

2018 Coastal Hazards Resilience Network Annual Meeting Summary

Time: 9:00 am to 4:00 pm

Date: June 5, 2018

Location: University of Washington, South Campus Center (Room 303)

Objective: The objective of this meeting was to provide an opportunity for members of the Coastal Hazards Resilience Network (CHRN) and guests to collaborate, and to present information about hazards and resilience projects happening along Washington's coast.

Welcome: The Coastal Hazards Resilience Network members and guests were welcomed to the 2018 annual meeting. The members were provided a summary of the day and the new members to the network were introduced to the audience. The new members include: Carrie Garrison-Laney (Washington Sea Grant), Alex Rosen (WA Department of Ecology), Kyle Landon (Moffatt & Nichol), Mitch Paine (King County Department of Natural Resources), Kathy Ketteridge (Anchor QEA), Ann Bostrom (University of Washington), Daniel Abramson (University of Washington), Younes Nouri (Moffatt & Nichol), Jeff Parsons (Herrera), Charlene Andrade (WA Department of Commerce), Harriet Morgan (UW Climate Impacts Group), and Maximilian Dixon (Washington Military Department).

Earthquake and Tsunami: The first panel of the day was composed of earthquake and tsunami experts. The panel started off with three presentations that focused on the background and science of tsunami hazards in Washington, tsunami modeling, and new tsunami maps created by the Washington Department of Natural Resources. The last two presentations highlighted the use of tsunami hazards scenarios in community planning in Aberdeen and Neah Bay and the science of risk and hazards communication.

- Carrie Garrison-Laney of Washington Sea Grant provided an introduction to earthquake hazards in Washington and how paleoseismology is used to determine the recurrence of earthquakes and tsunamis.
 - Question 1: Are the subaqueous slumps derived from bathymetry? How are they dated? *Some have pieces of vegetation that can be carbon dated. High resolution scans of Puget Sound would allow for a more detailed view of where slumps/tsunamis have occurred.*
 - Question 2: How do you look at a deposit and know how big the tsunami was? *Sand size particles and silt can be modeled to determine the size, though it is difficult to do. By doing this you can get a good idea of flow depth and the velocity of the water.*
 - Question 3: Has there been much work done in the Georgia Straight area? *Series of debris flows have been carbon dated. Another Cascadia quake that hasn't been recorded may have occurred in more northern stretches.*
 - Question 4: What do you do as a liaison between Sea Grant and NOAA Pacific Marine Environmental Laboratory (PMEL)? *I help with website updates and outreach.*
- Randall LeVeque of UW provided an introduction to tsunami modeling along the outer coast of Washington.
 - Question 1: Do you model beyond basic waves? Chaos theory with earthquakes/tsunamis, etc.? *We know certain things about the way the plates/sea floor will move. It isn't always clear from hydrostatic pressure/surface waves, and how all of the modeling and waves will fit together.*
- Daniel Eungard of the *Washington Department of Natural Resources* provided an introduction to Washington's tsunami maps and explanation for their use the L1 scenario.
 - Question 1: What assistance is provided, similar to project safe haven, is there enough capacity for the requests for assistance? *Absolutely not. Federal assistance is helping though.*
- Dan Abramson of UW provided a summary of his experiences using tsunami hazard scenarios in community planning in Aberdeen and Neah Bay.

- Q: How closely are these communities aware of the recovery time after these events? Are they thinking this through? *Aberdeen knows the city, as it is now, would change. The port plans to continue to operate.*
- Ann Bostrom of UW highlighted insights from the sciences of risk and science communication

Washington State Coast Resilience Assessment: The second presentation of the day was provided by Phyllis Shulman of the William D. Ruckelshaus Center. She summarized and answered questions from the audience about opportunities that support long-term resilience to natural hazards for the Washington coast and coastal communities as identified in the [Washington State Coast Resilience Assessment](#).

- Phyllis Shulman of the William D. Ruckelshaus Center answered the following questions:
 - Question 1: Tribes are adapting, moving up the hill. Houses of white people on the spits are not. Many people are saying “yes we need to change, but we need help figuring it out/how to do it. We’re stuck”. *A lot of this is just resource constraints, funding constraints.*
 - Question 2: You mentioned providing \$50k to each community, where did this number come from? *There was interest in a legislative ask for a specific number. We needed the ability to maximize projects, but not go overboard, thus \$50K seemed like a good balance.*
 - Question 3: Do you feel like the “lack of” in terms of capacity and technical info was captured in the recommendations? *Yes. There are many recommendations that call for more resources to be brought in.*

Road Map to Washington’s Future Project: The third presentation of the day was provided by Joe Tovar of the William D. Ruckelshaus Center. He summarized the [Road Map to Washington’s Future Project](#) which aims to create a vision of Washington’s future and identify additions, revisions, or clarifications to the state’s growth management framework of laws, institutions, and policies needed to reach that future.

Additionally, Joe and Phyllis collected feedback from the audience, during this presentation, focused on how the audience would define resilience. Definitions provided by the audience included the ability of an outer coast community to relocate, explaining that some people and groups view resilience as protecting people from nature while others view resilience as protecting nature from people, and the importance of folding adaptive management into long-term planning efforts.

Coastal Hazards in Review: Hugh Shipman of the Washington State Department of Ecology provided an overview of natural coastal hazards in the Puget Sound. His presentation included a summary of hazards caused by erosion, landslide, earthquakes, and tsunamis.

Popup Talks: During this last 30 minutes of the meeting, CHRN members and guests were encouraged to share out about projects with opportunities to collaborate. The following folks shared:

- Sara Brostrom shared about opportunities to write [blogs for the CHRN website](#) and about the opportunity to help redesign the CHRN website.
- Travis Bell shared about his efforts to create a climate change learning network and a series of webinars that the US Army Corps of Engineers will showcase next year.
- Alex Rose shared about the opportunity to submit examples to a [natural hazards mitigation and risk reduction survey](#).
- Jackson Blalock shared out about [Objective 4 of the Washington Coastal Hazards Resilience Project](#) and that they will be looking for ambassadors for communities to share the deliverables of this project throughout the coastal region of Washington.
- Ian Miller shared out about [Objective 1 of the Washington Coastal Hazards Resilience Project](#) and that the probabilistic sea level rise projections created through the project will be published in Summer 2018.

- Claire Ryan shared about case studies that she and UW students will be collected throughout the state during the next year focused on strategies communities have employed to plan for the impacts of natural hazards and climate change.

Conclusion: The annual meeting concluded with a brief summary of the day. Attendees were encourage to continue the conversations at a happy hour near the location of the meeting.

Attendees

- 1) Dan Abramson, University of Washington
- 2) Travis Bell, U.S. Army Corps of Engineers
- 3) Jackson Blalock, The Nature Conservancy
- 4) Ann Bostrom, University of Washington
- 5) Mike Chang, Makah Tribe
- 6) Jessica Côté, Blue Coast Engineering
- 7) Greg Curtiss, Golder Associates Inc.
- 8) Paul Dye, Washington Sea Grant
- 9) Kevin Decker, Washington Sea Grant
- 10) Daniel Eungard, Washington Department of Natural Resources
- 11) Nicole Faghin, Washington Sea Grant
- 12) Bob Freitag, University of Washington
- 13) Carrie Garrison-Laney, Washington Sea Grant
- 14) Michael Godfried, University of Washington
- 15) Eric Grossman, USGS and Western Washington University
- 16) Jeanne Branch Johnston, FEMA Region X
- 17) George Kaminsky, Washington Department of Ecology
- 18) Haley Kennard, Makah Tribe
- 19) Kathy Ketteridge, Anchor QEA
- 20) Mariko Kobayashi, University of Washington
- 21) Robert Knapp, Jamestown S'kallam Tribe
- 22) Kyle Landon, Coastal Engineer
- 23) Randall LeVeque, University of Washington
- 24) Guillaume Mauger, UW Climate Impacts Group
- 25) Ian Miller, Washington Sea Grant
- 26) Lan Nguyen, University of Washington
- 27) Mitch Paine, King County Department of Natural Resources
- 28) Alex Rosen, Washington Department of Ecology
- 29) Clare Ryan, University of Washington
- 30) Ann Schnitz, Advisian

- 31) Gwen Shaughnessy, NOAA's Office for Coastal Management
- 32) Hugh Shipman, Washington Department of Ecology
- 33) Phyllis Shulman, William D. Ruckelshaus Center
- 34) Amanda Siok, FEMA Region X
- 35) Ryan Swanson, University of Washington
- 36) Bobbak Talebi, Washington Department of Ecology
- 37) Joe Tovar, William D. Ruckelshaus Center
- 38) Bree Turner, NOAA's Office for Coastal Management
- 39) Nathan VanArendonk, Western Washington University
- 40) Brynne Walker, Pierce County Planning and Public Works
- 41) Heather Weiner, Washington Department of Ecology

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| 8:30 AM – 9:00 AM | Check-in |
| 9:00 AM – 9:25 AM | Welcome |
| 9:25 AM – 9:30 AM | Break |
| 9:30 AM to 12:00 PM | Earthquake and Tsunami <ul style="list-style-type: none">• Carrie Garrison-Laney of Washington Sea Grant: Introduction to earthquake hazards in WA and how paleoseismology is used to determine recurrence of earthquakes and tsunamis• Randall LeVeque of UW: Introduction to tsunami modeling• Daniel Eungard of the Washington Department of Natural Resources: Introduction to Washington's tsunami maps and explanation for L1• Dan Abramson of UW: Tsunami hazard scenarios in community planning in Aberdeen and Neah Bay• Ann Bostrom of UW: Communicating coastal hazards: insights from the sciences of risk and science communication |
| 12:00 PM to 1:00 PM | Lunch |
| 1:00 PM to 1:30 PM | Washington State Coast Resilience Assessment <ul style="list-style-type: none">• Phyllis Shulman of the William D. Ruckelshaus Center: exploring opportunities that support long-term resilience to natural hazards for the Washington coast and coastal communities. |
| 1:35 PM – 2:30 PM | Road Map to Washington's Future Project <ul style="list-style-type: none">• Joe Tovar of the William D. Ruckelshaus Center: a vision of Washington's future and identify additions, revisions, or clarifications to the state's growth management framework of laws, institutions, and policies needed to reach that future. |
| 2:30 PM – 2:35 PM | Break |
| 2:35 PM – 3:15 PM | Coastal Hazards in Review <ul style="list-style-type: none">• Hugh Shipman: of the Washington State Department of Ecology: overview of persistent coastal hazards in Washington |
| 3:20 PM to 4:00 PM | Popup Talks and Round Table Discussion |
| 4:30 PM – 6:00 PM | Happy Hour at Big Time Brewing & Alehouse <ul style="list-style-type: none">• 4133 University Way NE, Seattle, WA 98105 |