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Salish Sea Ecosystem Conference

2018 Salish Sea Ecosystem Conference  
(Seattle, Wash.)

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Apr 6th, 10:30 AM - 12:00 PM

## **Long-term changes in Salish Sea kelp forests and the benthos: Evidence of response to chemical contaminants, nutrient loading, and climate change pressures.**

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Dutch, Margaret; Krembs, Christopher; Apple, Jude K.; and Harley, Christopher, "Long-term changes in Salish Sea kelp forests and the benthos: Evidence of response to chemical contaminants, nutrient loading, and climate change pressures." (2018). *Salish Sea Ecosystem Conference*. 606.  
<https://cedar.wvu.edu/ssec/2018ssec/allsessions/606>

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**Long-term changes in Salish Sea kelp forests and the benthos: Evidence of response to chemical contaminants, nutrient loading, and climate change pressures.**

As part of a four-session track focusing on how “Long-term monitoring reveals effects of nutrient loading, climate change, and other human-related pressures in Salish Sea ecosystems”, this session moved into the realm of kelp forests and the benthos, examining changes in habitat structure and species assemblages at the bottom of the Salish Sea. A variety of long-term monitoring surveys have been conducted in the Salish Sea spanning nearly three decades, including 26 years of tracking bull and giant kelp abundance, over 3800 SCUBA surveys tracking epibenthic seabed species, 28 years of monitoring three native intertidal clam species, and 26 years of monitoring sediment-dwelling invertebrates and the condition of the sediments they inhabit. While the organisms studied differed, these programs have worked to determine the influence of anthropogenic pressures on the spatial composition of these assemblages and their changes over time. Correspondence between the structure of these different assemblages and measures related to chemical contamination, nutrient loading, and climate change in the Salish Sea were explored. A wrap-up of this Long-term Monitoring Track and the four sessions was also provided, including thoughts about the past, current, and future focus of long-term monitoring in the Salish Sea in the face of changing pressures on this ecosystem.