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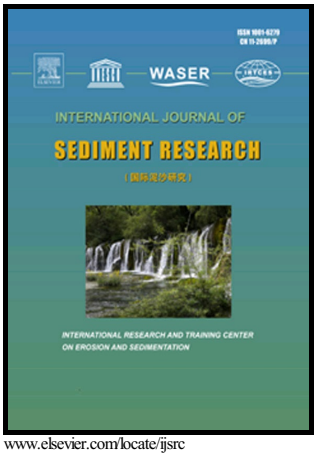
Berrin Tanse, Syed Rafiuddi



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Heavy metal content in relation to particle size and organic content of surficial sediments in Miami River and transport potential

Berrin Tansel[1*], Syed Rafiuddin[1]

[1]Department of Civil and Environmental Engineering, Florida International University, College of Engineering and Computing, 10155 West Flagler Street, Miami, FL 33174

*** Corresponding author:** Department of Civil and Environmental Engineering, Florida International University, College of Engineering and Computing, 10555 West Flagler Street, Miami, FL 33174. (305) 348 2928 (e-mail: tanselb@fiu.edu)

Abstract

Transport of contaminants in Miami River sediments with river currents is a concern due to their potential impact in areas that are away from the potential sources. Accumulation profiles of five metals (As, Cd, Hg, Zn, Pb) in the surficial sediments of the Miami River were evaluated in relation to grain size (from less than 0.075 mm to 6.3 mm) and organic content. Surficial sediment samples were collected along the river basin as well as in bay waters. Fine sediments (<0.106 mm) contained more than 10 times the levels of Cd and Hg and more than 6 times the levels of arsenic in comparison to the sediments that are larger than 0.850 mm. Zn and Pb levels were more than 10