PLASTICS LAND TO SEA

Spatial and seasonal distribution and characteristics of microplastics in Narragansett Bay surface water

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Microplastic pollution is a critical but absent metric in the majority of water quality analyses conducted in New England's largest estuary, Narragansett Bay. Recent research indicates high variability of MP concentration and characteristics within estuarine systems, suggesting that the observed composition of MPs is variable not only by each sampling site's geography, physical processes, and pollutant sources, but also by sampling time relative to seasonality. A two-year multi-site seasonal sampling effort using surface water trawling in Narragansett Bay was completed and analyzed for MP concentrations and particle characteristics. The observed results indicate remarkably similar particle characteristics (morphology, color, polymer type) across all sampling sites and seasons, but significant variation in particle concentrations (particles/m^3 of seawater).

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