

Identifying 20th Century Sediment Deposition in the Harbor and Manhattan Section of the Hudson River Estuary

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During the 20th century, sediment deposited in the Hudson River has contained high levels of heavy metals, PCBs, and other hazardous contaminants. Using acoustic sub-bottom profiling in conjunction with x-ray fluorescence spectrometry, researchers have been able to identify areas and depths of contaminated sediment deposits. This study, which is a continuation of a previous study already completed for the Tappan Zee, Newburgh, and Poughkeepsie region of the river, examines deposition in the Hudson Harbor and Lower Manhattan Region. The Hudson Harbor region is of particular interest to scientists due to the effects of both fluvial and tidal forces on sedimentation. Significant dredging has also occurred in this area, repeatedly altering the morphology of the river bottom. Little information currently exists on how these factors affect sediment distribution and rates, making the Hudson Harbor an important study site.