

MICROPLASTICS IN THE PECONICS

BACKGROUND

Common trash from consumer goods makes up the majority of what eventually becomes marine debris, polluting our waterways and oceans. Plastics in the aquatic environment are of increasing concern because of their persistence and effect on the environment, wildlife, and human health.

PROJECT DETAILS

Identification, Distribution, and Source Assessment of Microplastics in the Peconic Estuary

Waters samples throughout the Peconic's system during the wet, pre-tourism season and during the dry, tourism season.

Systematic beach surveys at strategic locations during both seasons.

OBJECTIVES

- Determine concentrations, volumes, and distribution of MPs suspended in Peconic Estuary waters during two seasons
- Determine concentrations, volumes, and distribution of MPs in beach sediments samples (beach surveys)
- Identify the chemical composition and measure volumes of MP particles to derive masses of each polymer
- Perform source assessments of MPs based on chemical identities, morphological attributes, and distributions

IDENTIFICATION, DISTRIBUTION, AND SOURCE ASSESSMENT OF MICROPLASTICS IN THE PECONIC ESTUARY

- The proposed research will be the first attempt to understand the dynamics of MPs in the Peconic Estuary
- What factors (e.g., intensity of the Peconic river discharge, touristic activity, etc.) affect the concentration of specific MP polymers, possible source, transport, and distribution
- Base for Future research of MPs in the Peconic Estuary
 - More samples sites and temporal resolution
 - Expanding the particle size range sampled
 - Investigating possible effects on marine organisms,
 - Evaluating human health risks imposed by MPs in this estuary.



CCMP ACTIONS

ACTION 22

- Assess marine debris in the Peconic Estuary and develop plans to address problems that are found

PARTNERS

- Stony Brook University (School of Marine and Atmospheric Sciences)
- NYSDEC
- Suffolk County Department of Health Science

STATUS

- Expected project completion on track for December 2025

