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Salish Sea Ecosystem Conference

2018 Salish Sea Ecosystem Conference
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Interdisciplinary Approaches to Understanding Eutrophication and Over-enrichment of Nutrients in Puget Sound and Effects on Marine Species

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Session title: Interdisciplinary Approaches to Understanding Eutrophication and Over-enrichment of Nutrients in Puget Sound and Effects on Marine Species

Session chair: Chris Harvey, NOAA Northwest Fisheries Science Center (United States)

This session put long-term monitoring of eutrophication in the Salish Sea into the context of species and food webs. Water quality monitoring and observations of Puget Sound have revealed signs of eutrophication, influenced by a combination of ocean and regional human sources of nutrients, climate change impacts on water temperature, and changes in watershed hydrology that affect water circulation in Puget Sound and the greater Salish Sea. In order to best understand how these complex physical and chemical processes affect marine species and the ecosystem services they provide, we must take interdisciplinary approaches to gathering and analyzing information. This session featured six presentations spanning a range of approaches to collecting and using monitoring data to understand eutrophication effects on species throughout the food web. Presenters described methods for monitoring nutrient and hypoxia effects on species, ranging from microbes to plankton to top predators, and how to incorporate those data into analyses ranging from storyboarding to statistical analyses to qualitative and quantitative models. Our goal was to better understand and communicate the effects of eutrophication in order to inform policy and management actions that may be needed to mitigate and manage human impacts now and into the future.