

# Washington Sea Grant's Coastal Hazards Resilience Team



## About Washington Sea Grant

Washington Sea Grant (WSG) is a unit of the College of the Environment at the University of Washington. WSG both funds and conducts marine and coastal research, outreach and education throughout Washington state to support the health and sustainable use of marine resources and to improve the lives and resiliency of people living in Washington. We work directly with a range of constituents, from fishermen and legislators, to resource managers, tribal communities, and educators, collaborating on marine-related opportunities and challenges within Washington.

The Coastal Resilience Team at Washington Sea Grant focuses on building the "resilience" of Washington's coastal communities, which we define as the ability of a system (a community or natural ecosystem) to thrive in the face of stresses imposed by coastal hazards (like flooding, erosion and earthquake-driven disasters) and changing ecological and social conditions (things like economies, or demographics, or cultural inequities). We are a multidisciplinary group of experts dedicated to supporting communities as they work towards understanding, reducing and adapting to the impacts of coastal hazards and changing conditions on the coast. Together, we collaborate with partners to assess coastal community vulnerability, assist in developing solutions, and educate communities about current and future risk through community-led decision-making processes.

## Assessing Vulnerability



Coastal flooding at Swantown, Whidbey Island  
Photo: Hugh Shipman, WA Dept. of Ecology

- Puget Sound Parcel-Scale Vulnerability Assessment
- Northwest Climate Resilience Collaborative (NCRC) Tribal Coastal Resilience Portfolio (Tribal Climate Adaptation Needs Assessment)
- Economic and social vulnerability



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Resilience and Adaptation Specialist



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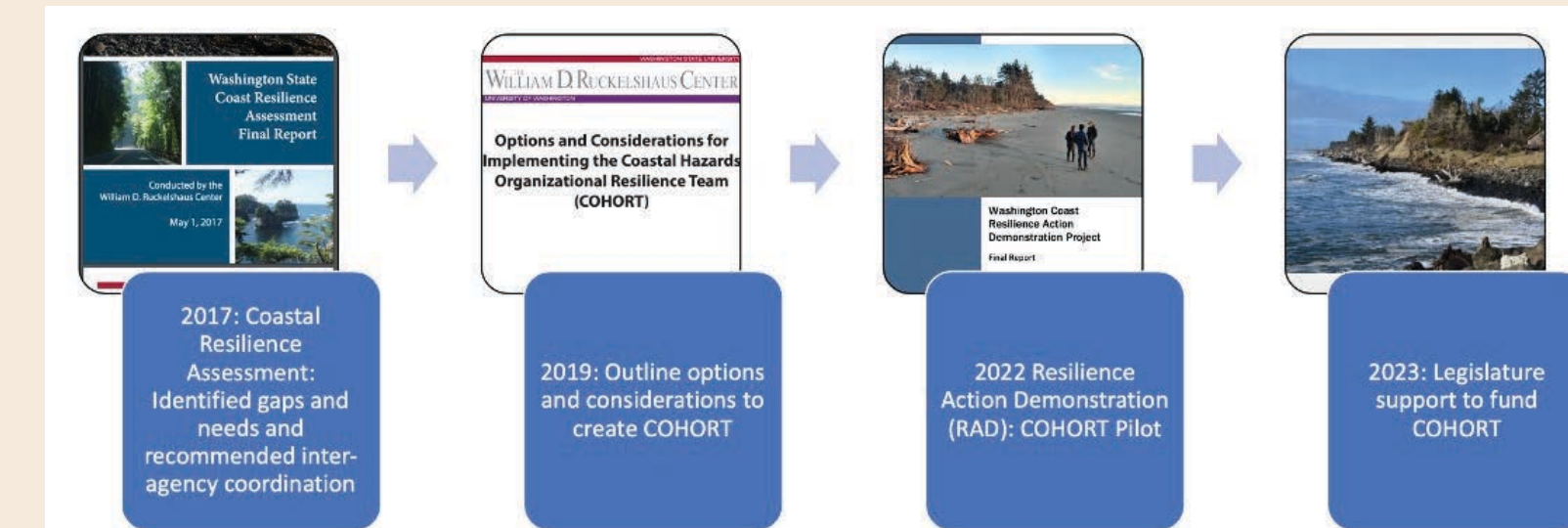


Jessika Tantisoook  
Economic Recovery Corps Fellow



Carrie Garrison-Laney  
Coastal Hazards Specialist and NOAA PMEL Liaison

## Washington State's Interagency COHORT



- Enhances community resilience to natural hazards
- Assists in aligning key resources, technical assistance, and expertise
- Facilitates governmental and academic collaboration and cross-fertilization of ideas
- Coordinates strategic investment in projects and programs
- Improve public understanding and access to information



Sanpisa Srirairat



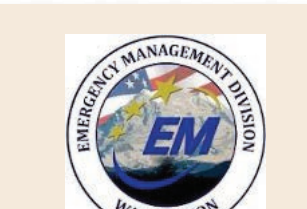
**Coast and Oceans Management Unit**

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WASHINGTON STATE UNIVERSITY  
EXTENSION

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Ellen Chappelka

## Connecting, Advancing and Training

- Coastal Hazards Resilience Network (CHRN)
- Washington Coastal Training Program
- State and national panels and workgroups (Examples: Pacific County MRC, Washington Coast Restoration and Resilience Initiative Steering Committee, NOAA Tsunami Science and Technology Advisory Panel, National Tsunami Hazard Mitigation Program, USGS Powell Center Workgroups)



<https://wacoastalnetwork.com/>



<https://coastaltraining-wa.org/>



## Support for community adaptation & resilience

- Coastal Hazards Organizational Resilience Team (COHORT)
- NEW Coastal Resilience Fellow program
- National Fish and Wildlife Foundation (NFWF) Lower Willapa Resilience Project
- NFWF Lower Columbia River Project (Bay to Bay)



NFWF: Bay to Bay: Community-Based Hazards and Resilience Planning in the Columbia River Estuary

## CORAL Project

Coastal Opportunities for Resilience and Livelihoods

### Overview

CORAL is a "blue economy" initiative that brings together maritime partners from across the Washington State Coast. The partners are working on projects that will create new maritime businesses, reuse historic seafood processing facilities, identify the full potential of the marine trade center, develop tribal shellfish aquaculture, and provide job training, entrepreneurial skills, and trade certifications.

CORAL is a part of the inaugural **Economic Recovery Corps (ERC)** program - a 2.5 year economic development fellowship program designed to accelerate recovery from the COVID-19 pandemic in distressed regions throughout the U.S. ERC connects host organizations with needed talent and capacity to advance **new ways of doing economic development** that promote economic resilience and transformative change.

**Jess Tantisoook (MBA)** has been working in community development for 15 years. Her experience includes starting and operating a small business, directing a regional food systems-focused non-profit and helping small businesses develop and enact equity-driven strategic plans.

**WA Sea Grant (WSG)** is a partnership between University of Washington and NOAA. WSG funds high quality marine research and working with communities, businesses, educators and the public to advance regional understanding and sustainable use of ocean and coastal resources.

### CORAL's Partners & Projects

Within the vast work of the project partners, CORAL specifically focuses on six key projects:

Project Title	Partner Organization	Location	Project Focus
1. Marine Training Center	Port of Port Angeles	Port Angeles	Support project partnerships and community engagement
2. Marine Trade Training	Cape Horn Historical Society	Cape Horn	Increase program capacity to attract more diverse markets
3. Entrepreneurial Incubator	Coos Bay Harbor Inc. Pacific County EDC	Coos Bay Harbor Pacific County	• Building a coastal model and recruiting project partners • Secure resources to run all of business incubator
4. Shellfish Aquaculture Expansion	Shawmut Bay Tribal Enterprise	Tribal	Add landing strategy and partnerships
5. Sustainable Landing Site Support	Port of Willapa Harbor	South Bend	Create and share project plans
6. Marine Economy Visiting	WA Sea Grant	WA Coast	Report on key themes and next steps for coastal regions



ECONOMIC RECOVERY CORPS

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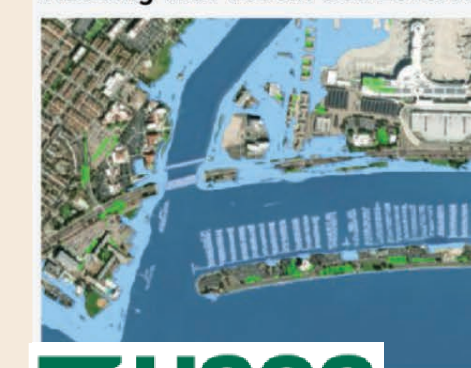
## Hazard exposure assessment



- CoSMoS: outreach & engagement
- SLR projections
- Tsunami source and recurrence research

Cascadia CoPES Hub coastal hazard research and community outreach  
Photo: Ian Miller, WSG

Flooding with 150cm Sea Level Rise



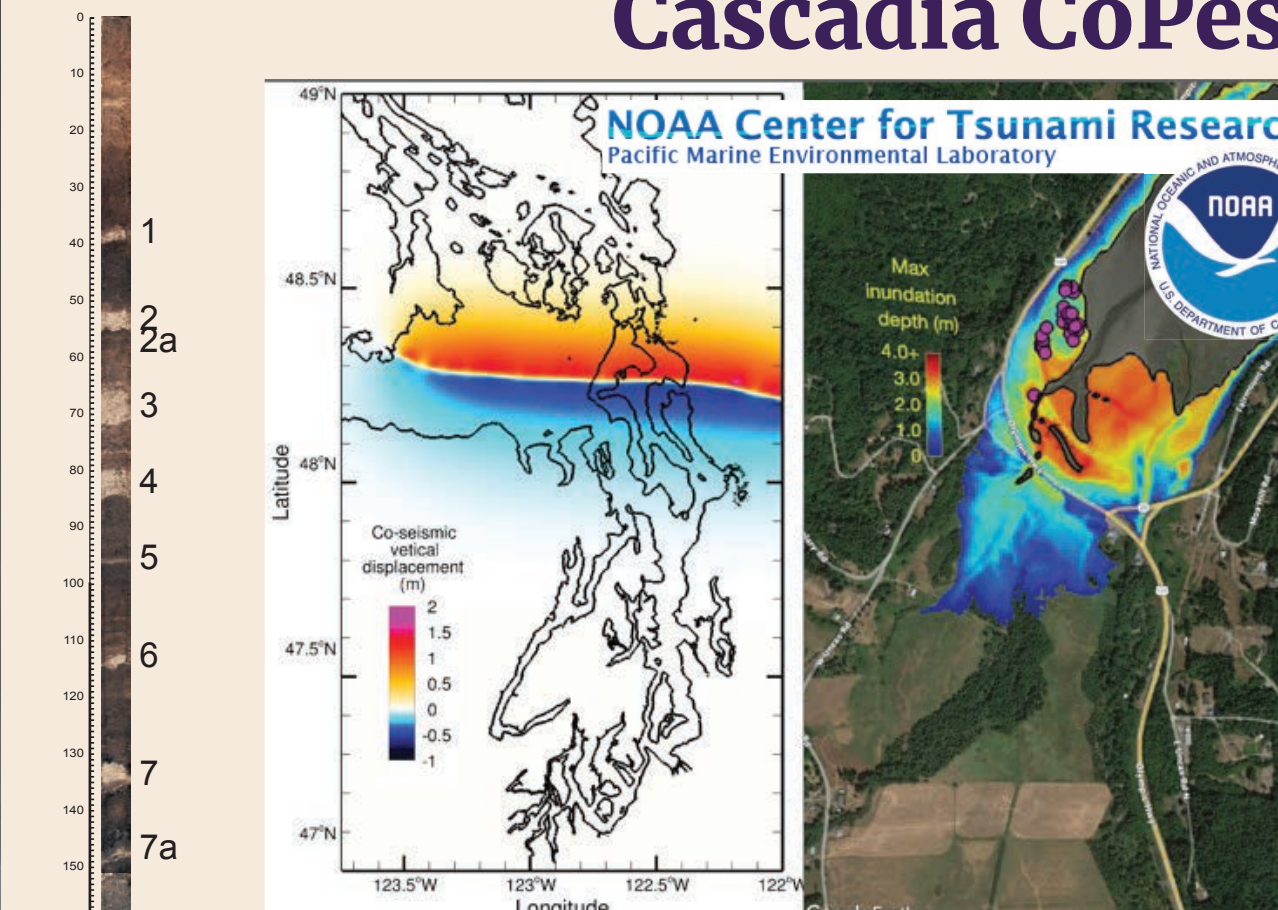
Minimum and Maximum Flooding with 150cm Sea Level Rise



USGS

USGS Coastal Storm Modeling System (CoSMoS)

## Paleoseismology research supported by the Cascadia CoPES Hub



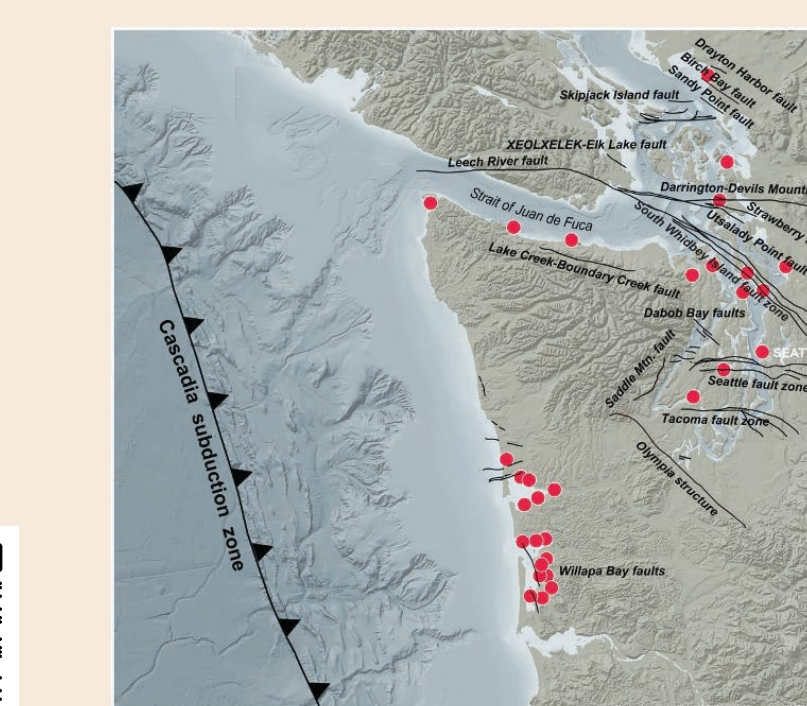
Tsunami modeling of Discovery Bay by Yong Wei, NOAA NCTR



Tsunami deposits at Discovery Bay, WA



Vibracoring at Discovery Bay, WA



WA tsunami deposit locations and sources