



NAME
NORTHWEST AQUATIC
& MARINE EDUCATORS



COASTAL RE-CONNECTIONS: OUTDOOR EXPLORATIONS FROM THE FOREST TO THE SEA

Northwest Aquatic and Marine Educators

2022 NAME Conference Program

August 6th – August 10th Netarts, Oregon



Table of Contents

Contents	2
Conference Planning Committee	2
About	2
NAME Leadership	3
Traditions	5
General Conference Information	5
Conference at a Glance	6
Special Events	6
Plenary Sessions	7-9
Conference Strands	9
Concurrent Sessions at a Glance	10
Conference Details	11-17
Sunday	11-13
Monday	14-15
Tuesday	15-17
Field Experiences	18-21
Post Conference	22
Conference Sponsors	23





Conference Planning Committee

The following people put in countless hours to coordinate everything that made this conference a success: speakers, field trips, presentations, presentations, lodging, food, the auction, registration, and all the other details that often go unnoticed.

Fawn Custer, Kay Shoemaker, Pat Willis, Chrissy Smith, Travis Korbe, Janice Elvidge, Jennifer Magnusson, Jennifer Huntley, Kari Henningsgaard.

About NAME

NAME was founded in 1976 and became a chapter of the National Marine Educators Association in 1980. In the early 1990s NAME expanded its mission and membership, recognizing that marine and aquatic ecosystems, environments, and issues are linked together, and that educators working in both environments share common beliefs and strategies. NAME includes members from Alaska, British Columbia, Washington, and Oregon. Annual NAME conferences rotate through these states and province. In addition, each state or province offers local professional development opportunities for formal and non-formal educators throughout the year. NAME is a 501(c)(3) nonprofit organization.

NAME is a “family” of educators who believe:

- Every human on earth should be water-literate
- Using the allure of water enriches and facilitates learning
- Sharing our knowledge and experience with others creates a community of informed stewards
- NAME has an innovative and energetic Board of Directors guided by dedicated members from Alaska, British Colombia, Washington and Oregon to fulfill our mission and goals.

NAME’s Goals:

- Encourage professional growth by offering quality workshops, conferences, field experiences, and in-service opportunities in the Pacific Northwest
- Share information and education materials focused on marine and aquatic environments and issues
- Support a growing network of NAME educators who reflect the diverse communities of the Pacific Northwest Conference



NAME Conference Traditions

With more than forty conferences under our collective belt, we can't help but have a few traditions. If you are a first-time NAME member or conference attendee (and even if you aren't).

NAME Board Meeting

Sue's Pride 9:00 am to 3:00 pm August 6th

This is a gathering of NAME's leaders (at least, the elected and appointed ones). All NAME members are invited to witness leadership in action, come meet the core members of NAME, bring your suggestions, new ideas and complaints.

NAME General Business Meeting:

U.S. non-profit law requires a general membership meeting once each year, and this is it. Don't miss this opportunity to learn about the latest NAME innovations, programs, and plans for the future. Be involved.

Chapter Meetings:

These meetings give members of each province and state a chance to meet together and plan the upcoming year. Find out what great stuff is happening in your own backyard.

SeaFaire

Monday August 8

During lunch at Cape Lookout Interpretive Center

Consider it an idea and innovation garage sale, free of charge. Browse brochures, flyers, curriculum, and lots of free giveaways. Conference attendees and local organizations are welcome to reserve a table and show off during this event.

NAME Awards Banquet:

Don't miss a great evening capped off with our annual fund-raising auction, food, friends, and fun!

Annual NAME Auction:

Always a conference highlight, the auction raises funds for NAME's mini-grant and scholarship programs. Be ready to bid on unique aquatic-themed items donated by NAME members and local businesses in our live and silent auction. If you have some items to add to this auction, bring them along and deliver them to the registration table at check-in!



NAME Leadership

President

Jennifer Huntley
Bellingham, Washington
president AT pacname.org

President-elect

Janice Elvidge
Elmer City, Washington
president-elect AT pacname.org

Treasurer

Rob Coats
Portland, Oregon
treasurer AT pacname.org

Alaska Co-Directors

Jennifer Howell
Anchorage, Alaska
alaska AT pacname.org

Kristina Tirman

Sitka, Alaska
alaska AT pacname.org

Past-president

Kay Shoemaker
Portland, Oregon
past-president AT pacname.org

Secretary

Amy Cole
Seattle, Washington
secretary AT pacname.org

NMEA Representative

Maile Sullivan
Seattle, Washington
nmearep AT pacname.org
Oregon Director

Oregon Director

Fawn Custer
Seal Rock, Oregon
oregon AT pacname.org

Awards Chair

Alan Rammer
Montesano, Washington
awards AT pacname.org

British Columbia Co-Directors

Cathy Carolsfeld
Victoria, British

Laura McKillop

Surrey, British Columbia
bc AT pacname.org

Scholarship & Mini-grants Chair

Fawn Custer
Seal Rock, Oregon
scholarships AT pacname.org

Membership Co-Chairs

Jennifer Howell
Anchorage, Alaska
membership AT pacname.org

Jennifer Magnusson

Victoria, British Columbia
membership AT pacname.org

Webmaster & Conference Registrar

Jennifer Magnusson
Victoria, British Columbia
webmaster AT pacname.org



British Columbia Co-Directors

Washington Co-Directors
Woody Moses
Seattle, Washington
washington AT pacname.org

Giovannina Souers

Seattle, Washington
washington AT pacname.org

Communications Chair

Orlay Johnson
Seattle, Washington
orlay AT comcast.net

NW Compass Chair

Fawn Custer
Seal Rock, Oregon
compass AT pacname.org



General Conference Information

NAME Registration/Information Desk

4:00 pm to 5:30 pm Saturday

Registration and check-in will begin at 4:00 pm on Saturday, August 6th, at the Sue's Pride Big House. Registration will be available at the daily venue each morning and throughout the day as needed. Please contact registration@pacname.org if you have any questions.

Presenters:

Please check in at the registration table and double check the media set up prior to speaking. Don't hesitate to ask for support if you need it. You are encouraged to bring your own computer if needed.

NAME tags:

Wear 'em! They are your tickets to events, food, and other cool stuff. Besides, it helps you hide the fact that you can't quite remember that person you met last year and helps the people you meet for the first time this year remember you next year.

Field Trips:

If you have signed up for a field trip, please confirm your attendance when you check in at the registration table and check for departure time and carpool or van information. If you haven't signed up yet, we encourage you to check to see if there are any openings left.

Beverage Cup/Water Bottle:

We are dedicated to the Green Conference philosophy. In order to reduce waste, we encourage you to bring your own beverage cup and/or water bottle for coffee breaks. Please, don't forget to carry your own cup with you!

Event Waiver Form:

Just in case you snuck by us, make sure you have a signed Event Waiver Form turned into Registration. These forms are protection for NAME and you!

Meals

All meals are provided, except Sunday dinner on your own. Breakfast and lunch are provided throughout the Conference. Enjoy, one of the many dining options, from Oceanside to Cape Kiwanda and into Tillamook for your dinner during the Conference. There are lots of yummy options! Your nametag is your ticket to the conference meals.



Conference Sponsors

Orca Level - \$2,000 **FOUNDRY10,LLC**

Crab Level - \$200

- Friends of Netarts/WEBS
- Netarts/Oceanside Fire Hall
- Cape Lookout State Park

Seastar Level - \$100

- McEneny Woodcrafting
- Rogue Brewery





Conference at a Glance

Saturday, August 6

9:00 am—3:00 pm—Board Meeting
4:00 pm—Check in
6:00 pm—Reception

Sunday, August 7

8:00 am—Breakfast/ Check-in
9:00 am—Plenary
10:00 am—12:00 pm—Concurrent sessions
12:00—1:00 pm—Lunch
1:00—5:00 pm—Concurrent sessions
Dinner on your own

Monday, August 8

8:00 am—Breakfast/ Check-in/ Chapter meetings
9:00 am—12:00 pm—Concurrent sessions
12:00—1:00 pm—Lunch/ Sea Faire
1:00—5:00 pm—Concurrent sessions
6:00 pm—Banquet/ Awards/ Auction

Tuesday, August 9

8:00 am—Breakfast/ Check-in
8:30—10:00 am—AGM/ Plenary
10:00 am—12:00 pm—Concurrent Sessions
12:00—1:00 pm—Lunch/ Poster Session
1:00—5:00 pm—Concurrent Sessions
6:00 pm—BBQ on the Beach/ Jam session

Wednesday, August 10

5:30 am—Guided Clamming
7:30 am—Guided Beach Walk
8—11—Clean up and check out



Special Events

Reception at JAndy Oyster Company

Saturday August 6

Passenger vans will leave from Fire House beginning at 5:30pm. Participants may also drive themselves.
6760 S Prairie Rd, Tillamook, OR 97141. Heavy hors d'oeuvres served.

Annual NAME Banquet, Awards, and Auction

Monday August 8

6:00 – 10:00 pm
Schooner Restaurant

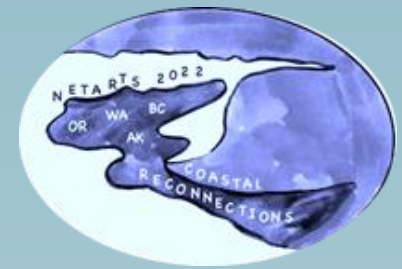
Vans will be leaving from Netarts Fire Hall beginning at 5:30pm. Vans will begin departing from the restaurant following the auction. Participants may drive themselves.
2065 NW Boat Basin Rd, Netarts, OR 97143

BBQ-on the Beach

Tuesday August 9

5:00 pm-10:00pm
Happy Camp Beach

We will BBQ grass fed burger, natural and organic hot dogs, and anything else requested!
Beverages: soda, iced tea, and Rogue beer



Concurrent Sessions at a Glance

Sunday

	Big House	Fire Hall	Netarts Community Center	Cape Lookout Interpretive Center	Cape Lookout Covered Shelter	Field Various Locations	Field Various Locations	Field Various Locations
7:30am		Breakfast and Registration						
8:00am								
9:00am	Registration	Keynote Speaker Dr. Burke Hales						
10:00am					van 1 10-2 Huehca Omeyocan Open to all to attend			
10:10am		Coastal Flooding in My Neighborhood: Engaging High Schoolers with Local Data	Our Wet Footprint: Teaching About Human Impacts on Marine Ecosystems					
11:00am								
11:10am								
12:00pm				LUNCH				
12:30pm								
1:00pm								
1:30pm								
2:00pm			New! Free Water + Climate Action Video Game + Hands-On Resources	CoastWatch: A gateway to community science on the Oregon coast				
2:30pm								
3:00pm								
4:00pm								
5:00pm		Dinner on your Own						
6:00pm								
8:00pm								
9:00pm								

Monday

7:30am		Breakfast and Registration	OR Chapter					
8:00am	BC & AK Chapters meetings	meeting		WA. Chapter meeting				
8:30am								
9:00am					The Oregon Hatchery Research Center-Facility, Research Projects and Educational Offerings			
9:30am								
10:00am				Juntos Aluera			Audubon Guided Bird Tour	
10:30am						Guided tour of Cape Meares Lighthouse and the Octopus Tree		
11:00am					SeaFaire 11-1:30 LUNCH 12-1			Rob. Van 2 Kayaking Miami Cove and River
11:30am								
12:00pm								
12:30pm								
1:00pm								
1:30pm								
2:00pm								
2:30pm			Land -sea Conservation Issues and Strategies	Tracking Carbon through Living Systems: using real data to teach climate change and ocean acidification	Marine Debris Site Survey Demonstration			
3:00pm								
3:30pm								
4:00pm								
5:00pm							van 1 and 2	
6:00pm								
7:00pm								
8:00pm						Schooner Awards Banquet Auction	van 1 and 2	
9:00pm							van 1 and 2	
10:00pm							van 1 and 2	



Concurrent Sessions at a Glance

TUESDAY August 9								
	Big House	Fire Hall	Netarts Community Center	Cape Lookout Interpretive Center	Cape Lookout Covered Shelter	Field Various Locations	Cape Lookout Coastal Trail	Field Various Locations
7:30am		Breakfast and Registration AGM						
8:00am								
9:00am		Virtual Speaker. Dr. Bob Dziak						
9:30am								
10:00am	Snacks Registration			Plaster Scrimshaw Medallions	Cape Lookout: Climate Impacts on Our Coast			Kay. Van 2 Kaysing Miami Cove and River 10:45-1:15
10:30am								
11:00am								
11:30am								
12:00pm				LUNCH /Poster				
12:30pm								
1:00 PM								
1:30 PM						Guided Oyster Farm Tour	Cape Lookout Trail Coastal Interpretive Hike	Investigating Crayfish + Freshwater Ecosystems STEAM Educators Workshop
2:00 PM								
2:30 PM								
3:00 PM								
3:30 PM								
4:00 PM								
5:00 PM						BBQ-on the Beach-Happy Camp Beach! Netarts		
6:00 PM								
7:00 PM								
8:00 PM								
9:00 PM								
WEDNESDAY August 10 Post-Conference, Clean Up and Check Out								
5:30 am								
6:30am						POST CONFERENCE - Clamming Netarts Estuary- Permit Required.		
7:30am								
8:30am							POST CONFERENCE. Happy Camp. CoastWatch Guided Walk and Orientation	
9:00 AM	CLEAN UP AND CHECK OUT!!!! THANK YOU FOR COMING AND SAFE TRAVELS HOME! LOOK FORWARD TO SEEING YOU IN BELLINGHAM, WASHINGTON NEXT YEAR							
12:00pm								

Plenary Sessions

Sunday August 7

9:00-10:00 am

Netarts Fire Hall

The Carbon Cycle in the Coastal Ocean: Local Responses to a Complicated Global Problem

**Dr. Burke Hales, Professor CEOAS
Oregon State University**

Abstract:

The oceans have taken up nearly 200 billion tons of carbon in the form of CO₂ released to the atmosphere by human combustion of fossil fuels and cement production. Although this has reduced the rate of accumulation of CO₂ in the atmosphere, it has serious consequences to the chemistry of ocean water. This is impacting important members of the ocean ecosystem, including shellfish, corals, and key species of plankton. Ocean carbonate chemistry is complicated and can be challenging to convey to stakeholders and students but can be distilled into its essential elements in ways that allow local mitigative actions to be taken. However, CO₂ emissions are relatively rapidly dispersed globally, and broader responses to the CO₂ problem require actions to address the fundamental emissions.

BIO:

Burke Hales is a professor in Ocean Ecology and Biogeochemistry (OEB) at the College of Earth, Ocean, and Atmospheric Sciences (CEOAS) at Oregon State University, and the Chief Scientist for PacWave. Burke grew up in Eastern Washington and attended the University of Washington for a BS in Chemical Engineering and a PhD in Chemical Oceanography. After a postdoctoral appointment at Columbia University's Lamont-Doherty Earth Observatory, he joined the faculty at OSU in 1998. Burke is a seagoing oceanographer who builds the instrumentation and analytical tools he uses to infer ocean processes that control the carbon cycle. He has spent nearly two years at sea on over 15 different vessels and over 25 ports of call in all the major ocean basins of the global ocean. Burke joined the PacWave team as Chief Scientist in 2017, and is focused on bringing the grid-connected test facility into full operation.

Plenary Sessions

Tuesday, August 9th

9:00am-10:00am

Netarts Fire Hall

Looking for a Tsunami in the Forest

**Dr. Bob Dziak, Research Oceanographer, NOAA/ PMEL
Hatfield Marine Science Center, Newport, Oregon**

Abstract:

On January 26 in the year 1700, a massive earthquake and tsunami struck the Oregon coast. The earthquake caused the coast line to drop several feet and generated a tsunami that flowed landward, inundating much of the coastal areas while depositing a thick layer of sand and mud along the bays and estuaries of the central Oregon coast. The havoc the earthquake and tsunami brought to the coast caused severe damage to coastal forests in Washington State, but evidence of the impact on coastal Oregon trees has been more challenging to find. In this talk, I will present some of the first evidence of tree ring growth changes caused by the 1700 tsunami from an old-growth Douglas fir stand located at the Mike Miller State Park in South Beach Oregon. I will also show a tsunami inundation model of this area based on the latest computer simulation techniques and source information of the 1700 earthquake.

BIO:

Bob Dziak is a Research Oceanographer for NOAA's Pacific Marine Environmental Laboratory, and manages an Ocean Acoustics Program that's focused on a wide variety of research topics, including marine seismic and volcanic hazards, offshore wave and wind energy, Antarctic ice shelf stability and baleen whale vocalizations. Before his NOAA appointment, Bob worked for Oregon State University for 26 years, receiving his Ph.D. in Marine Geophysics from OSU in 1997, ultimately achieving the rank of Professor, Senior Research within the OSU-NOAA cooperative institute at the Hatfield Marine Science Center. Bob lives in Seal Rock with his family, where they enjoy long beach walks combined with agate and fossil hunting, as well as hikes in the coast range and central Cascade mountains.



2022 NAME CONFERENCE STRANDS

Education

Education topics have a focus on prepared materials for educators fulfilling the Next Generation Science Standards (NGSS) and Science, Technology, Engineering, and Math (STEM) opportunities.

Culture

The Culture Strand includes topics with a keen focus on the traditional, indigenous knowledge, and/or the role of art in environmental education, STEAM, (includes artistic innovation).

STEAM – Science, Technology, Engineering, Art, and Mathematics

STEAM topics cover the most up-to-date scientific knowledge and discoveries giving educators the background and tools needed to fulfill STEM and NGSS for both freshwater and coastal environments.



Concurrent Sessions – Sunday

9:00 AM to 2:00 PM Educational Activity Stations and Events

During the celebration, enjoy a number of additional events and activity stations fun for all ages and led by Friends of Netarts Bay WEBS, OSU Tillamook County Extension, Juntos Afuera Program, Oregon State Parks, and Portland Audubon.

Stations may include:

- Nesting shore birds and maintaining healthy habitats
- Friendship Bracelet Making
- Make your own natural and biodegradable flower offering
- Marine debris art

9:00 AM Family-friendly hike on the beach and around Cape Lookout State Park and the Netarts Spit

Join Oregon State Park Rangers and Friends of Netarts Bay WEBS staff for a fun, family-friendly hike on the beach and around Cape Lookout State Park and the Netarts Spit. This relatively easy, 2 mile walk will discuss this important natural area, changes happening along our coast, and how we can be good stewards. Walk the wrack line, hunt for interesting beach finds, and discover the wonders of this unique habitat. Please register to save your spot on this fun adventure.

10 AM to 2 PM Huehca Omeyocan – An Offering to our Healing Ocean

The main event of the day is a celebration honoring our healing ocean led by Huehca Omeyocan

Bring a blanket or camp chair, some snacks, and drinks, and enjoy a day on the beach. Please keep the health of the ocean in mind and keep track of trash, use reusable water bottles and utensils, and dispose of food waste appropriately.

11 AM & 1 PM Beach Cleanup

Grab a bag from the cleanup station and head out to remove debris from the beach at Cape Lookout State Park. Return debris to the art station to be reused and transformed.

We understand everyone learns and experiences the outdoors differently and we are open to working with anyone that needs additional support. We have limited capacity. Please contact us in advance so we can do our best to accommodate your needs and/or find a way for you or your group to have fun participating in our events.

Additional Logistics:

- Registration is encouraged but not required to join in on this amazing day
- There is a \$5 fee to park at Cape Lookout State Park
- Please be prepared for dynamic coastal weather conditions. Expect anything from sun to wind and rain.

The van will pick up and drop off at the parking lot every 30 minutes, traveling back to Netarts.

Concurrent Sessions – Sunday Continued

10:10-11:10 **Our Wet Footprint: Teaching About Human Impacts on Marine Ecosystems**

Netarts Community Club

Gayle Thieman, Associate Professor

College of Education, Portland State University

Our world population of nearly 8 billion and growing has affected our marine ecosystems in many ways from overfishing and pollution to acidification and climate change. In this interactive workshop, discover activities to explore global population trends and human interactions with our blue planet during modern history, and the future challenges for sustainable marine stewardship. Presented activities provide an interdisciplinary scope to the issues of human ecology, population growth and marine conservation, and sustainability education in general. Receive lesson plans and background materials matched to NGSS and relevant state and provincial content standards.

Education, STEAM NGSS aligned, Freshwater, Marine. 60 min program

10:10-2:00 **Huehca Omeyocan**

Cape Lookout State Park, Covered Shelter

Celebrate art, culture, and the environment during this wonderful event at Cape Lookout State Park.

Información sobre este evento-<https://www.eventbrite.com/e/an-offering-to-our-healing-ocean-a-huehca-omeyocan-celebration-registration-384047194497>

Huehca Omeyocan, a group dedicated to promoting cultural practices of the Pre-Hispanic (Aztec) Mesoamerican peoples primarily through dance and music, will perform a traditional Aztec dance in honor of our oceans and beaches.

Be inspired by the Huehca Omeyocan:

"Huehca Omeyocan goal [is] to reclaim our true identity (native identity) and history, by learning the history of our ancestors which is ultimately our own history. When we create sounds and movements we do so with passion because it is in these moments that we have a connection with nature, our ancestors, and our community. We believe our grandparents' spirits are encoded in all the instruments we use to create music and they guide us on our journey of self-discovery. Sacred energy is within all of us and it's our responsibility to share it with our community in a respectful and inclusive manner. When we create sounds and movements - we represent that history and we do it with passion."

Join Huehca Omeyocan, Friends of Netarts Bay WEBS, Oregon State Parks, OSU Extension, the Juntos Afuera Program, and Portland Audubon for an inspiring day with opportunities to explore, learn, celebrate and act for the ocean.

Concurrent Sessions – Sunday Continued

10:10-11:50

Coastal Flooding in My Neighborhood: Engaging High Schoolers with Local Data

Netarts Fire Hall

Anita Wray, Graduate Student; Nicole Naar Aquaculture Specialist

Washington Sea Grant

Join us in unveiling a set of lesson plans focusing on high water levels in coastal communities. Our 3-day lesson plan, aimed at high schoolers, introduces students to sea level rise, storm surge, and king tides and challenges them to interpret and apply sea level rise projections for their own community. Using tools from Washington Sea Grant's King Tides program, students will select and analyze localized data, model potential impacts, and propose actions to prevent or minimize those impacts. Session participants will receive an overview of this new curriculum and have an opportunity to pilot and provide feedback on lessons to help fine-tune them before distribution.

Education, NGSS aligned, Marine. 90 min program

2:00-3:00 pm

New! Free Water + Climate Action Video Game + Hands-On Resources

Netarts Community Club 2:00-3:00

Rick Reynolds, M.S.Ed., Engaging Every Student and Janice Elvidge, M.S., The River Mile Network

"The Astounding Adventures of Marco the Water Molecule" video game and supporting resources are being developed with partners to engage all ages in learning about water, including oceans and the water cycle, extreme weather, and ways to take action to reduce risks from climate change. The game is being designed for grades K–8, especially grades 3-6, and all ages will also have the opportunity to develop new chapters/versions of the game. Join us to help shape the program and change the world!

Through play and inquiry-based experiments, students will develop deeper understanding of phenomena impacting our climate, how they can be modeled, and ways to take action to reverse current trends. Research supports the efficacy of games, phenomena-based learning, and hands-on learning.

Significant research has shown the benefits of playing video games for student learning and well-being. Other studies have shown strong links between participation in a climate simulation and behavior change and climate change education and dramatic emissions reductions. Game features such as haptic feedback, closed captioning, and optional narration will allow the game to be accessible and impactful for nearly all learners.

Concurrent Sessions – Sunday Continued

2:00-3:00

CoastWatch: A Gateway to Community Science on the Oregon Coast

Cape Lookout Interpretive Center

Jesse Jones, CoastWatch Volunteer Program Coordinator

Oregon Shores Conservation Coalition/CoastWatch

CoastWatch is a mile-by-mile shoreline adoption program along the entire Oregon coast. Mile adopters are individuals, schools, groups and even a National Historic Park, among others. CoastWatch began in the 1993, as a quarterly commitment where volunteers submit observations on their mile, but as the Oregon coast changed in both human and wildlife environments, our program evolved with these changes. Today, CoastWatch connects our volunteers to scientists and researchers to collect data on their adopted mile. Community and citizen science projects are available year-round to those who want to help collect data on the Oregon coast. From hybrid beach grass mapping, to marine debris surveys to sea star observations and tidal photo captures, CoastWatch connects everyone – including schools – to data collection to help understand and even help our coast. In this presentation, participants will learn about the various Citizen and Community Science projects and opportunities for training.

STEAM Field-based, Marine, Arts. 60 min program

Concurrent Sessions – Monday

9:10-10:00 The Oregon Hatchery Research Center- Facility, Research Projects and Educational Offerings

Cape Lookout Interpretive Center 9:10-10:00

Jen Krajcik, Hatchery Manager

Oregon Hatchery Research Center (Oregon Department of Fish and Wildlife)

This presentation will cover the facility layout and amenities at the OHRC, as well as dive into some of the different research topics that have been/are currently being conducted. Additionally, the outreach and education aspect of the hatchery will be emphasized through a description of the various programs offered there.

Education, STEAM Field-based, Freshwater. 60 min program

Concurrent Sessions – Monday Continued

10:10-11:00

Juntos Afuera

Netarts Community Club

Deane McKenna, Department Chair, Tillamook Bay Community College

Nat Macias, Juntos Coordinator, Oregon State University; Perla Gutierrez, Student Intern, Oregon State University

Juntos Afuera offers outdoor programming throughout Tillamook County centered on Latinx identity, time to engage with Latinx natural resource professionals while learning about their careers, and information on local educational opportunities at the community college and university. Students will connect their Latinx identity with the outdoors through various activities including kayaking, birding, hiking, gardening, culturally relevant art activities (e.g., Nazca lines, molas, papel picado, etc.), and zip lining. Curriculum has been adapted from Somos LatinX and Mapping Migraciones. The theme for this year is “conectando dos mundos.” Students will learn STEAM related topics through two lenses: Latin American traditional knowledge and western knowledge.

Education, Culture, STEAM Field-based, Arts. 60 min program

2:00-3:00 pm

CoastWatch: A Gateway to Community Science on the Oregon Coast

Cape Lookout Interpretive Center

Jesse Jones, CoastWatch Volunteer Program Coordinator

Oregon Shores Conservation Coalition/CoastWatch

CoastWatch is a mile-by-mile shoreline adoption program along the entire Oregon coast. Mile adopters are individuals, schools, groups and even a National Historic Park, among others. CoastWatch began in the 1993, as a quarterly commitment where volunteers submit observations on their mile, but as the Oregon coast changed in both human and wildlife environments, our program evolved with these changes. Today, CoastWatch connects our volunteers to scientists and researchers to collect data on their adopted mile. Community and citizen science projects are available year-round to those who want to help collect data on the Oregon coast. From hybrid beach grass mapping, to marine debris surveys to sea star observations and tidal photo captures, CoastWatch connects everyone – including schools – to data collection to help understand and even help our coast. In this presentation, participants will learn about the various Citizen and Community Science projects and opportunities for training.

STEAM Field-based, Marine, Arts. 60 min program



Concurrent Sessions – Monday Continued

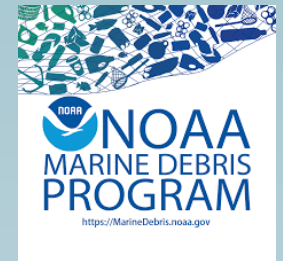
2:00-3:00 pm **Marine Debris Site Survey Demonstration**

Cape Lookout Covered Picnic Shelter

Jesse Jones, CoastWatch Volunteer Program Coordinator

Oregon Shores Conservation Coalition/CoastWatch

The Marine Debris Monitoring and Assessment Project (MDMAP) is a NOAA citizen science initiative that engages NOAA partners and volunteers across the nation to survey and record the amount and types of marine debris on shorelines. Participants in the MDMAP network select nearby shoreline monitoring sites that they return to routinely to conduct surveys and record information that can be used to compare amounts, locations, movement, sources, and impacts across the United States and internationally. CoastWatch, the volunteer program of Oregon Shores, works along the Oregon coast to set up 100 meter sites with interested volunteers. Jesse Jones, CoastWatch Volunteer Program Coordinator, will demonstrate how to set up a site, and then how to collect data for this monthly survey.



STEAM Field-based. 60 min program

2:00-3:00 pm **Land –sea Conservation Issues and Strategies**

Cape Lookout Interpretive Center

Paul Engelmeier

I will discuss land and sea issues and conservation strategies – Uplands and ocean conservation – from the ESA listed Murrelet habitat to the Clean Water Act/303d listed streams to salmon restoration efforts in the MidCoast basins – from Cascade Head to Heceta Head. I will also be sharing the latest about Oregon's 5 Marine Reserves and MPAs.

60-min Education

STEAM Freshwater, Field-based, Marine

Concurrent Sessions – Monday Continued

2:00-3:00 pm

Tracking Carbon through Living Systems: using real data to teach climate change and ocean acidification

Cape Lookout Interpretive Center 2:00pm-3:30pm

Susan Wood, Education Coordinator Chandler Colahan, Estuary Educator

Padilla Bay National Estuarine Research Reserve

We'll start with a quick experiment using marine plants to provide student-generated data that we can connect to living systems and ocean acidification. Then we'll introduce online local, regional, and global data that help middle and high school students understand climate change and increase data literacy.

90-min Education, STEAM Field-based, Marine

Concurrent Sessions – Tuesday

10:10-11:00 am The Changing Face of Cape Lookout

Cape Lookout Covered Shelter

Travis Korbe, Park Ranger Supervisor

Cape Lookout State Park

Join Oregon State Park Staff on a walk through the coastal erosion story of Cape Lookout State Park. This short walk will compare current realities on the ground with pictures highlighting the changes that have taken place over the last 100 years. We will be traveling on and off the beach, so appropriate shoes will be needed.
Education Field-based

10:10-11:30 am Plaster Scrimshaw Medallion

Cape Lookout Interpretive Center

Rob Coats, Teacher out to Pasture

First a brief introduction to scrimshaw, its history, its relevance to marine education. Then create, transfer and etch your own design onto a lacquered plaster medallion, filling lines with soot (lampblack) to resemble true scrimshaw. Wear on string as pendant, fail to bathe, and you are a whaler! Great class activity for sailors from intermediate grades to burial at sea.

Education, Culture Marine, Arts We all need love.

Concurrent Sessions – Tuesday Continued

1:30-3:30pm

Investigating Crayfish + Freshwater Ecosystems STEAM Educators

Workshop

Whiskey Creek

Rick Reynolds, Founder, Engaging Every Student

Janice Elvidge, Founder, The River Mile network

A passenger van will take participants from the Cape Lookout Campground office to Whiskey Creek by 1:20pm. Learn how to engage students in fascinating crayfish and water quality investigations while meeting standards and integrating the arts. Learn ways to participate with The River Mile network's Crayfish Study and how different tools can be used to collect, analyze, and share data and student observations. Learn how you can get free equipment, transportation, subs, and more! If time allows, we will visit a freshwater site for field investigations. Either way, we will have hands-on fun.

Education, STEAM NGSS aligned, Freshwater, Field-based, Arts. 120 min program





Poster Sessions – Tuesday

Tidepool Ambassador Internship

Illana Brown, Tidepool Ambassador Intern Friends of Otter Rock Marine Reserve, Oregon

2022 is the first year for the Tidepool Ambassador program at Otter Rock Marine Reserve. The goal for this program is to give high school students the opportunity to gain confidence with their people skills while learning more about our amazing marine reserves and tidepools.

Oregon Marine Scientist and Educator Alliance

Tracy Crews, Marine Education Manager Oregon Sea Grant/Oregon State University

In 2019, Oregon Sea Grant and the Oregon Coast STEM Hub partnered to create the Oregon Marine Scientist and Educator Alliance (ORSEA) which brings together middle and high school math and science teachers with researchers to co-create marine-themed integrated lessons designed to increase ocean and data literacy. Come learn about the curriculum that has been developed and future opportunities to participate in this program.

STEAM MARINE (Poster)

Beyond Form and Function: Marine Animal Sentience and Cognition

Annette Dehalt, Biology Instructor Camosun College

Most marine biology texts and lectures in secondary and post-secondary education give the familiar information on phylogeny and form and function of the various taxa. A lot of recent research on the non-physical abilities of individual (marine) animals has not found its way into our classrooms. This includes faculties like individual recognition, self-awareness, complex behaviors (e.g. inter-species collaboration, spatial awareness, memory, etc.), and can be found in both vertebrates and invertebrates. Relating these animal capacities to students is important not only in captivating their interest, but also in generating greater respect and empathy for marine species and individuals.

Education, STEAM. program (Poster)

Rosemary Anderson High School POIC

Student presentations!

Field Experiences

Sign-up Limited numbers. First come first serve!

To sign up for any of the Field Experiences (except the Kayak trips, you have to sign up for those ahead of time by going to the kayaktillamook.com link, email oregon@pacname.org date, field experience and your name(s). We'll get your fee at the conference. Preference is given to NAME members and those paying for the conference.

Guided Bird Hike

\$5

Monday, August 8 - 9:00-12:00

by Portland Audubon

Netarts Community Center to Cape Meares

Limited to the first 10 people. Join Friends of Netarts Bay WEBS and Portland Audubon's Coastal Community Science Biologist, Allison Anholt, to observe coastal birds on and near Netarts Bay. We'll start off the day with an overview of the endangered Western Snowy Plover and the "Plover Patrol" program run by Portland Audubon and Oregon State Parks coordinating community scientists to monitor this recovering species on the north coast including Netarts Spit. We will travel to various locations around the bay and surrounding headlands and hope to see soaring brown pelicans, great blue herons, bald eagles, songbirds, and cormorants among others from afar and bayside.

Details:

- Be prepared to walk up to 1-2 miles to and from observation points, descend and ascend a long steep stairway to the beach, and negotiate a short expanse of slippery rocks.
- Participants will need to provide their own transportation between locations and may need to purchase a day-use permit at the state park. The specific route and locations will be shared at the start of the program. Carpooling is encouraged.
- Gear: Bring binoculars (two spotting scopes and a few binoculars will be available) and appropriate shoes (please no flip flops). The climate can change quickly along the coast, ranging from warm to cool and breezy, so please bring the gear you need to stay comfortable. This event will take place primarily outdoors. If bad weather develops, an alternate plan will be communicated to the registered participants.

Registration Required. oregon@pacname.org



Field Experiences

Guided tour of Cape Meares Lighthouse and the Octopus Tree

\$5

Monday, August 8 - 10:00-11:30

State Park and US Fish and Wildlife Volunteers Cape Lookout State Park

Kay Shoemaker, Past-NAME President, Teacher, Netarts Local

Limited to the first 10 people. The van will leave from the Fire Hall immediately after the Chapter meetings, to take participants up to Cape Meares. This guided tour begins at the renowned Cape Meares Lighthouse, where participants will be able to explore this tiny lighthouse and learn of its history. We will then venture outside to learn about the variety of seabirds visiting this amazing rocky habitat. Kay will then lead the group up to visit the famous Octopus Tree.

Education, Culture, Science 90 min program

Guided Kayak Tour of Miami Cove and River

\$90

Monday, August 8 - 10:00-12:30

Rob Coats, NAME Lead

Tuesday, August 9 - 10:45-1:15

Kay Shoemaker, NAME Lead

Marcus Hinz of Kayak Tillamook is your guide

Limited to the first 15 people, van pick up at Fire Hall.

Imagine paddling across a sheltered cove carefully nested between foothills, only to duck under a bridge and discover a small charming river. Well, after exploring old floating wood docks occupied by sea birds and admiring the panoramic views of our coastal mountains from your watercraft, this is exactly what you'll do. Surrounded by a deciduous forest, the crystal clear waters of the Miami River will allow peaks at the river bottom and its surface will offer you reflective perspectives of everything around you.

You will need to register through the following link: Miami Cove & River: <https://kayaktillamook.com/content/products/tp/miami-cove-river> The additional \$5 is to help cover our van cost.

Field Experiences

The Art of Growing Oysters

\$5

Tuesday August 9 - 1:30-3:00

Chrissy Smith, Director Friends of Netarts WEBS

Alan Barton, Hatchery Manager

Do you enjoy Pacific Northwest oysters? Have you ever wondered where the oysters come from? The oyster industry is an important part of Tillamook County and includes several farms and one of the largest oyster hatcheries in the country, Whiskey Creek Shellfish Hatchery on Netarts Bay. Tour Whiskey Creek Shellfish Hatchery and see how oysters start, learn what it takes to get an oyster from the bay to your plate, and how the industry is working with scientists to advance our understanding of large-scale ocean changes and their impacts on oyster aquaculture.

PLEASE READ THE FOLLOWING:

- Oregon Dept. of Agriculture requires that the hatchery collect the names and contact information of all people that come into the facility.
- We also require anyone attending to sign a Friends of Netarts Bay WEBS waiver.
- The hatchery may require visitors to wear a mask while inside the facility, please bring your own.
- Closed-toed footwear is required. Flip flops, sandals, or similar shoes will not be permitted in the facility. There will be running water along the floor and your feet will likely get wet. We recommend boots, waterproof shoes, or bringing a change of shoes for after the tour.
- The hatchery will be in full production mode when you visit which makes for a good tour! The hatchery will likely be loud, have running water draining along the floor, and many things to navigate around. Be prepared to walk over sloped concrete surfaces and navigate around hoses and pipes. The group will also need to navigate up and down steps. If that is a limitation for anyone in your group, please let me know so I can work to change the way we travel through the facility as best as possible.

LOCATION & MEETING TIME: The van pick up is at Cape Lookout State Park, office Parking lot. Immediately after lunch. Meet at the pull-off near the hatchery at 1:15 pm to check in and complete needed paperwork.

120-minute oral presentation hands-on and/or field based

Presentation Strand: Education, STEAM

Limited to 15



Field Experiences

Cape Lookout Trail Coastal Interpretive Hike

\$5

Tuesday, August 9 - 1:00-3:00

Travis Korbe, Park Ranger Supervisor
Cape Lookout State Park

Limited to the first 15 people, van pick up at Cape Lookout State Park, office Parking lot. During this guided tour, participants will learn about the native vegetation and history of Cape Lookout. This 5-mile round trip hike to the end of the headland gives a spectacular view of the Pacific. Whales and other marine animals have been spotted from this vantage point. The Cape Trail may have muddy conditions in some sections of the trail. The first half of the trail is fairly smooth the second half has rocks and roots to navigate so appropriate shoes will be needed. It is a 5-mile hike round trip, there is however the opportunity to make it a shorter hike by going to the mid-way point, you still get some great views and whale watching but avoid the rougher trail sections and mud. Plan to carry your water bottle!

Field Experiences – Self-Led

- Dune Buggy Rentals Self Mon-Fri 85-355 9:00am-3:30 pm <https://www.sandlaketsunamiatvrental.com/index.htm>
- Kayaking Netarts Bay Guide August 7th 85 1:45pm - 4:15pm Netarts Bay Netarts Bay: <https://kayaktillamook.com/content/products/tp/netarts-bay>
- Tillamook Cheese Factory Guide tour Daily 35-40 <https://www.exploretock.com/tillamookcreamery>
- Tillamook Cheese Factory Self Daily Free 9am-7pm <https://www.tillamook.com/visit-us/creamery>
- Clamming bay, blues gapers, razors, -shellfish permit self daily wee hours myodfw.com
- Crabbing-same license- self daily tide dependent myodfw.com
- Hiking- Cape Lookout. Self daily anytime <https://www.alltrails.com/trail/us/oregon/cape-lookout?u=m>
- Cape Kiwanda- scenic by-way. Dunes- self daily anytime <https://stateparks.oregon.gov/index.cfm?do=park.profile&parkId=130>
- Octopus Tree-Friends of Cape Meares self daily anytime <https://stateparks.oregon.gov/index.cfm?do=park.profile&parkId=131>
- Blue Heron guide tours daily 8am -6pm <https://www.blueheronoregon.com/pages/visit-us> wine, sausage/cheese tasting, petting zoo
- Cape Meares Lake guide Experience: Low Fitness: Low \$75.00 (8) seats avail. Sat 08/06/22 05:00pm - 07:30pm <https://kayaktillamook.com/content/products/te/cape-meares-lake-sat-080622-0500pm-0730pm>
- Birding, tidepools exploring the beach self daily Free Any time... tide dependent Shortsands Oswald State Park, Short Beach Oceanside, Netarts



Post Conference Opportunities

Wednesday August 10, 2022

Clamming Netarts Estuary

5:30-7:30 am on Netarts Bay

7:30-9:00 am Whiskey Creek Fish Hatchery

Jesse Kane, Community Education & Engagement Coordinator
Tillamook Estuary Partnership



https://netartsbaytoday.org/html/clams_.html

Join Jesse Kane, Community Education & Engagement Coordinator for the Tillamook Estuaries Partnership, in an early morning Clamming Adventure! We will meet for a journey onto the clam beds on the beautiful shore of Netarts Bay at 5:30am on Wednesday, Aug 10, 2022. Our group will target Bay Clams including Butter Clams, Gapers, Cockles and Littlenecks. During our journey we will be discussing the unique ecosystem and biodiversity present on the tidal flats in addition to the special management practices found in the bay. Each participant will be provided with their own shovel and clam bag and **must acquire their own shellfish license before the event**. Log onto myodfw.com to purchase your permit. The cost for an annual permit for residents is \$10 and Non-residents can get a 3-day permit for \$19. Youth license 12-17yrs is \$10 resident or non-resident.

Following our clam dig, we will be driving a half mile down the road to the Whiskey Creek Fish Hatchery to process our catch and to break down the clams. There will also be a short cooking demonstration so that you may better understand how each part of the clam can be utilized. Facilities and a comfortable covered setting will be present at the hatchery.

****The walk to the clam beds can be physically challenging as can the digging practice so all participants should be physically fit and properly equipped to brave the elements.****

https://netartsbaytoday.org/html/clams_.html



Post Conference Opportunities

Wednesday August 10, 2022

7:30am-9:00am

CoastWatch Orientation at Happy Camp Beach

Jesse Jones, CoastWatch Volunteer Program Coordinator
Oregon Shores Conservation Coalition/CoastWatch
Happy Camp Beach

CoastWatch Volunteer Program Coordinator Jesse Jones will lead an informational CoastWatch walk along CoastWatch Mile 280, north of Happy Camp, and south of Oceanside in Tillamook County. The walk will begin at 7:30 am and go for just over an hour. Jesse will share what CoastWatch volunteers observe while walking their mile, and which citizen and community science projects are available in the area. Bring comfortable walking shoes and dress for the weather.

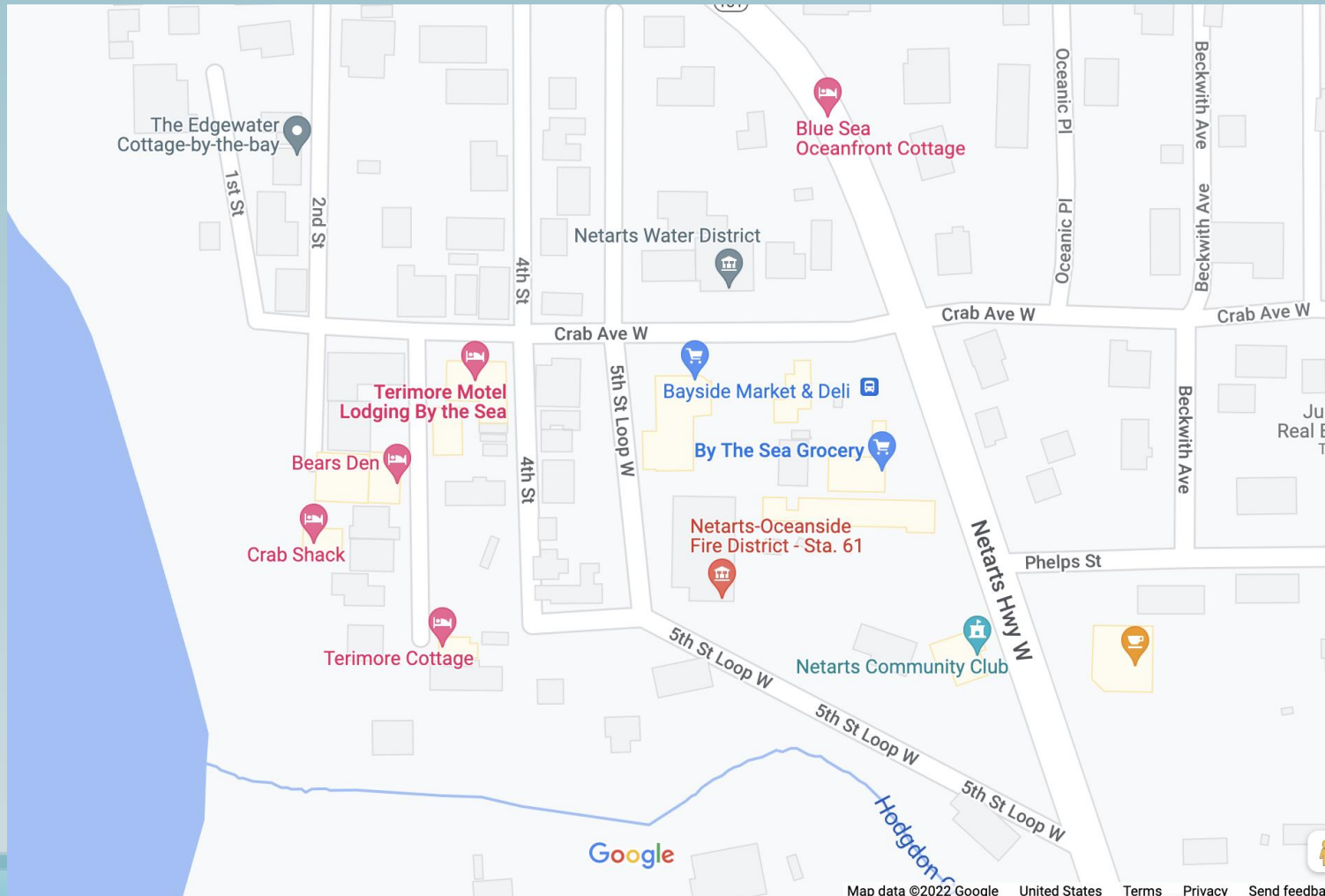
Education 120-minute oral presentation hands-on and/or field based



https://en.wikipedia.org/wiki/Oceanside_Beach_State_Recreation_Site



Netarts - Terimore





Directions to Events and Venues

From Portland to Netarts

Driving Directions from Portland, Oregon

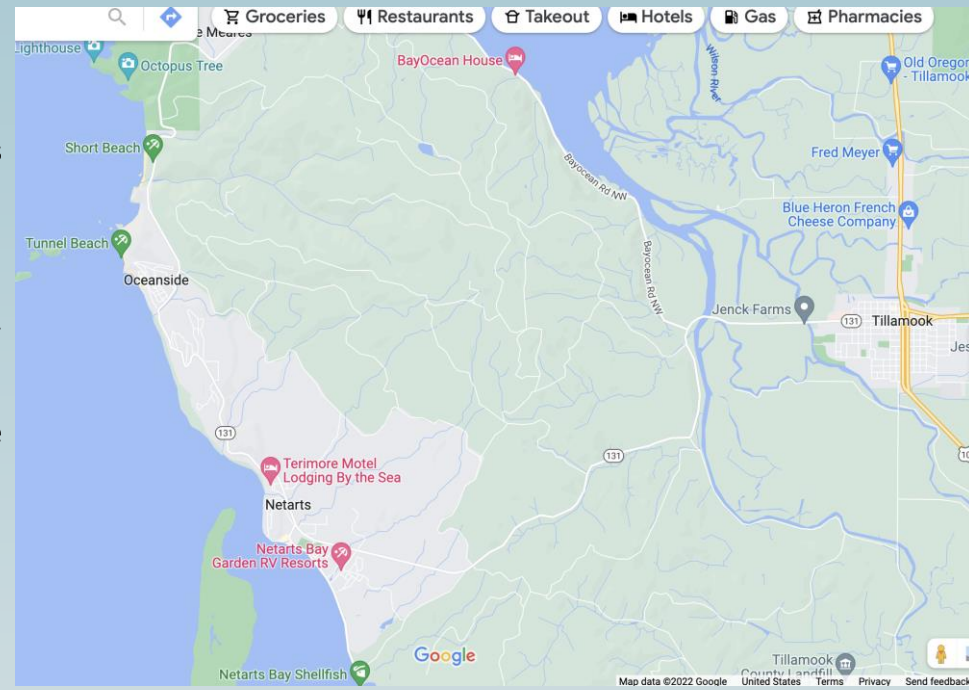
- Follow US-26 W and OR-6 W to OR-131 W/3rd St/Netarts Hwy W in Tillamook 1 h 19 min (72.1 mi)
- Turn right at the 2nd cross street onto OR-131 W/3rd St/Netarts Hwy W. Continue to follow OR-131 W/Netarts Hwy W

RECEPTION- JANDY OYSTER COMPANY

From Terimore Lodging by the Sea Netarts to Reception at JAndy Oyster Company 6760 S Prairie Rd, Tillamook, OR 97141. 15 minutes

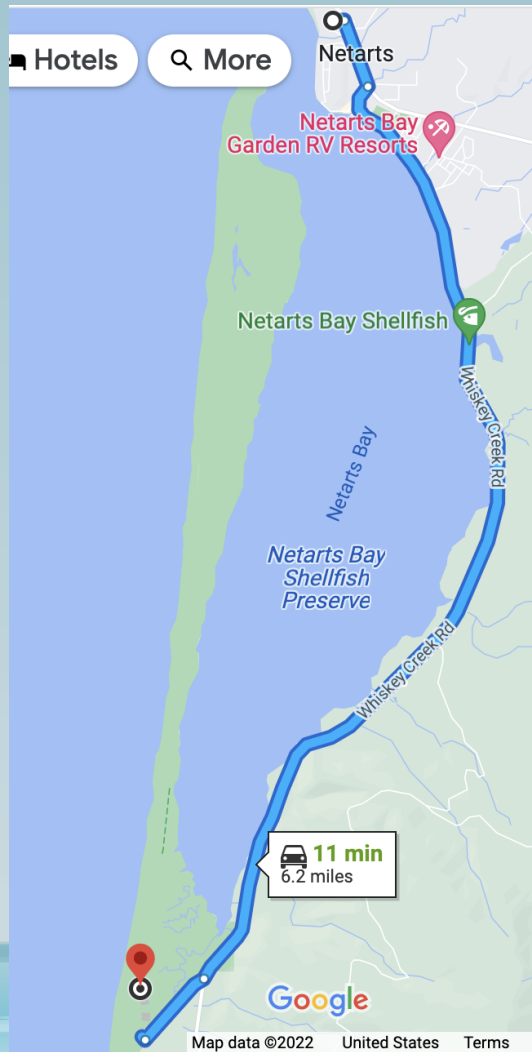
- Start out going east on Crab Ave toward 4th St.
- Then 0.03 miles
- Take the 2nd right onto 5th Street Loop.
- Then 0.15 miles
- Turn slight right onto Netarts Hwy/OR-131. Continue to follow OR-131. Then 6.67 miles
- Turn right onto Main Ave/Pacific Coast Scenic Byway/US-101 S. Continue to follow Pacific Coast Scenic Byway/US-101 S. If you are on 3rd St and reach Pacific Ave you've gone a little too far. Then 3.85 miles
- Turn left onto S Prairie Rd. Then 0.09 miles JAndy Oyster Company.

**** We will have two vans transporting participants to and from the Reception. ****





Directions to Events and Venues



Netarts to Cape Lookout State Park

- 11 min (6.2 miles)
- From 1120 5th St Loop W
- Head east on Crab Ave W toward Netarts Hwy W
- Turn right at the 1st cross street onto Netarts Hwy W 0.4 mi
- Turn right onto Netarts Bay Dr 5.3 mi
- Turn right at Cape Lookout Rd(Whiskey Creek Rd) 0.4 mi
- Turn right 118 ft

Cape Lookout State Park Campground

Tillamook, OR 97141

Cape Lookout State Park to Cape Lookout Trail

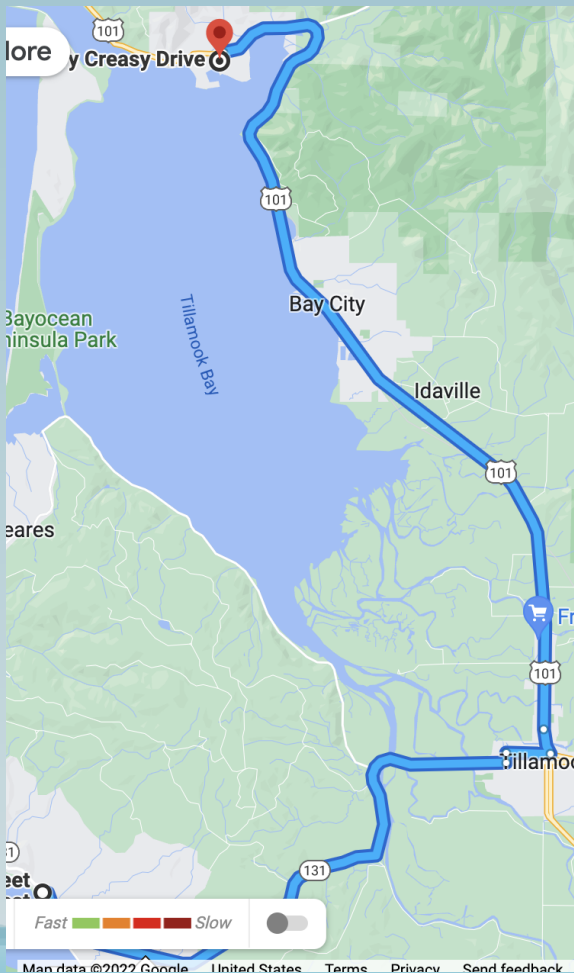
13000 Whiskey Creek Rd, Tillamook, OR 97141

- Head northwest on Cape Lookout Rd toward Cape Lookout Trailhead
- 0.2 mi
- Turn left onto Cape Lookout Trailhead 0.1 mi

Cape Lookout Trail

Oregon 97112

Directions to Events and Venues



Netarts to Garibaldi

30 min (16.5 miles)

via OR-131 E/Netarts Hwy W and US-101 N

Netarts, Oregon 97141

- Turn Right onto OR-131 E/Netarts Hwy W left on Birch. Right on 1st. Pacific Ave in Tillamook 11 min (6.7 mi)
- Follow US-101 N 3rd St in Garibaldi. 13 min (9.7 mi)
- take a left on Continue on 3rd St Turn Right on American Avenue and left onto Jerry Creasy Drive. coninueto your destination

401 Jerry Creasy Dr

Garibaldi, OR 97118



NMEA 2023



Strait to Sound: Gathering at the Salish Sea
July 23-27, 2023 | Bellingham, WA

See you next year!

