

## **Suspended Sediment Budget for the Elwha River Floodplain**

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Natural river floodplain ecosystems are adapted to regular flood inundation and periodic episodes of erosion and sedimentation. Floodplain managers increasingly recognize the value provided by these processes and have begun developing management approaches that involve setting levees back away from river channels, thus providing room for the river to evolve naturally. Quantifying the full range of hazards and benefits associated with such projects is a challenge, particularly because the relevant timescales can be large. Recent removal of two large dams on the Elwha River near Port Angeles, Washington, represents a unique natural experiment that is producing rapid geomorphic change. The proposed project involves collection and interpretation of sedimentation rate data on the Elwha River floodplain. The project will use a combination of field measurements, remote-sensing, and numerical modeling in order to determine the long-term geomorphic consequences of sediment that has been released from the dams. Data collection and analysis will support the incorporation of floodplain sedimentation and vegetation growth dynamics into a numerical model for landscape change, CAESAR, that will be used in a complimentary student project to evaluate the ecological services associated with an erodible channel corridor.