

SECTION G

SEDIMENT INPUT SUMMARY

INTRODUCTION

The estimated sediment inputs for the Gualala WAU have been summarized and are presented. The purpose of this summary is to demonstrate the relative amount of different sediment sources, priorities for erosion control, and interpretation of stream channel conditions in relation to sediment deposition and transport. A sediment budget provides quantification of sediment inputs, transport, and storage in a watershed (Reid and Dunne, 1996). In this case we are not doing a true sediment budget, only an estimation of the sediment inputs. However, this estimation is useful for source analysis, numeric targets, and allocation of responsibility as needed in a Total Maximum Daily Load (TMDL) for 303(d) listed rivers, such as the Gualala River. However, care must be used when interpreting these estimated values; by no means can the estimates be considered absolute. Rather, the sediment input estimates are best interpreted for relative comparisons between processes and planning watersheds.

This section combines and summarizes the sediment input results from the Mass Wasting and Surface and Point Source Erosion modules of the watershed analysis for the Gualala WAU. Sediment input for the Gualala WAU is estimated from hillslope mass wasting, road associated mass wasting, road surface and point source erosion, and skid trail erosion. The sediment inputs have been estimated for the past 30 years (1971-2000).

SEDIMENT INPUTS

The average estimated sediment input for the past thirty years for the Gualala WAU is 900 tons/square mile/year. The inputs in the Gualala WAU over the last 30 years have come from mass wasting (54%), surface and point source erosion (40%) and to a lesser extent skid trail erosion (6%) (Figure G-1). The breakdown of total sediment input is presented by planning watershed for the Gualala WAU (Table G-1 and Figure G-2). The greatest amount of sediment inputs is estimated to be from the Tobacco Creek and Flat Ridge Creek planning watersheds.

Road associated erosion is the dominant sediment contributing process in the Gualala WAU. The road associated mass wasting, surface and point source erosion combined accounts for 57% of the estimated sediment inputs in the Gualala WAU. Mass wasting from roads and hillslopes combined accounts for 54% of the sediment inputs in the Gualala WAU. Future forest practices must give the potential of mass wasting and road erosion careful attention in the Gualala WAU to attempt and reduce this sediment input over time.

Figure G-1. Estimated Percentage of Sediment Inputs by Source for the Gualala WAU, 1971-2000.

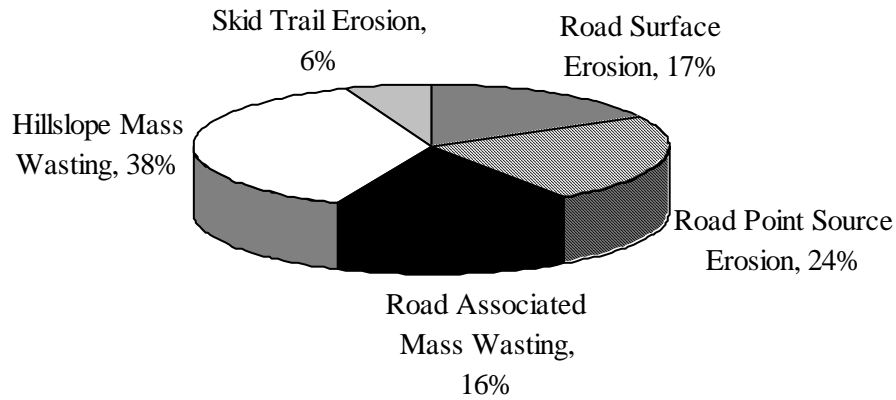


Table G-1. Estimated Sediment Inputs by Input Type for Planning Watersheds of the Gualala WAU, Averaged over Thirty Years (1971-2000) (rounded to nearest 50 tons).

Planning Watershed	Road Surface Erosion (tons/mi ² /yr)	Road Point Source Erosion (tons/mi ² /yr)	Road Associated Mass Wasting (tons/mi ² /yr)	Hillslope Mass Wasting (tons/mi ² /yr)	Skid Trail Erosion (tons/mi ² /yr)	Total (tons/mi ² /yr)
Annapolis	100	100	50	550	50	850
Flat Ridge Creek	400	100	100	550	50	1200
Haupt Creek	100	50	150	150	50	400
Tobacco Creek	150	600	200	500	50	1500
Doty/Robinson Creeks	50	300	250	200	n/a	750
Gualala River WAU totals	200	200	150	350	50	900

Literature Cited

Reid, L. and T. Dunne. 1996. Rapid evaluation of sediment budgets. Catena Verlag GMBH. Reiskirchen, Germany.