

The Tidal Influence on the Nutrient Concentrations in the Hudson River Estuary

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Abstract:

Estuaries throughout the country face the problem of eutrophication. Eutrophication causes increased primary production, algal blooms, and hypoxic or anoxic waters. When the dissolved oxygen levels in the water drop, the water becomes uninhabitable by fish and other marine organisms. The Hudson River Estuary receives nutrients from agriculture run-off and sewage outfalls during periods of heavy rain. This project examines the tidal influence on the concentration of the nutrients nitrate and nitrite in the Hudson River Estuary. The study site for this project is Piermont Pier, which is at the southern end of Tappan Bay, less than five hundred meters from a sewage outfall. The pier is situated between the small town of Piermont, NY and Piermont Marsh.