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# Clay Minerals as Indicators of Sediment Source in Tidal Estuaries of Long Island Sound

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**Abstract:** Clay minerals were used as indicators for determining the source of sediment in recently dredged harbors along the north shore of Long Island Sound. Amount and characteristics of clay minerals in sediments from the dredged channels were compared to their amount and characteristics in the surrounding soils and in sediments from Long Island Sound. Clay minerals in sediments from the channels were similar in amount and characteristics to clay minerals in sediments from Long Island Sound but differed from those in the surrounding soils in the watershed. Thus, the main source of deposits in the channels is the bottom sediment of Long Island Sound which is transported to the channels by tidal action. These conclusions are supported by recent studies of the bottom currents in the Sound.

**Key Words:** Clay • Sediment • Sedimentation • Soil

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