



Western Washington University
Western CEDAR

Salish Sea Ecosystem Conference

2022 Salish Sea Ecosystem Conference
(Online)

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Sentinels of Change: Engaging communities to monitor marine invertebrates in the Salish Sea

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Community Science

Across our inland sea, coastal communities are poised to contribute to meaningful monitoring and science and, in doing so, enhance community capacity, ocean literacy, and environmental engagement.

We are mobilizing a network of community scientists to monitor marine invertebrate populations and communities.

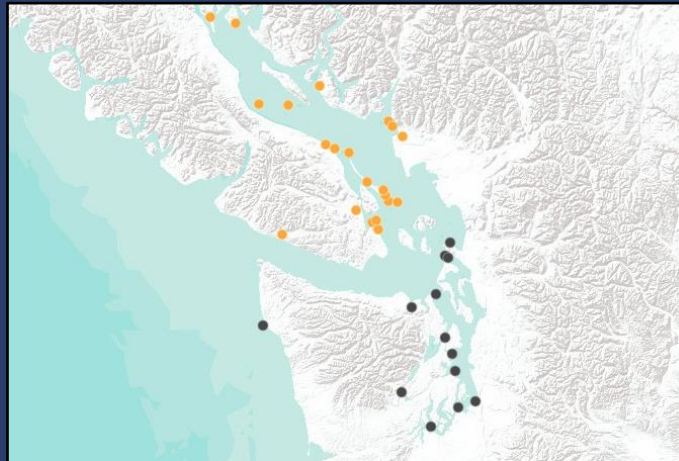
Approaches

We are combining three approaches to monitor marine invertebrates: **Light traps** attract larvae, with a focus on Dungeness crab; **autonomous reef monitoring units (ARMS)** track benthic recruitment; and **genetic analyses** compliment and enhances light traps and ARMS.



Partners and Monitoring Sites

In 2022, 30+ community partners deployed light traps at 22 sites in the Salish Sea and Juan de Fuca Strait. This work builds on the established Pacific Northwest Crab Research Group (PCRG) light trap network in Puget Sound. We conducted training in each community and will host local and regional gatherings to discuss results and co-develop research through the project's duration.



2022 Light Traps. Black dots = PCRG network, orange dots = Sentinels of Change stations.



Applications

This project provides locally-relevant data to partners about the status and delivery of larval Dungeness crab and broader invertebrate biodiversity. It feeds into a growing network of approaches to support adaptive management across borders and governments. As part of the United Nations Decade of Ocean Science for Sustainable Development, these efforts will extend to at least 2030.

Acknowledgments

We are very grateful to the **PCRG & Swinomish Indian Tribal Community** for their work & **our many community partners** for their participation: Tsleil-Waututh First Nation, Tsawout First Nation, Shaw Centre for the Salish Sea, Sewell's Marina, Saturna Ecological Education Centre, SD64, Pacific Science Enterprise Centre, Pacific Biological Station, Page's Resort & Marina, Pender Island Conservancy, Pender Harbour Ocean Discovery Station, Pacheedaht First Nation, Ocean Wise, Mayne Island Conservancy, Lasqueti Island Nature Conservancy, Institute of Ocean Sciences, Institute for Multidisciplinary Ecological Research in the Salish Sea, Howe Sound Marine Stewardship Initiative, Hornby Island Natural History Centre, Hornby Island Diving, Galiano Conservancy Association, Gabriola Power Squadron, Gabriola Island Community, Friends of Cortes Island Society, False Creek Friends Society, Emily Carr University, Cowichan Bay Maritime Centre, Cowichan Estuary Restoration & Conservation Association, Cowichan Estuary Nature Centre, & Conservancy Hornby Island.