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A Regional Perspective on Trash and Debris from Rivers to the Sea in Southern California

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Abstract

Trash and debris in the aquatic environment is a concern for environmental managers as they look to control and manage the amount entering the environment. In Southern California, debris surveys have shown debris to occur in different habitats; however, a regional survey has never been done to examine debris over multiple habitats. The Southern California Bight (SMB) Regional Monitoring Program (1994-2013) is a partnership of many to address management questions of regional importance. Bight 2013 was the first survey to focus on debris from a regional perspective. The primary goal of this study was to assess the extent and magnitude of trash/debris in southern California, from wadeable streams to marine habitats, answering three primary questions: 1) What are the quantities and types of debris in marine and estuarine sediments and epibenthos? 2) What are the quantities and types of trash in riverine channels? and 3) What is the prevalence of debris in nearshore demersal and pelagic fish? In the epibenthos, anthropogenic debris was found one-third of the time, and typically in small amounts (1-10 items). Trash was most ubiquitous in riverine systems across all southern California land uses, with the urban land use having the most coverage (90-100%). Ingested debris was found to be low in fish (<1%). In both the epibenthic and riverine habitats, plastic was the most common type of debris.

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