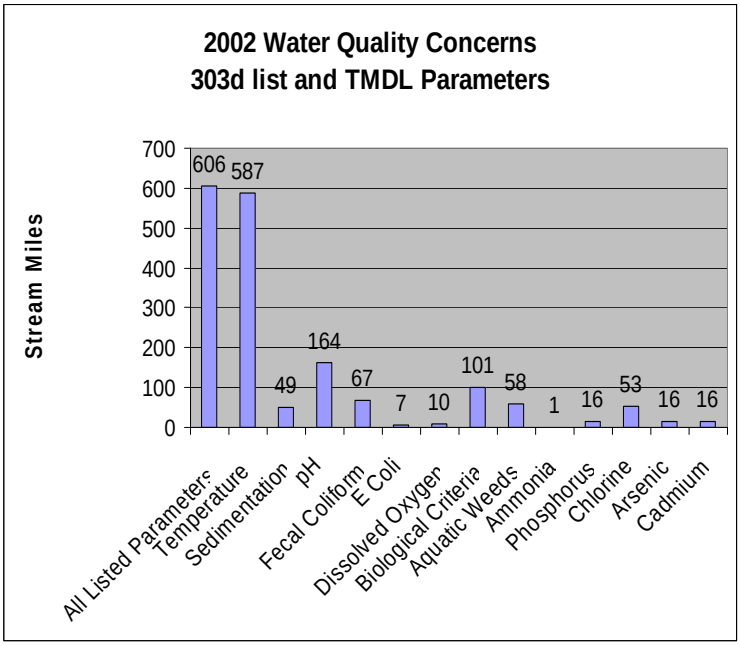
Animal Type	Dairy	Feedlot	Poultry	Swine	Mink	Other
No. of Permitted Farms	0	2	0	2	0	0
No. of Permitted Animals	0	806	0	373	0	0

Resource Concerns

Back to Contents



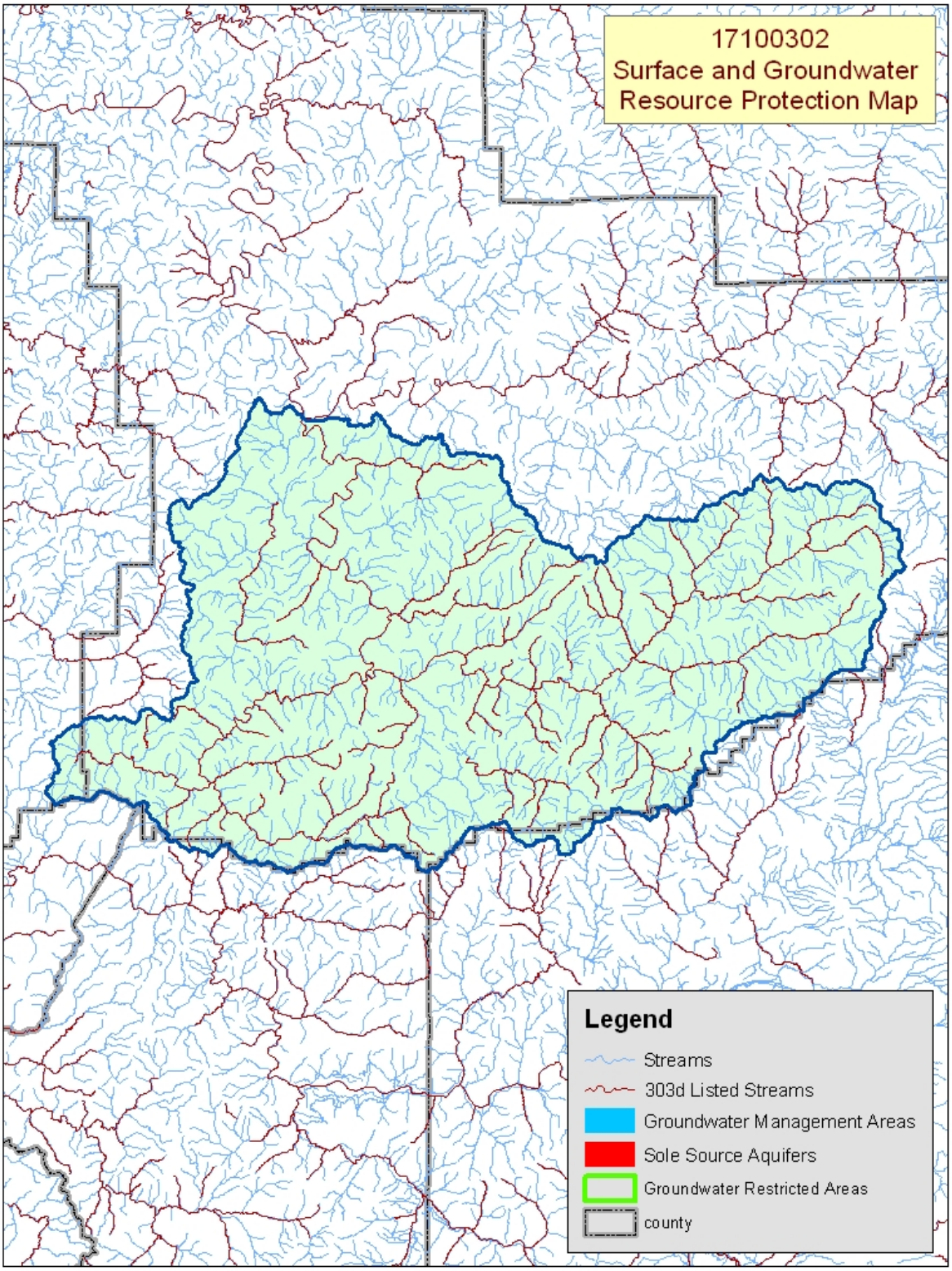
- Sheet and rill erosion by water on the cropland and pastureland have been reduced by nearly 6,000 tons of soil per year from 1982 to 1997.
- NRI estimates indicate that 1,600 acres of the agricultural lands still had water erosion rates above a sustainable level in 1997.
- Controlling erosion not only sustains the long-term productivity of the land, but it also affects the amount of soil, pesticides, fertilizer, and other substances that move into the Nation's waters.



- Ninety-six 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 and E coli can be indicative of livestock waste, but they also are 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
Sutherlin Creek	Installed - 1964	None	None
ODEQ TMDL's[8]		ODA Agricultural Water Quality Management Plans[9]	
Name	Status	Name	Status
Umpqua Basin	Data Collection	Umpqua	Completed
OWEB Watershed Council[10]	Watershed Council Assessments[11]		NWPCC Subbasin Plans and Assessments[18]
Umpqua Basin Watershed Council	Deer Creek, Lower South Umpqua, Middle Cow Creek, Middle South Umpqua, Myrtle Creek, Olalla/Lookingglass, South Umpqua River, Tiller Region, Upper Cow Creek, and West Fork Cow Creek Watershed Assessment and Action Plans		None

(Continued on page 8)



Map Footnote [17]

Resource Concerns - Continued

Back to Contents

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
	Soil Mass Movement						X
Water Quality, Surface	Suspended Sediments and Turbidity						X
	Temperature	X					X
	Aquatic Habitat Suitability	X					X
Plant Suitability	Site & Intended Use Suitability/Invasive Weeds	X					X
Plant Condition	Productivity, Health, and Vigor	X					X
Plant Management	Establishment, Growth, and Harvest	X					X
Animal Habitat, Domestic	Water - Quantity and Quality	X					
	Management	X					
Animal Habitat, Wildlife	Food, Cover, and/or Shelter	X					
	Water - Quantity and Quality	X					
Human, Economics	High Capital/Financial Costs	X					X
	Low or Unreliable Profitability	X					
Human, Political	Lack of Technical Assistance	X					X

Grass / Pasture / Hay

- Erosion (streambanks) and water quality (temperature) are concerns commonly because of a lack of riparian buffers.
- Lack of desirable forage and lack of proper grazing management contribute to low-producing pastures.
- Invasive, noxious weeds can be a significant problem, especially on overgrazed pastures.
- The level of management needed for high-quality pastures commonly is not an objective of small acreage operators.

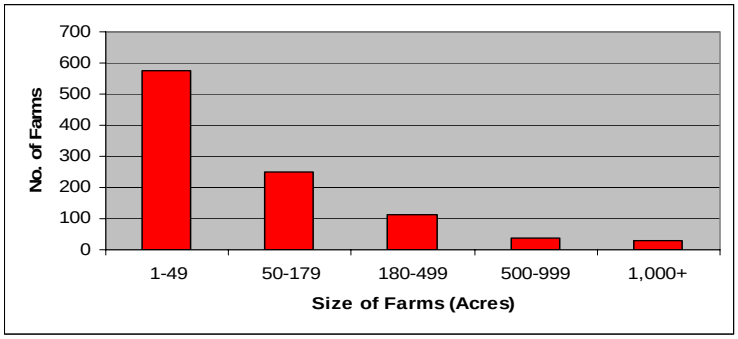
Forestland (private, non-industrial)

- The primary resource concern is the impact on fish and wildlife of erosion from concentrated flows on roads and landings.
- Private woodlots commonly suffer from hygrading (harvesting the best trees) and poor stand management (overstocked stands).
- Overstocked forests and invasive weeds limit the productivity and increase the risk of catastrophic fire.
- Conservation on private, non-industrial forestland is limited as a result of:
  - High capital cost to establish and manage timber.
  - Lack of technical assistance to small acreage woodlot owners.

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES[12]	
THREATENED SPECIES	**CANDIDATE SPECIES**
Mammal-Canada lynx **Marine –** Stellar (northern) sea lion **Birds –** Marbled murrelet, Western snowy plover, Bald eagle, Brown pelican, Short-tailed albatross, Northern spotted owl **Fish –** Coho salmon, Steelhead, Chinook salmon **Plants –** Kincaid's lupine, Rough popcorn flower	**Fish** – Steelhead **Birds –** Streaked horned lark **Amphibians and Reptiles –** Oregon spotted frog **PROPOSED SPECIES** None
ESSENTIAL FISH HABITAT[13] – Chinook, Coho	

Census and Social Data[14]

Back to Contents



Number of Farms: 1,005

Number of Operators: 1,680

- Full-Time Operators: **564**
- Part-Time Operators: **1,116**

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

Moderate for operators of well-established large operations

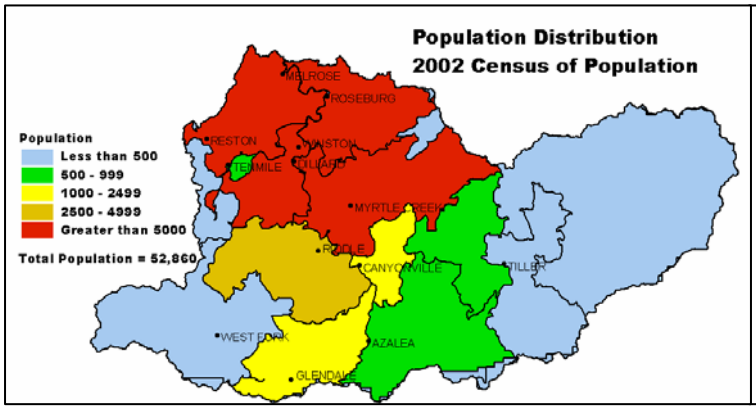
Many of these operators are aware of local resource issues and have a positive stewardship attitude; however, only some see their operation as related to local resource problems and have farm plans that include conservation. Marketing conservation could substantially increase its diffusion among these operators. Many adopt conservation measures to improve profitability and wildlife habitat.

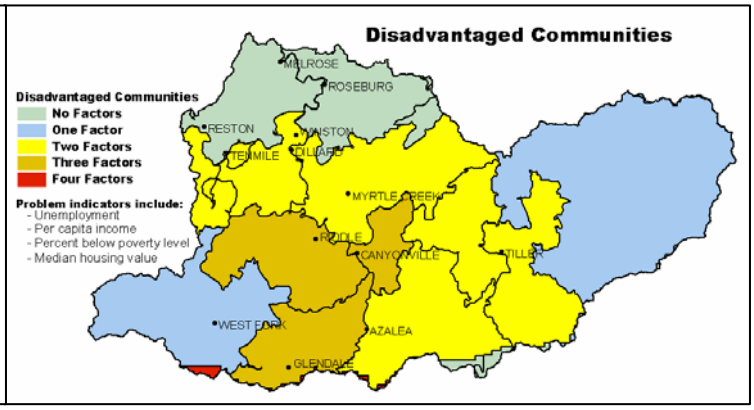
Moderate to Low for operators of small operations

Many of these operators have a positive stewardship attitude and hold conservation in a favorable light. They tend to be well educated and aware of local resource issues; however, many are new to agriculture and have little resource management experience. This limits their ability to adopt conservation practices. Generally, these landowners are willing to adopt conservation practices but they need guidance. Technical assistance committed to meeting the needs of small acreage landowners could significantly increase the diffusion of conservation in the subbasin.

Evaluation of Social Capital[16]:

The strengths of the communities in the subbasin are that they tend to complete projects and have the ability to solve problems. Participation in many community organizations tends to be low, and effective leadership is inconsistent. New landowners in the area are likely to be well educated and moderately affluent. Conservation systems will become more widely diffused throughout the subbasin if information, technical assistance, and conservation systems become more germane to the needs of the small acreage landowner.

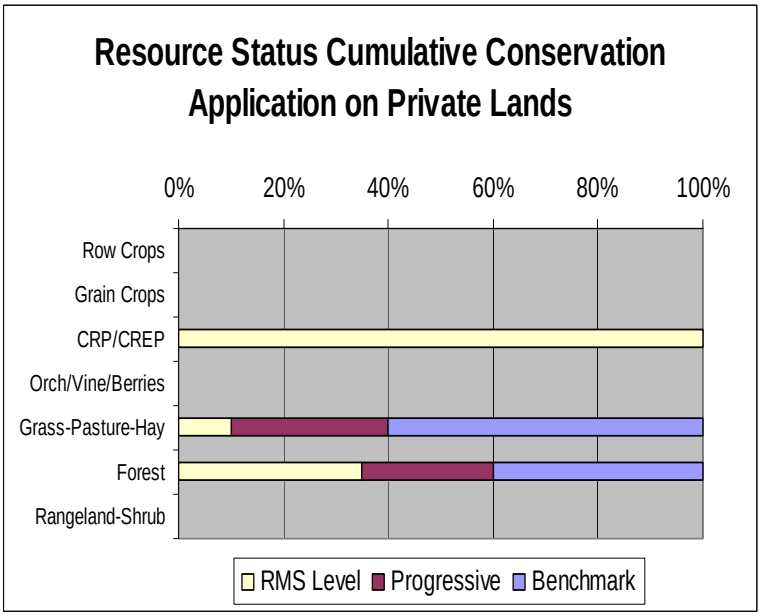




Progress / Status

Back to Contents

PRMS Data	FY99	FY00	FY01	FY02	FY03	Avg / Year	Total
Total Conservation Systems Planned (Acres)	581	0	439	422	1,731	635	3,173
Total Conservation Systems Applied (Acres)	39	0	434	1,313	1,292	616	3,078
Conservation Treatment (Acres)							
Waste Management	0	0	0	0	0	0	0
Buffers	7	0	27	10	0	9	44
Erosion Control	0	0	0	0	0	0	0
Irrigation Water Management	0	0	0	233	56	58	289
Nutrient Management	0	97	0	762	17	175	876
Pest Management	0	59	0	0	335	79	394
Prescribed Grazing	0	128	434	869	1,556	597	2,987
Trees & Shrubs	39	0	45	0	0	17	84
Conservation Tillage	0	0	0	0	0	0	0
Wildlife Habitat	0	0	0	174	251	85	425
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:
  - ~ Prescribed grazing on pasture and woodland.
  - ~ Wildlife habitat management.
- Invasive weeds and the lack of proper grazing management are ongoing concerns.
- Private industrial forestland owners typically do not work with NRCS and SWCDs; however, their lands usually comply with State forest practices act requirements.
- Much of the private, non-industrial forestland in the watershed is used for long-term timber production. The rest is used as rural homesites and recreational property.

Lands Removed from Production through Farm Bill Programs

- Conservation Reserve Program (CRP): **38 acres**
- Wetland Restoration Program (WRP): **None**
- Conservation Reserve Enhancement Program (CREP): **None**

Footnotes/Bibliography

Back to Contents

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

Back to Contents

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.

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.