

**AN EXPERIMENTAL STUDY:
NUTRIENT RELEASE FROM KANEOHE BAY SEDIMENT**

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ABSTRACT

Kaneohe Bay receives large quantities of freshwater discharge and high sediment loads during intensive rainfall in the winter season. Both dissolved and particulate materials transported to the bay contribute to increased nutrient concentration in the bay, which potentially causes harmful algal blooms.

In some cases Kaneohe Bay shifts to being P limited in storm events (Ringuet and Mackenzie 2006), therefore, sources of P transported to the bay play a critical role in the health of the bay. Various studies have been conducted to investigate dissolved nutrient loads to the bay, but there is a lack of reliable data to show how much nutrient can potentially be released from suspended sediment to the water column.

This study attempts to evaluate potential nutrient releases, with a focus on phosphorus, from Kaneohe Stream sediments delivered to Kaneohe Bay during storms. Laboratory nutrient desorption experiments were conducted to quantify nutrients released when particulate materials interact with different salinity solutions.