

Geology: Coastal Shore Processes
Eel River Area

Ritter

SAND TRANSPORT

by the

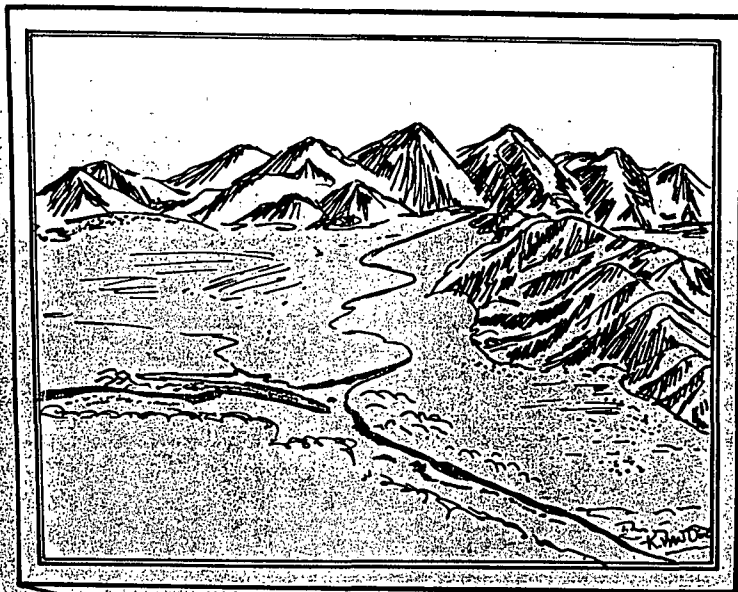
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SAND TRANSPORT BY THE EEL RIVER AND ITS EFFECT ON NEARBY BEACHES

By John R. Ritter

ABSTRACT

The Eel River basin has one of the largest sediment yields per unit area in the world. Sand composes about 25 percent of the total sediment transported by the river into its estuary. The annual sand load averages about 4,600,000 tons, equivalent to a deposition of about 2,100 acre-feet of sand per year.

Most of this sand probably enters the ocean, some is deposited in the estuary, and the amount furnished to nearby beaches probably is small. Of the sand and finer sediment debouched by the Eel River into the ocean, the major part is scattered over the continental margin, some is trapped by the Eel Canyon (not shown in fig. 1), and some is deposited offshore near the Eel River mouth. The Eel River probably supplies most of the sand found along the beaches between Centerville Beach and the entrance to Humboldt Bay. The Mad and Little Rivers probably supply most of the sand found along the beaches between the entrance to Humboldt Bay and Moonstone Beach.