

## **SECTION G**

### **SEDIMENT INPUT SUMMARY**

#### **INTRODUCTION**

The estimated sediment inputs for the Big River WAU have been summarized and are presented. The purpose of this summary is to demonstrate the relative amount of different sediment sources, indicate priorities for erosion control, and assist with 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 Big 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 Big River WAU. Sediment input for the Big River WAU is estimated from hillslope mass wasting, road associated mass wasting, road surface and point source erosion, and skid trail erosion. The skid trail erosion is the sum of skid trail associated mass wasting and surface and point source erosion estimates. The road associated mass wasting shown in this section has the skid trail mass wasting removed. The sediment inputs are shown as an average rate for the past 3 decades (1970-2000).

#### **SEDIMENT INPUTS**

The average estimated sediment input for the past thirty years for the Big River WAU is 880 tons/square mile/year. The inputs in the Big River WAU over the last 30 years have come from mass wasting (48%) and surface and point source erosion (52%). The breakdown of total sediment input is presented by planning watershed for the Big River WAU (Table G-1 and Figure G-1). In all of the planning watersheds there were high estimated road sediment inputs.

Road associated erosion is the dominant sediment contributing process in the Big River WAU. The road associated mass wasting, surface and point source erosion combined accounts for 66% of the estimated sediment inputs in the Big River WAU. When skid trail erosion is included with the road sediment inputs the amount totals 81% of the sediment inputs of the Big River WAU.

Figure G-1. Estimated Percentage of Sediment Inputs by Source for the Big River WAU, 1970-2000.

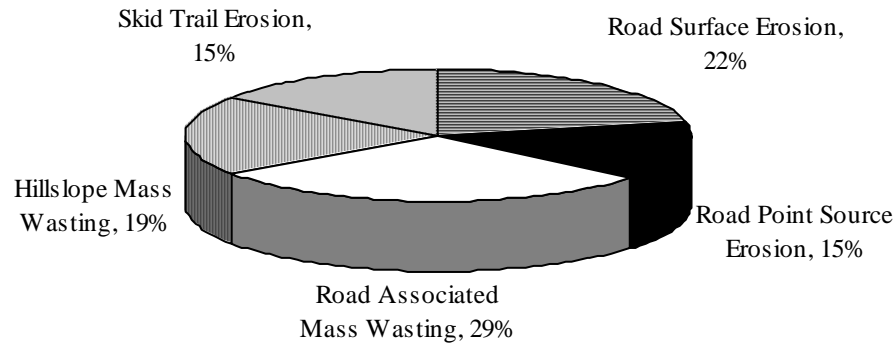


Table G-1. Estimated Sediment Inputs by Input Type for Planning Watersheds of the Big River WAU Averaged over Thirty Years (1970-2000).

Planning Watershed	Road Surface Erosion (tons/mi <sup>2</sup> /yr)	Road Point Source Erosion (tons/mi <sup>2</sup> /yr)	Road Associated Mass Wasting (tons/mi <sup>2</sup> /yr)	Hillslope Mass Wasting (tons/mi <sup>2</sup> /yr)	Skid Trail Erosion (tons/mi <sup>2</sup> /yr)	Total (tons/mi <sup>2</sup> /yr)
East Branch North Fork	165	235	100	140	150	<b>790</b>
Rice Creek	290	20	70	230	10	<b>620</b>
Lower North Fork	235	35	205	240	75	<b>790</b>
Mettick Creek	130	70	320	190	170	<b>880</b>
Dark Gulch	n/a	n/a	20	110	50	<b>180</b>
Russell Brook	170	270	200	90	90	<b>820</b>
South Daugherty	160	230	270	150	90	<b>900</b>
Two Log Creek	220	80	320	280	250	<b>1150</b>
<b>Big River WAU Totals</b>	<b>190</b>	<b>130</b>	<b>255</b>	<b>170</b>	<b>135</b>	<b>880</b>

### Literature Cited

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