

Mariculture Research Center Concept Paper

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Note: This whitepaper is conceptual in nature and will likely require flexibility during implementation in order to take advantage of timely opportunities related to funding and staffing availability.

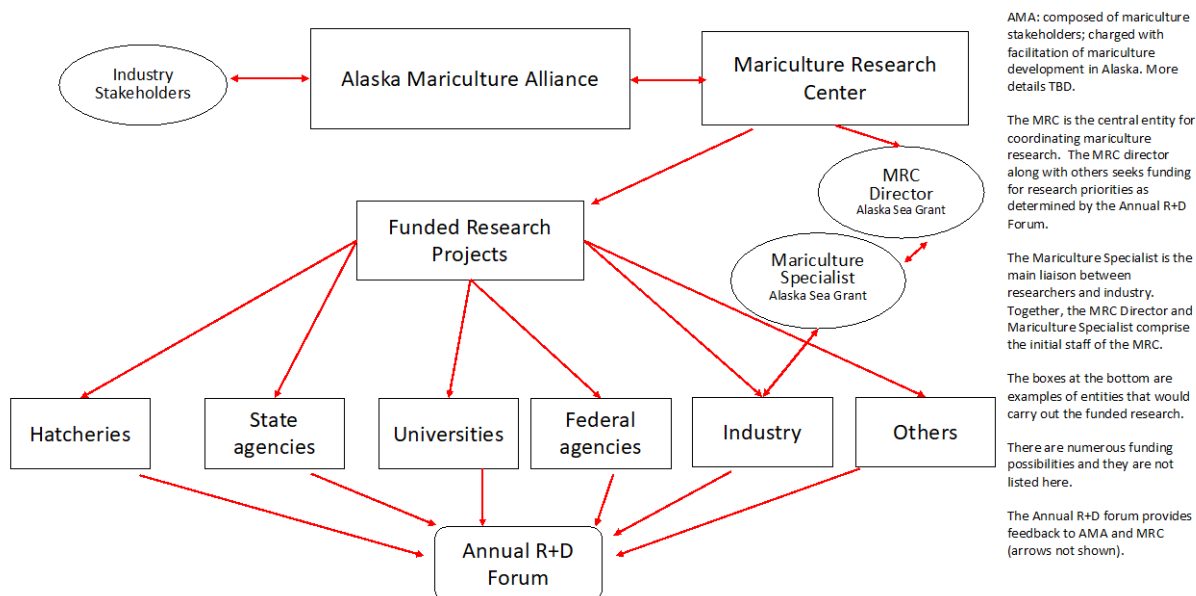
Alaska has the potential to become an international leader in mariculture as it has a number of strengths that can benefit mariculture development: clean and abundant waters, skilled laborers familiar with working on the water, an existing large-scale seafood industry with associated infrastructure, the Alaska Seafood Marketing Institute, engaged and supportive policymakers, and researchers with expertise in oceanography, marine sciences, and climate change.

In order to realize this potential, Alaska adopted the [Alaska Mariculture Development Plan](#) in 2018, which is a statewide, comprehensive approach to accelerate the development of mariculture with the goal to grow a \$100 million industry in 20 years. In order to reach this goal, the Plan makes recommendations, including a number of priority recommendations which are intended to address systemic challenges for the industry and lay the foundation for future growth.

Specific to mariculture research and development (R&D), Alaska has historically not emphasized support for mariculture. For example, the University of Alaska does not have undergraduate or graduate degrees in mariculture, and participation by faculty and students in field research has been limited. In order to grow the industry, Alaska needs to build capacity in the research community with the intention to focus and coordinate research activities in order to enable growth of the mariculture industry.

With this in mind, the Plan includes a priority recommendation to implement the concept of a **Mariculture Research Center** (MRC) in order to address research needs in Alaska in a way that coordinates efforts and integrates industry leadership in order to reduce duplication and competition for funding, and strengthens the application of science to further industry growth.

Below is a diagram which illustrates the relationship of the conceived MRC with other mariculture-related entities. (The diagram is intended to be instructive, but not prescriptive, particularly at the early stages of development of the industry.) Combined with the guidance of the Alaska Mariculture Development Council and the outcomes of the Mariculture R&D Forums, the MRC will not only organize the research community, but also connect it with the industry, regulators, Alaska Native organizations and other stakeholders in Alaska, facilitating continual industry improvements and laying the foundation for the development of mariculture in Alaska.



- **Mariculture Research Center (MRC):** an entity at the center of a formal network of facilities capable of doing mariculture R&D as part of their mission statements. The envisioned **MRC** would be administered within the University of Alaska at Alaska Sea Grant, which is a partnership between the University and NOAA. The MRC would include the various public and private research centers in Alaska, such as the NOAA’s Alaska Fisheries Science Center, Little Port Walter, and Kodiak Lab, the UAS Lab in Juneau, UAF-CFOS, Kasitsna Bay Lab, Alutiiq Pride Shellfish Hatchery, OceansAlaska, Alaska Ocean Observing System, regional science centers, and others.
- **MRC Objectives:**
 - 1) Coordinate research across disciplines (biology, engineering, economics, marketing, food sciences, etc.) for better success of industry development and to improve mariculture management.
 - 2) Coordinate with Alaska Mariculture Alliance (AMA) in order to facilitate industry participation in setting priorities and providing research platforms and incorporating research results.
 - 3) Help set research priorities by hosting abi-annual R&D Forum and translate to funders
 - 4) Develop partnerships in order to facilitate research proposal submissions and complete the research.
 - 5) Engage with industry to share research results and provide support to incorporate results within industry.
 - 6) Facilitate training (classes, webinars, workshops, etc.) to support expansion and technology transfer to the industry.

- **Staff:** ideally, the MRC will utilize two staff positions hosted by Alaska Sea Grant; these will likely be less than full time positions initially. The **MRC Director** will facilitate communication, coordination and cooperation with this network in order to meet the research priorities outlined in the Plan in a variety of fields from biology to food sciences to engineering to marketing. The MRC Director will work closely with the NOAA Alaska Regional Aquaculture Coordinator to facilitate the development of these research priorities through organizing the annual Mariculture R&D Forum. The MRC Director may also help write proposals to secure funding from eligible grant sources. The MRC Director will also provide “matchmaking” services for students and faculty with growers and other entities. The **Mariculture Specialist** will facilitate cooperative and applied research projects with industry, translate research results into practical improvements for industry, provide workforce training, and interact with other stakeholders.
- **Mariculture R&D Forum:** annual forum with industry leadership where priorities are discussed in cooperation and action plans are developed to achieve outcomes. The NOAA sponsored mariculture workshop planned by the Alaska Region serves as the first R&D Forum.
- **Funds:** financial support to achieve mariculture R&D priorities (i.e. human and physical resources) will come from a variety of sources including federal and state governments, and private sources (industry, NGO, North Pacific Research Board, EVOS funds, etc.). Funding for the MRC staff should ideally be “hard” money to provide a long-term commitment and consistency from year to year.