

Did it Move? Lessons Learned with Sediment Tracking

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Substrate mobility is a key component of natural channel function. Whether sediment is actually moving, and how well it can be predicted by particle entrainment equations is not always clear. To examine the reliability of particle entrainment equations for the purpose of characterizing existing conditions and for applications such as defining erosion thresholds or substrate gradations for restoration projects, we implemented a sediment tracking program at three sites in semi-alluvial watercourses. At each monitoring location, a gradation of substrate materials, similar to existing conditions, was placed on the channel bed, and a flow logger installed. The movement of substrate particles was tracked after several flow events. Lessons learned and a review of study findings will be presented.

Biography

Mariëtte Pushkar is a senior geomorphologist at Ecosystem Recovery where she is supported by a multi-disciplinary team. She has over 20 years of consulting and research experience, applying the science of geomorphology to better understand watercourse form, function and processes from the drainage network to local site scales in urban and rural settings. She has co-authored protocol and guidance documents for regulatory agencies and municipalities; participates in research and development initiatives for clients; and is a member of Natural Channel Systems Initiative Committee.