Necanicum – 17100201

8-Digit Hydrologic Unit Profile

FINAL

SWCD	Acres
Clatsop	80,822
Tillamook	6,267

Introduction

The Necanicum 8-Digit Hydrologic Unit Code (HUC) subbasin is comprised of 87,000 acres. Ninety-four percent of the subbasin is forestland, of which eighty-eight percent is privately owned. Only 18 farms and 27 operators are in the entire subbasin.

There is only a minimal amount of pastureland in the subbasin. The resource concerns associated with the pastureland include streambank erosion, soil compaction, unsuitable aquatic habitat, unreliable profits, and the need for timely technical assistance. Rapid residential and recreational development is a resource concern on private, non-industrial forestland.

Possibly the greatest resource concern in the area is the influx of people from Portland and other areas buying farmland. Most of these new landowners, while commonly well-intentioned, lack experience managing natural resources.

One NRCS service center, two soil and water conservation districts, the Northwest Oregon Resource and Conservation Development (RC&D) office, and other local organizations provide conservation assistance in the subbasin.

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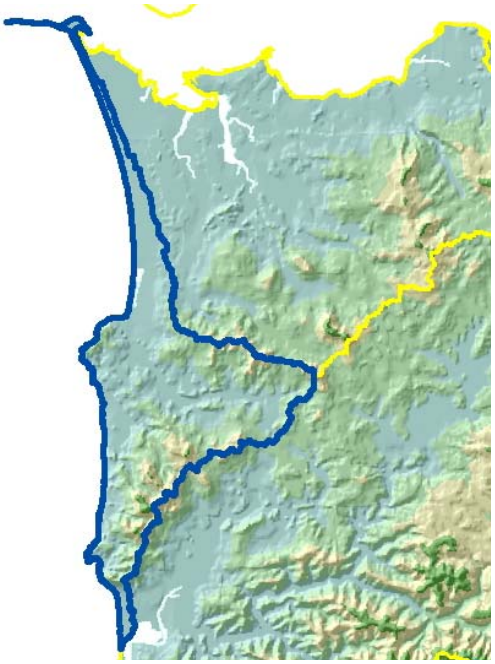

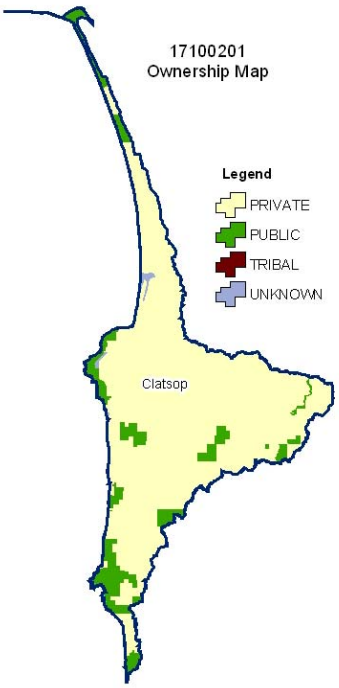

Produced by the Water Resources Planning Team Portland, OR

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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	8,900	10%	72,100	83%	0	0%	81,200	94%
Grain Crops	0	0%	0	0%	0	0%	0	0%
Conservation Reserve Program Land [a]	0	0%	0	0%	0	0%	0	0%
Grass/Pasture/Hay	*	---	*	---	0	0%	1,000	1%
Orchards/Vineyards	0	0%	*	---	0	0%	*	---
Row Crops	0	0%	0	0%	0	0%	0	0%
Shrub/Rangelands	*	---	*	---	0	0%	*	---
Water/Wetlands/Developed/Barren	*	---	3,000	3%	0	0%	3,600	4%
Oregon HUC Totals [b]	**10,000**	**12%**	**76,200**	**88%**	**0**	**0%**	**86,600**	**100%**

**: Less than one 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:

- Eighty-two percent of the private forestland is under industrial forest ownership (OSU, Forestry Sciences Laboratory).
- Pastureland grazing occurs on small farms and ranchettes.
- Some pastureland is leased to commercial livestock operators in adjacent watersheds.
- A minor acreage is used for specialty crops, such as flower bulbs, cranberries, and artichokes.
- There has been an influx of people from Portland and other areas buying older farm homes and bringing in horses or beef cattle.

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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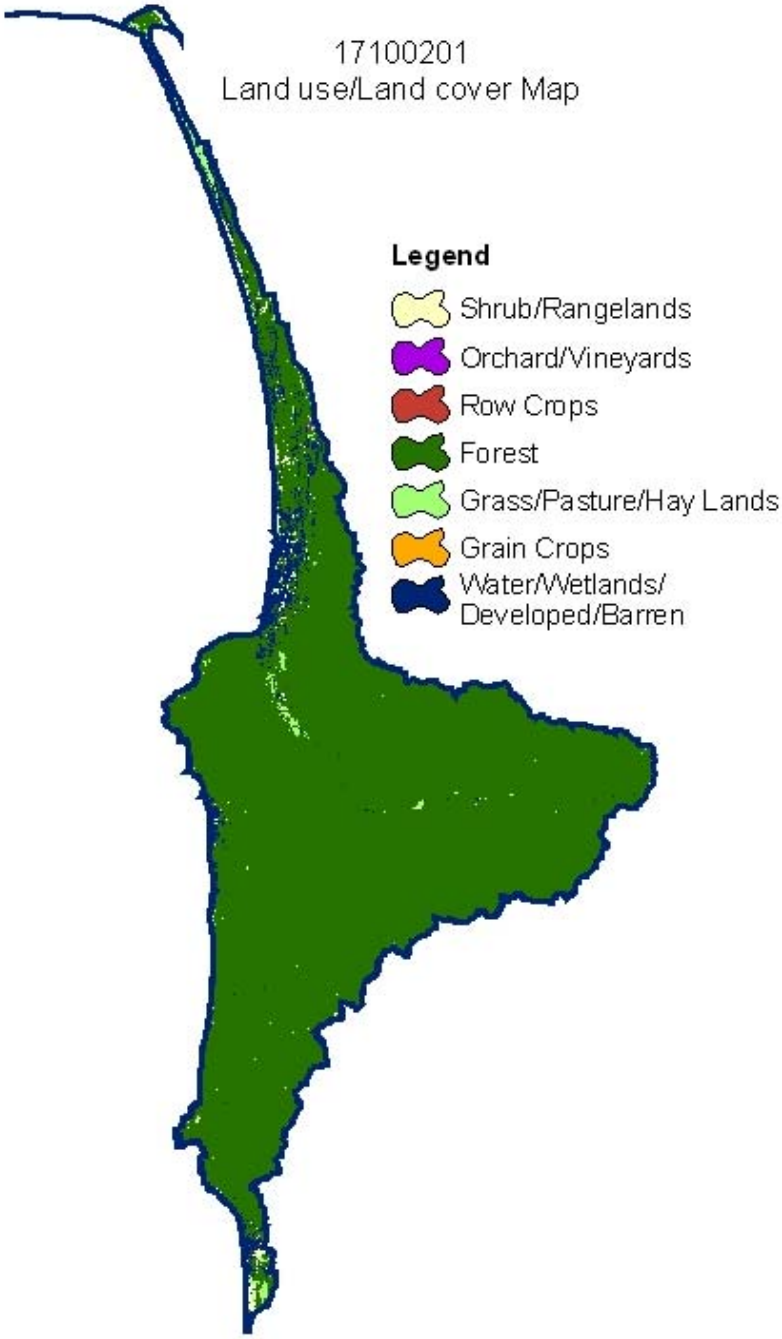

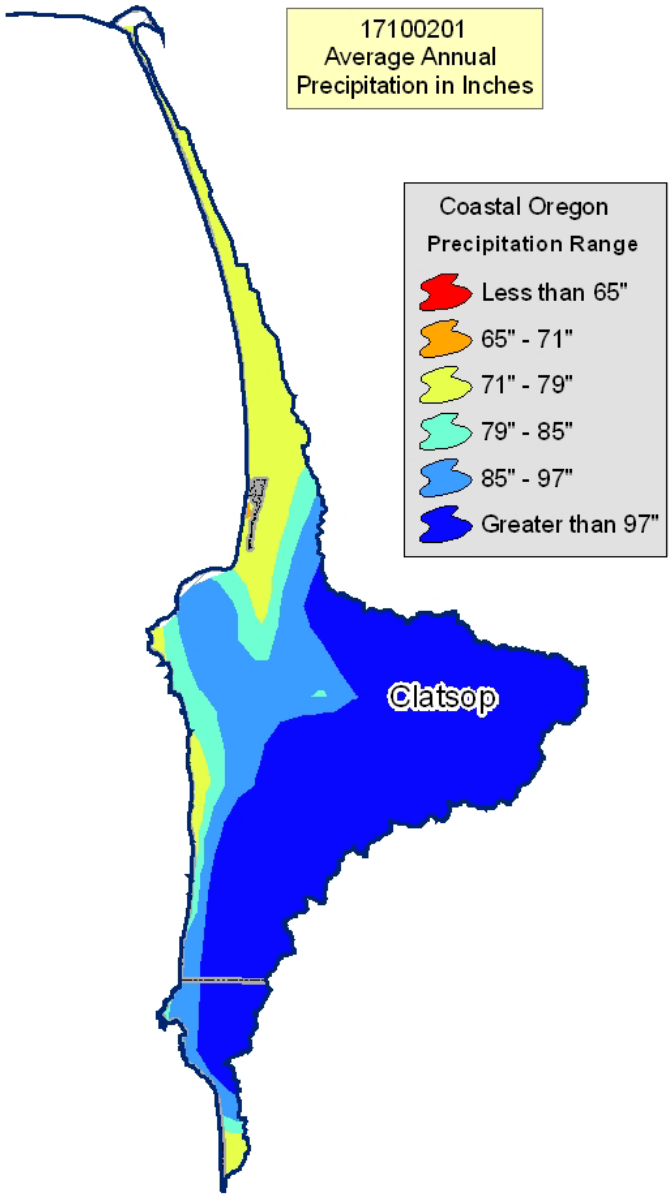

Common Resource Area Map

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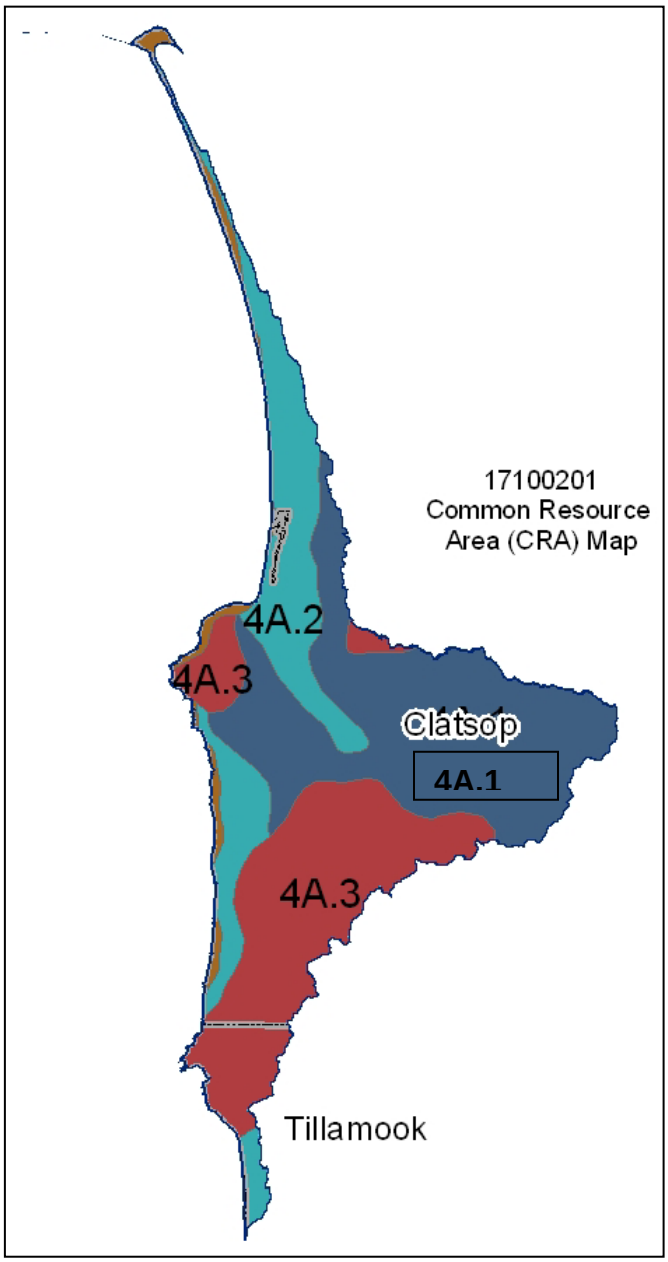
Only the major units are described below - for descriptions of all units within the HUC, go to: http://ice.or.nrcs.usda.gov/website/cra/viewer.htm



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

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

Physical Description – Continued

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		ACRES	ACRE-FEET
Irrigated Adjudicated Water Rights *(OWRD[4])*	Surface	504	1,260
	Well	21	53
	Total Irrigated Adjudicated Water Rights	525	1,313
Stream Flow Data	OWRD 14299000 SOUTH FORK NECANICUM RIVER, NEAR SEASIDE, OR	**Total Avg. Yield**	50,867
		May – Sept. Yield	5,760
		MILES	**PERCENT**
Stream Data[5] **Percent of Total Miles of Streams in HUC*	Total Miles – Major (100K Hydro GIS Layer)	170	---
	303d/TMDL Listed Streams (DEQ)	28	16%
	Anadromous Fish Presence (StreamNet)	26	15%
	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	3,423	85%
	Grain Crops	0	0%
	Grass/Pasture/Hay	115	3%
	Orchards/Vineyards	0	0%
	Row Crops	0	0%
	Shrub/Rangelands – Includes CRP Lands	104	2%
	Water/Wetlands/Developed/Barren	409	10%
	Total Acres of 100-foot Stream Buffers	**4,051**	**---**
Land Capability Class *(Croplands & Pasturelands Only)* *(1997 NRI[3] Estimates for Non-Federal Lands Only)*	**1** – slight limitations	0	0%
	2 – moderate limitations	2,600	43%
	3 – severe limitations	0	0%
	4 – very severe limitations	3,400	57%
	5 – no erosion hazard, but other limitations	0	0%
	6 – severe limitations; unsuitable for cultivation; limited to pasture, range, forest	0	0%
	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	**6,000**	**---**

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	0
No. of Permitted Animals	0	0	0	0	0	0

Resource Concerns

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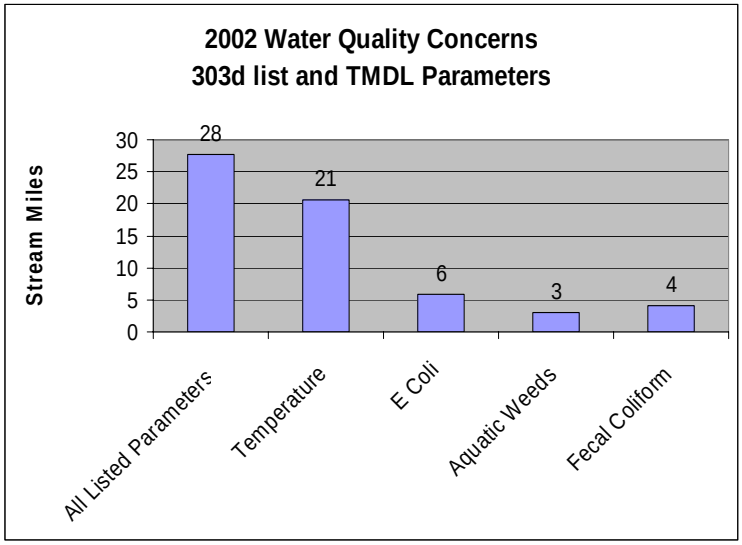
Tons of Soil Loss by Water Erosion: Due to the limited amount of non-Federal cropland and pastureland within this HUC, no reliable NRI soil loss estimates are available.



- Seventy-five percent 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.
- E Coli and fecal coliform can be indicators of livestock waste, but they also are associated with improperly operating onsite sewage disposal systems.
- Conservation practices that can be used to address these water quality issues include 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
North Coast Subbasins	Completed	North Coast	Completed

OWEB Watershed Council[10]	Watershed Council Assessments[11]	NWPCC Subbasin Plans and Assessments[18]
Clatsop Coordinating Council, Ecola Creek Watershed Council, Necanicum Watershed Council	Ecola Creek Watershed Assessment, Necanicum River Watershed Assessment	None

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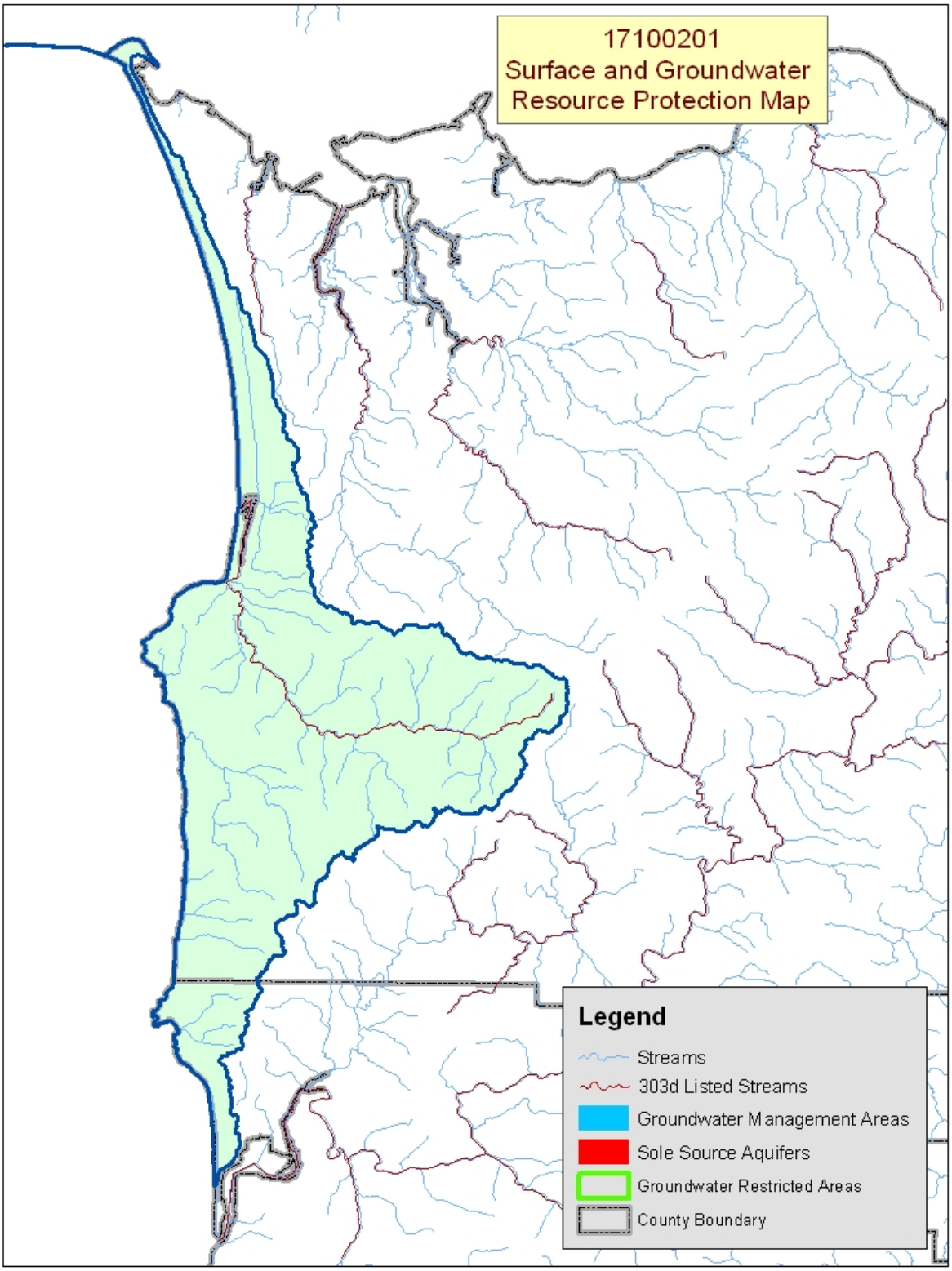

Map Footnote [17]

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	Streambank	X					
Soil Condition	Soil Compaction	X					
Water Quantity	Ponding & Flooding	X					
Water Quality, Surface	Low Dissolved Oxygen	X					
	Temperature	X					
	Aquatic Habitat Suitability	X					
Plant Condition	Productivity, Health, & Vigor	X					
Animal Habitat, Wildlife	Food, Cover, &/or Shelter	X					
Human, Economics	High Risk & Uncertainty	X					
	High Capital/Financial Costs						X
	Low or Unreliable Profitability	X					
Human, Political	Lack of Technical Assistance	X					

Grass / Pasture / Hay

- There is a steadily increasing influx of people from Portland and other urban areas who are buying farmland and bringing in horses. As new land managers, they commonly do not have the knowledge needed for good pasture and grazing management.
- Some landowners have converted pastures to Christmas trees, and they do not have the ability to manage the natural resources.

Forestland

- Most private, non-industrial forestland owners are converting the land from productive timber land to residential or recreational property.

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES[12]	
THREATENED SPECIES	**CANDIDATE SPECIES**
Marine – Steller (northern) sea lion **Mammals-** Columbian white-tailed deer **Birds –** Marbled murrelet , Western snowy plover, Bald eagle, Brown pelican, Short-tailed Albatross, Northern spotted owl **Fish –** Chum salmon, Coho salmon, Steelhead, Sockeye salmon, Chinook salmon **Invertebrates –** Oregon silverspot butterfly **Plants –** Howellia	**Fish** – Coho salmon, Steelhead **Birds –** Streaked horned lark **PROPOSED SPECIES** None
ESSENTIAL FISH HABITAT[13] – Chinook, Coho	

Census and Social Data[/14]

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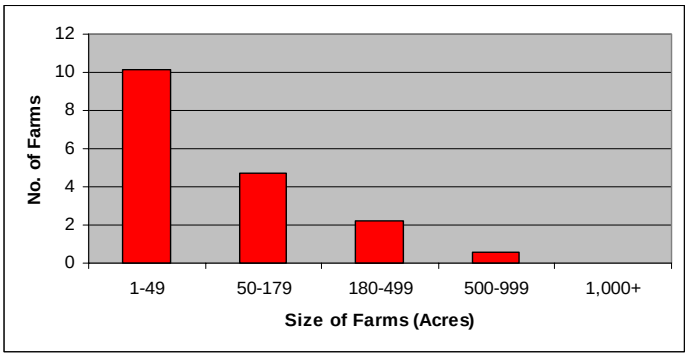
Number of Farms: 18

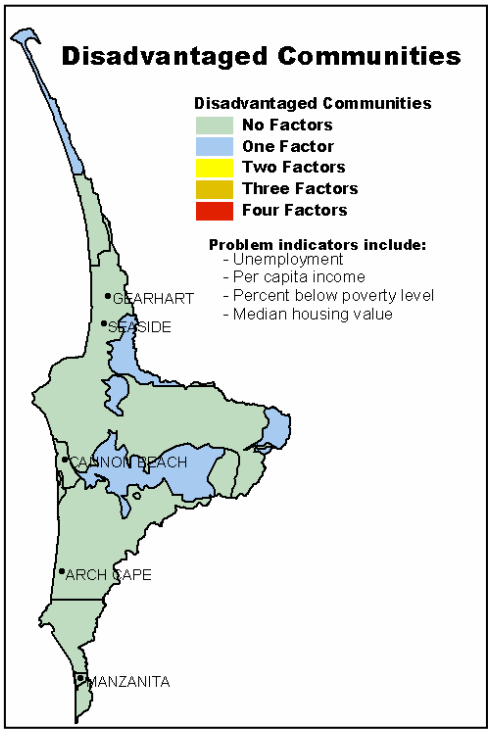
Number of Operators: 27

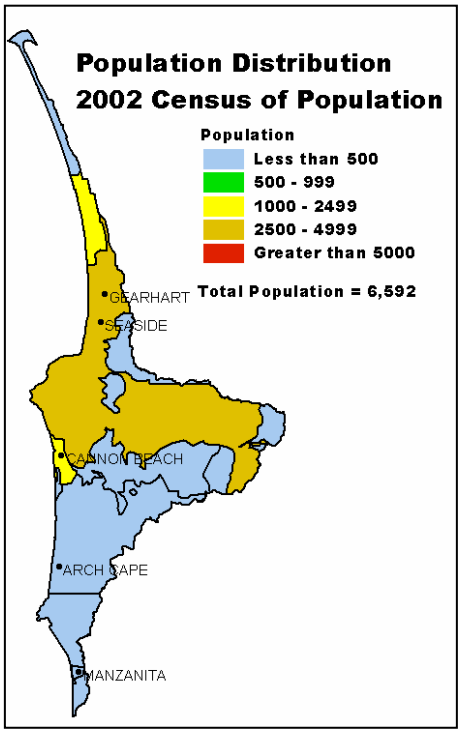
- Full-Time Operators: **8**
- Part-Time Operators: **19**



Estimated Level of Willingness and Ability to Participate in Conservation[/15]: Moderate
In the subbasin, the largest group of rural landowners own the smaller farms. These landowners require considerable technical and financial assistance. They need to be made aware of local resource concerns and the relationship between their land management activities and resource issues throughout the basin. Most also need significant financial assistance to adopt appropriate resource management systems.

Evaluation of Social Capital[/16] Low to Moderate
Social capital in the Necanicum subbasin is closely linked to that of the neighboring Lower Columbia subbasin, where social capital is estimated to be low to moderate. That community's greatest strength is its ability to recruit a good number of volunteers when there is a project to be done. The Necanicum community might benefit from garnering more widespread participation in community decisions from newcomers to the area.





Progress / Status

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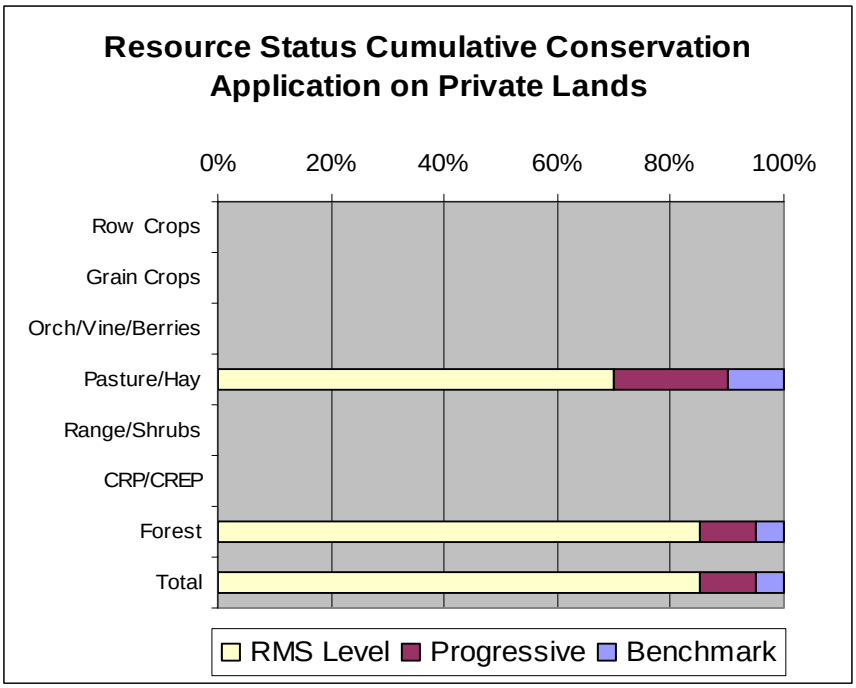
PRMS Data	FY99	FY00	FY01	FY02	FY03	Avg / Year	Total
Total Conservation Systems Planned (Acres)	30	0	0	0	0	6	30
Total Conservation Systems Applied (Acres)	30	0	0	0	0	6	30
Conservation Treatment Acres							
Waste Management (Number)	0	0	0	0	0	0	0
Buffers (Acres)	3	0	0	0	0	1	3
Erosion Control (Acres)	8	0	0	0	0	2	8
Irrigation Water Management (Acres)	0	0	0	0	0	0	0
Nutrient Management (Acres)	0	0	0	0	0	0	0
Pest Management (Acres)	2	0	0	0	0	0	2
Prescribed Grazing (Acres)	25	0	0	0	0	5	25
Trees & Shrubs (Acres)	3	0	0	0	0	1	3
Conservation Tillage (Acres)	0	0	0	0	0	0	0
Wildlife Habitat (Acres)	7	0	0	0	0	1	7
Wetlands (Acres)	0	0	0	0	0	0	0



- Progress has been limited because of the distance from a USDA service center and the fact that most operators are small producers who commonly do not seek USDA assistance.
- Poor pasture management is common on non-commercial livestock operations, where people from Portland and other areas have purchased older farms and have a few horses or beef cattle.
- Pastures that are leased by commercial dairies generally are well managed.
- Private industrial forestland owners typically do not work with NRCS and SWCDs; however, their land commonly complies with State forest practices act requirements.
- Much of the non-industrial, private forestland is used as rural homesites or recreational property. Only a small portion is used for long-term timber production.

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

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.