

Request for Proposals

Alaska Mariculture Initiative:

Economic Analysis to Inform Statewide Strategic Plan

Released: August 22, 2014



Vision: Grow a \$1 billion industry in 30 years.

The economic impact of mariculture (enhancement, aquatic farming, and restoration of shellfish and marine plants) could grow to \$1 billion in Alaska by 2045 given a coordinated effort, a public-private partnership, and a strategic plan designed to reach this goal.

Problem Statement: The potential economic impact of a fully developed mariculture industry in Alaska is not well understood by industry or policy makers. It is also not entirely clear what is needed to move from Alaska's current micro industry (approximately \$500,000 in annual sales) to a fully developed industry. In general, the existing seafood industry (harvesters and processors) does not consider themselves to be potential beneficiaries of mariculture development. Since the *Aquatic Farm Act* was passed in 1988, allowing for aquatic farming of shellfish and marine plants, the stakeholders and agencies have not been acting in coordination to expedite the development of the industry, pointing to the necessity for a statewide strategic plan.

The Alaska Fisheries Development Foundation (AFDF) was awarded a \$216,000 grant from NOAA in order to spearhead the ***Alaska Mariculture Initiative*** (AMI), with the following goals:

- Goal 1: Expand stakeholder base, create partnerships and increase capacity to be effective.
- Goal 2: Develop a clear and comprehensive strategic plan, including a written commitment to implement the plan by the various stakeholders and agencies.

An important part of the ***Alaska Mariculture Initiative*** will be an economic analysis to help inform the decisions to be made in the creation of the strategic plan. This economic analysis will contain three phases as described in detail below. In the most basic terms, the economic analysis will answer the following questions:

- 1) What have other regions achieved?
- 2) How did they do it?
- 3) What was their payoff/benefit?
- 4) How could/should Alaska do it?
- 5) What would be the payoff/benefits for Alaska?

PHASE I: Comparative case studies (6) which outline examples of successful mariculture industries in different regions of the world with similar or relevant environmental and/or economic conditions to Alaska, including native species and potential stakeholders. Each case study should include:

- a description of the industry
- the current economic impact of the industry

- the history and reasons for the industry’s growth, as well as past and current obstacles to growth
- best available estimates of private and public investment in order to reach current levels of development, recognizing that for some regions data may be limited or not available
- a simple cost/benefit analysis of the return on investment in these regions, given best available data
- similarities and contrasts to Alaska (including, but not limited to, native species present, transportation, workforce, energy costs, environmental conditions, existing industry, infrastructure, business climate, regulations, government support programs, marketing, research and development, etc.), and relevance and applicability of the industry’s experience to Alaska

As the first deliverable, the contractor will offer a list of recommendations of regions/examples for case studies. Recommendations should include a variety of regions, species, and examples of both farming (private) and enhancement/restoration (public). Several likely options include, but are not limited to: New Zealand (mussels, oysters, salmon), Alaska (salmon enhancement, crab enhancement/restoration), Japan (kelp, abalone, scallops, oysters), France (mussels), Prince Edward Island (mussels, oysters, finfish), Washington State (shellfish), and examples of shellfish enhancement (i.e. lobster, geoduck, sea cucumber, clams or crab). The final list of case studies will be decided in consultation between AFDF and the contractor prior to commencing with further work on Phase I. The final work product for Phase I should include not only a written report, but also a bibliography of relevant, existing studies of the industry, including copies of such studies (see **Deliverables** for more info).

PHASE II: Preliminary economic analysis to support the development of a statewide strategic plan.

- Design a simple economic framework or model of various potential approaches to developing the mariculture industry in Alaska. This model can be used to analyze economic costs and benefits as well as the speed and scale of development resulting from the implementation of a strategic plan.
- This framework or model will be used to inform the strategic planning process by helping stakeholders and agencies understand economic costs, benefits and impacts of different potential approaches to a strategic plan and its implementation.
- Examples of these approaches include (but are not necessarily limited to):
 - limited government involvement; attraction of private business
 - public-private partnership
 - significant public investment initially, followed by private investment
- The information from Phase II should be useful in determining the best balance of these inputs/investments, and the best “bang for the buck” (where marginal benefits begin to fall off).

PHASE III – Analysis of the cost/benefit and economic impact of the statewide strategic plan developed as a part of the “Alaska Mariculture Initiative”. This should be a refined analysis of what the final strategic plan will cost and what the benefits will be (jobs, economic impact, etc.).

Deliverables: Deliverables will include the following: a list of options for case studies, written reports from each phase, PowerPoint presentations for each phase which summarize the findings in each report, one presentation in person of the results of Phases I & II during the workshop to be conducted as a part of the **Alaska Mariculture Initiative** leading to the development of the strategic plan (tentatively planned for Fall 2015 in Ketchikan), and a bibliography and copies of all relevant studies previously completed.

Quality of Work: The economic analysis should be complete, accurate, and appropriate for guiding public and private policy decisions regarding investment. In other words, the work should be practical and written in language and using theories that are understandable to business owners and policy makers.

Timeline: AFDF is looking for a contractor who can complete this project within the following schedule:

- Phase I by January 1, 2015
- Phase II by May 1, 2015
- Phase III by June 1, 2016

Funding available: Phase I is a part of AFDF's **Alaska Mariculture Initiative** funded by a grant awarded by NOAA (Grant #NA14NMF4270058) for a total not to exceed \$24,000. These grant funds have already been secured. AFDF has submitted an additional funding request for \$25,000 to another source for Phase II. AFDF has not yet submitted a request for \$25,000 to fund Phase III. Interested contractors should submit a proposal for all three phases with the understanding that Phases II & III may not be funded and, consequently, not undertaken.

Right to Refusal: AFDF reserves the right to reject any and all proposals received.

Judging of Proposals: Criteria for judging proposals are listed below:

- 25% Demonstration of knowledge and understanding of the project
- 25% Past experience on relevant and/or similar projects
- 25% Demonstration of capacity to complete all of the deliverables within the required timeline
- 25% Costs are reasonable and fall within available/projected funding levels

Due Date: Proposals must be submitted via email no later than **5:00pm AST, Friday, September 19, 2014** to jdecker@afdf.org as either Adobe PDF or Microsoft Word documents.

Questions: For questions, please call or email Julie Decker at 907-276-7315, jdecker@afdf.org.

See attached concept paper for more information regarding the **Alaska Mariculture Initiative**.

Alaska Mariculture Initiative

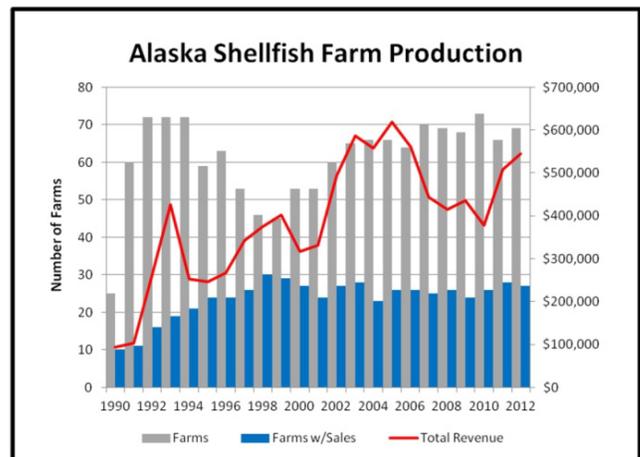
May 1, 2014

Vision: Grow a \$1 billion industry in 30 years!

Alaska's mariculture industry (enhancement, farming, and restoration of shellfish and aquatic plants) could grow to \$1 billion in thirty years. Is this attainable? Absolutely – with a coordinated effort, a public-private partnership, and a strategic plan designed to reach this goal. The ex-vessel value of Alaska seafood in 2012 was approximately \$2 billion, of that the salmon hatcheries contribute roughly \$100-300 million, depending upon the year. Examples of other geographic regions with smaller shorelines yet significant annual aquaculture production are Washington (\$110 M), New Zealand (\$400 M), Norway (\$5 B), and China (\$54 B).

Problem = Unrealized Potential

Since Alaska's *Aquatic Farm Act* was passed in 1988, growth in this new industry has been mostly stagnant. ***The Alaska Fisheries Development Foundation (AFDF) will spearhead the Alaska Mariculture Initiative to expedite the development of the mariculture industry.*** As a part of the Initiative, AFDF will complete a strategic planning process inclusive of all stakeholders and agencies (including coastal communities, industry, the State of Alaska, NOAA, and interested conservation groups), and develop the partnerships necessary to implement the plan. The project will meet the goals and objectives listed below.



Goal 1: Expand stakeholder base, create partnerships & increase capacity to be effective

- **Objective:** Expand the vision of the mariculture industry to include ***aquatic farming, wild fishery enhancement, and restoration*** (species include King crab, Dungeness crab, geoduck, scallop, pinto abalone, sea cucumber, mussel, clam, sea urchin, oyster & many aquatic plants)
- **Objective:** Coordinate efforts of the partnership to promote, support, develop and expand the mariculture industry and increase its capacity to be effective

Goal 2: Develop a clear & comprehensive strategic plan, including a written commitment to implement the plan by the various stakeholders and agencies

- **Objective:** Convene strategic planning conference in Alaska, including experts from other regions with successful mariculture industries
- **Objective:** Develop a strategic plan using results of the conference & partnerships
- **Objective:** Gain commitments, or sign Memorandums of Agreement, by all participating stakeholders and agencies regarding implementation of the strategic plan

The ***Alaska Mariculture Initiative*** will also integrate with the following policies and priorities which have recently been adopted:

- ***National Shellfish Initiative*** launched by NOAA Fisheries' Office of Aquaculture in 2011 aimed at increasing the populations of bivalve shellfish through commercial production and restoration;
- ***USDA Investment Strategy in Support of Rural Communities in Southeast Alaska 2011-2013*** which identifies mariculture development as worthy of further USDA investment;
- ***Alaska Mariculture Development Prospectus*** (draft) published in June 2013 by the Alaska Department of Commerce as a means to generate discussion and ideas among mariculture stakeholders with the goal of creating a unified approach to move the industry forward.

Alaska Mariculture Initiative

May 1, 2014

Anticipated Benefits/Outcomes: The *Alaska Mariculture Initiative* will expedite mariculture development in Alaska through the creation of partnerships, a strategic plan and a mechanism to implement the plan, launching Alaska down the path to the creation of a new billion dollar industry based on a renewable resource with numerous economic benefits for communities.

Examples of Success: Many examples exist worldwide of successful wild fishery enhancement, shellfish farming, and restoration operations, including:

- **British Columbia** 1,000 FT jobs in rural coastal communities; \$33 million in annual sales <http://bcsga.ca>
- **Washington** 3,200 people employed with \$27 million in payroll; over \$100 million in annual sales; providing a total economic contribution of \$270 million <http://pcsga.org/wprs/wp-content/uploads/2013/04/Washington-Shellfish-Initiative.pdf>
- **New Zealand** aquaculture industry produces \$400 million in annual sales & is projected to grow to \$1.1 billion by 2025: <http://aquaculture.org.nz/industry/overview/>
- **Alaska salmon enhancement** produced between \$110 million and \$300 million in ex-vessel value each year since 2010; hatcheries repaid most of initial loans from the State with interest

Challenges:

- Remote areas - extremely remote sites which increase costs & logistics
- Infrastructure investment - seed production, growth techniques, product development require initial investment
- Organizational capacity - new & emerging industry lacks capacity & coordination to address challenges
- Workforce - lack of workforce requires recruitment, training, development
- Regulatory hurdles - perceived competing uses for sites & perceived environmental issues
- Environmental issues - sea otter predation & ocean acidification



AFDF Background: Since 1978, AFDF has helped turn challenges into opportunities for Alaska's seafood industry by focusing on areas of research & development prioritized by industry. Successes include development of surimi in Alaska, fish oil research & development, encouraged development of over 400 value-added seafood products (including salmon burgers, salmon bacon, salmon babyfood, salmon jerky), and promoted winning value-added products. During a recent Board strategic planning session, AFDF identified mariculture development as a new area of focus for the organization.

Target Partners: State of Alaska, NOAA, USDA, EDA, University of Alaska, Alaska Sea Grant, OceansAlaska, Alutiiq Pride, Sealaska – Haa'Aani, Alaska Shellfish Growers' Association (ASGA), United Fishermen of Alaska, seafood processors, fishing industry groups, local communities, Southeast Conference, SW Alaska Municipal Conference, Juneau Economic Development Council.

