



# LONGLINES

Volume 25 No. 4

Fall 2022



**PCSGA WELCOMES  
NEW DIRECTOR**

# PCSGA



PACIFIC COAST SHELLFISH GROWERS ASSOCIATION

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(360) 754-2744

The PCSGA strives to ensure a healthy industry and environment for shellfish farming on the Pacific Coast.

## What The Tide Brought In

### *Notes from the Director*

Greetings PCSGA community! I am honored and excited to join all of you on your mission to ensure a healthy social, regulatory, and natural environment for shellfish farming on the West Coast. I have spent the past 10 years running a sustainable seafood program at the Aquarium of the Pacific in Long Beach, California. In that time, I went from being skeptical about marine aquaculture to being a vocal supporter. In fact, much of my career at the Aquarium was spent advocating for the expansion of marine aquaculture in the U.S. and educating people about the important role marine aquaculture plays in supporting a more sustainable, resilient and nutritious food future. Why? Because it is one of the most promising tools we have to help feed the growing population in the changing climate with less impact. Bivalve shellfish has the added benefit of supporting healthy ecosystems. I know I'm preaching to the choir here, but I wanted you to know where I'm coming from.



One of the things I'm most excited about in this new role is building relationships with the PCSGA farming community. Over the years it has become increasingly apparent to me that you, the farmers, are the true champions of sustainability. NGOs, aquariums, and researchers get a lot of the glory and credit for sustainability victories. But without farmers the efforts of the other stakeholders never get realized beyond a publication or symposium discussion. In addition to providing food and economic contributions to your communities, you put these ideas and concepts into action and provide expertise to ensure the theoretical concepts will actually work. You are also most likely to be adversely impacted if the health of the local environment is compromised. I'm really excited to start this new chapter working with all of you and learning more about the amazing work you do every day to feed people, support your communities, and raise the bar for ocean stewardship and sustainability.

My first order of business will be getting on the road to meet with all of you and learn more about your businesses and how I can best serve as your executive director. I recognize that PCSGA is a strong and well functioning organization with an active and engaged board. I look forward to working with all of you to build on this strong foundation to ensure a sustainable, resilient, and prosperous future for shellfish farming on the West Coast.

Cheers!

Kim Thompson  
Executive Director, PCSGA

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Comments or questions?  
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**Cover Photo: Joshua Trujillo: A Suquamish tribe member participating in a clam dig.**

# Pearls from the Prez

## Notes from the President

It's hard to believe, but fall is here. This season means the kids are heading back to school, pumpkin spiced everything is right at your fingertips, and we are once again working the night tides. This season has also blessed me with my first granddaughter, Serenity, an absolute doll, and a perfect little pearl. This season of changing leaves and crisp air is also the first opportunity for many farmers to take a quick breath after a summer of hot days, planting, harvesting, and ensuring our growing crops are in good shape.

While we all know that this is short lived, I hope it allowed each of you to find time for something that brings you joy. Perhaps a trip to the pumpkin patch, a final backyard barbeque or a weekend away with friends and loved ones. However you spent those brief moments of time, I hope it recharged your batteries and invigorated your spirits.

This fall season has also brought us our new Executive Director, Kim Thompson. I hope many of you had the chance to meet Kim at our annual conference and engage on the interests that are important to you. This season of change brings with it the opportunity to be more a part of the array of committees, and tours that our association continually participates in. These roles ensure our ability to be the best voice for our members, yours included. We are stronger together and this includes you.

I sincerely hope this fall finds you enjoying a pile of leaves, warm cider (spiked perhaps?), and an energy to help make us the best association we can be. "If the world is my oyster, then my family is my pearl."



Miranda Ries  
Pacific Seafood, Pacific Shellfish

## Congratulations To This Year's Photo Contest Grand Prize Winners!



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2nd Place - \$300  
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3rd Place - \$200  
Megan Homewood  
Hama Hama

## MONTHLY ECOSYSTEM SERVICES PHOTO CONTEST WINNERS!



**July:** Megan Homewood: Yesterday we found a spot prawn hiding out in an oyster shell and using it as protected habitat creation!



**August:** Nyle Taylor: In Samish Bay, shellfish structure provides many ecosystem services. This picture shows a sponge beginning to climb up the top line anchor point. This particular area in Samish has soft, tacky mud and little natural structure. This sponge was happy to utilize our anchor as its own anchor.

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# Remembering Ken Chew

by: Exerpts from Journal of Shellfish Research



Ken Chew, crabbing. Photo credit: PCSGA

Dr. Kenneth Kendall Chew passed away on Saturday, September 24th, 2022. He was a highly respected, cherished and integral part of the field of molluscan biology and shellfish aquaculture in the Pacific Northwest, with the positive impacts of his contributions felt globally as well.

He grew up in California and came to Washington to pursue a Masters and then a Phd from the University Of Washington

School of Fisheries, studying molluscan biology and populations of Pacific Oysters in Washington State. He then went on to teach and hold several positions, including director of the UW School of Fisheries.

During this time he conducted baseline ecological studies of intertidal and subtidal invertebrate communities and produced research on important topics like paralytic shellfish poisoning, shellfish biology and aquaculture. Throughout his work he mentored and inspired many students to continue their careers in molluscan biology.

Many of us either directly benefited from his mentorship and guidance or have worked with industry legends that were mentored by him. He fostered connections between scientists and industry as a long time board member of the National Shellfisheries Association and through work with PCSGA.

The productive and dynamic relationships we now enjoy between industry, government, and academia are largely due to his tireless efforts in facilitating collaboration and connection. His monumental contributions to the shellfish world have been recognized by NOAA in the naming of the Kenneth K. Chew Center for Shellfish Research and Restoration, located at NOAA's Manchester Research Station and through the establishment of a Professorship in Aquaculture in his name at UW. He and his wife, Maegan, raised a beautiful family of four children and many grandchildren.

His loss will be greatly felt in our community but his legacy lives on in his family and the relationships he cultivated throughout his career.

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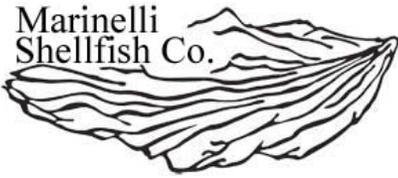
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# Shellfish in Danger After Unprecedented Pacific Northwest Heatwave

by: Michelle Ma, Univ. of WA Magazine

It's hard to forget the excruciating heat that blanketed the Pacific Northwest in late June 2021. Temperatures soared well above 100 degrees, with Seattle hitting a record 108 degrees on June 28.

During the heat wave, research scientists, tribal ecologists and community members noticed a disturbing uptick of dying and dead shellfish on beaches in Washington and British Columbia. Quickly realizing this was an unprecedented event, the groups organized to document the die-offs as they were happening. Now, a team led by the UW has compiled and analyzed hundreds of the field observations to produce the first comprehensive report of the impact of the 2021 heat wave on shellfish. It found that many shellfish were victims of a “perfect storm” of factors: The lowest low tides of the year occurred during the hottest days—and at the warmest times of day. The results were recently published in the journal *Ecology*.

“You really couldn’t have come up with a worse scenario for intertidal organisms,” says lead author Wendel Raymond, a research scientist at UW Friday Harbor Laboratories. “This analysis has given us a really good general picture of how shellfish were impacted by the heat wave, but we know this isn’t even the full story.”

The researchers found that each species’ ecology contributed to how it survived the extreme heat. Some shellfish that naturally burrow deep beneath the surface, like butter clams, usually fared better than ones that typically ride out low tide just below the sand’s surface, such as cockles. They also found

that shellfish on the outer coast experienced low tide about four hours earlier, when it was cooler, than shellfish on inland beaches. This analysis was funded by Washington Sea Grant.



Joe Williams, front, and Darrell Williams with the Swinomish Indian Tribal Community’s Fisheries Department conduct a study on clam biomass. Photo by: Northwest Indian Fisheries Commission

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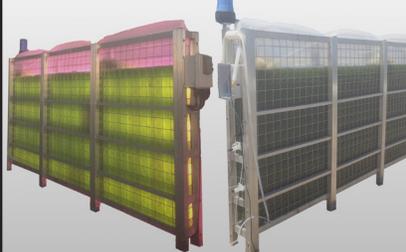
## Hump Island Offers Great Activities

by: Trevor Sande

Hump Island Oyster Company, located in Clover Passage near Ketchikan, Alaska, is starting its 11th year of operation. In 2017, the original Hump Island lease was expanded to add kelp farming, as well as adding a small parcel on the Ketchikan road system for a nursery with a floating upweller and processing facility. Oysters are not native to Alaska so seed is supplied from Hawaiian Shellfish. The seed typically arrives from Hawaii at about 3mm in size in April and is held in the nursery until 25mm in the fall when it is transferred to the farm site at Hump Island. Oysters are suspended in trays from wood rafts for two to three seasons until market size. In 2019, a tour component was added for cruise ship passengers with a tasting room at the farm site. Visitors are greeted at the cruise ship dock and transported to the nursery via a 14 passenger van. They are provided a lesson on how oysters reproduce in a hatchery setting and how the upweller works so efficiently at moving plankton-rich water through the seed. The guests then embark on the 15 minute wildlife cruise to the Hump Island location where they learn about oyster husbandry. The tour features a touch tank which is replenished with sea creatures that are pulled from the oyster stacks. The tour also has a gift shop with Hump Island and Alaskan apparel and the High North Bar for a nice pairing of wine or bubbly with your shooter. Tour volume in 2021 was approximately 1300 visitors with 400 from local ships and 900 from direct port calls to the farm from National Geographic vessels operated by Lindblad. Tours run from May through September. This year we have entertained approximately 3,500 visitors. Visit our website at [www.humpislandoyster.com](http://www.humpislandoyster.com)



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Shellfish Growers Climate Coalition

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- Ed Chiles  
The Chiles Group

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# PCSGA's Annual Conference Returns to Meeting In-Person

by: Vicky Rockey, PCSGA

PCSGA's Annual Conference was held in Wenatchee, Washington, September 20-22. Around 280 people attended the conference, along with 17 trade show vendors. The auction brought in just over \$3,000 for PCSGA's Grower and Enrichment Development Fund, and the John Lentz profiles in Innovation Speaker Series.

Dr. Yoshitaka Ota, Ph.D., from the University of Washington School of Marine and Environmental Affairs, gave an inspirational talk entitled *Ocean Equity - To Protect Oceans We Need To Protect Those Who Live Within Nature*. He left many in the audience with food for thought.

Opening day luncheon speaker (and crowd pleaser!) David Williams captivated many in the room with anecdotal stories from his newest book, *Homewaters: A Human and Natural History of Puget Sound*.

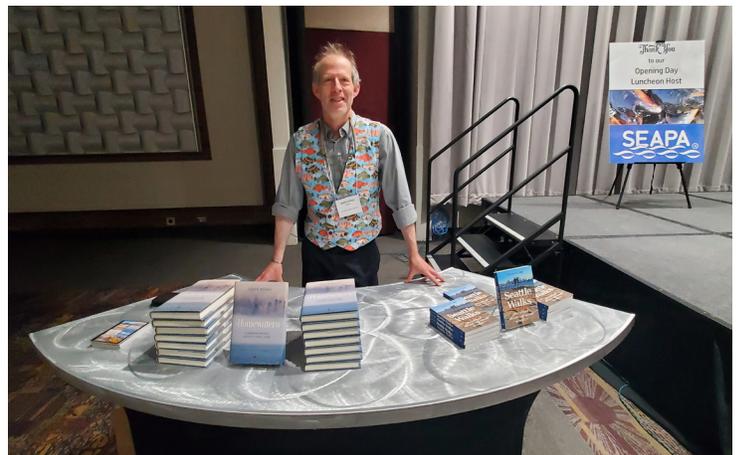
Conference attendees enjoyed the many discussions and workshops throughout the week - not to mention networking with cherished colleagues and friends. The Prince of Tides was awarded to Duane Fagergren with Calm Cove Oyster. Connie Smith, Assistant Director at PCSGA, announced her retirement at the end of this year, after 34 years of service. Next year's conference will be in Seaside, OR, September 2023.



The crowd enjoys a talk at the Annual Conference



James Dickson and Theo Walker, Chelsea Farms



David B Williams, Author of *Homewaters: A Human and Natural History of Puget Sound*



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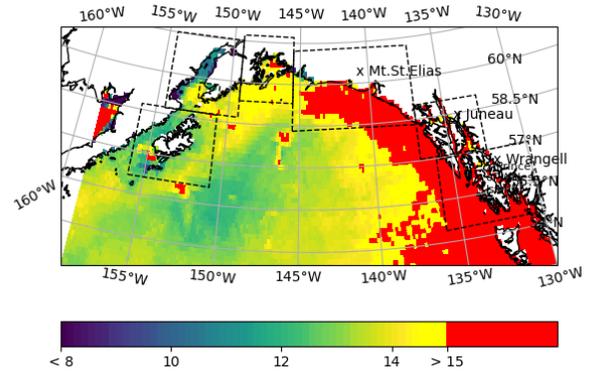
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# New Tools Predict Sea Surface Temperature to Inform Safe Harvest of Alaska Oysters

by: Robert Daniels, Ava Ellett, John Jacobs and Varis Ransi - NCCOS NOAA

Two new tools — now available to growers, farmers, and managers in Alaska’s coastal waters — will alert users when surface waters reach temperatures that favor *Vibrio* growth. The first tool uses satellite observations to determine the maximum sea surface temperature (SST) reached over the last week. The second tool predicts SST over the next four days.

*Vibrio parahaemolyticus* (Vp) are naturally occurring bacteria in coastal waters. Eating raw or undercooked seafood with high levels of *Vibrio* can cause infection. While these cases can be uncomfortable (e.g., upset stomach, gastroenteritis), they seldom cause serious illness. However, *Vibrio* infections and concerns surrounding them can have negative impacts on restaurants and the shellfish industry.



Temperature is a major driver of Vp growth. In general, once water temperatures exceed 59 F, growth will occur, with faster replication at higher temperatures (Goertz et al. 2013). Because of the strong dependence on temperature for growth, SST is used in some cases to trigger harvest restrictions. The new Alaska SST Tools can help in planning safer harvest and cooling strategies by indicating when and where temperatures have already or are likely to exceed this threshold.

The Alaska Max SST tool shows the maximum SST over the last seven days derived from VIIRS (Visible Infrared Imaging Radiometer Suite) at a nadir resolution of about 750 m (NOAA CoastWatch). The temperature scale is demarcated at the critical temperature of 59 F with red or with the darkest shade in the color blind scale option. The Alaska Navy NCOM model tool shows SST forecasts at a resolution of 3.6 km or 1/30th of a degree. Forecast images are shown in a loop at an interval of every three hours over the next four days.

The tools were developed by the NCCOS Cooperative Oxford Lab in collaboration with the NCCOS Kasitsna Bay Lab, NOAA CoastWatch, and the State of Alaska DEH- Food Safety & Sanitation. NCCOS produces several *Vibrio* Predictive Models that improve the safety of oysters by assisting coastal managers and shellfish growers in oyster harvest decision making nationwide.

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# Cryopreservation Shows Genuine Promise For Mussel Farming

by: The Fish Site

A new study shows cryopreserved mussel larvae can survive and develop to adult mussels - a discovery that could help mussel farmers prosper even in years of poor natural spatfall.

A long-term study funded by the ASSEMBLE Plus project has shown that adult mussels can be grown from cryopreserved larvae without compromising the quality of the next generation's offspring.

The Mediterranean mussel (*Mytilus galloprovincialis*) is one of the most farmed molluscs worldwide. This is the first time *M. galloprovincialis* spat produced from cryopreserved larvae were able to develop into adults at the same growth rates as control individuals, be cultured in a natural environment, and even reach average commercial size at the same time as control mussels obtained from non-cryopreserved larvae.

Additionally, the viability of the produced adults is apparently unaffected by the cryopreservation process, with fertility and offspring quality comparable with those of control mussels.

Dr Estefania Paredes, from Universidade de Vigo, who led the research team that designed the cryopreservation protocol said in a press release: "Shellfish aquaculture needs the development of new tools such as this to reduce its reliance on natural spat collection whilst improving good practices and efficiently increasing production. The results signify strong evidence for the suitability of this cryopreservation method for use in mussel aquaculture and in research, where animals must be in optimal health."

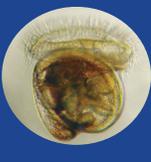
Open access details of the cryopreservation protocol are published in Scientific Reports, under the title Long-term study on survival and development of successive generations of *Mytilus galloprovincialis* cryopreserved larvae.



*Juvenile mussels from cryopreserved larvae settled in ropes with their growth being checked. Photo by: Pablo Heres and Estefania Paredes*

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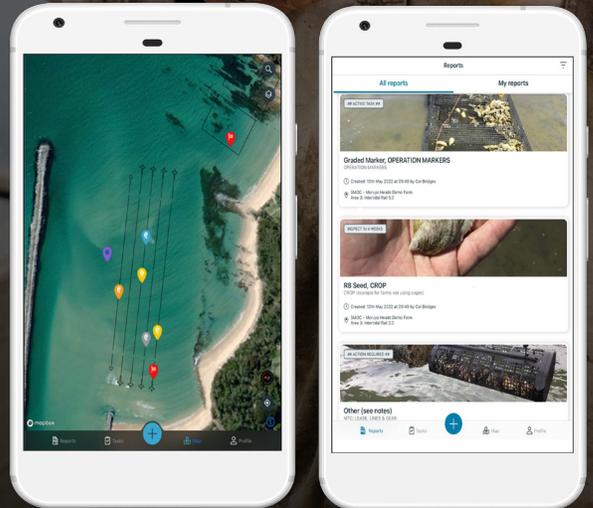
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# More than 100,000 Invasive Green Crabs Removed from Washington Waters This Year

by: Erica Zucco, King 5

WASHINGTON, USA — A number of agencies, tribes and groups across Washington state are working to limit the growth of European green crab populations. Scientists say the invasive species can consume shellfish and other native marine life, and destroy habitats that much of the food web relies on.



Photo by WDFW

The most recent update by the Washington Department of Fish and Wildlife (WDFW) said since the beginning of the year, more than 138,000 crabs have been trapped.

Along with the Washington Department of Natural Resources, U.S. Fish and Wildlife Service and Washington Sea Grant, WDFW said shellfish growers, tribes and other entities have played crucial roles in crab removal.

Allen Pleus, European Green Crab Incident Commander for WDFW, said Washington is still early enough in the phases of invasion that it is possible to make a significant dent in populations.

“We have a really unique opportunity to hit these hard and try to manage them,” Pleus said.

Pleus said the crabs first arrived on the West Coast in 1998, but initial populations appeared to die out. Over the past three to four years, the state has seen a resurgence, mostly on the coast, with Lummi Sea Pond a major area of concern. In December, the Lummi Nation shared that it had seen populations there grow from the tens in 2019, to the hundreds in 2020 and thousands in 2021.

The Shoalwater Bay Indian Tribe said it, too, is dealing with a large influx of the crabs and will use some federal funding to trap tens of thousands this year. “We’re not seeing a let-up on any of the numbers we’re trapping and there’s no population reduction we’ve seen anywhere,” Shoalwater Bay Indian Tribe Director of Natural Resources Larissa Pfleeger-Ritzman said.

WDFW said so far, infestations have been detected in Willapa Bay, Grays Harbor, Makah Bay and Lummi Bay; they remain low across other areas of the Strait of Juan de Fuca, San Juan Islands, Bellingham and Padilla bays. WDFW said it has not yet confirmed the crabs in the Salish Sea south of northern Hood Canal and Marrowstone Island in Admiralty Inlet.

## Industrial Plankton Celebrates 12 Years!

By Ashley Roulston, Industrial Plankton, Inc.

Twelve years ago we founded Industrial Plankton. We couldn't be more proud of the company and team we've become. To celebrate, we took the entire team on a company retreat to Bamfield BC.

Bamfield is a special place for us. It's where our first customer (Nova Harvest) is located. Anyone in business knows how memorable the milestone of a first customer is. Now our bioreactors are in 23 countries, but you never forget your first. It's been great to support Nova Harvest with multiple algae bioreactors over the years, and watch them become a powerhouse shellfish hatchery/producer. While in Bamfield we also had the opportunity to meet Tom Campbell, the President & Founder of West Coast Kelp, and to tour their seaweed nursery.

Thanks to everyone in the industry for the support over the past 12 years. Cheers to more good years ahead!

# EPA Gives \$50M To Help Tribes' Fish, Shellfish Habitat Efforts

By Matthew Nash, Sequim Gazette

Clallam County tribes and other Western Washington tribes are slated to receive up to \$50 million over five years for salmon and shellfish habitat restoration through the federal government.

The U.S. Environmental Protection Agency made the announcement July 19 in Blyn, following the Northwest Indian Fisheries Commission's monthly meeting at the 7 Cedars Resort.

EPA staff said the funds come from the Bipartisan Infrastructure Law to the commission, which provides natural resources management support for several Western Washington tribes — including the Jamestown S'Klallam Tribe.

Casey Sixkiller, EPA's Region 10 regional administrator of Seattle, said the tribes continue to lead joint efforts to restore and protect waters for future generations.



Liz Tobin, shellfish program manager for the Jamestown S'Klallam Tribe, shows some larval Dungeness crab on a tour of Littleneck Beach in Blyn. Sequim Gazette photo by Matthew Nash.

“Today’s \$7.5 million grant [appropriated for 2023] is a down payment on a \$50 million investment over the next five years to support [tribe-]sponsored projects to upgrade critical infrastructure, restore habitat, and address the impacts of climate change on treaty and cultural resources,” Sixkiller said.

Fisheries Commission staff said the EPA funding doubles a previous grant from \$25 million to \$50 million over five years for the Puget Sound Action Agenda, and it supplements annual EPA funding. Fisheries commission vice-chair Lisa Wilson said that as stewards of the land the tribes follow an obligation to their ancestors to maintain Puget Sound, and so that future generations can be able to exercise their treaty rights.

“The late Billy Frank Jr. said years ago that we’re at a crossroads,” Wilson said. “Well, we’re really at a crossroads and we really need to move that dial to make sure we regain and retain our way of life.”

U.S. representative Derek Kilmer wrote in a statement he thinks Puget Sound is critical for future generations “because we know that [it] has no equal in terms of beauty and biological value.

“Our indigenous communities have known that and worked toward that ethic since time immemorial. We all know



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that for too long, the federal government has failed to live up to its trust and treaty responsibilities, and persistently failed to provide the federal funding needed to invest in the infrastructure our tribal communities need.

“But the Bipartisan Infrastructure Law, which I was proud to vote for and which President Biden signed into law, is starting to make a difference.”

Projects EPA designated funds for Puget Sound ecosystem recovery have supported more than 100 projects through the Fisheries Commission since 2010. On July 19, Jamestown S’Klallam tribe’s Natural Resources staff gave a tour of Little Neck Beach in Blyn, and John Wayne Marina with staff speaking about restoration efforts across the Sequim area. Some of the projects that used EPA funding in Sequim include: detection and removal of European green crab with partnering agencies; water quality improvements in the Dungeness watershed; habitat protection and restoration; monitoring marine waters and algae populations to ensure shellfish are safe to eat, and restoration of Jimmycomelately Creek and Estuary.

“At Little Neck Beach, the Jimmy come lately Restoration Project helped the estuary unexpectedly improve the shellfish habitat by firming up tideflat substrate as the fine sediments were retained by restored [the] creek and floodplain,” said Hansi Hals, director of the Jamestown S’Klallam Tribe’s natural resources department.

Sixkiller said he was impressed by Jamestown’s efforts, as it shows “EPA money always goes a little further when working in partnerships.”

The Lower Elwha Klallam Tribe plans to use EPA funds to evaluate fish community responses to habitat restoration in Little River and Indian Creek. The tribe will use data to help evaluate restoration effectiveness in a sub-basin made accessible by Elwha Dam removals, staff report.

The Makah Tribe’s Makah Fisheries Management has four objectives for the funding: continue to participate in policy work groups to provide a presence on freshwater and terrestrial issues for the Western Strait of Juan de Fuca; improve habitat along the Strait of Juan de Fuca; continue instream flow monitoring the Clallam and Sekiu Rivers and of meteorological conditions at the Hoko River Weather Station, and facilitate the Lower Ossert Creek Restoration Design Project for inclusion in an existing large-scale restoration design project.

# U.S. Department of Commerce Invests Approximately \$49 Million to Boost Mariculture Industry in Alaska

by Toby Nelson, EDA Commerce News

WASHINGTON – Today, President Biden will announce the Alaska Mariculture Cluster as one of 21 winners of the \$1 billion Build Back Better Regional Challenge, the most impactful regional economic development competition in decades. Funded by President Biden’s American Rescue Plan and administered by the U.S. Department of Commerce’s Economic Development Administration (EDA), the Regional Challenge is awarding approximately \$49 million in grants to the Alaska Mariculture Cluster, led by the Southeast Conference, to catalyze a sustainable mariculture industry in Alaska.

With \$49 million in funding from EDA, the Alaska Mariculture Cluster will support the region’s growing mariculture industry and ensure that it provides shellfish and seaweed for the long-term benefit of Alaska’s economy, environment, and communities. Projects include the creation of a Revolving Loan Fund to provide funding for local businesses to grow, development of mariculture-focused workforce training programs, and research support to grow innovative seaweed and shellfish products. The coalition will operate in partnership with Sealaska, an Alaska Native Corporation owned by more than 23,000 Tlingit, Haida, and Tsimshian shareholders, ensuring the cluster’s approach centers the priorities of tribal, rural, and underserved communities.

“President Biden recognizes the immense potential of the nation’s ocean and blue economy and Alaska’s important role in its success. For many Alaska natives, mariculture is not just an industry, but a way of life.” said U.S. Secretary of Commerce Gina Raimondo. “This EDA investment will create new opportunities across Alaska that are directly aligned with the needs of tribal and rural communities and can provide long-term benefit to the state’s economy and environment.”

“The Economic Development Administration plays an important role in supporting community-led economic development strategies designed to boost economic recovery from the coronavirus pandemic,” said Assistant Secretary

of Commerce for Economic Development Alejandra Y. Castillo. “This EDA investment will provide the tools Alaska needs to develop a strong and resilient mariculture sector, supporting the nation’s growth of its blue economy.”

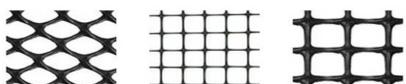
The Southeast Conference Alaska Mariculture Cluster is one of 21 winners – each a regional coalition of partnering entities – that will receive awards between \$25 million and \$65 million to implement an average of six integrative projects that enable each region’s economic transformation and competitiveness.

The Build Back Better Regional Challenge (BBBRC) is an unprecedented competitive federal grant program that provides each regional coalition with significant investments to tackle a wide variety of projects – including entrepreneurial support, workforce development, infrastructure, and innovation – to drive inclusive economic growth. Each coalition’s collection of projects aims to develop and strengthen regional industry clusters – all while embracing economic equity, creating good-paying jobs, and enhancing U.S. competitiveness globally. Projects span 24 states and include \$87 million to two primarily Tribal coalitions and over \$150 million for projects serving communities impacted by the declining use of coal.

The 21 BBBRC awardees were chosen from 60 EDA-designated finalists that each received approximately \$500,000 in funding and technical assistance to continue developing their cluster strategies. The funding for each coalition is approximate, with awards to be signed later in September. Those 60 finalists were chosen from a Phase 1 applicant pool of 529 applications, which exemplifies the tremendous demand for transformational economic development approaches. EDA will continue to support all 60 finalists with the creation of a Community of Practice that will provide technical support, foster connectedness with peer regions and build capacity.

The Build Back Better Regional Challenge is one of EDA’s many programs aimed at building strong regional economies

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and supporting community-led economic development. EDA was allocated \$3 billion in supplemental funding under the American Rescue Plan to assist communities nationwide in their efforts to build back better by accelerating economic recovery from the coronavirus pandemic and building local economies that will be resilient to future economic shocks. As a part of this funding, EDA allocated \$300 million through a Coal Communities Commitment to support coal communities in pandemic recovery and help them create new jobs and opportunities, including through the creation or expansion of a new industry sector. Specifically, EDA has dedicated \$100 million of its Build Back Better Regional Challenge funds and \$200 million of its Economic Adjustment Assistance funds to directly support coal communities. Grantees for EDA's full suite of American Rescue Plan programs will be awarded on a rolling basis through September 30, 2022. For more information, visit <https://www.eda.gov/ARPA/>.

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## Ecosystem Services Photo Contest Increases Monthly Prize Money

With inflation raging across the country, we know how hard it is to decide between ordering another alcoholic beverage or filling up your gas tank. Luckily, you no longer have to contemplate this difficult decision - all you have to do is notice an example of shellfish aquaculture providing a benefit to the marine environment. When you see it, snap a photo and email it to us with a short caption describing the benefit being provided by the shellfish aquaculture industry.



Every month five judges from the PCSGA membership choose a winner. And....we just increased our monthly prize cash award to \$200!

Put a smile on your face and a few dollars in your pocket. Email your ECOSYSTEM SERVICES PHOTO and CAPTION to [memberservices@pcsga.org](mailto:memberservices@pcsga.org). Winning photos will be featured in the next Longlines newsletter, and will be displayed on our website. Good luck!

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# PCSGA's Fall Beach Clean-Up Brings Together 110+ Volunteers

by Vicky Rockey, PCSGA

PCSGA's Fall Clean-Up was a huge success with over 100 volunteers and 15 boats helping to clean up debris from the South Sound. Volunteers came out October 5th to the Arcadia Boat Launch in Shelton, WA, and National Fish & Oyster in Nisqually, WA. This was the first time in two years that we had our beach clean-ups simultaneously.

Salish Seafoods, Squaxin Tribe, Skokomish Tribe, Taylor Shellfish, Wallin's Oysters and Clams, Chelsea Farms, Sound Shellfish, Northwest Shellfish, Seattle Shellfish, and National Fish & Oyster were among several other members who banded together for this event.

The weather was amazing, and fortunately it stayed dry throughout the day. Some notable items hauled in were a mattress, wheelbarrow, lawn chairs, rafts, multiple chairs, a boat, a bike, part of an RV, an old TV, an exercise ball and 14 tires. Over 24 cubic yards of garbage was collected, and over 7 cubic yards of aquaculture was recycled. Boat crews tracked which areas they covered and helped tally up garbage and recyclable marine debris once back onshore.

PCSGA provided pizza, snacks, coffee and beverages to the volunteers to help keep up their strength as they

cleaned our marine environment. We want to give a huge shout-out to everyone who participated and thank you for all your hard work and effort.

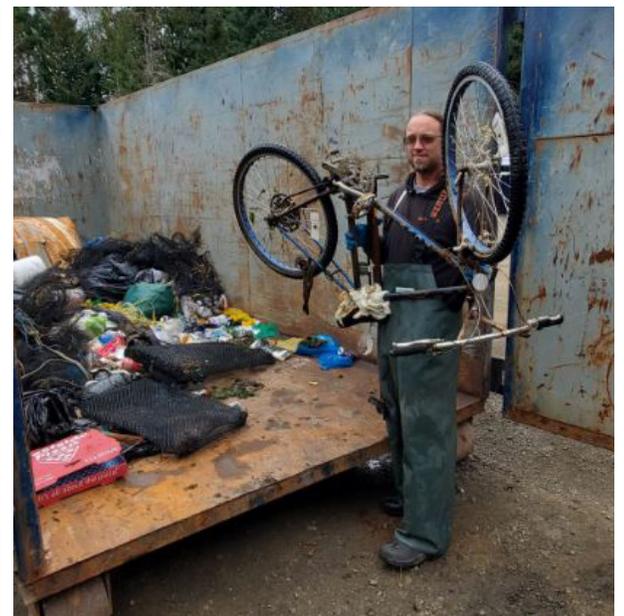
We look forward to our next beach clean-up in the spring!



*Andrew Pavone, Skokomish Tribe, and Nels Whipple, Taylor Shellfish Farms, lift a TV tube into the dumpster*



*Volunteers sift and sort recycling from garbage*



*Blair Paul, Skokomish Tribe, holds a bike that was found on the beach before placing it in the dumpster*

# New PCSGA Allied Member Hinchinbrook Inc Offers 10% Discount on New Orders

by Keith van den Broek, Hinchinbrook, Inc.

Hallprint's type FPN glue-on shellfish tags are rapidly becoming the "gold standard" method of tagging hard shelled shellfish such as mussels, oysters, clams and scallops. The thin (150 µm), flexible custom extruded polyethylene conforms to the shell surface and is specially treated to ensure that it attaches firmly with cyanoacrylate (common household superglue) to shell surfaces.

While custom sizes can be made for an additional fee, the 8 mm x 4 mm oval tag is by far the most popular option as it allows up to four indelibly marked alphanumeric characters (e.g. A000 - A999) for the minimum surface area, whereas the 16 x 8 mm tags can utilize up to seven characters per tag e.g. A000000 - A999999.

Tags are presented on strip rolls for easy detachment in sequential order and can be purchased to include duplicate numbered tags for double tagging experiments. Over a dozen colors are available, and color/ID can be easily matched with most of our other tag styles such as

cable tie and wire-on tags for consistent identification between organisms and physical assets.

Please contact Keith van den Broek at Hallprint's US office located in Northcentral Washington: [hinchinbrook@hallprint.com](mailto:hinchinbrook@hallprint.com) or (509) 885-8032 for further information or an obligation free quote. Many options are also available for immediate purchase through our online store at [www.hinchinbrookei.com](http://www.hinchinbrookei.com). We also offer a huge range of tags and tagging supplies for finfish, elasmobranchs and crustaceans.

Be sure to ask about our new products currently in development, including an electronic shellfish measuring board, underwater calipers, Bluetooth caliper adapters, and more. Consulting services are also available for your research, monitoring, and data analysis needs.

PCSGA Members, please mention this ad for an introductory 10% discount off your first order!

## MTS Announces 2022 Awards Winners

By Nick Rome, University of Washington

Big shout-out to NANOOS Executive Director, Dr. Jan Newton and long-time NANOOS contributor and Affiliate Professor at the University of Washington, Dr. Fritz Stahr as two of this year's Marine Technology Society's (MTS) award recipients.

They were respectively awarded the Lockheed Martin Award for Ocean Science and Engineering Award and MTS Fellow Award for outstanding contributions and distinguishing themselves in their fields. Their ability to relentlessly search for solutions to problems and find innovative ways to improve ocean observing in the Pacific Northwest (and beyond) is the key to our success -- they set an amazing example for everyone in the NANOOS family.



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# PCSGA Stewardship Officer Heads to D.C.

by Sam Klein, PCSGA

In late July I received an email from Sally McGee, manager of the Shellfish Growers Climate Coalition (SGCC), of which many of our members belong. In light of faltering climate negotiations, Sally asked PCSGA to send a representative to Washington D.C. in early August. She felt that PCSGA members, along with members from the East Coast Shellfish Growers Association (ECSGA) and Oyster South had important stories to tell about how climate change is impacting their businesses and coastal communities.



Photo credit: Sam Klein, PCSGA

As I read through the email, I realized with nervous excitement that she was asking me to go to D.C. with a small group of farmers. I knew how important this was, having read about the upcoming reconciliation bill that possibly included history's largest investment in reducing greenhouse gases. With the guidance from PCSGA members Bill Dewey and Mark Wiegardt, our Executive Committee, and support from The Nature Conservancy (TNC), I booked my ticket.

The team consisted of myself, Bob Rheault (ECSGA), organizers of the Shellfish Growers Climate Coalition Sally McGee and Hannah Packman (TNC), Sarah Malinowski (Fishers Island Oyster Farm) and Chris Davis (Pemaquid Oyster Company). Our plan for the trip was to have targeted meetings with senators whose states have shellfish farms and were crucial to passing climate action. We ended up meeting with 16 offices in-person, and many more virtually, to share with them the importance of shellfish growers to their state's coastal communities. We were able to meet with Senator Wyden's (OR) and Senator Murkowski's (AK) offices to discuss specific grower's needs within their states, and how the climate provisions within the bill are important to them. It was a fantastic experience for me to listen



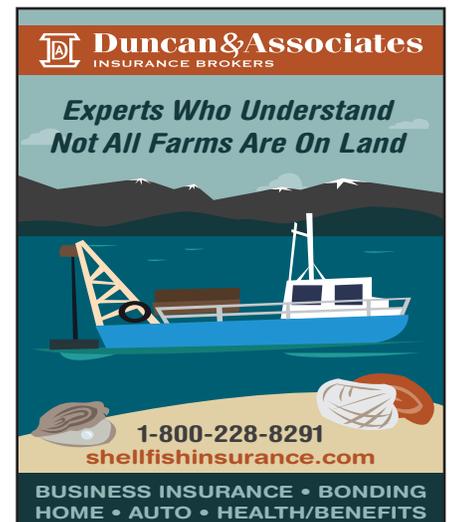
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to seasoned shellfish representatives like Bob Rheault and Sally McGee express industry needs. I even got to try my first Eastern Oyster, though I still prefer Pacifics! The reconciliation bill, renamed Inflation Reduction Act, did end up passing the Senate and House with \$369 billion in clean energy and climate investments. This includes \$30 billion in incentives for solar, wind, and battery manufacturing, \$20 billion to support climate smart agriculture, \$7.6 billion for forest and coast conservation and restoration, \$60 billion for low-income frontline communities' climate resilience, and much more that can aid shellfish growers. Analysts have calculated that these investments will reduce carbon emissions 40% below peak levels by 2030. However, the work is never done. Shellfish growers are passionate about what they do to steward tidelands, produce sustainable food and support coastal communities. We must take steps to ensure that these investments are implemented well and that this industry continues to thrive.



Photo credit: Sam Klein, PCSGA

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## Calendar of Events

### October

- 1 - 2: Oysterfest, Shelton, WA
- 5: PCSGA Beach Cleanup
- 15: Ecosystem Services Photo Contest Submission Due
- 25: PCSGA Board Meeting - via Zoom

### November

- 15: PCSGA Board Meeting - via Zoom
- 15: Ecosystem Services Photo Contest Submission Due

### December

- 13: PCSGA Board Meeting - via Zoom
- 15: Ecosystem Services Photo Contest Submission Due

## PCSGA at Oysterfest

October 1 - 2, 2022



Vicki Wilson, Arcadia Point Seafood; Kim Thompson, PCSGA; Jonnel Fagergren, Calm Cove Oyster Co; and Samantha Klein, PCSGA



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