

IN BRIEF

Alaska Mariculture Development Plan

2018



"Aquatic plants and shellfish present a significant and sustainable economic opportunity for coastal Alaska communities....I support this comprehensive plan and commit the State of Alaska to work in partnership with stakeholders and agencies toward its implementation."

—Governor Bill Walker

"This plan is intended to increase profitability, expand participation, and provide coordination....the Task Force members remain committed and are enthusiastic about expanding Alaska's mariculture industry."

—Alaska Mariculture Task Force



What is Mariculture?

Enhancement, restoration, and farming of shellfish (marine invertebrates) and seaweeds (macroalgae). Finfish farming is not legal in Alaska waters, and therefore, it is not considered in this report.

Why Mariculture?

Economic Benefits

- 🌀 Adds jobs in primary, secondary, and support sectors.
- 🌀 Adds money and commerce flowing through coastal communities.
- 🌀 Increases trade domestically and internationally.

Environmental Benefits

- 🌀 Shellfish filter and clean the water allowing light to penetrate.
- 🌀 Shellfish and seaweed remove excess nutrients.
- 🌀 Shellfish and seaweed provide essential habitat and support diverse ecosystems.
- 🌀 Shellfish and seaweed help mitigate ocean acidification in local waters.

Cultural Benefits

- 🌀 Complements existing traditions and customs in coastal communities.
- 🌀 Complements existing skill sets.

This synopsis of the 2018 Alaska Mariculture Development Plan presents results of a two-year planning process by the Governor's Mariculture Task Force (MTF).

The MTF, including advisory committees, held public meetings, conducted outreach, and completed an economic analysis as part of the planning process. The economic analysis included case studies of successful mariculture industries, an economic framework for developing the Alaska mariculture industry, and a cost/benefit analysis of the economic impacts of mariculture industry development.

Vision

Develop a viable and sustainable mariculture industry producing shellfish and aquatic plants for the long-term benefit of Alaska's economy, environment, and communities.

Goal

Grow a \$100 million mariculture industry in 20 years.

Guiding Principles

Coordination and Leadership

Effective implementation of this comprehensive plan requires coordination and commitment of time and resources from local, state, federal and tribal governments, industry, communities, the University, and other interested stakeholders.

Sustainability

Development of mariculture will be compatible with sustainability principles to maintain and improve environmental integrity, as required by the Alaska Constitution and ADF&G management practices.

Alaska Native Participation

Mariculture development will benefit from the involvement of Alaska Natives in every element of the process.

Innovation

Alaska presents many unique challenges, and developers will look globally to applicable research and solutions to apply to Alaska's circumstances and geography.

Compatibility

Implementation of this plan must protect existing marine uses, such as subsistence, commercial fishing, and recreation. It will also utilize Alaska assets and infrastructure.





MADE IN ALASKA

MARICULTURE

PATHWAY TO A VIABLE AND SUSTAINABLE INDUSTRY

Priority Recommendations Highlighted in Red

Secure and Promote Investment In Mariculture

- ☞ Increase the Mariculture Revolving Loan Fund principal as utilization increases.
- ☞ Secure private investment.
- ☞ Coordinate federal and state funding sources.
- ☞ Fund business planning, start-ups, and structures.
- ☞ Leverage utilization of existing coastal infrastructure.
- ☞ Develop a web-based mapping tool.
- ☞ Encourage financial support for State agencies to properly manage and timely process farm applications.
- ☞ Develop options for self-assessments, taxation, or other fee mechanisms to support growth.

Establish an Alaska Mariculture Development Council (AMDC)

- ☞ **Extend the MTF and its advisory committees for three years, with a new directive to begin implementation of the comprehensive plan and creation of the AMDC.**

Maximize Innovation and Growth Through Research

- ☞ **Establish a Mariculture Research Center to address research priorities and continually update needs.**
- ☞ **Fill the UAF Alaska Sea Grant Mariculture Specialist position.**
- ☞ **Fill the Alaska Region NOAA Aquaculture Coordinator position.**

Develop New Mariculture Markets and Products

- ☞ Coordinate mariculture marketing through trade associations and consider joining with ASMI through self-assessment.
- ☞ Encourage ASMI to expand marketing to include mariculture products.
- ☞ Engage in product form research and development and market research.
- ☞ Support economic data collection and research.

Build Public Understanding and Support for Mariculture

- ☞ Inform about maintaining existing uses, preserving the environment, preventing genetic issues, and avoiding market competition with wild-caught seafood.
- ☞ Conduct public outreach to multiple audiences.
- ☞ Identify and communicate with all community stakeholders early in the process.
- ☞ Coordinate information and advocacy through a central body.

Promote Success Through Alaska Native Participation

- ☞ Conduct outreach to Alaska Native organizations related to mariculture opportunities and relevant technical and financial support.
- ☞ Seek tribal engagement through local outreach during the farm permitting process.
- ☞ Develop collaborative workforce development programs between tribes, Alaska Native Corporations, industry, and other relevant partners.
- ☞ Integrate mariculture topics and studies in relevant educational programs.

Align Laws, Regulations, and Agency Practices with Stakeholder Needs

- ☞ **Allow restoration, rehabilitation, and enhancement of shellfish stocks.**
- ☞ Create a single point of contact for permitting processes.
- ☞ Modify farm site lease requirements, including bonding requirements, lease fee structures, risk reduction, and best practices.
- ☞ Provide resources necessary to ADEC.
- ☞ Pursue clarification of regulations.

Secure Seed Supply Through Shellfish and Seaweed Hatcheries

- ☞ **Fund hatchery operating costs until the industry is self-sustaining.**
- ☞ Develop long-term funding options to support hatchery production.
- ☞ **Allow and encourage shellfish and seaweed hatcheries to utilize the Mariculture Revolving Loan Fund.**
- ☞ Provide technical assistance to existing and new hatcheries.

Grow and Develop the Mariculture Workforce

- ☞ Provide mariculture skill-building resources and professional development opportunities to growers, available both remotely and in-person.
- ☞ Offer an "Introduction to Shellfish/Seaweed Farming" boot camp.
- ☞ Utilize the University of Alaska's Sea Grant Mariculture Specialist position.
- ☞ Develop a mariculture apprenticeship/mentorship program.
- ☞ Participate in industry career awareness activities.
- ☞ Evaluate and track participant progress and include mariculture workforce impacts in economic and employment analyses.

'Made in Alaska Mariculture' graphic provided by Alaska Department of Commerce, Division of Economic Development and artist Craig Updegrave.

\$100 Million Alaska Mariculture Industry in 20 Years



Long-Range (20-Year) Annual Production Goals

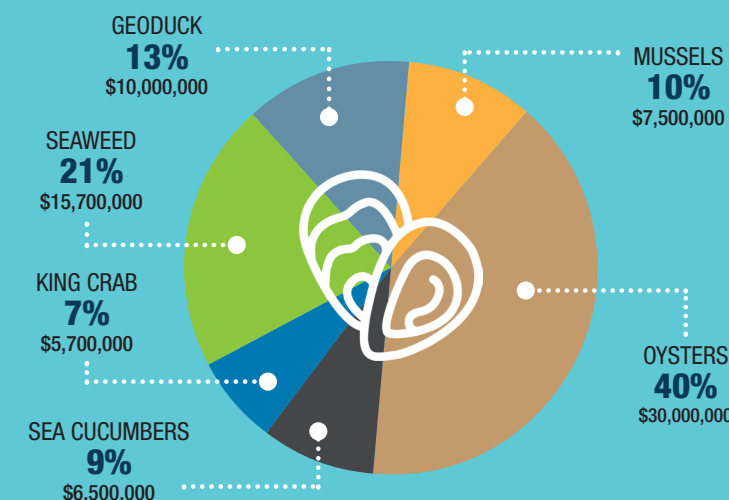
45 million	Pacific oysters (count)
500,000	Geoducks (count)
48 million	Kelp (lbs.–wet)
1.8 million	Blue mussels (lbs.)
565,000	Red king crab (lbs.)
1.9 million	Sea cucumbers (lbs.)

20-Year Annual Economic Impact

\$100 million+	\$75 million in industry sales
Annual output, including all direct, indirect, and induced effects	1,500 total jobs
	\$38 million in direct wages
	\$49 million in total labor income

Note: 2017 dollars

20-Year Annual Revenue Goals





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DEPARTMENT OF
COMMERCE,
COMMUNITY,
AND ECONOMIC
DEVELOPMENT



UNIVERSITY
of ALASKA
Many Traditions One Alaska



Southeast Alaska Regional Dive Fisheries Association



OceansAlaska
MARINE SCIENCE CENTER

ALASKA MARICULTURE TASK FORCE

Governor Bill Walker established the Alaska Mariculture Task Force (MTF) in 2016 to create a comprehensive plan for development of a viable and sustainable mariculture industry in Alaska. Eleven representatives of communities, tribes, industry, hatcheries, researchers, and state government comprise the MTF.

Julie Decker, MTF Chair, Alaska Fisheries Development Foundation

Paula Cullenberg, Alaska Sea Grant

Angel Drobnic, Aleutian Pribilof Island Community Development Association

Jeff Hetrick, Alutiiq Pride Shellfish Hatchery

Heather McCarty, Central Bering Sea Fishermen's Association and Alaska King Crab Research, Rehabilitation and Biology Program

Mike Navarre (current Commissioner)/Chris Hladick (former Commissioner), Alaska Department of Commerce, Community, and Economic Development

Sam Rabung, Alaska Department of Fish and Game

Dr. Michael Stekoll, University of Alaska Southeast and University of Alaska Fairbanks

Kate Sullivan, Southeast Alaska Regional Dive Fisheries Association

Christopher Whitehead, Sitka Tribe of Alaska and Southeast Alaska Tribal Ocean Research

Eric Wyatt, OceansAlaska and Blue Starr Oyster Company

The full plan may be accessed through the Alaska Fisheries Development Foundation www.afdf.org and the Alaska Dept. of Fish and Game www.adfg.alaska.gov



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