

Building tsunami awareness through research and outreach



Fall 2019

Tsunami and Coastal Resilience Program

The National Oceanic and Atmospheric Administration (NOAA), NOAA Sea Grant, and Washington Sea Grant (WSG) combined efforts to create the Tsunami and Coastal Resilience liaison position in cooperation with the Pacific Marine Environmental Laboratory (PMEL). This position fosters collaboration across NOAA, partner organizations, communities, and stakeholders who need science-based outreach, data, and tools to understand tsunami hazards in the Pacific Northwest.

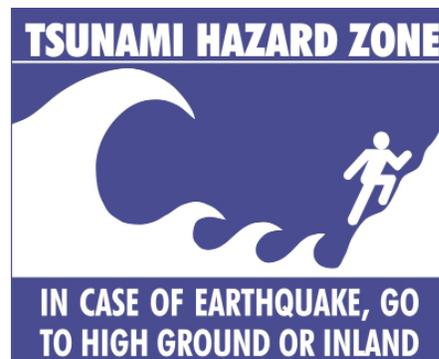
Meet Carrie Garrison-Laney, Washington Sea Grant/PMEL Tsunami and Coastal Resilience Liaison



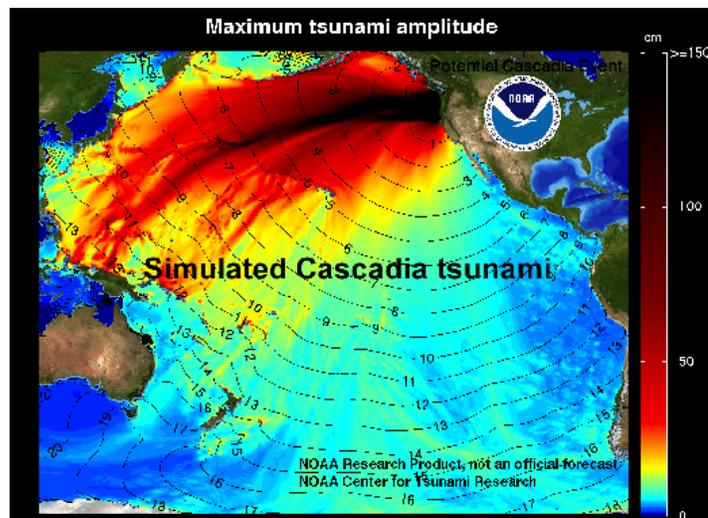
As the Sea Grant/PMEL Tsunami and Coastal Resilience Liaison, Dr. Garrison-

Laney uses her expertise in tsunami science and scientific outreach to provide coastal communities with information on tsunami hazards, preparedness, and resilience.

While tsunamis are an infrequent coastal hazard, those who live along Washington's coastline must have a clear understanding of their considerable threat. Recent advances at NOAA's Pacific Marine Environmental Laboratory (PMEL) in tsunami modeling and forecasting help emergency managers and other decision-makers provide timely warnings so that critical actions can be taken to save lives and property. Even with advanced forecasting and more precise warnings, the public must understand what causes tsunamis and where to go in the event of a threat. The Tsunami and Coastal Resilience Liaison works with NOAA, state agencies, emergency managers, and coastal communities to make the latest tsunami science and preparedness guidance available.



The Cascadia Subduction Zone is a 620-mile fault that ranges from British Columbia to Northern California. Experts say that the region will have a major earthquake and tsunami event in the future. Washington Sea Grant, the University of Washington, and PMEL are partnering to provide scientific tools and guidance to better prepare coastal communities along the Cascadia Subduction Zone.



A simulation of tsunami wave heights generated by the most recent Cascadia tsunami in 1700 AD (Credit: PMEL).





Tsunami deposit (sandy layers in gray mud) from the 1700 Cascadia tsunami from the Niawiakum River in southwest Washington.

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Tsunami Roadshow

Washington Sea Grant has partnered with the Washington Department of Emergency Management, the National Weather Service, and the Washington Geological Survey to share scientific advances and to give coastal residents the most relevant information for their area. The Tsunami Roadshow has reached thousands of people, and now will be held as two events—one for the Pacific Coast, and one for the “Inner Coast,” including Puget Sound..

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Outreach Materials

Washington Sea Grant and PMEL have developed videos, handouts, and other educational materials about tsunamis and tsunami preparedness and made them available to the public. The Tsunami and Coastal Resilience Liaison works with Washington Sea Grant and PMEL to ensure that the most current scientific forecasting capabilities and research inform the public education materials.

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Paleotsunami Research

To understand the future tsunami hazards in coastal areas, we can look to the past. Geologic evidence of past tsunamis provides key information about the timing and size of past tsunamis. Dr. Garrison-Laney researches the history of tsunami deposits in Washington State and has identified new evidence for Cascadia tsunamis in Hood Canal.



Sea Grant/PMEL Tsunami and Coastal Resilience Liaison Dr. Carrie Garrison-Laney investigates tsunami deposits at Discovery Bay, Washington.

Tsunamis do not just happen in the Pacific Northwest. Outreach materials from the Tsunami and Coastal Resilience Liaison can be made available for the Sea Grant network and other partner programs by contacting Dr. Garrison-Laney at cegl@uw.edu.