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Abstract

The removal of the Elwha and Glines Canyon dams from the Elwha River in Washington, USA, resulted in the erosion and transport of over 10 million m^3 of sediment from the former reservoirs and into the river during the first two years of the dam removal process. Approximately 90% of this sediment was transported through the Elwha River and to the coast at the Strait of Juan de Fuca. To evaluate the benthic dynamics of increased sediment loading to the nearshore, we deployed a tripod system in ten meters of water to the east of the Elwha River mouth that included a profiling current meter and a camera system. With these data, we were able to document the frequency and duration of sedimentation and turbidity events, and correlate these events to physical oceanographic and river conditions.