

The phytoplankton *Alexandrium catenella* produces saxitoxin that bioaccumulates in filter-feeding shellfish, producing paralytic shellfish toxin. When this shellfish is consumed by mammals, it could cause paralytic shellfish poisoning. This organism has two life cycles as vegetative swimming cells and dormant resting cysts. It is crucial to monitor the concentration and distribution of the dormant cysts to determine potential public health hazards. This project continues monitoring work by King County to establish long-term trends. Bed sediment was collected from various locations in the Puget Sound around King County. Sediment was prepared, dyed with Primulin stain, and identified and enumerated using microscopy. The majority of the locations had no presence of cysts. However, there were *Alexandrium* cysts at two sampling locations: Central Quartermaster Harbor (140 cysts/cc wet, 465 cysts/cc dry) and Inner Quartermaster Harbor (70 cysts/cc wet, 228 cysts/cc dry), located between Vashon and Maury Islands. The presence of the *Alexandrium* cysts implies the bay should continue to be monitored.