

OceansAlaska Feasibility Study Interim Report

June - October 2025

Background:

OceansAlaska is a 120' x 40' concrete float with a 30' x 80' two story metal structure, 40' x 40' clear deck, 220 three-phase power, aluminum ramp, and an aluminum stiff arm hoist, situated in Ketchikan, Alaska. OceansAlaska currently operates as a shellfish nursery and seaweed hatchery. OceansAlaska produces seaweed seeded string during the months of September-November and is a shellfish nursery from February-May. Ketchikan also has a robust summer visitor season with ~ 1.7 million visitors visiting SE Alaska on cruise ships alone. Thus, there are six to seven months that the facility can be used as a commercial kitchen, shellfish storage, or seafood/mariculture processor. These uses can be directed at providing products or activities to take advantage of the visitor market. Additionally, the ability to provide cool/freezer storage and a DEC approved processing/commercial kitchen space is essential to further the mariculture industry and allow remote farms and local harvesters, access to transportation and markets. OceansAlaska has also subcontracted with Fishes and Dishes to further study the permitting requirements to utilize the space as a commercial kitchen and/or a small processing facility.



Preliminary Work:

The first half of the year, Fishes and Dishes staff started the initial research into the many agencies and permits that would be needed. We discussed plans with Kaijsa Bellon, DEC

Ketchikan, Carol Brady, DEC shellfish coordinator, and Chris Sannito of Sea Grant. We also conducted an extensive search online through Alaska's DEC Food and Sanitation website.

The permitting falls into three main categories: 1) Food Establishments/Commercial Kitchen; 2) Shellfish Holding Facility; and 3) Seafood Processing. There are numerous sub-categories and additional permits within these three main categories. Following our research, we decided to explore the feasibility of a commercial kitchen and shellfish holding facility. Initial research seems to indicate that a seafood processing facility would not lend itself well to our current plan for multiple user groups. Our current understanding is that a seafood processing permit is needed for each entity that processes, even within a communal space. We are still exploring small-scale seafood processing as a concurrent or complimentary activity within the commercial kitchen.

We concluded that a commercial kitchen would provide mariculture stakeholders with an opportunity and space to innovate, experiment and produce small scale test products for the local and visitor market. OceansAlaska and Fishes and Dishes have established relationships and are members in many organizations such as the Alaska Fisheries Development Foundation's (AFDF) Symphony of Seafood, the Alaska Travel Industry Association (ATIA), the Alaska Seafood Marketing Institute (ASMI), and the Alaska Shellfish Growers. Plus, we have many years of experience and practical knowledge working with State and Federal agencies and programs. Our industry knowledge, the OA facility, and this feasibility study, will be available to help new entrepreneurs with introductions, experienced help, facilitation, and mentoring.

NEW WORK:

ADEC Approved Water, Wastewater, and Sanitation:

The OA facility is not connected to city water, nor to the city wastewater system. We are working on determining both wastewater disposal and accessing ADEC approved water.

Requirements:

1) Water Source:

An ADEC Drinking Water Program approved water source is necessary for the location at Peninsula Point as we do not have access to municipal water (which is not uncommon in Alaska). If we had municipal water, we would still be required to have the water tested if it went into storage tanks. In this case, a water sample would be sent to RM Engineering.

Below are two ADEC approved bulk water suppliers. The cost is approximately \$250 for 4,000 gallons. A 500-gallon vertical tank is 48' x 68' and costs approximately \$900 plus shipping.

<https://ketchikanh2o.com> Bulk Water Delivery of potable water services to many people in the community of Ketchikan, both residential and commercial. Bulk water services are used to fill individual water tanks or cisterns. They are enrolled with the State of Alaska DEC and follow proper protocol to stay in compliance with their regulations.

<https://ketchikanwater.com/> Ketchikan Water, provides high-quality, safe drinking water to the community of Ketchikan. They are committed to supporting the local community and are a trusted source of bulk drinking water for homes and businesses in the area.

2) Food Preparation Equipment:

A three-compartment sink, a hand sink, food pre sink, and mop sink are required. A dishwasher may be used in conjunction with the three-compartment sink, but it must be commercial grade. Self-draining drainboards, sufficient room for air drying, thermometers, and test strips for testing sanitizers are also required.

Food prep sinks are only for rinsing and food preparation; they are not to be used as a mop sink or as a hand washing sink. Handwashing sinks are required in restrooms and also in the food preparation area. They must have hot and cold running water. The hot water must be at least 100 F with soap and paper towels provided. A 6" barrier may be necessary, depending on the placement of the sink, to prevent splashing and cross contamination.

A separate mop or utility sink is to be used for cleaning and disposal of mop water; it is not to be used for handwashing or food preparation. Mop storage must also be provided.

At this time the facility has an inadequate amount of hot water. A 50-gallon commercial hot water heater is necessary to meet ADEC standards for the amount needed for the proposed activities at the facility.

3) Restroom Facilities:

A food establishment is required to provide multi-gender restrooms. I am checking on the number of restrooms that are required for the OA facility.

4) Wastewater:

Wastewater disposal must be approved by the ADEC division of water under the Engineering and Plan Review program. As of now our layout consists of trapping wash water in trays and pumping it up to a tank and then to the up-land waste system. A sump pump that can pump up hill 23' (roughly the maximum tidal exchange) is needed. Cost of these pumps depends on gallons per minute and head pressure. We are initially planning to have a smaller 200-250 gallon tank on the facility and pump from there. This size provides storage, flexibility for tidal range,

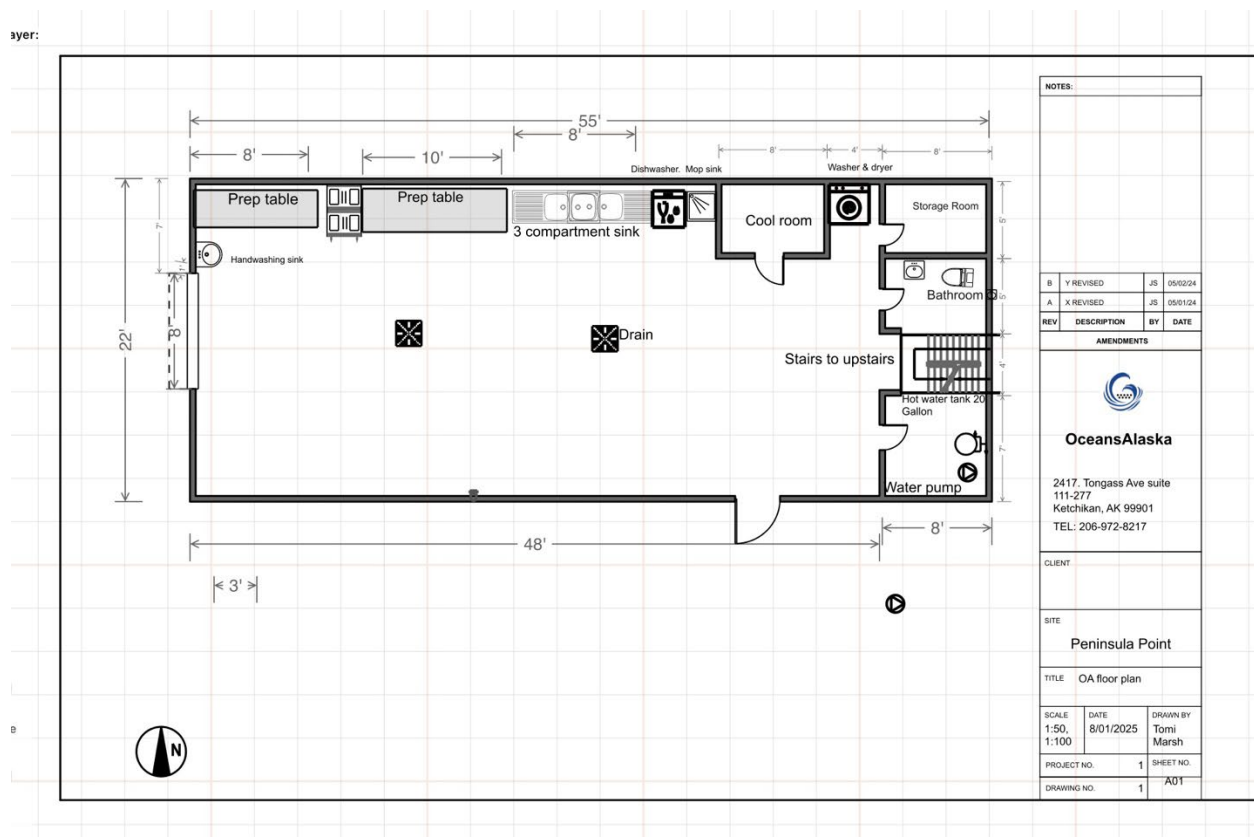
and can be used for chlorinating and de-chlorinating wash water/grey water. Our current restroom is an Incinolet, (incinerating toilet) so we are not producing grey water.

Solid waste is disposed of in designated containers and taken to the landfill.

Currently we are not planning to include frying equipment, but if we did in the future, the waste oil would be disposed of at the Full Cycle facility in Ward Cove. There is additional cost for the disposal of waste oil.

Commercial Kitchen Layout:

We have measured the space and have laid out a schematic drawing of how the space will be utilized. Some modifications are needed to meet DEC standards. *See attached* Downstairs, the facility has food grade FRP walls, 25' ceilings, overhead lighting, cement floors, drainage area for wastewater, approved electrical outlets, fresh water plumbing, salt water plumbing, pumps, ramp to uplands and road system, hoist on the water side end of the facility, toilet, sink, and upstairs office area, lab area, and dry storage.



Cool/Freezer Holding Space:

A 20' insulated 3-phase 480 v freezer van has been purchased, and we have located this freezer/cooler space on the upland area. The air conditioner, Cool Bot, and cool curtain have been purchased and delivered. Steelhead Electric installed a 15kva transformer, (to hook it into the 208 v breaker/panel), new fuses, and a disconnect plug. We are building and purchasing shelving. We are currently waiting for the electrician to complete the electrical design of the commercial kitchen.



Shellfish Holding and Repacking Permits:

Oysters fall under three permit/licensing categories: 1) harvester; 2) shell-stock shipper; and 3) shucker-packer. The harvester permit is one that the oyster farmer would possess to harvest the oysters. A shell-stock shipper license is required to ship and sell live oysters. A shucker-packer permit is needed to re-pack oysters into smaller boxes or containers for resale and/or to shuck oysters. Additionally, a shellfish holding permit is needed to receive oysters and redistribute them. Logs, retention of shellfish tags, HACCP plans, flow chart, temperature logs, sales, and critical/control points are all required to be recorded and kept.

Labeling:

A labeling license is needed if products are packaged and labeled for resale. For example, frozen, cut packaged seaweed would need a labeling permit for resale. The permit consists of submitting your label for approval to ADEC. We would help stakeholders on an individual basis to determine what their desired outcome is. We are working on labels for two products that a user of the commercial kitchen could produce. We are using the examples under Fishes and Dishes to understand the process better and be able to help others with their applications. The

two example labels we're working on are for an Alaska salmon/seaweed croquette for food banks and an oyster chowder.

Applications:

A food establishment permit, shellfish holding, and shellfish shucker/packer are being submitted. Logbooks for shellfish tags and protocols are being compiled. Labeling application for Fishes and Dishes is being submitted for a seafood and seaweed croquette suitable for an air fryer and produced for food banks and for an oyster chowder. Conditional use permit for the Ketchikan Gateway Borough and the corresponding commercial application are in process.

Visitor Sector:

The Alaska Travel Industry Association (ATIA) held their annual convention and trade show in Anchorage in October, which I attended. This is another tremendous opportunity for mariculture farmers and locally produced products. Over 3million visitors came to Alaska in 2024-2025; over half of these traveled by cruise ship while the rest were independent travelers. Cruise ships and independent travelers are exploring all parts of Alaska providing easy to access seasonal markets from SE Alaska through South Central, Kodiak, and even out to Dutch Harbor. There is an increased number of cruise ships, (potentially 15-20%) that will cross-gulf and reposition at the new dock and terminal in Seward and Whittier. Also, three new cruise lines will be coming to Alaska: MSC Poesia, Virgin's Brilliant Lady and Ritz Carlton yachts. Disney has announced that they will also bring one more ship.

Mariculture farmers can take advantage of this increased local and seasonal traffic to provide their products to local markets or open oyster shacks. Representatives from all of the big cruise lines attended the convention along with tour operators both large and small. All were hungry for more local goods and curated tours.

Fishes and Dishes has established relationships with the Cruise Lines Association of Alaska (CLIAA), Princess and Holland America lodges in Denali, Fairbanks, etc, along with contacts in the tour sector, such as Palmer and Lewis and API. Additionally, we collected contact information from many of the attendees. At the conference, Fishes and Dishes established contact with Royal Caribbean and Norwegian and discussed extending or implementing the Fisherman on Board enrichment program. Also, there are opportunities for a tour of the OA commercial kitchen, since OA is a non-profit organization and the cruise lines have programs to support non-profits. The tour could educate visitors about seaweed and shellfish production and farming and highlight the "makers" kitchen.



Local products from the kitchen can be offered for sale. We are discussing this with local tour operators and the cruise lines. OA would partner with an existing small operator in order to elevate their tour. The OA facility is a 10 min boat ride from Ward Cove dock. This is an ideal spot as the ships have short port calls. This model can also be implemented in other communities.

Marketing:

The Alaska Fisheries Development Foundation (AFDF), held their annual Alaska Symphony of Seafood (ASOS) in Seattle during One Ocean Week. AFDF promotes innovation for Alaska seafood and launches a competition during the event. Many mariculture products have entered the Symphony and there have been notable winners, such as Barnacle's kelp salsas and bull whip hot sauces. Alaska oysters are also prominently displayed and tasted. Fishes and Dishes CBD and Seaweed brownies were entered several years ago, and the feedback from the judges and the process was very educational and worthwhile. The top winners in each category win a roundtrip ticket to the Boston Seafood show/SENA (Seafood Expo North America), space at the AFDF/ASMI booth with a chance to meet new customers and explore customers.

Symphony products are also displayed, tasted, and promoted at the ASMI GO WILD Boston party. This event is attended by over 500 plus buyers and influencers. AFDF'S Symphony of Seafood program is an amazing opportunity for innovators of Alaska seafood and is a supportive and financially accessible opportunity that garners an immense amount of exposure to the market. The Symphony also co-sponsors an event in Juneau during the legislative session, legislators and local people learn more about the importance and relevance of Alaska seafood and mariculture products.

The Symphony is also highlighted at the ASMI All-Hands event in the fall, where local processors and salespeople can learn more about mariculture products. An example of this is the collaboration with Peter Pan to produce a sockeye portion paired with a SeaGrove kelp chimichurri. Fishes and Dishes has many contacts and can help users of the commercial kitchen connect with those that can help grow their markets.

At this year's Symphony, Selkies Soak, made from local seaweed, was one of the winners. Also, SeaGrove oysters were paired with the new Holland America sparkling wine which was a tremendous hit as an auction item. Both products raised awareness and heightened creativity and innovation for new markets, collaborations, and partnerships for mariculture farmers.



Community Workshops:

As the winter season approaches, we plan to hold community workshops or a listening session on Annette Island, Ketchikan, and with the Alaska Shellfish Cooperative. SEC, AMA and Tastemakers have launched a mariculture marketing campaign. We can share information and insights with new and established farmers and with community members to discover more ideas and opportunities. The commercial kitchen can inspire new culinary inspirations and help launch more small, local businesses. Keolani Booth of Annette Island, and owner of Rebel Oceans seaweed farm, is helping to facilitate a presentation at the high school and for the community. Keolani views the commercial kitchen as an opportunity to continue to build bridges between the two communities and tap into Ketchikan's growing visitor industry. Travis, of the Uncharted Distillery (Symphony winner for his Holdfast Vodka, made with Alaska seaweed) has enthusiastically offered his space for a workshop or presentation this fall or winter in Ketchikan. Tentative dates for this workshop are December 5th or 12th.



Culinary Incubator:

Fishes and Dishes is a food trailer at the refurbished Newtown Wharf, an exciting new venue by berth 4 in Ketchikan. Newtown Wharf showcases a food trailer court, of which Fishes and Dishes and the Oyster Shack are a part. Fishes and Dishes has built a covered area over the back, which provides increased, covered and protected space for “pop ups.” “Pop ups” are an economical way for entrepreneurs to test markets, packaging, and products, this in turn allows them to create a more robust and sustainable business plan before investing in expensive equipment or space.

Fishes and Dishes had previously created a business plan around “pop ups” called “Fish Pop.” It demonstrated that “pop ups” are a way to explore, try, and fine tune an idea before investing further. Sometimes they realize that a “pop up” scenario is the best fit. Fishes and Dishes has a current ADEC permit, fire permit, cooking equipment etc. and we encourage new business owners to use the space. We have held three “pop ups” with Blue Starr Oysters, Local Table and with a high school student. Blue Starr Oysters was exploring the visitor sector and found that their oysters were immensely popular with both locals and tourists. They are now very interested in holding and re-packing opportunities that would utilize the commercial kitchen and supply restaurants and local distribution. We encourage summer “pop ups” as we have the space and it creates more buzz and excitement with both visitors and locals. We hope to help the next potential Symphony winner!





Executive Summary:

OceansAlaska and Fishes and Dishes entered the grant proposal to study the feasibility of establishing a mariculture processing facility or a commercial kitchen. Discussions with mariculture stakeholders and Chris Sannito of Sea Grant, the operator of a small processor in Kodiak, confirms our choice of “which fork in the road” to take. We have determined that a commercial kitchen and shellfish holding/repacking facility meets the needs of our local mariculture stakeholders and community members. Many of the mariculture farms or wild harvest efforts around our area are small ventures, just starting up or slowly expanding. We want to provide access to a space where people can safely innovate and create. A commercial kitchen allows this opportunity. As people succeed and businesses grow, they would likely attain a direct marketer permit and utilize a larger facility such as the one KAPA is building. The commercial kitchen is a foundational piece that will lead to larger scale production and the KAPA processing plant.

Task 1: Designs for processing/kitchen and associated cold storage container

· *Identify design and operational considerations associated with required permitting (HAACP, DEC food safety, FDA NSSP, etc.) planning for a combination of shellfish, seaweed, seafood, and cultural food use and processing.*

The permitting falls into three main categories: 1) Food Establishments/Commercial Kitchen; 2) Shellfish Holding Facility; and 3) Seafood Processing. There are numerous sub-categories and additional permits within these three main categories. Following our research, we decided to explore the feasibility of a commercial kitchen and shellfish holding facility.

See information in above sections of the report:

- ADEC Approved Water, Wastewater, and Sanitation
- Commercial Kitchen Layout
- Shellfish Holding and Repacking Permits
- Labeling
- Applications

HACCP Plan included with this report

This task is complete.

· *Hire electrician to develop an electrical plan for any additions/modifications to OA electrical system to allow a processing facility/commercial kitchen to be operated in the barge when the barge is not in use as a hatchery/nursery.*

Ongoing

We are currently waiting for the electrician to complete the electrical design of the commercial kitchen.

· *Plans for facility layout when operating as a processing space, including equipment configuration with consideration of required permits, various user types, and plumbing/sewage/electrical/etc.*

Following our research, we decided to explore the feasibility of a commercial kitchen and shellfish holding facility. Initial research seems to indicate that a seafood processing facility would not lend itself well to our current plan for multiple user groups. Our current understanding is that a seafood processing permit is needed for each entity that processes, even within a communal space. We are still exploring small-scale seafood processing as a concurrent or complimentary activity within the commercial kitchen.

See additional information in the report.

Plans for a commercial kitchen are attached.

- *Develop an alternative set of drawings that place the processing facility/kitchen in shipping container(s). This analysis may be at a lower level of specificity than drawings for barge.*

We have evaluated this option and decided to focus on utilizing the OA facility for the commercial kitchen. There are many companies which specialize in building commercial kitchens or processing facilities in shipping containers. Information can be found at Kitchenstogo.com, Roboxcontainers.com, USmobilekitchens.com and many others. Customized shipping container kitchens can cost \$10,000-\$30,000 for conversion plus the initial cost of the container at \$2,000-5,000.

- *Analysis of cold storage container on land adjacent to OA barge, potentially 10' for cool storage and 10' for freezer storage.*

A 20' insulated 3-phase 480 v freezer van has been purchased, and we have located this freezer/cooler space on the upland area. The air conditioner, Cool Bot, and cool curtain have been purchased and delivered. Steelhead Electric installed a 15kva transformer, (to hook it into the 208 v breaker/panel), new fuses, and a disconnect plug. We are building and purchasing shelving.

This task is complete.

Deliverable: Drawings and plan for processing space on OA barge, processing space in shipping containers, and combined cool/freezer container. In addition to the drawings, analysis of designs will be included as a section of the final report.

Task 2: Business and operations planning for OA processing/kitchen.

- *OA will investigate cooperative business models for a community kitchen and processing center including:*

- *Insurance options and business structures*

Models we have explored include cooperative, anchor tenant, custom processing, and rental arrangements. The facility and equipment listed will be made available to community members through an application process and rental agreement that will require the responsible operation and maintenance of the equipment.

- *Estimation of other operating costs*

This will be provided in the final report

- *OA will explore a variety of revenue and programming options, including rentals, classes and workshops, tours, and an outdoor shellfish/seaweed food bar.*

See information in above sections of the report:

- Visitor Sector
- Marketing
- Community Workshops
- Culinary Incubator

- Programming options analyzed will also include a tour and outdoor shellfish/seaweed food bar focused on generating revenue from cruise ship passengers and independent travelers.

Fishes and Dishes is a food trailer at the refurbished Newtown Wharf, an exciting new venue by berth 4 in Ketchikan. Newtown Wharf showcases a food trailer court, of which Fishes and Dishes and the Oyster Shack are a part. Fishes and Dishes has built a covered area over the back, which provides increased, covered and protected space for “pop ups.”

OA attended the Alaska Travel Industry Association (ATIA) annual convention and trade show in Anchorage in October and has connected with cruise ship representatives and tour operators.

Ongoing

- OA and Tomi Marsh will work with nearby tribal entities (such as Metlakatla Indian Community and Ketchikan Indian Community) to consider and advance planning for Indigenous food classes and workshops at the facility. Similar outreach and planning will consider partnerships with local high school students and other relevant interested parties.

As the winter season approaches, we plan to hold community workshops or a listening session on Annette Island, Ketchikan, and with the Alaska Shellfish Cooperative. SEC, AMA and Tastemakers have launched a mariculture marketing campaign. OA will share information from this feasibility study.

- *Financial and operations planning, including estimation of costs of containers, modifications, and permits. Estimate of potential revenues.*

A budget for equipment and container vans has been generated.

Completed

Deliverable: *Findings integrated into final report.*

Task 3: Reporting, Outreach, and Coordination

- *Conduct outreach to other interested community members, including other projects focused on adding mariculture and seafood multi-user processing space in Ketchikan and surrounding region.*

The commercial kitchen can inspire new culinary inspirations and help launch more small, local businesses. Keolani Booth of Annette Island, and owner of Rebel Oceans seaweed farm, is helping to facilitate a presentation at the high school and for the community.

See additional information in the report section: Community workshops and Culinary Incubator

Ongoing

Deliverables:

- *Quarterly progress updates submitted to AMC during the project period.*
- *Designs, drawings, plans, financial models, and other relevant supporting documents created under the project.*
- *Final report outlining key findings, business and operation plan overview, and other findings from tasks 1-3.*
- *Presentation at a virtual venue sponsored by SEC, with include Power Point or similar slides.*