



Welcome to the new Minister & Staff Updates



Welcome and congratulations to the Honourable Joyce Murray on her appointment to Minister of Fisheries, Oceans and the Canadian Coast Guard. Many First Nation communities and entrepreneurs have embraced aquaculture to manage our traditional territories and to develop partnerships and create economic development options. The AAA looks forward to working with her to advance Indigenous aquaculture development. To continue working jointly to develop a Blue Economy Strategy that

supports and understands the essential role that aquaculture plays for remote coastal First Nation communities.

There are a number of staff changes at the Department of Fisheries and Oceans Pacific Region.

Brenda McCorquodale has replaced Allison Webb as DFO's Director of Aquaculture Management. Mrs. McCorquodale brings many years of fisheries & aquaculture experience to the position having worked with DFO for over 21 years and, it is the AAA's hope that Brenda's long tenure with DFO will be a positive influence for First Nations and Indigenous entrepreneurs wanting to engage in new aquaculture businesses or expand existing sites. It is also hoped that her office will put measurable effort in creating long awaited DFO policy that will allow

for new species to be farmed such as sea urchin, sea cucumber & abalone.

Neil Davis has replaced Andrew Thomson as the new Regional Director, Fisheries Management. He can be reached by email at Neil.Davis@df-mpo.gc.ca. The AAA would like to thank Mr. Thomson for his support of the AAA over the years.

Amy Mar, Regional Manager, Sustainable Fisheries Framework, has been appointed as the manager to the new Fish Pen Transition Program and can be reached at 604-666-1090 or by email at Amy.Mar@dfo-mpo.gc.ca.

The province of British Columbia also recently appointed Jessica Outhwaite as the new Aquaculture Section Head of the BC's Ministry of Forests, Lands, Natural Resources Operations and Rural Development (FLNRORD) responsible for all aquaculture tenures; License of Occupations, Leases, Reserve Notation etc. Jessica replaces the much-appreciated Lesley Fettes who brought a wealth of knowledge and experience to the position and was a supporter and facilitator of aboriginal aquaculture development.

New BC Emails

New All Seaweed Aquaculture enquiries:
AquaticPlants.Courtenay@gov.bc.ca

New - All aquaculture site inquiries to Min:FLNRORD:
aquaculture.program@gov.bc.ca

Seaweed Farming

Like other natural foods today, Seaweed is considered a "super crop" for all its nutritional and medicinal advantages and because of this there is a huge amount of noise being made around seaweed farming globally. The coastal waters of British Columbia provides ideal currents, pristine temperatures, and nutrients creating some of the best quality seaweed found on Earth.

Around the globe the supply of goods has been disrupted over the past two years causing concern to consumers and businesses alike. As a result, there is a lot of attention being paid to local seaweed. Globally countries are starting to look more to locally produced natural foods from the land and sea. The supply of seaweed typically comes from across the ocean from Asian countries where they are able to harvest a lot of seaweed at a very low cost of labor.

With the health benefits of seaweed and the quality of seaweed grown in our coastal waters, it is not surprising that in B.C. we see many companies trying to leverage into the seaweed space in our traditional territory waters. They chase

the demand for premium seaweed and try too quickly to establish farms to start production.

While current small-scale cultivation projects are considered lower risk an expansion of the industry that includes large scale cultivation will require a more complete understanding of the scale dependent changes in order to balance environmental and financial risks with the benefits that seaweed cultivation projects can offer. What scale is needed to be profitable, what are the impacts of any expansion on the environment/eco-system, are the infrastructure needs to support an expanded operation available and viable? There are still many unknowns with seaweed aquaculture.

There are claims that seaweed sequesters carbon thus reducing CO2. While this is a promising mitigation strategy the carbon sequestration value is still speculative. More science and research are needed to know how much is sequestered as well as the co-benefits and dis-benefits (risks). To do this properly a framework that assesses this needs to be developed along with proper monitoring.

When considering seaweed farming you would want

to ensure that the farm/business plans include being involved financially with the sale of the seaweed down the value chain with the various seaweed products being produced. Typically, the farmers do all the hard work and sell their crops to companies that then turn the seaweed into food additives, supplements for our health, cosmetic products and many more. Those companies tend to make far more profit than the hard-working farmer. Make sure that your plans also look downstream where the bigger profits are found.

Rapid growth brings with it many risks. In order to limit your risk, take a more cautious approach. Be wary of the many promises of the environmental benefits, employment and profits of seaweed aquaculture.



Water Classification for Shellfish Aquaculture & Harvesting - Falling Short of Industry Needs

The Canadian Shellfish Sanitation Program (CSSP) is a federal program jointly administered by the Canadian Food Inspection Agency (CFIA), DFO and Environment Canada Climate Change (ECCC) and, is tasked with ensuring the safe harvest, production and consumption of shellfish on behalf of all Canadians and export markets of BC shellfish.

The CSSP determines areas that are safe or unsafe for shellfish harvesting and consumption whether wild or farmed through regular testing of samples and water quality assessments of British Columbia waters. The agency is responsible for monitoring shellfish bio-toxins (red tide and harmful algae blooms), identifying safe shellfish harvest areas, identify and assess sanitary and bacteriological water quality surveys and determine whether waters are "open" or "closed" designation for aquaculture operations. All shellfish aquaculture must be conducted in "open" designated waters approved for such activity, furthermore the harvest of cultured shellfish in areas closed because of sanitary conditions (fecal coliform) cannot be sold unless depurated or relayed prior to processing and sale.

The most recent challenge (amongst already many) facing new entrants into shellfish aquaculture is that the CSSP program does not have the resources to conduct regular sampling and water testing for areas outside of existing shellfish aquaculture production zones. The funding of this program has not increased in over 15 years. This is especially challenging for entrants located in more remote areas such as the upper Vancouver Island and Central Coast. These new entrants (high percentage are First Nations and Indigenous entrepreneurs) are faced with not having the water classification that allows for aquaculture development even though their remote location is an actual benefit in that those waters are usually void of pollution and human impact (fecal coliform) which continuously plague populated areas. One only has to think of recent Norovirus outbreaks to understand the impact to humans.

For Canadians and world markets to continue having faith in our brand of high-quality shellfish farmed in pristine and unpolluted waters and, to support the livelihoods of shellfish harvesters and producers as well as consumer wellbeing, the government

must step up to the challenge and make available more funding to the CSSP in order to maintain the agency's ability to test and sample waters in more areas around BC, especially those areas that have little or no testing regimens. Closed or untested waters stall the growth of shellfish aquaculture development. This is perhaps an opportunity for government to work more closely with First Nations in managing the issue of safe shellfish for all.

Ocean Acidification & Hypoxia Workshop Planned

In 2019, the Province of British Columbia completed a [Preliminary Strategic Climate Risk Assessment](#) as a part of [B.C.'s Climate Preparedness and Adaptation Strategy \(CPAS\)](#) to better understand climate-related risks and help the provincial government develop appropriate measures to address those risks. This assessment noted that by 2050, ocean acidification (OA) was an almost certain likelihood to occur; however, due to a lack of information, the consequences from OA were much less certain. In addition to OA, hypoxia is also an anticipated intensifying threat along coastal margins. The fisheries and aquaculture sectors play an important part in BC's food security and are vulnerable to OA and hypoxia. Accordingly, there is an urgent need

to determine the state of knowledge related to OA and hypoxia in BC's coastal waters. In response to the Risk Assessment findings, the Province of BC is developing a Fisheries and Aquaculture Ocean Acidification and Hypoxia (OAH) Action Plan.

This Plan aims to determine the state of knowledge related to ocean acidification and hypoxia in BC's coastal waters, with long-term goals for addressing knowledge gaps and developing adaptation and mitigation strategies to support the fisheries and aquaculture sectors, traditional harvesters, and other BC seafood interests. As part of this effort a series of four workshops have been planned.

The first workshop took place in November providing an overview of the State of the Science

on OAH Research. The balance of three workshops will be held over the coming months hosted virtually by the Quadra Centre for Coastal Dialogue.

BC Seafood Harvester and Producer Perspectives on OAH. This workshop will review the key themes and recommendations from the first workshop and give an opportunity for BC's commercial harvesters, food-fish harvesters, and

aquaculture producers to share their perspectives.

January 18 & 19th 2022
Coastal Communities' Perspectives on OAH in BC. The focus of this workshop is to give an opportunity for BC's local governments and First Nations governments to share their perspectives and expand on socio-economic impacts and perspectives from affected communities.
February 15th & 16th
The date for the

fourth workshop is yet to be determined but will provide an opportunity for recommendations from the first three workshops to be reviewed under a policy and governance lens.

The outcome of all of the workshops will consist of a synthesis with recommendations in support of the development of regionally-relevant mitigation and adaptation strategies for B.C.'s fisheries and

aquaculture sectors.

We encourage you to participate in this effort. If you are interested in attending, you can fill out an expression of interest [here](#) in order to receive a notification when the full registration is available. There is no cost to attend the workshop.

Aquaculture Funding Opportunities

Several programs that make funding available for First Nation & Indigenous aquaculture research & development are available with application submission deadlines looming on the horizon:

PICFI ADS - Application Deadline target end of February 2022:

- Funding that provides support to First Nations to develop sustainable aquaculture operations.
- Available to First Nations in the Pacific Region that currently do not participate in PICFI CFEs.
- Minimum of 10% cash contribution towards the total project expenditures required.
- Expansion or upgrades to existing marine finfish, shellfish, or land-based aquaculture facilities.
- Equipment, gear and infrastructure for new aquaculture operations.
- Acquisition of an existing aquaculture operation.
- Business Plan development (includes technical and management advisory costs).
- Start-up costs (administration, salaries, wages for project management/technical advisory, seed, training etc.)

ABAM - Area Based Management - Application Deadline December 31 2021:

- Funding available for First Nations to participate in the creation of an Area Based Management Pilot Project.
- Contact Amber Neuman Senior Aquaculture Management Coordinator at (250) 754-0406 for program details.

FACTAP - Fisheries & Aquaculture Clean Technology Adoption Program

- FACTAP funding commitment has been extended till 2023.
- Aquaculture producers wishing to pilot new late-stage innovative technologies, systems or processes.
- Aquaculture producers wishing to purchase and install existing, off-the shelf clean technologies, processes and sustainable practices.

PacifiCan - Pacific Economic Development Canada, SPI - Strategic Partnership Initiative

- Funding (up to 50%) and loans (5 years interest free) for Indigenous Businesses, Partnership or Joint Ventures.
- For environmental diagnostics and evaluations, for pre-feasibility and feasibility studies.
- For skills development and training and for expanding viable businesses.
- New BC specific agency, used to be called Western Economic Diversification.

BCSRIF - BC Salmon Restoration Fund - 2022-23 Funding Round yet to be Announced

- Focuses on three areas: Innovation, Infrastructure & Science Partnerships.
- Priorities include:
 1. Aquaculture and the changing environment.
 2. Species of concern rebuilding (habitat restoration).
 3. Community hatchery upgrades.
 4. Increasing innovation to support the sustainability and economic stability of BC Fisheries.

Canadian Fish and Seafood Opportunities Fund

- Funding available for maintaining and accessing new markets.
- Branding and promotional strategies to increase Canada's standing as global leader in high-quality & sustainable seafood.
- Funding available for ensuring product integrity throughout the supply chain.
- Contact 1-844-795-9718 or DFO.opportunities-initiatives.MPO@dfo-mpo.gc.ca



Season's Greetings

The AAA
Board of Directors & Staff
Wish you and your family a

Merry Christmas

and a

Happy and Healthy New Year



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