

Abstract.

Seattle's Elliott Bay has been a particularly intriguing area in regards to anthropological activities and their effects on the surrounding environment. The construction of the city brought about the displacement of sediment around the bay, resulting in lower quality sediments that negatively impact the nutrient cycles in the benthic zone. This project's examination of total organic carbon and particle size in sediment serves as a baseline to which scientists can refer in monitoring future sediment health. To determine this baseline, UW Tacoma obtained sediment samples from Washington State Department of Ecology's Puget Sound Ecosystem Monitoring Program. The samples were analyzed in the lab with a Beckman-Coulter Particle Size Analyzer for sediment grain size, while the total organic content (TOC) was found by the loss on ignition technique. Overall, the larger TOCs were found to correlate with smaller particle sizes. The particle size data from Elliott Bay indicates that the site ranges from sand to sandy silt. A few of the sites also had clayey-silt sediments. Follow-up studies should be completed periodically to provide continuous monitoring of this bay. Any disturbances should be considered and provided to interested stakeholders.