

Tidal variation in location and intensity of the estuarine turbidity maximum in Penobscot Bay, Maine

In this study, the variation of the location and intensity of the estuarine turbidity maximum (ETM) in Penobscot Bay, Maine during spring tide and during neap tide was determined. Six cruises were conducted during the spring and fall of 2006 along the lower salinity reaches of the estuary. A transmissometer was used to locate the ETM, which is indicated by less than 10% light transmission. Water samples were collected from Niskin bottles and filtered to find the concentration of total suspended matter (TSM) in g L^{-1} . An ETM was found on only one cruise, when both high tidal current from the spring tide and high river discharge conditions were present, leading to the possibility that both conditions are needed to have an ETM in Penobscot Bay.

Advisor: Lauren Sahl