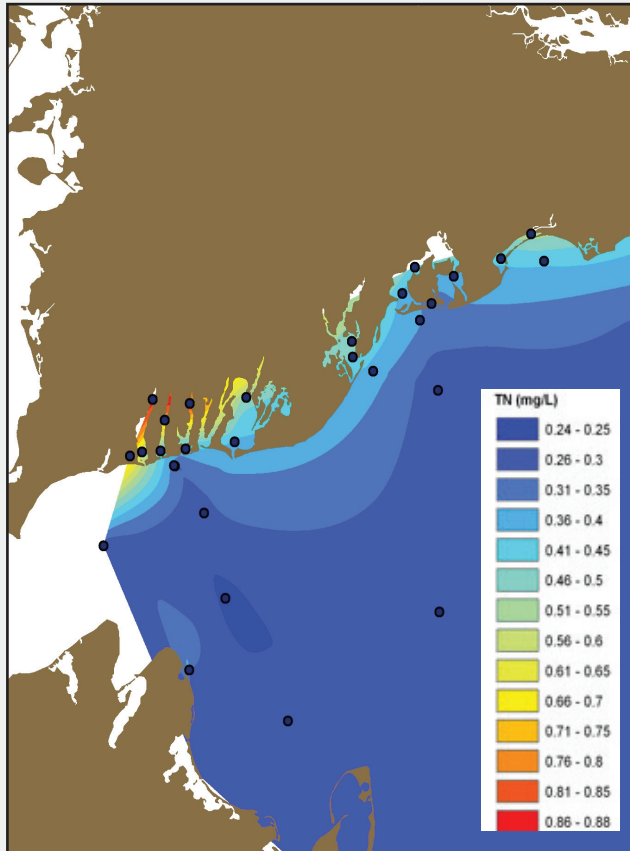


## Estuarine Water Quality Monitoring Coastal Systems Program-SMAST



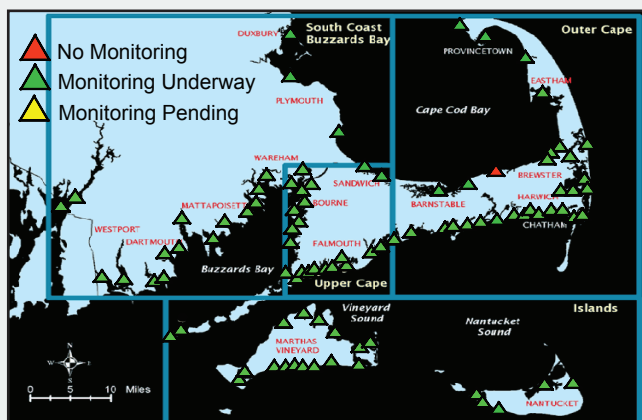
The nitrogen gradient pictured shows the effects of TN export from the tributary estuaries adjacent Nantucket Sound. This “snap shot” and other environmental data are guiding habitat assessments and Sound-Wide management planning.

The Coastal Systems Program at SMAST has implemented a water sampling program for nearly all coastal embayments in southeastern Massachusetts. This system-wide monitoring enables an understanding of the biological and physical processes controlling water and habitat quality for any coastal system.

With an established and continuing water quality monitoring baseline, coastal managers can gauge progress towards water quality improvements.

For example, the program has been critical in identifying the water quality baselines needed to establish estuarine specific nutrient restoration thresholds. These thresholds are the basis for the regulatory Total Maximum Daily Loads (TMDLs) as required by the Federal Clean Water Act for impaired waters. Moreover, the embayment-specific nutrient threshold serves as the guide for municipally driven Comprehensive Wastewater Management Planning.

*Partners: The Alliance to Protect Nantucket Sound, Nantucket Marine Department, MV Commission, Tisbury Shellfish Department, Three Bays Preservation, Mashpee Water Quality Monitoring Program, Cleveland Ledge Lighthouse Foundation, Falmouth PondWatch*



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