

THE EFFECTS OF LIGHT ON PRIMARY
PRODUCTIVITY IN SOUTH KANEOHE BAY

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ABSTRACT

Primary production at a single station in Kaneohe Bay, Oahu, Hawaii was studied over a six-month period. Vertical profiles of production, plant biomass, light, and temperature were obtained and the data applied to a production model. The diel changes in surface production were measured and used to estimate daily production.

Primary production per unit surface area was found to average 1.5 grams carbon per square meter per day and was higher on days with little vertical stratification and with lower incident radiation. Light appeared to limit production below .12 langley's per minute which occurred below about five meters depth.