

## **SEDIMENT TOTAL ORGANIC CARBON: IS THIS A USEFUL INDICATOR OF SEDIMENT CONDITION FOR PACIFIC NORTHWEST ESTUARIES?**

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Total organic carbon (TOC) content of sediments has been used as an indicator of benthic community condition during multiple cycles of the EPA National Coastal Assessment (NCA). Because percent TOC is generally positively correlated with sediment percent fines, previous analyses have shown that an uncorrected TOC index will substantially overestimate potentially impacted sites. Within the Pacific Northwest region, individual estuaries differ significantly in the regression slopes that relate TOC to grain size, and estuary classification has so far failed to provide insight into the drivers of this variation. Within an individual estuary, the spatial variation in depositional versus erosional conditions may drive the relationship. Given the multiple sources of variation, we conclude that TOC is currently not a useful indicator of marine benthic condition in estuarine condition assessments.