

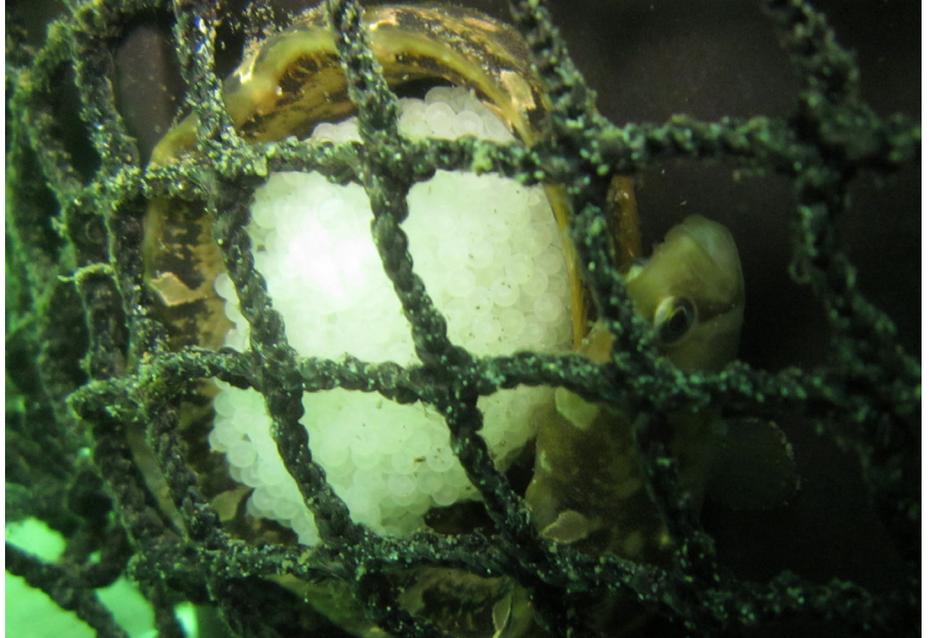
Strengthen Your Voice with PCSGA Membership

Happy New Year! If you're not currently a PCSGA member we hope you enjoy this complementary issue of our newsletter. Members receive Longlines four times a year (December, March, June, and September). If you would like to stay informed on shellfish farming issues and support the shellfish farming community, you are invited to fill out the enclosed membership form and send it in today. You can also become a member online at www.pcsga.org.

PCSGA unites the collective strength of its members to ensure the best possible environment for producing quality shellfish. PCSGA treks to Washington D.C. and state capitals where we follow proposed legislation and regulations, and advocate for favorable market conditions. We make it easier for members to focus on what they do best: producing the world's best shellfish!

Our work for the industry benefits every shellfish grower on the Pacific coast. Benefits of membership include: a voice at the table and a role in shaping important issues of the day; guidance and support on regulatory and legal issues; regular updates on issues and news; trainings; workshops; events; PCSGA's Annual Conference; and the knowledge that your participation is helping ensure our industry's future.

Become a member today by filling out the form on page 7



This year's winning ecosystem services photo by Nicholas Wenzel.

Picture Perfect - Photo Competition Grand Prize Winner

PCSGA is pleased to announce Nicholas Wenzel of Seattle Shellfish as the winner of the 2013 Ecosystem Services Photo Competition. Nick was presented with a check for \$400 at PCSGA's Annual Conference in October. Nicholas' photo of a Saddleback Gunnel using geoduck netting to protect its eggs is a perfect example of an ecosystem service provided by shellfish aquaculture.

The Ecosystem Services Photo Competition awards a monthly prize of \$50 for the best photo, and an annual grand prize of \$400 at PCSGA's annual conference. For more information, visit www.pcsga.org.

BTC Opens New Fisheries & Aquaculture Center

On November 16, 2013 Bellingham Technical College (BTC) celebrated the grand opening of The Perry Center for Fisheries & Aquaculture Sciences. After years of being housed in the former sewage treatment plant, the Fisheries and Aquaculture program at BTC has moved in to a brand new building. Many thanks to the donors who made this possible, including PCSGA members Taylor Shellfish, Seattle Shellfish, Northwest Farm Credit Services, and Rock Point Oyster Company.

Continued on page 4

Walk the Hill

One of the most rewarding opportunities as a member of PCSGA is participating in our annual Walk the Hill visit to Washington DC. Each year, approximately a dozen PCSGA members get a chance to meet with members of Congress and their staff from WA, OR, CA, HI, and AK to discuss shellfish related issues. We have seen significant progress on some of our issues over the years and know that being present in DC has had a great impact.

The week is typically jammed packed with meetings and taxirides but somehow there always seems to be enough time for some fun including visits to our national museums and monuments. Novice “walkers” should not be intimidated. One of the best things about being in DC with PCSGA is the camaraderie and relationships that develop during the week. Being in the marble halls of Congress is a far cry from the farm, but all PCSGA members are welcomed and effective.

Please consider participating in this year’s walk which will be the week of February 23rd. If you are concerned about the financial cost, please contact PCSGA to discuss how our Grower Enrichment Fund can help.

Pacific Coast Shellfish Growers Association

2013-2014

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pcsga@pcsga.org
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What the Tide Brought In: *words from our director*

In a matter of days we’ll turn the calendar to 2014. Like you, I have great expectations for 2014. Among other things, I hope to see a much anticipated HCP from the WA Department of Natural Resources as well as a completed consultation on the Nationwide Permit 48. I also hope we continue to demonstrate the importance of our great industry – not just to the economic and environmental health of our region, but also the social value that has been woven into shellfish communities.



Current and former PCSGA directors Margaret Barrette, Robin Downey, and Tim Smith

PCSGA works hard to ensure growers have the tools they need to produce quality shellfish and remain competitive. In 2013 we hosted a seed summit and spawning identification class. We also connected with state and federal decision makers on a variety of issues including shoreline planning, ocean acidification, food safety, international trade, and research. We have exercised legal options in cases about non-point source pollution, administrative restrictions on shellfish farming and fought for one of our own in an attempt to keep their farm.

Given the chaos of everyday life, I don’t expect you to keep track of all that PCSGA does for you and your business. However, I ask that as you consider whether or not to join or renew your membership, you think how the industry has changed over the past 8 1/2 decades and how through it all, PCSGA and PCOGA have been there. During the annual conference, it was an honor to stand with recent past directors Tim Smith and Robin Downey. Together, we represent the past 25 years of this great organization. A great number of amazing things have been accomplished over the years and ...I’m just getting started!

I wish the best for you and your families for this holiday season and always.

Be well, Margaret



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ISSC Update

Every other year changes to the National Shellfish Sanitation Program (NSSP) are considered by the Interstate Shellfish Sanitation Conference (ISSC). Due to the recent government shutdown, the 2013 Conference will now be held during the last week in January in San Antonio, TX.

As a PCSGA member you can take solace in the fact that your fellow members are considering dozens of proposals (80 to be exact) and determining if and how certain proposals will impact you. Some proposals address new testing protocol, time to temperature requirements, and controls for vibrio management. One of the most worrisome proposals has to do with a one hour requirement to get product to 50 degrees.

PCSGA is also working with industry representatives from around the country as well as shellfish authorities in WA, OR, AK and CA to establish strategies to make the NSSP an effective tool and to reduce unnecessary and ineffective requirements for shellfish farmers. It is daunting to think how one might do this work alone and exemplifies the value of your PCSGA membership.

PCSGA members are also invited to attend a special meeting on January 7th in Portland OR. During this time you'll get the current status on the ISSC proposals and have the opportunity to ask questions and share how the proposals might impact you and your operations. The meeting will take place at the Embassy Suites. For more information, please contact Margaret Barrette at 360-754-2744. The event is open to all PCSGA members, in good standing. Please consider joining to be part of this very important discussion.

Pearls from the Prez:

When I last wrote Pearls, the annual conference was just around the corner. One of the early pre-conference events was a mountain bike ride, in which I participated. I thought I was in fairly good condition, but was taught a lesson. I did complete the uphill portion of the ride, however, I finished last. My lesson learned was that a new exercise routine was needed to offset my sedentary management and consulting work, and to be able to safely navigate on the tidelands. Since that day, I have exercised daily and walked the equivalent of walking home from the conference (300+ miles). Thanks go to Connie for organizing that painful ride, and to my good friend and last place -unnamed- bike partner, who also needs some healthy exercise.

The conference presentations were great this year and covered some hot topics, including ecosystem services provided by our shellfish and farms, and a great workshop on oyster seed rearing. As a follow-up to the seed summit held earlier this year and the conference workshop, the Education Committee will continue work on additional grower resources. The details are yet to be worked out, but will likely include a reference manual and resource guide. A small group of dedicated volunteers will develop these resources, as time allows. We will also provide many of the seed rearing presentations on the PCSGA website as a further benefit to members.

I represent the PCSGA on a Dept. of Ecology committee to develop new water quality standards, including a new fish consumption rate upon which contaminant discharges from industries and municipal treatment facilities will be regulated. These new standards will be put into law during the first half of 2014 and more details will be provided as the rules are developed. A Dept. of Health committee is working on an improved Vibrio control plan and will be working through some test protocols this coming season with hopes that we can reduce Vibrio illness through a proactive approach, rather than the current reactive approach. There are many PCSGA members actively involved in the Vibrio committee and I believe that you are well represented.

Be safe during these winter storms,
Dave Steele, PCSGA President



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From left to right: Edd and Virginia Perry, Chuck and Diane Bundrant, BTC Students Rihanna Earl and Scott Smith, and Dr. Patricia McKeown BTC President. Photo by Craig Perry-Ollila

BTC

Continued from page 1

Since 1979 BTC has offered an associate degree science-based program, which includes a strong hands-on skill component. This is the only program of its kind in Washington, Oregon, Idaho and California, so it is a valuable resource for the northwest fisheries and aquaculture industries.

The new building complies with the standards for the Leadership in Energy and Environmental Design (LEED) program. It was named by Chuck & Diane Bundrant of Trident Seafoods honoring Edd & Virginia Perry. The new center includes a hatchery for both shellfish & finfish,

a student study, classroom space, a dry lab, and locker room. Outside are the rearing ponds for steelhead, Chinook, pink and chum salmon.

With these new state of the art facilities, BTC can continue turning out highly trained students ready for careers in the fisheries and aquaculture field.

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Alaska Shellfish Growers Association Update

By Weatherly Bates and Anthony Lindoff

The Alaskan Shellfish Growers Association (ASGA) is transitioning as Rodger Painter, the founder and current president phases out of the association. For over 30 years Rodger has dedicated his life to the shellfish farming industry in Alaska, operating his own oyster farm in Southeast Alaska, leading ASGA, working with the Alaska Shellfish Marketing Institute, securing Alaska Department of Environmental Conservation (DEC) funding for mariculture loans and numerous grants for the shellfish industry. His advocacy has been critical in developing a shellfish farming industry in Alaska.

ASGA's Annual Meeting was held October 23-26 in Ketchikan. The first day of workshops was held by Alaska Sea Grant's Marine Advisory Program with a workshop on Alaskan Mussel Culture and technical presentations made on oyster and mussel culture. The following day had presentations by Alaska DEC, Alaska Department of Fish and Game (ADFG), Department of Natural Resources (DNR) and two guest speakers.

Continued on page 5

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Sue Shotwell (right) with participants from her algae class. Photo by Sue Shotwell

Alaska Update

Continued from page 4

Sue Shotwell, Nisqually Tribe, hosted an algae workshop and gave presentations on oyster and algae culture that were well attended. Algae culture training was a major focus because all of Alaska's remote setting facilities have been struggling with algae production.

Dr. Jeremy Mathis presented on ocean acidification in Alaska. Rapidly accelerating rates of ocean acidification hold potentially major threats to shellfish and salmon stocks in Alaska. Mathis' recent research uncovered multiple sites in the Gulf of Alaska where concentrations



Cape fox Lodge provided a festive assortment of Halloween props to liven the meetings. Photo by Weatherley Bates

of shell building minerals were so low that shellfish and other organisms in the region would be unable to build strong shells. He also stated that ocean acidification is compounded in Alaska by glacier run-off which has a low pH.

ASGA held a business meeting, in which Margaret Barrette helped to facilitate a discussion on how PCSGA can help ASGA transition to a new president and board. It was decided that ASGA would operate under a provisional board with 7 members for the next year. Member-directed goals for the organization and committees were established. Topics of focus include: seed, regulations, business planning, membership, and a mariculture revolving loan program.

The Value of PCSGA Membership

By Duane Fagergren, Calm Cove Oyster Co.

I have been affiliated, one-way or the other with PCOGA, OOGA, and PCSGA for most of my 65 years. My Dad started Calm Cove Oyster Company in the mid 40's, and in those days fighting pulp mill pollution from Rayonier in Shelton called on growers to unite. After WWII, it also meant organizing to buy seed from Japan.

As a prideful small South Sound grower, Jonnel and I consider ourselves fortunate to be part of this efficient and effective association of west coast growers, PCSGA.

Some of the real tangible benefits (beyond social and life-long friendships) include: Buying power for seed and equipment; connection to progressive growers, large and small; ability to keep up to date on ever-changing regulations and emerging legislation at the local, state and federal levels; attending annual growers' conference for a fun get-away to exotic places like

Continued on page 6



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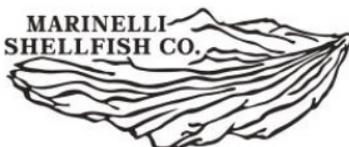
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Membership

Continued from page 5

Bend, Marysville, Tacoma, and Vancouver, to name just a few; and learning about new ways of growing our products from growers and allied members. Such features of the annual meeting as “Down on the Farm” are great; identifying with the industry, members and staff, and being able to share perspectives and tell stories, some even true. Our vote and voice as a small grower carry weight equal to large growers, which is refreshing in a trade association.

PCSGA feels like a functional family of dedicated growers, crackerjack staff (thanks Margaret, Connie, Mary) and contractors (e.g., Jim Jesernig, Plauché and Carr) who work effectively together and get things done even under trying conditions.

I will soon leave public service work after working 22 years with the Puget Sound Partnership (and its predecessor agencies). Jonnel and I look forward to being more engaged with shellfish culture, research, and with the Association.

More Comments From Our Members

“As a supplier of aquaculture and sea harvest containers, the PCSGA gives me visibility in an industry that I wouldn't have much visibility otherwise because I am not a grower. After a dozen years of membership, I find the PCSGA alliance to be an important component in marketing to this vital trade.”

Steve Call, Thunderbird Plastics

“It is VERY worthwhile to be members of such groups, because: 1) the sharing of information among fellow growers is so important. 2) Being able to speak with a collective voice, especially to the government. 3) Simply getting to know other folks who face the same problems, is somehow reaffirming.”

Dave Robbins, Hama Hama Co.

“We value our PCSGA membership because it gives us exposure to the oyster industry. We supply packaging products to many of the Oyster companies in the Northwest. We find that placing ads in the newsletter and having a booth at the annual conferences helps grow our business.”

Bryan Thulin, Aaron Packaging

“PCSGA is and has been critical to the success of the shellfish farming industry on the West Coast. It has been a strong advocate for protecting the industry from the many challenges we face and also for advancing shellfish farming to help us take advantage of other opportunities. Through PCSGA we growers get more clout with agencies, politicians and the communities where we work than we would as individual businesses. I also find that PCSGA brings growers together to share their individual ideas, problems and successes and from my experience over the years that interaction has benefited my family's company tremendously. PCSGA has represented growers successfully for generations and I believe that if it continues to engage and listen to growers it will represent the shellfish farming industry for many generations to come.”

Bill Taylor, Taylor Shellfish

Save the Date.....

PCSGA's Spring Beach Cleanup is March 13, 2014



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- Discount rates at Annual Conference & Tradeshow
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- Friend - All the above, plus entrance for one to PCSGA Annual Conference and Tradeshow at membership rates
- Associate - All the above, plus 2-1/4" x 2" ad in newsletter, company name on website, access to membership list
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Sustainably Farmed Shellfish Certification Program Reinstated

By Matthew Buck, Food Alliance

Following a suspension of services announced in February 2013, the non-profit Food Alliance has relaunched its third-party certification for sustainably farmed shellfish. Certifications for all participating shellfish growers and processors will continue under existing terms. Food Alliance is also prepared to receive new certification applications, and to begin scheduling new inspections.

Food Alliance developed the sustainability standard for farmed shellfish in response to a request made by the Pacific Coast Shellfish Growers Association, and with the assistance of the Pacific Shellfish Institute. The standard applies to North American production systems that produce shellfish from seed to harvest within a defined area and with clear ownership of the shellfish cultured, and covers oysters, clams, mussels, and geoducks. Wild harvested shellfish are not covered.

The standard addresses the following areas of concern: fish

and wildlife conservation, integrated pest and weed management, healthy and humane care for shellstock, conservation of soil and water resources, safe and fair working conditions, and shared resource management.

Shellfish growers and processors that have already received certification from Food Alliance include: Chelsea Farms, Coast Seafoods Company, Hog Island Oyster Co., and Taylor Shellfish Farms. "This was great news to us," says Marco Pinchot, Community Relations and Sustainability Manager at Taylor Shellfish Farms. "Food Alliance certification is something we believe in that creates value for us and our customers."

The evaluation criteria published by Food Alliance allow growers to self-assess current sustainability performance – and set sustainability objectives – either as a prelude to certification or as a best management practice. Those growers and processors that proceed with certification also have a credible way to distinguish their operation and products in the marketplace.

Food Alliance certification can help shellfish operations: demonstrate and document commitments to sustainable practices; address specific buyer concerns for social and environmental performance;

differentiate and add value to products; protect and enhance brands; access new market opportunities; and build customer loyalty.

More information and copies of standards and application materials can be found at: foodalliance.org. Those with questions can reach Food Alliance representative Matthew Buck at 503-267-4667 or by e-mail at matt@foodalliance.org.



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Grower Profile: Carlsbad Aquafarm

By Rebecca Richards, Acacia Pacific Investments, LLC/Carlsbad Aquafarm

Carlsbad Aquafarm is Southern California's only shellfish aquafarm growing over 1.5 million pounds of shellfish annually. Located on the Agua Hedionda Lagoon in Carlsbad, the site was originally founded as an aquaculture research facility in 1968 for San Diego State University. Co-owners John Davis and Acacia Pacific Investments have been farming at this site since 1990. We grow California, eco-friendly Mediterranean mussel, Pacific oyster, San Diego's green abalone, and native red seaweed. Speckled scallop, bay scallop, and manila clam will join the product portfolio in 2014/15. The farm has also developed a secondary line of products for the marine aquaria trade known as live-feed that includes micro and macro algae, copepod, amphipod, and brine shrimp.



Oyster harvesting at Carlsbad Aquafarm. Photo courtesy of Rebecca Richards

Both product lines allow the farm efficient use of its facilities, marine biologists, harvest crew, and grow-out systems. Suspended long-line cultivation and shore-based seawater tanks have minimal impact on marine habitats, wild fish populations, water quality, and the community. Rigorous laboratory testing and ultra-violet purification systems help ensure product safety while close proximity to the Los Angeles and San Diego metropolitan areas and major airports allow the farm a quick turn-around from harvest to shipping and delivery. The result is fresh, high quality, Southern California products with a small carbon footprint.

The success and growth opportunities of Carlsbad Aquafarm are dependent upon its relationships with other growers, hatcheries, equipment vendors, academia, and

seafood wholesale companies. Much of this has been greatly enhanced since becoming a member of PCSGA in 2012. Their purpose, to represent and work on behalf of its west coast growers and hatchery members, promotes and invites an invaluable forum for open dialogue, information exchange, networking, and collaboration.

Carlsbad Aquafarm is committed to sustainable mariculture and pursuing a necessary balance between the demand for responsible seafood production and the preservation of our oceans' resources.



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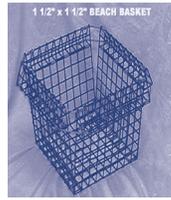
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Mussels Reduce Nutrients in Budd Inlet

By Aimee Christy, Pacific Shellfish Institute

In southern Puget Sound, Budd Inlet water quality is below state standards for a number of parameters, particularly dissolved oxygen. To address this issue, Pacific Shellfish Institute (PSI) is testing nutrient bioextraction, or the practice of growing and harvesting shellfish to remove nitrogen from natural water bodies. Over 225 nylon straps were placed under 3 existing dock structures to provide an attractive home for planktonic mussel larvae to attach to. By summer's end, over 8000 pounds of adult mussels were filter-

feeding on these straps, improving water clarity and incorporating nutrients into their tissues.

These mussels were harvested, chipped, and delivered to The Evergreen State College's Organic Farm, WSU-Puyallup Research and Extension Center, and Cedar Creek Correctional Center for ongoing compost trials. Next spring, over 15 cubic yards of rich, organic compost will be available to students, small farms, and inmates for plant growth trials.

While laboratory results are pending, the mussels removed an estimated 125 pounds of nitrogen, or 1 pound of nitrogen per day, from lower Budd Inlet over the course of 4 months. A scaled up version of this project could potentially serve to complement the Lacey Olympia



Assessing biomass, growth rates, and biodiversity during a community sampling day. Photo by Bobbi Hudson

Tumwater Thurston County (LOTT) Clean Water Alliance's current nitrogen removal efforts.

In addition to directly removing nitrogen from Budd Inlet, the mussel demonstration sites provided hands-on opportunities for the community. Over the summer, PSI hosted citizen monitoring events, K-12 field trips and classroom presentations. Outreach efforts focused on improving public understanding of local water quality issues, ecosystem services of shellfish, and controlling upland sources of nutrients that flow into Puget Sound.

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What is Shellfish Aquaculture Worth?

By Bobbi Hudson, Pacific Shellfish Institute

The Pacific Shellfish Institute (PSI) is wrapping up a multi-year effort to value West Coast shellfish aquaculture. Thank you to the producers and processors that responded to PSI's survey, and a special thanks to the companies who served as "key respondents," providing detailed expense data. Highlighted survey results include:

	WA	OR	CA
Acres reported	22,502	3,043	6,201
% of acres permitted (non-tribal)	76%	61%	100%
% of permitted acres "actively farmed"	62%	32%	12%
Spending per "actively farmed" acre	\$4,988	-	\$16,017

Based on analysis by Northern Economics Inc., shellfish aquaculture in Washington State generates over \$101M of direct economic impact, \$38M indirect impact, and \$45M induced impact. That's \$185M in total output, which doesn't even include Washington's \$40+M wild clam harvest. Shellfish farm employment totaled 1,900 jobs, with an additional 810 indirect and induced jobs stemming from shellfish farm activity. To look at it another way: for every \$1M spent by shellfish farms, 26.72 jobs are created. (This is the employment multiplier.) For comparison, forestry/logging in Washington generates 9.92 jobs per \$1M, and ship/boat building generates 9.54 jobs per \$1M. Only administrative/employment support services generates more jobs per \$1M spending, at 27.79 jobs.

Another common multiplier is labor income (LI), which also stands out for shellfish farming. Per dollar spent, LI is 0.76 for shellfish aquaculture, 0.50 for forestry/logging, and 1.01 for administrative/employment support services. The overall multiplier for Washington's shellfish aquaculture industry was calculated to 1.82, which compares to 2.06 for forestry/logging, and 1.91 for ship/boat building.

For more information about the survey, visit www.pacshell.org, or contact Bobbi Hudson at (360) 754-2741 or at bobbi@pacshell.org.



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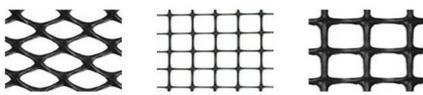


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CURRENT EVENTS

January

- 7-8: PCSGA Board Meeting:** Portland, OR.
- 26-Feb 1: ISSC.** San Antonio, TX.
- 31-Feb. 1: Portland Seafood and Wine Festival.** Oregon Convention Center, Portland. www.pdxseafoodandwinefestival.com.
- 4: PCSGA Virtual Board Meeting:** 9-11am.
4: FoodWorx Conference. Gerding Theater. Portland, OR. www.foodworxconference.com.

February

- 9: Aquaculture America.** Washington State Convention Center. Seattle, WA. www.was.org.
- 15: Confluence: A Wine, Beer, Seafood & Music Festival.** Reedsport Community Center. Reedsport, OR.
- 20: PCSGA Annual Legislative Reception.** State Capitol Museum. Olympia, WA. www.pcsga.org.
- 20-23: Newport Seafood & Wine Festival.** South Beach Marina. Newport, OR. www.seafoodandwine.com.
- 23-28: Walk the Hill.** www.pcsga.org.

March

- 1: Penn Cove Mussel Festival.** Coupeville, WA. www.thepenncove mussel festival.com.
- 3-4: Sea Grant Conference for Shellfish Growers.** Alderbrook Resort & Spa. Union, WA. www.wsg.washington.edu.
- 4: PCSGA Virtual Board Meeting:** 9-11am.
- 17-19: PacRim Annual Conference.** Location to be determined.