Upper Middle Umpqua Subwatershed

Watershed Analysis

Umpqua Resource Area
Coos Bay District
Bureau of Land Management

North Bend, Oregon

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With respect to use of all GIS maps included or referred to in this document: no warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

INTRODUCTION

Watershed analysis is a procedure used to characterize the human, aquatic, riparian, and terrestrial features, conditions, processes, and interactions . . . within the watershed. It provides a systematic way to understand and organize ecosystem information. In so doing, watershed analysis enhances our ability to estimate direct, indirect and cumulative effects of our management activities and guide the general type, location, and sequence of appropriate management activates within a watershed . . . Watershed analysis is not a decision making process. Rather it is a stage-setting process. The results of watershed analyzes establish the context for subsequent decision making processes, including planning, project development and regulatory compliance. From the introduction to Ecosystem Analysis at the Watershed Scale, Federal Guide for Watershed Analysis Aug. 1995, Ver. 2.2.

Within this context, the watershed analysis team went beyond just providing information and recommendations for developing project EAs under the current management plan. This document also includes recommendations that would either require a plan amendment, or need to be deferred until the next planning cycle before they could be considered through the NEPA process. This approach reflects the fact that ecosystem management is a young management philosophy. As such, the team believes that an ongoing discussion on how to approach ecosystem management is necessary if we are to refine and improve our practices over time. Those recommendations that we cannot act on during this decade can serve to stimulate internal discussion on what should be in a second generation ecosystem management plan.

The Analysis Area

The Upper Middle Umpqua Subwatershed is about 35 miles east of Reedsport, Oregon. Highways 38 and 138, and the Umpqua River all pass through this subwatershed. Elkton, Oregon is on its western edge. This analysis covers Fitzpatrick Creek, Mehl Creek, Sawyer Creek, Sawyers Ferry, and Umpqua Big Bend, which are the 5 northern drainages out of the 7 in the subwatershed[1]. See Map Intro-1: Drainages and Total Acres per Drainage. For the remainder of this document, the terms "Upper Middle Umpqua Subwatershed" and "the subwatershed" will refer to these 5 drainages.

The subwatershed contains 29,524 acres, of which 7,250 acres are administered by the Coos Bay District-BLM. About 90% of the federal lands in this subwatershed are either Riparian Reserve, Late-Successional Reserve, or administratively withdrawn. Of the 749 acres allocated to sustainable harvest, 465 acres support stands too young to provide timber volume during this decade. The subwatershed road density is 6.3 mile/ square mile. That figure, includes all ownerships and surface types. See Map Intro-2: Roads by Surface Type, and the Road Appendix. All acre figures in this document are from GIS data. Minor acre discrepancies in the document, and the differences between GIS and traversed acres are attributable to query sequence, rounding, the method used to resolve artifacts and slivers, and digitizing inconsistences.

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[1] McGee and Waggoner Creeks are the other 2 drainages. They are south of this analysis area. The *Upper Middle Umpqua Frontal Watershed Analysis, 22 June 1995* and the 12 October 1995 addendum, prepared by Roseburg District - BLM, covers those 2 drainages.

The REO recently revised hydrological unit boundaries. Therefore, the boundaries used in future analyzes covering this general area may be different from the ones used in this analysis. The hydrological unit boundaries used for this analysis are from the GIS layer "cbaws" (see Map Intro-3: Watershed Hierarchy of the Upper Middle Umpqua Subwatershed). The new unit boundaries reflected in the GIS layer "reo5thwsd." The new layer shows the land in this assessment area split between the 1710030302 and the 1710030304 fifth-field watersheds.

KEY QUESTIONS

Which specific road segments should be closed to meet the 1.1 mile/ square mile target set for the Tioga Game Management Unit?

Road segment specific recommendations will be delayed until the supporting data set for the Transportation Management Objectives (TMO) is completed. See the ***ROAD APPENDIX****, and* ***SPECIES and HABITAT: WILDLIFE*** *for background information.*

What types of restoration efforts can BLM implement to improve fisheries/riparian habitats in both the long and short terms?

See ***SPECIES and HABITAT: AQUATIC****,* ***STREAM CHANNELS****, and* ***VEGETATION*** *sections. The* ***EROSION*** *section covers sedimentation.*

Given that public lands administered by BLM contain relatively small portions of the four primary stream reaches supporting populations of anadromous salmoides, what opportunities will BLM have to cooperate with private landowners (timber and agriculture) or watershed associations in restoration efforts?

See ***SPECIES and HABITAT: AQUATIC,*** *and* ***HUMAN USE: MODERN****.*

In what order should units be harvested in the Matrix to keep fragmentation to a minimum?

This key question is dropped from this analysis and should be revisited in an analysis done at the fifth-field watershed scale. There are about 229 acres available for regeneration harvest, which is enough for 1 or 2 sales. The subwatershed level is proving to be too small a scale for analyzing options for minimizing fragmentation, given the number and distribution of candidate acres for regeneration harvest on the Umpqua Resource Area.

In which areas will noxious weed treatment benefit native vegetation and wildlife?

See **SPECIES and HABITATS: NOXIOUS WEEDS**.

Which road segments should be closed, repaired, or modified to minimize management caused fine sediment delivery to the streams?

See the ***EROSION*** *section and supporting appendices. Recommendations specifying road segments for closing are delayed until the supporting data set for the TMO's is completed.*

Which specific culverts should be replaced because they are either failing or undersized?

See ***SPECIES and HABITAT: AQUATIC****. Additional culverts may be identified after the culvert survey for this subwatershed is completed.*

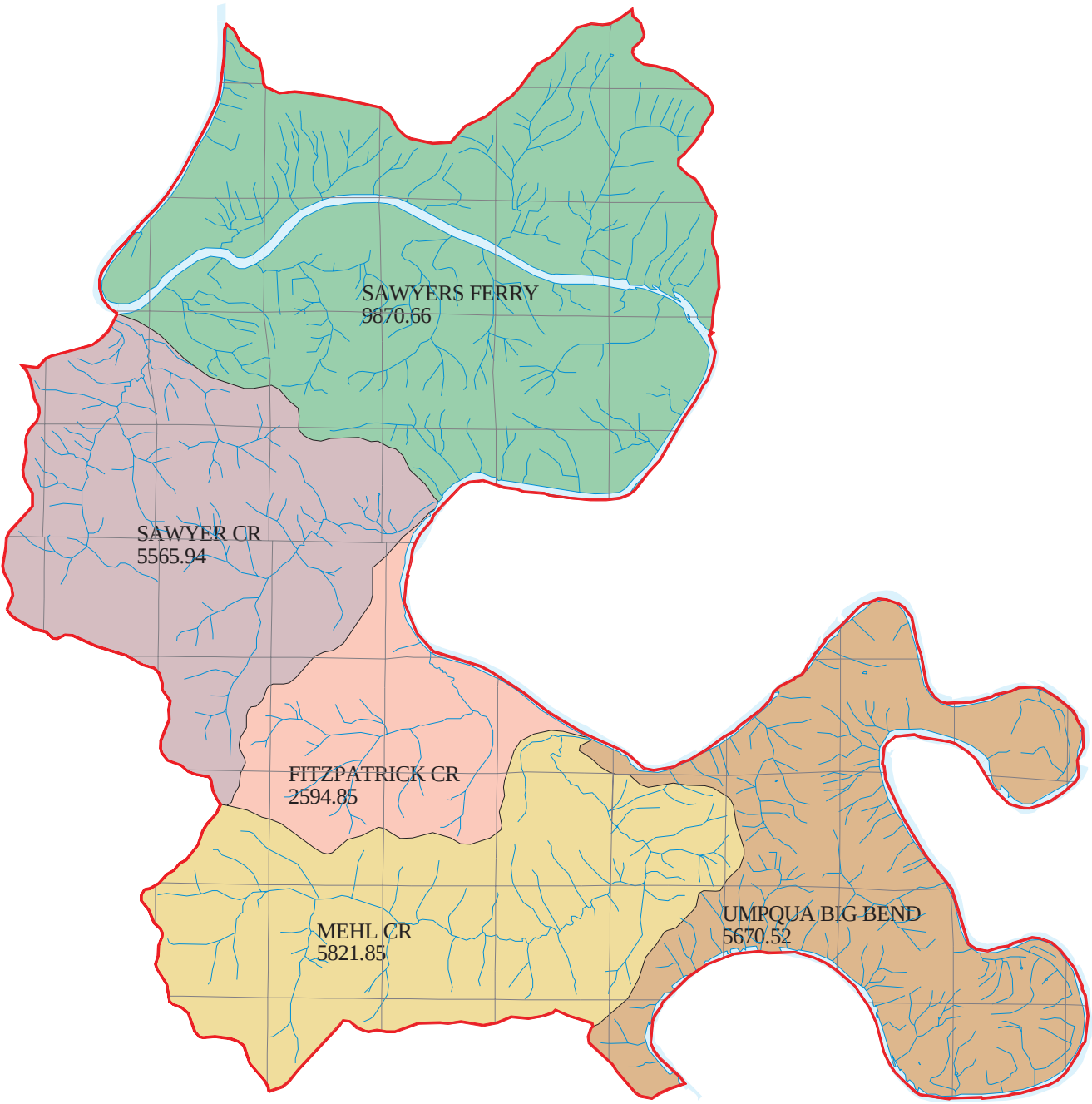
Which culverts presently block fish passage within the subwatershed?

See ***SPECIES and HABITAT: AQUATIC****. Additional culverts may be identified after the culvert survey for this subwatershed is completed.*

Where are the candidate areas for modifying the Riparian Reserve widths?

See **EROSION**, ***SPECIES and HABITAT: WILDLIFE****,* ***SPECIES and HABITAT: BOTANY****, and their associated appendices for a general background and recommendations. The* ***RIPARIAN RESERVE APPENDIX*** *contains analysis in support of the recommendations.*

MAP INTRO-1 Drainage Names and Total Acres per Drainage
UPPER MIDDLE UMPQUA SUBWATERSHED



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data

0.5 0 0.5 1 miles

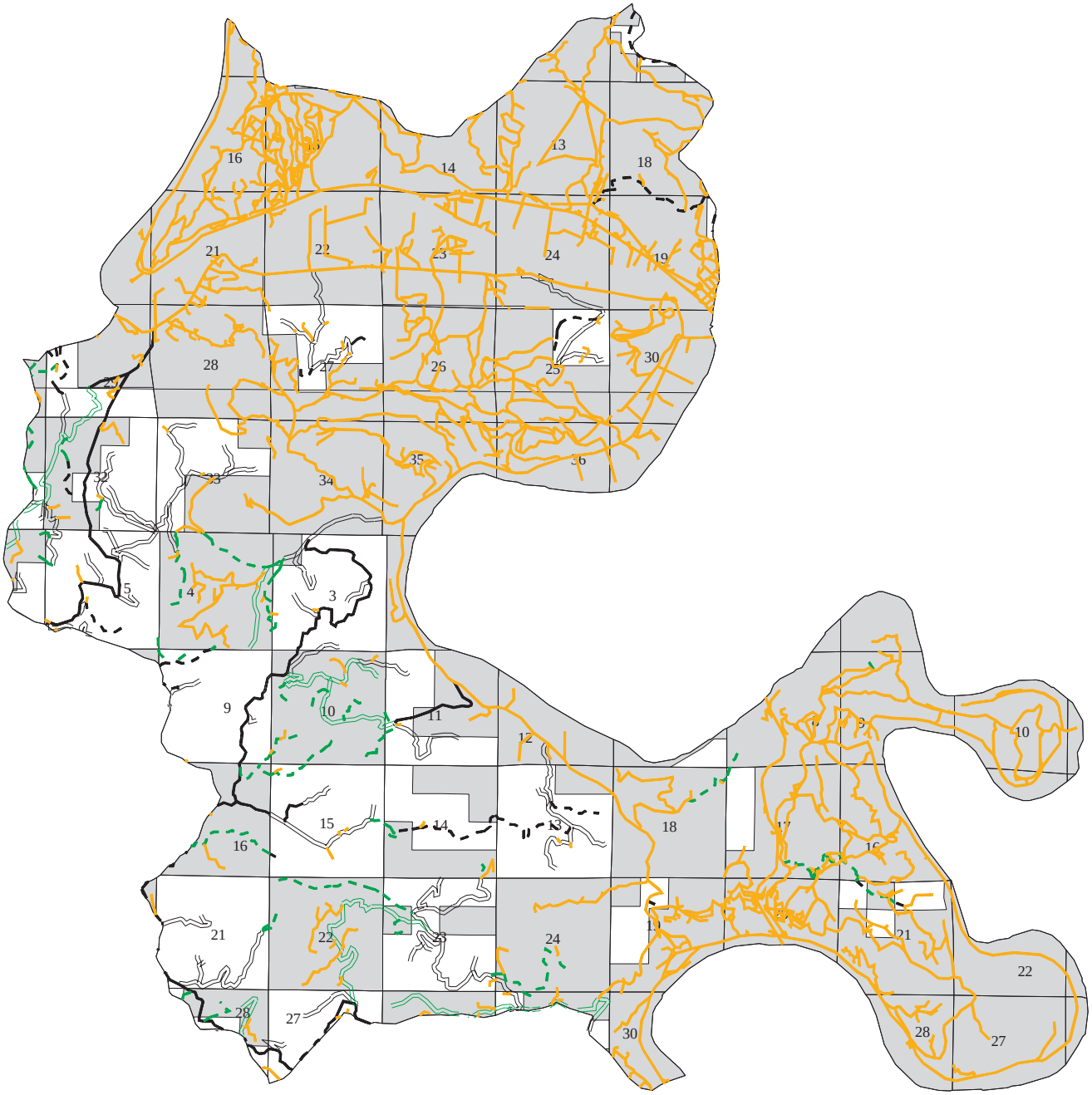
0.5 0 0.5 1 1.5 km

N

Scale 1: 89027

MAP INTRO-2 Roads by Surface Type and Control

UPPER MIDDLE UMPQUA SUBWATERSHED



MAP FEATURES

- *BST Roads, BLM Control*
- *Rocked Roads, BLM Control*
- *Nat. Surf. Roads, BLM Control*
- *Unknown Surf., BLM control*
- *Roads, No Data Available*
- *BST Roads, Private Control*
- *Rocked Roads, Private Control*
- *Nat. Surf. Roads, Private Control*
- *Unkown Surf., Private Control*
- *State, Cty, Pvt, and/or Oth. Lands*

Note: Some map features shown in the legend may not appear in the mapped area.

Scale 1:89027

0.5 0 0.5 1 miles

0.5 0 0.5 1 1.5 km

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data

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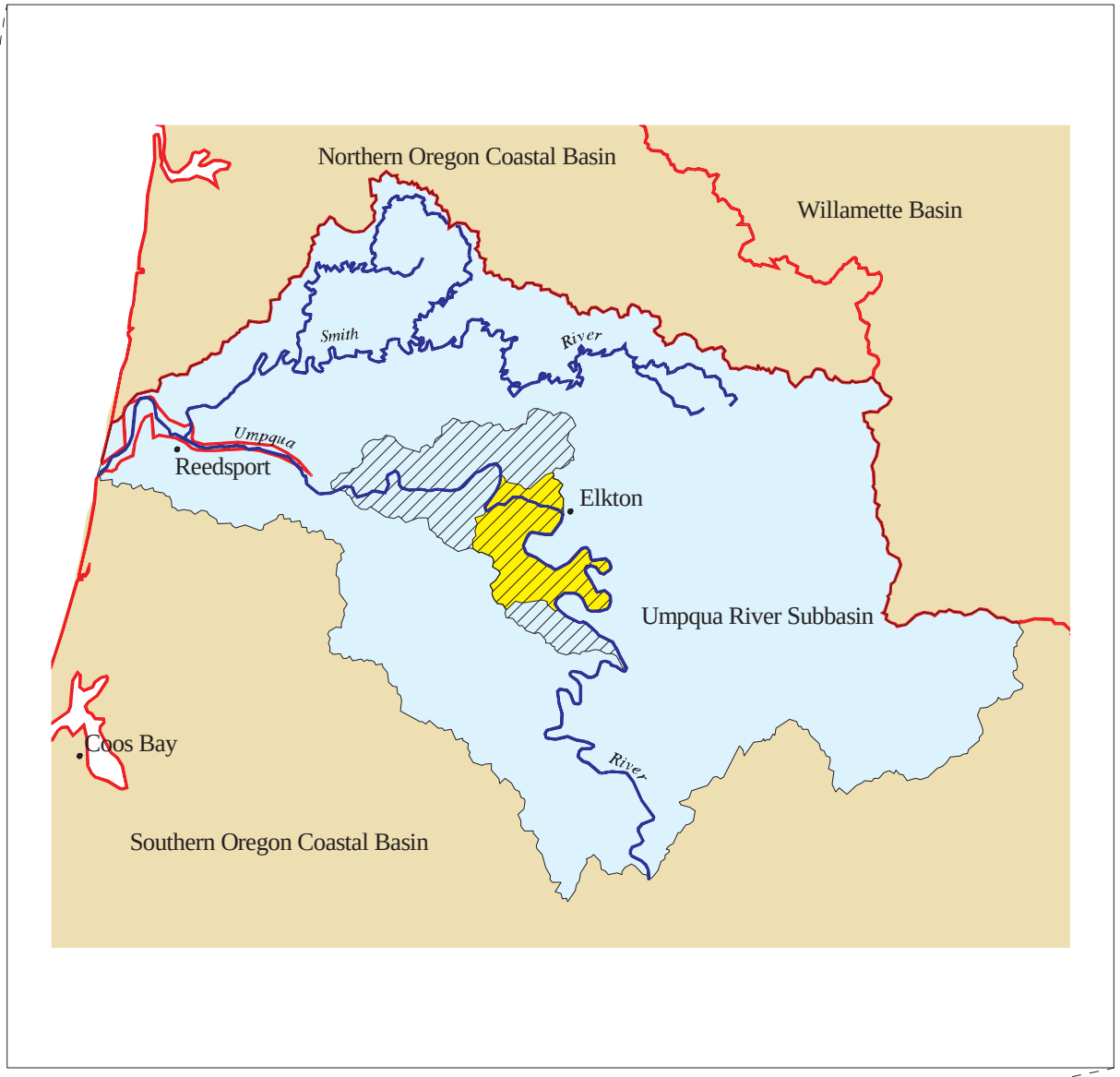
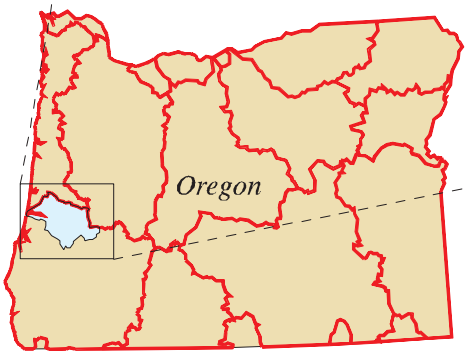
MAP INTRO-3 Watershed Hierarchy of the Upper Middle Umpqua Subwatershed





Scale 1 : 773783

5 0 5 10 miles

5 0 5 10 km

MAP FEATURES

- *Basins (3rd field)*
- *Subbasins (4th field)*
- *Watershed (5th field, Middle Umpqua Frontl)*
- *Subwatershed (6th field, Upper Middle Umpqua)*

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data

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award 10/10/97 /nfs/or4003/usr10/umpqua/wsa/up_mid_ump/hyd_covs/ump_wshed_hier.aml

R O A D MILES AND D E N S I T I E S
Upper Middle Umpqua Subwatershed

DRAINAGE NAME	BLM ADMINISTERED LANDS		NON-BLM LANDS		SUBWATERSHED TOTALS	
	Area (Acres)	Area (Sq. Mi.)	Area (Acres)	Area (Sq. Mi.)	Area (Acres)	Area (Sq. Mi.)
SAWYERS FERRY	578.6	0.9	9292.0	14.5	9870.6	15.4
SAWYER CR	2641.7	4.1	2924.3	4.6	5565.9	8.7
FITZPATRICK CR	1142.8	1.8	1452.0	2.3	2594.9	4.1
UMPQUA BIG BEND	303.0	0.5	5367.5	8.4	5670.5	8.9
MEHL CR	2583.7	4.0	3238.2	5.1	5821.9	9.1
TOTALS	**7249.8**	**11.3**	**22274.0**	**34.8**	**29523.9**	**46.1**

		BLM ADMINISTERED LANDS		NON-BLM LANDS		SUBWATERSHED TOTALS	
CONTROL	**SURFACE TYPE**	**ROAD MILES**	**ROAD DENSITY**	**ROAD MILES**	**ROAD DENSITY**	**ROAD MILES**	**ROAD DENSITY**
BLM	BST	8.1	0.7	4.6	0.1	12.7	0.3
	Rock	24.2	2.1	4.6	0.1	28.9	0.6
	Natural	6.4	0.6	2.2	0.1	8.6	0.2
	Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Private/Other	BST	0.0	0.0	0.0	0.0	0.0	0.0
	Rock	1.5	0.1	8.9	0.3	10.4	0.2
	Natural	2.6	0.2	12.4	0.4	15.0	0.3
	Unknown	0.0	0.0	0.0	0.0	0.0	0.0
BLM, PVT, Other	No Data	5.6	0.5	211.5	6.1	217.1	4.7
TOTALS		**48.4**	**4.3**	**244.2**	**7.0**	**292.6**	**6.3**

	BLM ADMINISTERED LANDS		NON-BLM LANDS		SUBWATERSHED TOTALS	
DRAINAGE	**ROAD MILES**	**ROAD DENSITY**	**ROAD MILES**	**ROAD DENSITY**	**ROAD MILES**	**ROAD DENSITY**
SAWYERS FERRY	6.2	6.9	123.6	8.5	129.8	8.4
SAWYER CR	19.5	4.7	26.0	5.7	45.5	5.2
FITZPATRICK CR	4.7	2.6	10.3	4.5	15.0	3.7
UMPQUA BIG BEND	1.5	3.2	61.1	7.3	62.6	7.1
MEHL CR	16.6	4.1	23.1	4.6	39.7	4.4
TOTALS	**48.5**	**4.3**	**244.1**	**7.0**	**292.6**	**6.3**

Road Density = Road Miles by Surface Type / Area in sq. mi. Table Does Not Include Any TRZ (non-road) features.