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Title: Landscape Correlates to Estuarine Condition

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Poster Abstract: Estuaries are important transition zones between land and sea, yet little is known about how landscapes influence these systems. Using broad scale Environmental Monitoring and Assessment Program (EMAP) data collected in small estuaries of the Virginian Biogeographic Province, we are quantifying relationships between estuaries and their associated watersheds. In particular we are testing whether landscape structure influences estuarine condition. Results to date suggest that the position of specific human land uses within a watershed impact estuarine sediment chemistry and benthic biology. In particular, greater interspersation of developed landuses with undeveloped lands, especially wetlands appears to mitigate the impacts of human development. We report on these findings and on our efforts to develop a set of watershed measurements that may be useful for predicting estuarine condition.

Topic Area: Marine and Coastal Ecosystems

Key Words: estuary, estuarine condition, landscape indicators, landscape structure, spatial arrangement