

Spatial Distribution of Metals in Long Island Sound

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Not much is known about the benthic environment of the Long Island Sound, an estuary located between Connecticut and Long Island in Northeastern America. In collaboration with several other research groups, Lamont-Doherty Earth Observatory of Columbia University has begun studying sediment cores and surface grab samples taken from two different areas of the Long Island Sound. The overall goals of the collaboration project are to better understand the Long Island Sound to better meet the needs of both anthropogenic and environmental concerns. My project has been to compare the surface grab sample data available from both areas to look for any meaningful patterns or trends. The purpose of my research has been to help provide a picture of spatial distribution of metals in Long Island Sound that may help future planned research work. Surface grab samples were analyzed using x-ray fluorescence (XRF) and data was collected, calibrated, and organized in Excel datasheets and maps made using ArcGIS tools. Results indicate that most metals show an increase in concentration from east to west. There are several possible causes for this including grain-size of sediments where samples were taken, ocean currents, weather, and human activity.