

Identification and Quantification of Microplastics in the Sediment of Puget Sound

Hayley Hartman and Julie Masura

Microplastics in marine environments have been an ongoing problem for decades. Plastics found in marine ecosystems affect marine life, but they also affect humanity as a whole. This study aims to identify how much and what types of microplastics are in the sediment of Puget Sound. During 2017, Washington State Department of Ecology sampled 50 locations throughout the Puget Sound for sediments to determine the health of benthic communities. Material was shared with our lab to process microplastic pollution. The research will help to determine which areas have the most plastic pollution, while simultaneously looking for trends that may occur. Trends can range from specific plastics types to where they are being found (i.e., near a city, factory, etc.). We expect to find a relationship between urbanization, suburbanization, and levels of microplastics. Thankfully there are many acts and policies that are working to mitigate this problem, such as; the federal Coastal Zone Management Act and the Water Pollution Control Act. We can use this information to facilitate future impacts and help keep marine environments clean.