

Woods Hole Sea Grant: Sediment Processes

Role of Sediment Resuspension in the Remobilization of Particulate-Phase Metals from Coastal Sediments

Kalnejais, L.H., W.R. Martin, R.P. Signell, and M.H. Bothner

Environ. Sci. Technol., Vol. 41, pp. 2282-2288, 2007 WHOI-R-07-010

The Cycling of Silver, Copper, and Lead in the Coastal Sediments of Boston Harbor and Massachusetts Bay

Martin, W.R. and L.H. Kalnejais

In: Bothner, M.H. and B. Butman (eds.), 2007, Processes Influencing the Transport and Fate of Contaminated Sediments in the Coastal Ocean—Boston Harbor and Massachusetts Bay. U.S. Geological Survey Circular 1302. pp. 66-72.WHOI-R-07-011

Changes in the Metal Content of Surficial Sediments of Boston Harbor Since the Cessation of Sludge Discharge

Zago, C., A.E. Giblin, and A. Bergamasco

Elsevier, Marine Environmental Research, Vol. 51, pp. 389-415, 2001 WHOI-R-01-004

Estimating Denitrification in North Atlantic Continental Shelf Sediments

Seitzinger, S.P. and A.E. Giblin

Biogeochemistry, Vol. 35, pp. 235-260, 1996 WHOI-R-96-011

Osmium Isotopes and Silver as Tracers of Anthropogenic Metals in Sediments from Massachusetts and Cape Cod Bays

Ravizza, G.E. and M.H. Bothner

Geochimica et Cosmochimica Acta, Vol. 60, No. 15, pp. 2753-2763, 1996 WHOI-R-96-009

Experiments on the Entrainment Threshold of Well-Sorted and Poorly Sorted Carbonate Sands

Prager, E.J., J.B. Southard, and E.R. Vivoni-Gallart

Sedimentology, Vol. 43, pp. 33-40, 1996 WHOI-R-96-002

Effects of Stratification by Suspended Sediments on Turbulent Shear Flows

Villaret, C. and J.H. Trowbridge

Journal of Geophysical Research, Vol. 96, No. C6, pp. 10659-10680, 1991 WHOI-R-91-002

Sediments suspended in turbulent flows of water over plane beds are known to influence the structure of the flows by which they are carried. Past attempts to model this effect have been based almost exclusively on a theoretical framework in which the dense solid particles stratify the flow and have an influence analogous to that of a downward heat flux in the stably stratified atmospheric surface layer. The authors compare results from a model based on this theoretical framework with laboratory measurements of ensemble-averaged velocity and ensemble-averaged particle concentration, obtained by previous investigators, in order to test the applicability of the theoretical approach to dilute suspensions of sand in turbulent flows of water.

Sedimentation Study: Environmental Monitoring and Operations Guidance System (EMOGS): Kings Bay, Georgia and Florida, Phase III--FY 1989

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Aubrey, D.G., T.R. McSherry, and W.D. Spencer

Woods Hole Oceanographic Institution Technical Report WHOI-90-34, 76 pp., 1990, WHOI-T-90-001

Sand Transport by Unbroken Water Waves Under Sheet Flow Conditions

Trowbridge, J. and D. Young

Journal of Geophysical Research, Vol. 94, No. C8, pp. 10971-10991, 1989 WHOI-R-89-015

A Simple Technique for Fine-scale, Vertical Sectioning of Fresh Sediment Cores

Fuller, C.M. and C.A. Butman

Journal of Sedimentary Petrology, Vol. 58, No. 4, pp. 763-768, 1988 WHOI-R-88-008

Theoretical and Observational Estimates of Nearshore Bedload Transport Rates

Goud, M.R. and D.G. Aubrey

Marine Geology, Vol. 64, pp. 91-111, 1985 WHOI-R-85-001

Sediment transport rates in a shallow (<3 m) nearshore region are estimated using theoretical models and using bedform migration rates measured from vertical aerial photographs covering a 10-year interval. Theoretical rates based solely on asymmetrical tidal currents are as much as an order of magnitude smaller than the observed rates, but inclusion of storm wave effects in the theoretical predictions brings them into better agreement with observations. This suggests that even in tidally dominated, protected regions with low background wave energy, infrequent storm wave events significantly modify sand transport rates and patterns.

Transport of Trace Metals in Nearshore Sediments

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Ph.D. Thesis, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution Joint Program in Oceanography and

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Aubrey, D.G. and M.R. Goud

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Sediment Transport in a Tidal Inlet

[Only available on loan from the National Sea Grant Library](#)

Aubrey, D.G. and P.E. Speer

Woods Hole Oceanographic Institution Technical Report WHOI-83-20, 112 pp., 1983 WHOI-T-83-003

Holocene Sedimentation in the Shallow Nearshore Zone off Nauset Inlet, Cape Cod, Massachusetts

Aubrey, D.G., D.C. Twichell, and S.L. Pfirman

Marine Geology, Vol. 47, pp. 243-259, 1982 WHOI-R-82-007

Movable Bed Roughness in Unsteady Oscillatory Flow

Grant, W.D. and O.S. Madsen

Journal of Geophysical Research, Vol. 87, No. C1, pp. 469-481, 1982 WHOI-R-82-003

Seasonal Patterns of Onshore/Offshore Sediment Movement

Aubrey, D.G.

1979 WHOI-R-79-010

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Mail: Woods Hole Oceanographic Institution, 266 Woods Hole Road, Woods Hole, MA 02543, USA.

E-Contact: info@whoi.edu; press relations: media@whoi.edu, tel. (508) 457-2000

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