



STATE OF THE COAST

November 5, 2022 • Newport, Oregon

- 8:00** **Coffee & Registration** *Gladys Valley Marine Studies Building (MSB) Lobby*
- 9:00** **Welcome & Keynote** *MSB Auditorium*
Keynote: Dr. Charlotte Côté (*University of Washington*)
Hačatakma čawaak (everything is interconnected). Indigenous Food Sovereignty, Reciprocity, and Sustainability in the Northwest Coast
- 10:00** **BREAK & Book Signing** *MSB Lobby*
- 10:30** **Coastal Snapshots** *MSB Auditorium*
Updates on issues, challenges, or opportunities related to coastal Oregon
- 1. NANOOS** *Charles Seaton, Columbia River Inter-Tribal Fish Commission*
 - 2. Tracking marine disease outbreak in real time with PRIMED** *Sarah Gravem, OSU*
 - 3. Infrastructure Investments on the Central Coast** *David Gomberg, OR State Rep. District 10*
 - 4. Local Catch Greater Utilization in Local Markets** *Hans Radke, Natural Resource Economist*
 - 5. The Future of Art and Ecology: Insights and calls to action from artists and scientists exploring the leading edges and intersections** *Alison Dennis, Sitka Center for Art & Ecology*
 - 6. PacWave - wave energy testing off Newport** *Dan Hellin, OSU/PacWave*
- 11:30** **Lunch** *MSB Lobby*
Student research & art exhibit *Visitor's Center*
- 1:15 - 2:30** **Breakout Sessions #1** (*5 concurrent sessions*)
- 1. Exploring Coastal Energy Resilience** *MSB Auditorium*
 - 2. Red Seaweeds - the Kelp Alternative?** *146 MSB*
 - 3. Fast FFAST: A condensed version of fishermen first aid and safety training** *176 MSB*
 - 4. Oregon's Marine Reserves, Assessing the First Decade** *Visitor Center Auditorium*
 - 5. Estuary Exploration: How to Use Inquiry to Investigate this Incredible Habitat**
(Meet-up location outside of the MSB Auditorium)
- 2:45 - 4:00** **Breakout Sessions #2** (*5 concurrent sessions*)
- 1. Partnering with Beavers to help tackle a range of challenging issues: water quality and quantity, salmon recovery, wildfire, and drought** *176 MSB*
 - 2. A conversation about how best to evaluate the opportunities and risks associated with Offshore Floating Wind Development** *Visitor Center Auditorium*
 - 3. Sculpting the Conversation: Art as a Medium for Scientific Exploration & Advocacy** *146 MSB*
 - 4. Coastal Community Islanding, Regional Highway Connectivity, and Recovery after a Cascadia Subduction Zone Earthquake and Tsunami** *MSB Auditorium*
 - 5. Watershed Game** *28 Education Wing*
- 4:00** **Capnote, Awards & Reception** *MSB Auditorium & Lobby*
Capnote: Laura Anderson *Local Ocean*
Level Up - Creating and sharing space for emerging seafood businesses

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2022 Student Research & Art Presenters

Student Researchers *Research abstracts are available on the conference website*

- 1: Meagan Abele OSU** *Modifications to Bottom Trawl Fishing Gear for Increasing Economic Utilization of Groundfish Stocks and Decreasing Trawl-Sea-floor Interactions on the West Coast*
- 2: Risa Askerooth OSU** *Hybrids hiding in plain sight: mapping the distribution and abundance of a newly discovered, invasive beachgrass hybrid on Oregon and Washington coastal dunes*
- 3: Alexandra Avila OSU**..... *How Nearshore Currents affect Larval Dispersal and Genetic Connectivity of China Rockfish (*Sebastes nebulosus*) Along Oregon and Washington*
- 4: Mayah Baker OSU** *Annual Abundance of blue and fin whales off the coast of Newport, OR using bioacoustic analysis*
- 5: Clara Bird OSU** *Individual behavioral specializations in gray whales documented through drone-based observation*
- 6: Joshua Blockstein OSU**..... *Exploring the connection between Community Assets and Social Capital among Latinx Coastal Community Members to support Community Resilience & Disaster Preparedness*
- 7: Lara Breitreutz OSU**..... *Reproductive Ecology of Eelgrass in South Slough National Estuarine Research Reserve*
- 8: Leanne Cohn OSU** *Using GIS to Illustrate the Intersection Between Climate Change, Energy, and Fisheries*
- 9: Raquel Gilliland OSU**..... *Utilizing Cooperative Fisheries Research To Better Understand Harmful Algal Blooms Along The Oregon Coast*
- 10: Aleah Hahn OSU** *Individual based modeling of Stage 0 treatment on juvenile Chinook*
- 11: Clare Jayawickrama OSU**.... *Investigating Microbial Enzyme Kinetics in Low Oxygen Systems*
- 12: WooJae Jung OSU** *Attenuating effect of Alaska Pollock (*Gadus chalcogrammus*) Milt hydrolysate on Muscle Atrophy*
- 13: Abby Knipp OSU** *Reshaping the Narrative of Marine Conservation: A Case Study of the Proposed Chumash Heritage National Marine Sanctuary*
- 14: Amina Meselhe OSU**..... *An Integrated Social-Science and Engineering Approach for Evaluating Community "Islanding" following Natural Hazards*
- 15: Zechariah Meunier OSU**.... *Regime shifts in rocky intertidal communities associated with a marine heatwave and disease outbreak*
- 16: Charles Nye OSU** *A Gut Feeling: DNA Metabarcoding of Prey Species from Fecal Samples of Gray Whales in the Pacific Coast Feeding Group*
- 17: Trisha Patterson OSU** *The Hazards-Housing Nexus: Assessing the Consideration of Hazards into Coastal Housing Strategies*
- 18: Xesca Reynés UIB** *Carbon metabolism and bioavailability of dissolved organic carbon (DOC) fluxes in seagrass communities are altered under the presence of the tropical invasive alga.*
- 19: Caroline Rice OSU** *It's Hammer Time: Determining Sea Urchin Return Rate after Culling Events To Identify Best Practices for Kelp Forest Restoration*
- 20: Carly Ringer OSU** *Oregon Coastal Dune Management: Creating a guidebook and understanding managed dune morphology*
- 21: Brenna Rothman OSU** *Evaluating the Growth and Reproduction of an Endangered Sea Star to Inform Species Recovery.*
- 22: Katie Russell UO** *Let's Talk About Climate Change: An Interpretive Guide for Education Volunteers at The Marine Mammal Center*
- 23: Andrew Scherer OSU**..... *Nearshore Nitrate Response to Wind Forcing on the Newport Hydrographic Line*

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Student Researchers Continued

- 24: Faith Townsend** OSU..... *Measurement of Juvenile Temperate Reef Fish Recruitment in Fished and Protected Nearshore and Intertidal Waters of Southern Oregon*
- 25: Katrina Vickery** OSU *Implementation and Evaluation of a Novel Framework for Public Engagement with Climate Change*
- 26: Colleen Walker** CCC *A 30-year look into the fish assemblage of the South Slough Estuary: Trends of declining productivity and biodiversity*
- 27: Sarah Wolf** OSU..... *Effects of Hypoxia on Microbial Processes in Oregon Coastal Seawater*
- 28: Hailey Zhou** OSU..... *In silico Prospecting for Novel Bioactive Peptides from Seafoods: A Case Study on Pacific Oyster (Crassostrea gigas)*
- 29: Alex Zinck** ESC *Measuring the Effects of Automobile Tire Microparticles on Pacific Oyster Larvae*

Student Artists

Artists statements and artwork are available on the conference website

- A: Cash Adams** SVHS *Oregon Pelican - Wood*
- B: Jess Hume-Pantuso** OSU *Begin/End (Repeat) - Digital Photographs, Ash and Rainwater on paper*
- C: Ellie Lafferty** OSU..... *Noise - Cinematography (Digital; DSLR)*
- D: Marina Larson** OSU *Bounty over Barren - Acrylics on canvas*
- E: Aspen McCallum** OSU *Humans at the Coast - Mixed Media*
- F: Carmen Sanchez-Reddick** UO..... *Heavy Machines, Fragile Bodies: How Massive Plankton Nets Help Us Explore a Fragile World - Photography*
- G: Hazel Seivers** CHS *Decline and Renewal (Triptic) - Mixed Media*

Many Thanks to the 2022 Advisory Committee

Brought to you by Oregon Sea Grant, STATE OF THE COAST is a coastal conference where everybody from scientists to industries to citizens can learn, network, and engage in the current and future state of Oregon's marine environment.



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Sciences



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Marine Studies Initiative



Oregon State University
Extension Service



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Breakout Session #1 Descriptions

1. Exploring Coastal Energy Resilience *Oregon's Coastal communities reside at the edge of an aging energy grid relying on imported fuels and electricity to meet our basic needs. As the region's weather events and energy demands shift in response to our changing climate, increased frequency and duration of energy supply interruptions are projected. What technologies, initiatives and funding resources are available for increasing coastal energy resilience and reliability?*

Melissa Cribbins, Coos County Commissioner; **Brent Bischoff**, Coos Curry Electric Cooperative; **Keith Tymchuck**, Central Lincoln PUD; **Jessica Reichers**, Oregon Department of Energy; **Shannon Souza**, Oregon Coastal Energy Alliance Network

2. Red Seaweeds - the Kelp Alternative? *The aquaculture of red seaweeds for food and phycocolloids is a \$1 billion global business; the Pacific regions of the US have significant potential. This session provides a briefing on current developments and the technical and economic challenges. Learn about new pathways and products such as plant-based proteins and how technology-based solutions may reduce both risk and production cost to potential growers.*

Gregory Rorrer, OSU; **Sam Chan**, OSU; **Ford Evans**, OSU; **Tom Mumford**, Marine Agrinomics, LLC; **Simona Augyte**, Ocean Era; **Amanda Stiles**, UMARO Foods; **Chuck Toombs**, OSU

3. Fast FFAST: A condensed version of fishermen first aid and safety training *FFAST is a first aid and safety training for commercial fishermen based off wilderness first aid principles. Using hands on training and scenarios that are specific to west coast commercial fishing, FFAST provides valuable skills and helps build confidence in fishermen that they can handle emergencies at sea. Participants in this session will learn content that is covered in the FFAST training, and practice first aid skills.*

Amelia Vaughn, OSU; **Amanda Gladics**, Oregon Sea Grant

4. Oregon's Marine Reserves, Assessing the First Decade *Ten years ago OR finalized the implementation of five marine reserves along the coast. Today we are in the midst of a statewide assessment of that reserves program. In this session, panelists will discuss the assessment process, what ODFW has accomplished in the marine reserves, and the results of investigations into the ecological and human effects of the reserves.*

Will White, OSU; **Lindsay Aylsworth**, ODFW; **Stephanie Fields**, ODFW; **Tommy Swearingen**, ODFW; **Jess Hopf**, OSU; **Brian Erickson**, OSU

5. Estuary Exploration: How to Use Inquiry to Investigate this Incredible Habitat *Join the Recess Outdoor Adventure School team on a walk along the Yaquina Bay estuary to uncover how to communicate coastal science concepts to preschool and elementary students. Discover native plants, watch wildlife, and collaborate with colleagues. **All weather presentation. Please bring hiking boots and rain gear. Limited to the first 20 participants.***

McKenzie Purdom, Griffin Purdom & Lori Quay, Recess Outdoor Adventure School

Breakout Session #2 Descriptions

1. Partnering with Beavers to help tackle a range of challenging issues: water quality and quantity, salmon recovery, wildfire, and drought *Join us to learn how beavers increase water availability, elevate the water table (even during drought), mitigate flooding, create complex winter rearing habitat for salmon and improve water quality. We will discuss challenges that beavers face, which limit their ability to fulfill their role as a keynote species linked to Oregon's Conservation Plan, benefits in addressing the Clean Water Act and salmon coevolution, and limiting factors.*

Paul Engelmeyer, Portland Audubon Society - Ten Mile Creek Sanctuary; **Kami Ellingson**, Hydrologist, Watershed Program Manager, Siuslaw National Forest; **Jason Kirchner**, ODFW, District Wildlife Biologist; **Fran Recht**, Pacific States Marine Fisheries Commission

2. A conversation about how best to evaluate the opportunities and risks associated with Offshore Floating Wind Development *A discussion about the opportunities and risks associated with offshore floating wind turbine farms. Offshore floating wind energy generation may be a key component of our transition away from fossil fuels - but how should we proceed to ensure important issues like environmental impacts, impacts to fisheries and the local economy are fully considered?*

Heather Mann, Midwater Trawlers Cooperative; **Kaety Jacobson**, Lincoln County Commissioner; **Nicole Hughes**, Renewable Energy Northwest; **Mike Graybill**, retired Marine Biologist; **Robert Westerman**, IEBW **Mike Retherford**, F/V Coast Pride, **Dean Fleck**, Englund Marine

3. Sculpting the Conversation: Art as a Medium for Scientific Exploration & Advocacy *Engage your senses while learning arts inspired instructional techniques and tips for communicating scientific concepts to diverse audiences in this hands-on workshop. Participants will explore how art can open new pathways to conversation using dry clay, a fast drying, recyclable, and reusable medium. **No artistic knowledge or experience needed.***

Leeauna Perry, Sitka Center for Art and Ecology; **Alison Dennis**, Sitka Center for Art and Ecology; **Peg Herring**, Sitka Center for Art and Ecology, OSU emeritus

4. Coastal Community Islanding, Regional Highway Connectivity, and Recovery after a Cascadia Subduction Zone Earthquake and Tsunami *This session looks at the isolation that Oregon coastal communities will experience after the M9 earthquake and tsunami, and how long it might take for the transportation to recover. We will discuss both a local connectivity index related to getting around within a community, and a regional connectivity index related to going from the community to other locations.*

Daniel Cox, OSU; **Dylan Sanderson**, OSU; **Jenna Tilt**, OSU; North coast, **Tiffany Brown**, Clatsop County, OSSPAC; Central coast, **Meg Reed**, DLCD; South coast, **Monica Ward**, Curry County; Regional Transportation, **Curran Mohney**, ODOT; Planning - **Jay Raskin**

5. Watershed Game *An active, tabletop simulation which helps participants learn how land use affects water quality and natural resources. It inspires teamwork, discussion, and shares practices, plans, and policies that can be used to decrease nonpoint source pollution. We'll play the Classroom Version-Stream Model and learn about features in the brand-new Coast Model.*

Cait Goodwin, OSG / OSU & **Shawn Rowe**, OSG / OSU