

Focus on: Sediment Quality in Budd Inlet



Aerial photo of Budd Inlet by Port of Olympia

Budd Inlet sediments evaluated

In June 2018, we sampled surface sediments at 30 monitoring stations in Budd Inlet as part of the Washington State Department of Ecology's Marine Sediment Monitoring Program Urban Bays surveys. We published the results in an [interactive story map](#)¹. The story map summarizes findings from analyses of physical, biogeochemical, and chemical contaminant parameters measured in sediment samples, as well as the composition of sediment-dwelling invertebrate communities. These results are also compared to those from our previous survey conducted in 2011.

Summary of Findings

Habitat

Budd Inlet is a shallow terminal inlet at the southern end of Puget Sound with predominantly silt and clay sediments. Total organic carbon and nitrogen content in Budd Inlet sediments were among the highest in Puget Sound. Stable isotope results indicated that the majority of Budd Inlet sediments contained organic matter derived primarily from algae and terrestrial plant detritus.

¹<https://storymaps.arcgis.com/collections/aaec1a6656ff43e098d209c75ce00244?item=10>

²<https://storymaps.arcgis.com/collections/aaec1a6656ff43e098d209c75ce00244>

Chemical contamination

Exposure to potentially harmful chemicals, as measured with the Sediment Chemistry Index, did not change since the 2011 survey of Budd Inlet. No chemical concentrations were found above (not meeting) Washington State's Sediment Quality Standards. Most chemical concentrations were a function of organic carbon content and location, with a decreasing spatial gradient from south to north in both detection rates and concentrations.

Benthos

Benthic (bottom-dwelling) community condition declined in Budd Inlet since 2011. Declining benthic conditions spread farther north, toward the entrance of the inlet.

Associations

Overall, 42% of the variability observed in the benthic community was associated with unmeasured parameters. Station depth, sediment characteristics, and several biogeochemical parameters contributed most to the variability in the benthic community.

Related Links

[Collection of interactive story maps on sediment quality in Puget Sound](#)²

[Marine sediments - Washington State Department of Ecology](#)³

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ADA accessibility

To request an ADA accommodation, visit <https://ecology.wa.gov/accessibility> or call 360-407-6764. For Relay Service or TTY call 711 or 877-833-6341.

³<https://ecology.wa.gov/Water-Shorelines/Puget-Sound/Sound-science/Marine-sediments>

