Upper Rogue – 17100307

8-Digit Hydrologic Unit Profile

FINAL

MARCH 2006

Introduction

The Upper Rogue 8-Digit Hydrologic Unit Code (HUC) subbasin is slightly over 1 million acres, largely in Jackson County. Eighty-five percent of the subbasin is forestland, and about nine percent is used for pasture, hay, and grass. Pasture is included on many small-acreage farms. There is only one permitted CAFO and 167 permitted animals in the subbasin.

The primary resource concern on the forestland is the impact of soil erosion from forest roads and landings on fish and wildlife. Other significant resource concerns include streambank erosion, diminishing water quality, invasive weeds, and minimal pasture management. Economic, political, and social issues, such as unavailable labor, high resource management requirements, perceived land use constraints, and controversy between new and longtime residents, impede the diffusion of conservation on agricultural lands in the subbasin.

There are 629 farms and 1,022 operators in the Upper Rogue subbasin. Sixty percent of the farms are less than 50 acres in size, and 85 percent are less than 180 acres in size. Many new owners of small-acreage operations have little experience with natural resource management and are in the subbasin for the rural life. Social capital in the subbasin is minimal, and local communities cannot be expected to actively support natural resource management. Conservation marketing, directed technical assistance, and support for increasing social capital are needed to increase the diffusion of conservation throughout the Upper Rogue subbasin.

Conservation assistance is largely provided by the Medford NRCS Service Center, Jackson Soil and Water Conservation District, Southwest Oregon Resource Conservation and Development (RC&D) office, Upper Rogue, Little Butte Creek, and Seven Basins Watershed Councils, and other local conservation organizations.

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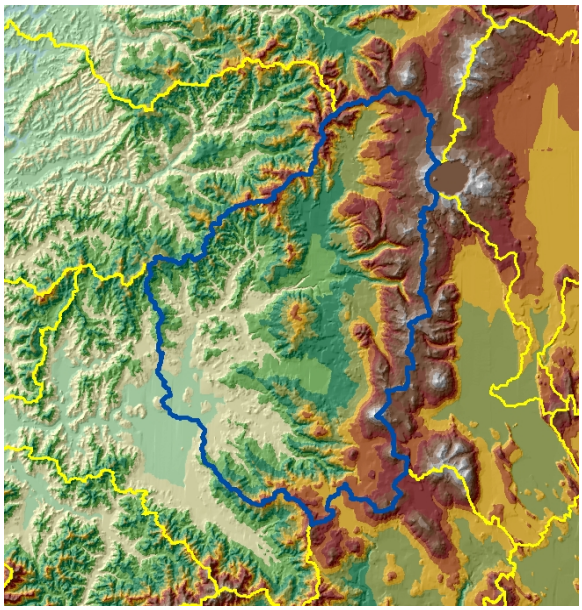

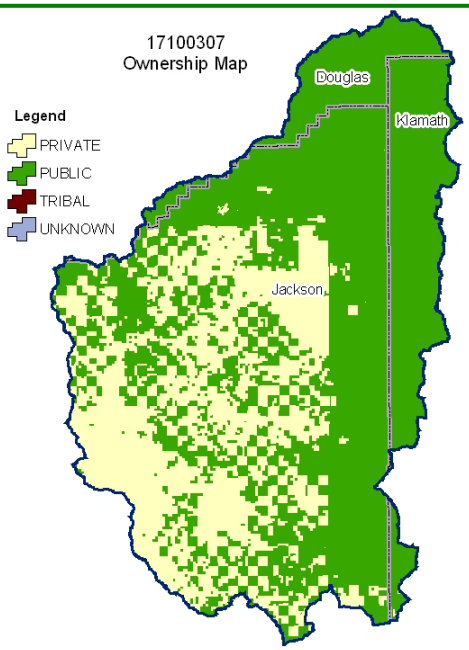

Produced by the Water Resources Planning Team Portland, OR

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Physical Description

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ALL NUMBERS IN THIS PROFILE ARE FOR OREGON ONLY

Land Cover/Land Use (NLCD[1,2])	Ownership - (2003 Draft BLM Surface Map Set[1])							
	Public		Private		Tribal		Totals	%
	Acres	%	Acres	%	Acres	%		
Forest	628,000	61%	251,400	24%	0	0%	879,400	85%
Grain Crops	*	---	*	---	0	0%	*	---
Conservation Reserve Program Land [a]	0	0%	0	0%	0	0%	0	0%
Grass/Pasture/Hay	18,500	2%	78,700	8%	0	0%	97,200	9%
Orchards/Vineyards	0	0%	0	0%	0	0%	0	0%
Row Crops	*	---	*	---	0	0%	*	---
Shrub/Rangelands	14,500	1%	22,900	2%	0	0%	37,400	4%
Water/Wetlands/Developed/Barren	*	---	*	---	0	0%	13,500	1%
Oregon HUC Totals [b]	**666,600**	**65%**	**365,700**	**35%**	**0**	**0%**	**1,032,300**	**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 70 percent of private forestland is under industrial forest ownership (OSU, Forestry Sciences Laboratory).
- Much of the private forestland is grazed.
- Land used for grain is being converted to pasture due to the current profitability of the cattle industry.
- Pasture is included on farms and ranchettes.
- During the last decade there has been a significant increase in vineyards, approximately 9,000 acres in Jackson County.

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	3,700	10%	<1%
	Pastureland	34,400	90%	3%
	Total Irrigated Lands	**38,100**	**100%**	**4%%**

(Continued on the following pages)

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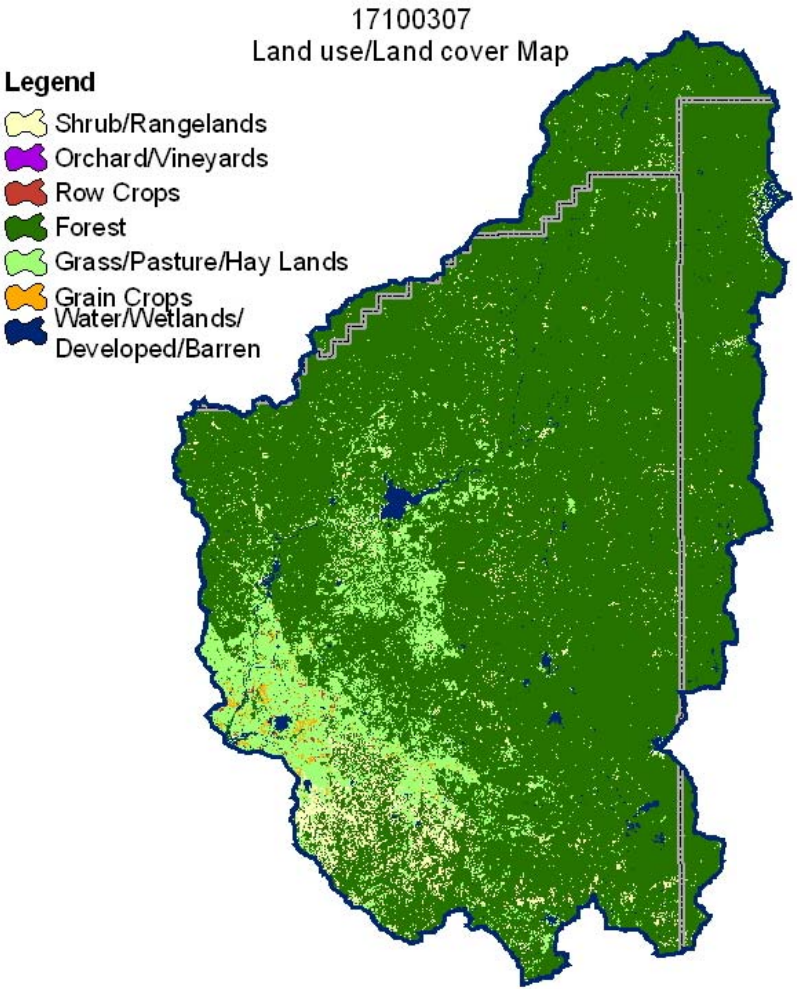

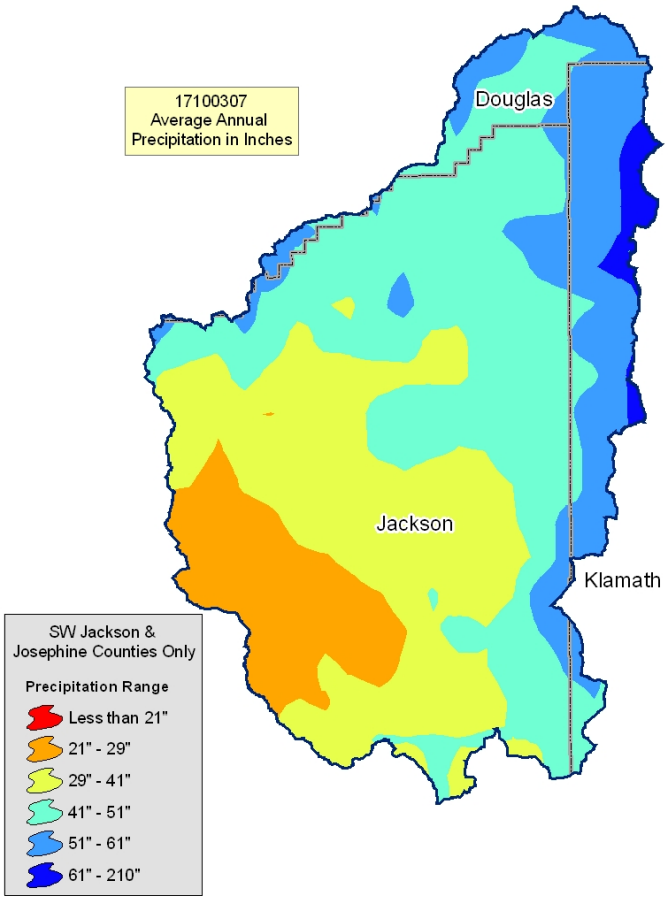

Common Resource Area Map

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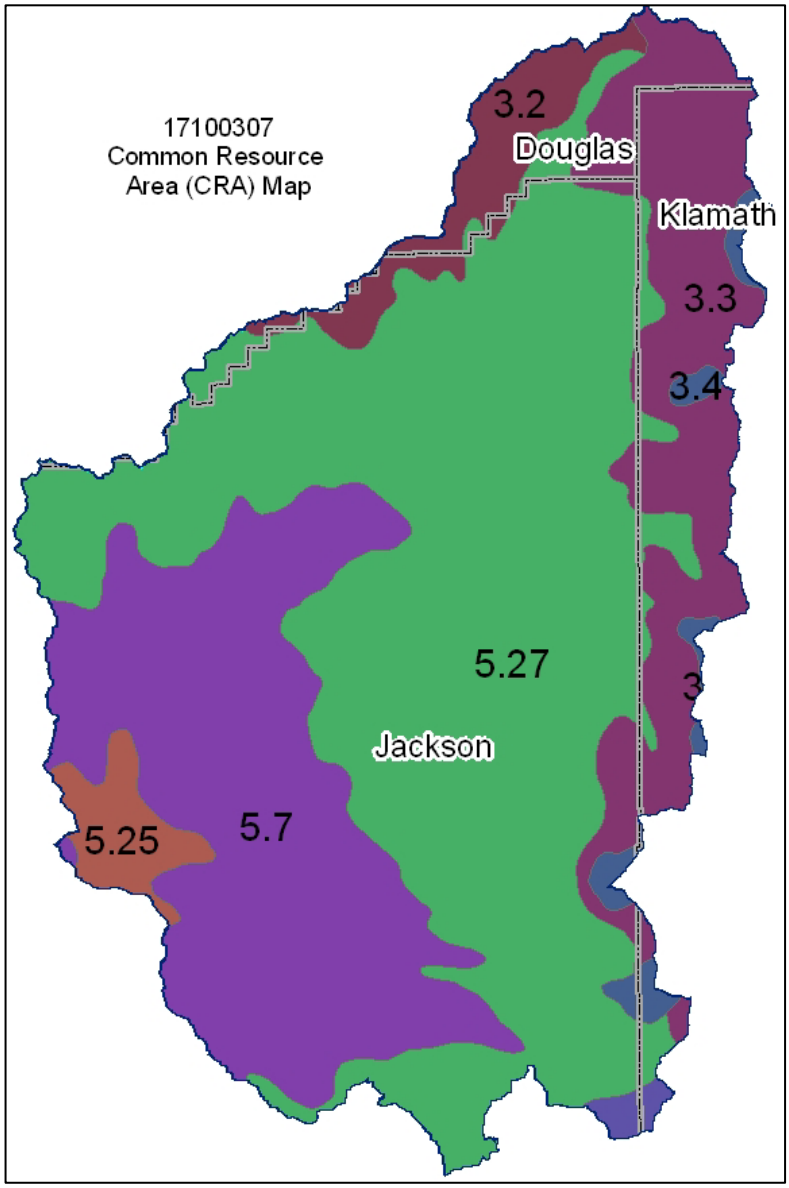
Only the major units are described below - for descriptions of all units within the HUC, go to: http://ice.or.nrcs.usda.gov/website/cra/viewer.htm



3.3 – Olympic and Cascade Mountains - Southern Cascade Crest Montane Forest: This unit comprises the southern end of the high Cascades. The vegetation is mountain hemlock, lodgepole pine, Shasta red fir, Pacific silver fir, and noble fir. The unit has a plateau topography and is characterized by numerous alpine lakes. The temperature regime is cryic, and the moisture regime is udic.

5.25 - Siskiyou-Trinity Area - Rogue and Illinois Valleys: This unit is comprised of the terraces and flood plains of the Rogue and Illinois River Valleys. The temperature regime is mesic, and the moisture regime is xeric. This unit contains small areas of foothill landforms but not to the extent of those in unit 5.28.

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

5.7 - Siskiyou-Trinity Area - Siskiyou Foothills: This unit is characterized by foothills adjacent to the terrace and flood plain unit 5.1. This unit dominantly supports Oregon white oak, Pacific madrone, ponderosa pine, and scattered Douglas-fir. Significant areas of rangeland are scattered throughout the unit in areas of shallow soils. The temperature regime is mesic, and the moisture regime is xeric.

Physical Description – Continued

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		ACRES	ACRE-FEET
Irrigated Adjudicated Water Rights *(OWRD[4])*	Surface	20,302	69,809
	Well	368	919
	Total Irrigated Adjudicated Water Rights	20,669	70,728
Stream Flow Data	USGS 14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR	**Total Avg. Yield**	1,838,124
		May – Sept. Yield	646,276
		MILES	**PERCENT**
Stream Data[5] **Percent of Total Miles of Streams in HUC*	Total Miles – Major (100K Hydro GIS Layer)	1,479	---
	303d/TMDL Listed Streams (DEQ)	211	14%
	Anadromous Fish Presence (StreamNet)	91	6%
	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	36,179	83%
	Grain Crops	238	<1%
	Grass/Pasture/Hay	4,743	11%
	Orchards/Vineyards	0	0%
	Row Crops	91	0%
	Shrub/Rangelands – Includes CRP Lands	1,293	3%
	Water/Wetlands/Developed/Barren	1,289	3%
	Total Acres of 100-foot Stream Buffers	**43,833**	**---**
Land Capability Class *(Croplands & Pasturelands Only)* *(1997 NRI[3] Estimates for Non-Federal Lands Only)*	**1** – slight limitations	0	0%
	2 – moderate limitations	0	0%
	3 – severe limitations	3,000	6%
	4 – very severe limitations	36,500	71%
	5 – no erosion hazard, but other limitations	0	0%
	6 – severe limitations; unsuitable for cultivation; limited to pasture, range, forest	12,200	24%
	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	**51,700**	**---**

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

Animal Type	Dairy	Feedlot	Poultry	Swine	Mink	Other
No. of Permitted Farms	0	0	0	1	0	0
No. of Permitted Animals	0	0	0	167	0	0

Resource Concerns

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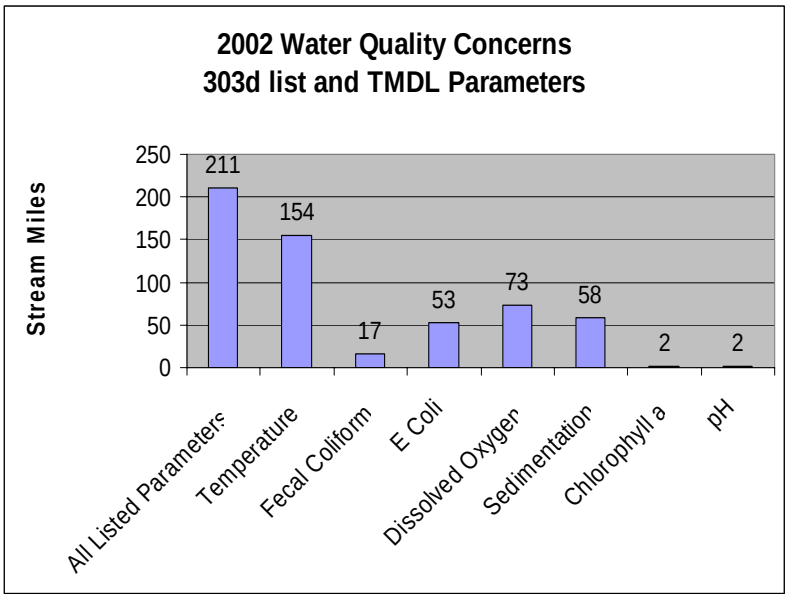
Tons of Soil Loss by Water Erosion: Due to the limited amount of non-Federal cropland and pastureland within this HUC, no reliable NRI soil loss estimates are available.



- Seventy-three 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
None	None	None	None
ODEQ TMDL's[8]		ODA Agricultural Water Quality Management Plans[9]	
Name	Status	Name	Status
Rogue Basin	Data Collection	Inland Rogue	Completed

OWEB Watershed Council[10]	Watershed Council Assessments[11]	NWPCC Subbasin Plans and Assessments[18]
Upper Rogue, Little Butte Creek, and Seven Basins Watershed Councils	Emigrant Creek Watershed Assessment and Action Plan, Evans Creek and Seven Basins Watershed Assessments	None

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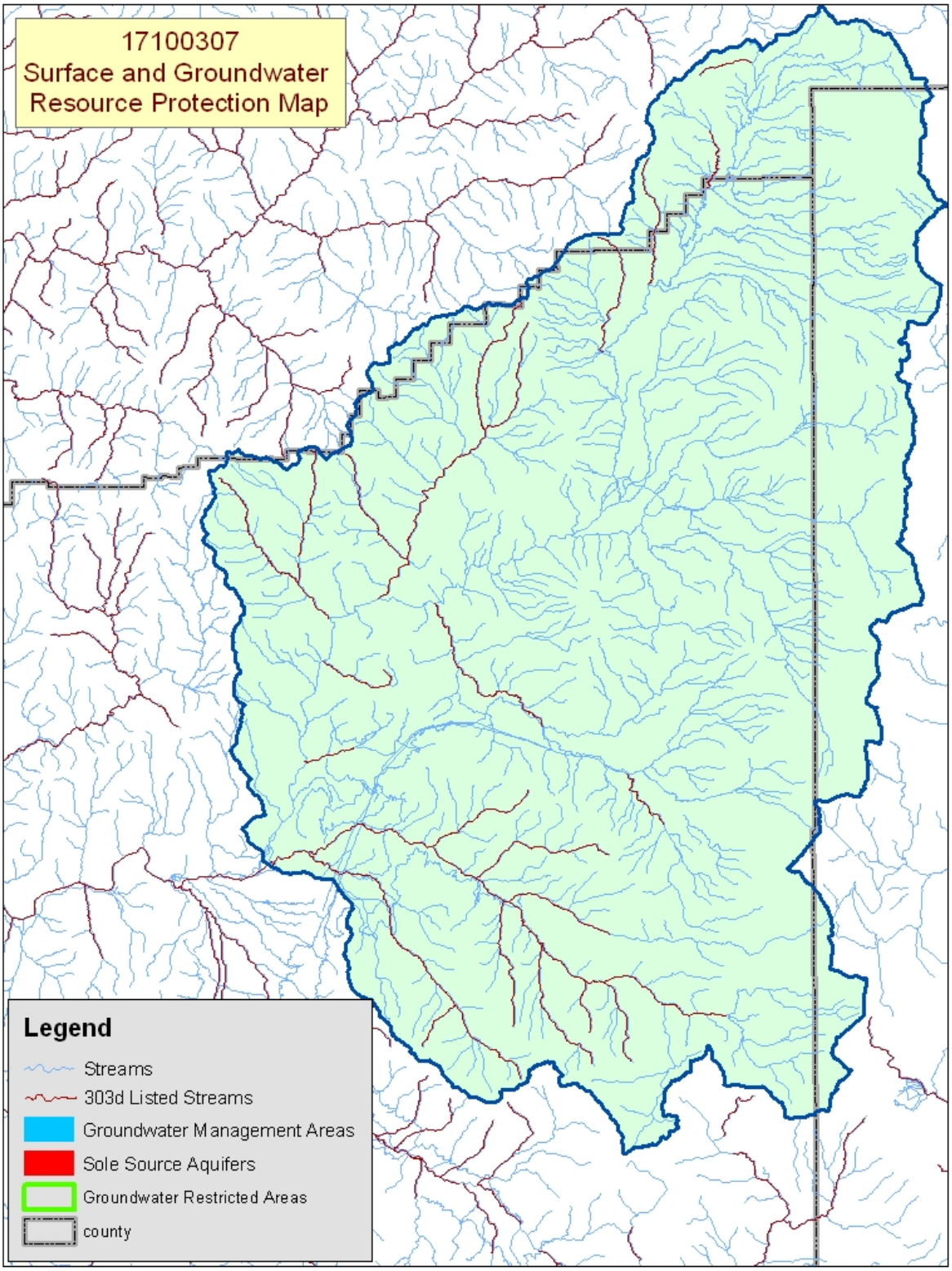

Map Footnote [17]

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	Concentrated Flow or Gully					X	X
	Streambank	X					X
Water Quantity	Water Management for Irrigated Land	X					
Water Quality, Surface	Low Dissolved Oxygen	X				X	
	Temperature	X				X	
	Aquatic Habitat Suitability	X				X	
Plant Condition	Productivity, Health, and Vigor	X				X	X
Plant Management	Establishment, Growth, and Harvest	X				X	
Animal Habitat, Domestic	Water - Quantity and Quality	X				X	
	Management	X				X	
Animal Habitat, Wildlife	Water - Quantity and Quality	X					
Human, Economics	Land Use Constraints/Restrictions	X				X	X
	High Labor Costs or Availability	X				X	X
	High Management Level Required	X				X	X
	Low or Unreliable Profitability	X				X	
Human, Political	High Degree of Controversy	X				X	X
	Lack of Technical Assistance						X

Grass / Pasture / Hay Lands

- Erosion (streambanks) and water quality (temperature) are concerns commonly because of a lack of riparian buffers.
- Insufficient forage and grazing management contributes 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 operators.

Range and Forestland (Private, Non-Industrial)

- The primary resource concern is the impact of erosion from concentrated flows, especially from forest roads and landings, on fish and wildlife.
- Overgrazing and noxious weeds limit range productivity.
- Private woodlots commonly suffer from hygrading (harvesting the best trees) or poor stand management (overstocked stands).
- Overstocked forests and invasive weeds limit productivity and increase the risk of catastrophic fire.
- Conservation on private, non-industrial forestland is limited as a result of the following:
  - Short growth cycle (40 to 60 years) for harvestable timber.
  - Low economic profitability associated with livestock grazing.
  - High capital cost to establish and manage timber.
  - Lack of technical assistance to small woodlot owners.

General

- Development pressure, diverse community attitudes, and issues relating to local zoning and land use can discourage landowner investment in conservation activities.

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES[12]	
THREATENED SPECIES	**CANDIDATE SPECIES**
Mammal-Canada lynx **Marine –** Steller (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]

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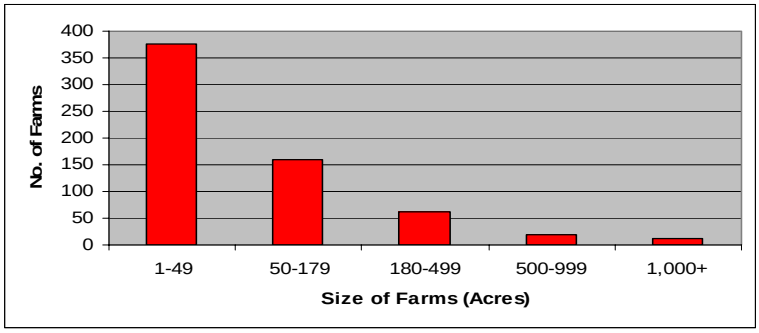
Number of Farms: 629

Number of Operators: 1,022

- Full-Time Operators: **333**
- Part-Time Operators: **689**



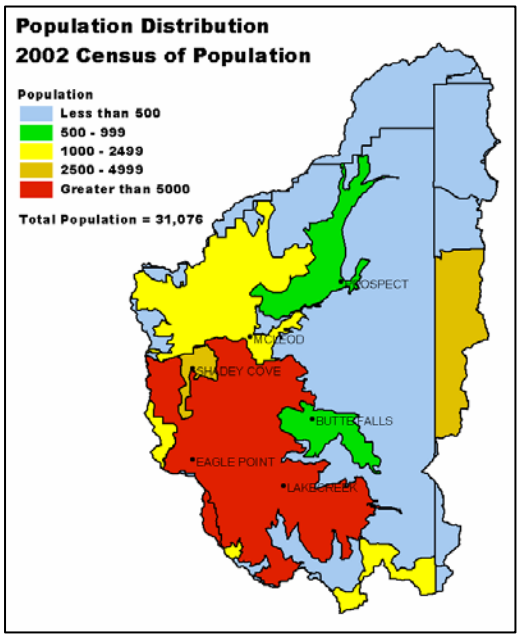
Estimated Level of Willingness and Ability to Participate in Conservation[/15]: Moderate to Low

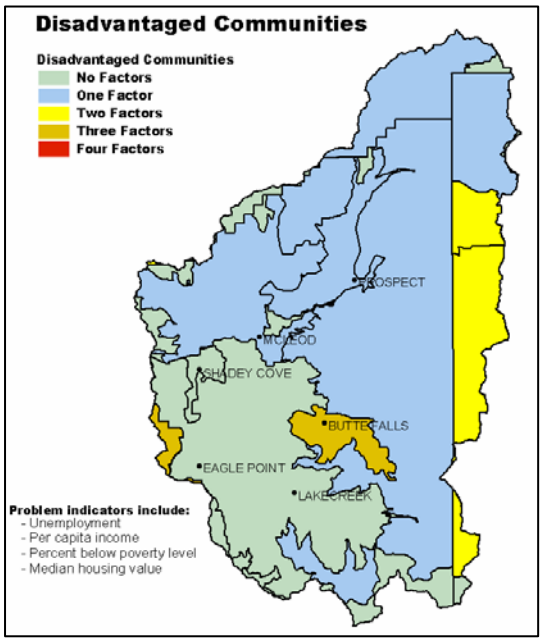
The *operators of large operations,* of which there are very few, are aware of local resource concerns and the conservation that is needed on their operation. Increased technical assistance aimed at improving management ability could increase conservation adoption among these operators.

The *operators of small operations that are trying to make a living* from their operation are reported to have positive stewardship attitudes and are aware of local resource concerns. There is a great need for technical and financial assistance aimed at meeting the needs of these operators in particular. Labor-saving conservation systems would be highly desirable to these operators.

The *small-acreage landowners that are in the subbasin for the rural lifestyle* tend to be new to agriculture and resource management, are not well aware of local resource concerns, and have little knowledge of conservation systems. They are, however, reported to have outside common that commonly is considerable. To increase the diffusion of conservation among this largest group of landowners in the subbasin, there is a need for targeted conservation marketing and technical assistance to improve the management skills of these landowners.

Evaluation of Social Capital[/16]: Communities in the Upper Rogue subbasin are reported to be largely ineffective at solving problems. Their strengths are the relatively high participation and good volunteerism for issues related to schools and other civic organizations. On the other hand, there is reportedly little participation in agricultural and environmental organizations, ineffective leadership, and a pervasive low sense of community well-being. When residents in the community deem natural resource management important to their well-being and community development assistance is available, it is likely that social capital will improve and become a force behind increasing resource management and enriching the well-being of the Upper Rogue subbasin.





Progress / Status

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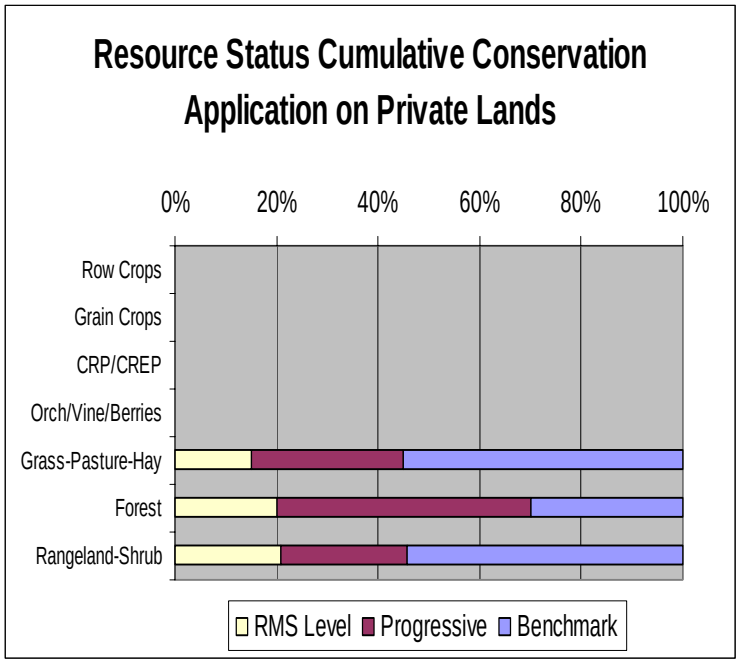
PRMS Data	FY99	FY00	FY01	FY02	FY03	Avg / Year	Total
Total Conservation Systems Planned (Acres)	22	664	0	10	0	139	696
Total Conservation Systems Applied (Acres)	0	1	0	0	51	10	52
Conservation Treatment (Acres)							
Waste Management	0	0	0	0	0	0	0
Buffers	0	0	0	0	0	0	0
Erosion Control	2	1	1	0	0	1	4
Irrigation Water Management	1,904	0	0	51	29	397	1,984
Nutrient Management	0	0	0	0	0	0	0
Pest Management	0	0	0	0	0	0	0
Prescribed Grazing	0	0	0	0	13	3	13
Trees & Shrubs	0	12	0	0	4	3	16
Conservation Tillage	0	0	0	0	0	0	0
Wildlife Habitat	1	7	0	0	0	2	8
Wetlands	0	50	0	0	0	10	50



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

- Progress over the last 5 years has been focused on:
  - ~ Irrigation water management on pastureland and hayland.
  - ~ Prescribe grazing and wildlife habitat management.
- Most of the livestock operations are smaller, non-commercial ones with beef, horses, or other livestock. NRCS and the SWCD has devoted some attention to these small farms in the past; thus, most of these operations are at the benchmark level.
- Invasive weeds and a lack of proper forage and grazing management is an ongoing concern.
- Private industrial forest owners typically do not work with NRCS or SWCDs; however, their lands usually comply with State forest practices act requirements.
- Much of the non-industrial, private forestland in the watershed 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): **None**

Footnotes/Bibliography

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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.