Board packet 2023-05-09 Table of Contents

Agenda	1
Minutes from 2023-02-24	4
Membership applications	10
Staff reports	13 - 114
Joint Innovation Projects RFP	115
Letter to Bank of America	119

Attachments

Troller lawsuit articles	120
ASF Memo	123
RC 055	124

Board of Directors Meeting

Alaska Fisheries Development Foundation, Inc.

WHEN: Tuesday, May 9th, 2023
9:00 am – 11:00am, Alaska Time

WHERE: ZOOM video-conference
Via computer https://us02web.zoom.us/j/83859080943
Via phone: 1-669-900-6833
Meeting ID: 838 5908 0943

AGENDA

Call Board meeting to order
Roll call; establish quorum (Julie Cisco)
Conflicts of interest declared (none anticipated)
Recognize AFDF members/staff/guests present
Review & approve agenda
Review and approve minutes (2023-02-24)
Review and approve new membership applications: Kaia Fisheries and Purr-ferred Pet Food, and City of Whittier (increasing to voting status), plus paid memberships (report attached)

Staff reports (65 mins):

a. Julie Decker, Executive Director (10 mins)
b. Ekaterina Ratzlaff, Finance Director (5 mins)
c. Julie Cisco, Executive Administrator, Membership & Symphony (5 mins)
d. Hannah Wilson, Development Director, Sustainability Certification & Mariculture (10 mins)
e. Robin McKnight, Mariculture Development Coordinator (5 minutes)
f. Ann Robertson, Technical Facilitator, RFM & MSC, salmon/cod/halibut/sablefish certifications (10:00am – 5 mins)
g. Ben Americus, Science Policy Coordinator, Synthesis & contextualization of AHRP(5 mins)
h. Garrett Evridge, Director, AFDF Startup Accelerator (10 mins)

Committee Reports:

- **ASOS Committee** - Chair - Tomi Marsh - met April 18, 2023
- **Bylaws Review Committee** - Chair - Matt Alward - postponed until fall, 2023
- **Industry Advisory Committee** - Chair - Mike Cusack - met May 2, 2023

9) Old Business:

A) DISCUSS/RECOMMEND: EDA BBB - Alaska Mariculture Cluster - Join Innovation Projects RFP - Review Committee - 1-2 AFDF Board members without conflicts interested?

New Business:

10) ACTION: New AFDF Visa: ***Recommended Motion: Approve AFDF's application for Alaska Airlines VISA credit card account through Bank of America, and authorizing Julie Decker, Ekaterina Ratzlaff and Julie Cisco to establish and use the account.*** [See draft letter attached. Two board members must sign the letter.]

11) ACTION: Approve ASOS Steering Committee recommendation. ***Recommended Motion: Approve adding a new category for 2024 ASOS "Around the Plate" (or other name)***

12) Set date for next Board meeting – August/Sept, 2023?
13) Adjourn

Alaska Fisheries Development Foundation, Inc.

Board of Directors Meeting Minutes

WHEN: Friday, February 24, 2023 from
9:00 am – Noon, Alaska Time
WHERE: APICDA Conference room 302 Gold Avenue, Juneau, Alaska, plus hybrid ZOOM video-conference

1) Call Board meeting called to order at 9:02A~~K~~ST by President Markos Scheer

2) Roll call; establish quorum and proxies on file (Julie Cisco)
   a. Board members present
      Markos Scheer, President
      Tommy Sheridan, Vice President (via Zoom)
      Chris Mierzejek, Secretary (via Zoom)
      Trevor Sande, Treasurer (via Zoom)
      Mike Cusack
      Matt Alward
      John Sund
      Rich Riggs (via Zoom)
      Stefanie Moreland(via Zoom)
      Keith Singleton(via Zoom)
   b. Board Members not present: Tomi Marsh, Tom Enlow

3) Conflicts of interest declared (none anticipated)
   a. Potential conflict on RFP for Joint Innovation Projects~~conflict of (bidding)~~

4) Recognize AFDF members/staff/guests present
   a. Julie Decker, Ekaterina Ratzlaff, Garrett Evridge, Robin McKnight, Ben Americus, Julie Cisco
   b. Hannah Wilson out sick
   c. Technical specialist Anne Robertson will be calling in later

5) **Motion to approve the agenda and amend to add discussion about Symphony / UFA co-hosting and ~~add~~ SK / AFAC discussion after item 16, and also strike "and proxies on file" from this and future agendas made by Matt Alward, seconded by John Sund.** No opposition.

6) **Motion to review and approve minutes (2022-10-07, 2022-11-16) made by John Sund, seconded by Mike Cusack. Amendment requested to revise minutes from November to remove minutes of executive session previous executive discussions to reflect entry into executive session, exit out of executive session and then showed the motions that were relayed to whole board/ outside of executive session**. No opposition.

8) Staff reports:

a. Julie Decker, Executive Director, Org Overview
   i. Symphony- Val's last year, Julie C taking over
      1. Emphasis on year round work with symphony
      2. Expanding the event over all
   ii. Certified Seafood Collaborative
      1. 1 year trial partnership with Global Seafood Alliance (GSA expansion into all seafood not just aquaculture)
      2. GSA has channels of communication (podcast, Seafood Advocate magazine~~newsletter~~, etc.)
   iii. Halibut and Sablefish (under RFM)
      1. Report back from 5 year reassessment: 1 major non-conformance (sablefish) and 1 minor non-conformance (halibut)
   iv. Salmon Hatchery Outreach
      1. Conversations with ASMI & others
   v. Faroe Islands trip, Denmark trip
      1. Ocean Rainforest site visit
         a. Very different farm design, more resilient to storms
      2. Seaweed genetics work (meeting in Denmark)
   vi. South Korea trip in April
      1. Looking at processing, farm design, etc., hoping to have someone from the governor's office ~~to~~ go also as this will hopefully help build~~ing~~ relationships between Korea and Alaska
   vii. ARPA-E
      1. Nearing close out of thisat project along with finishing some outreach work
   viii. EDA BBB kick off meeting
      1. Seaweed tissue analysis- Cameron Jardell, UAS
      2. Developing RFP for Green Energy
      ~~2.~~3. Developing RFP for Joint Innovation Projects
   ix. Grantham Ffoundation paid their $1.25 million to match the EDA BBB. Jeremy Grantham to visit Alaska in May- opportunity to organize tours of seaweed farms, oyster farms, seaweed processing
   x. Annual Mariculture Conference (Feb 15th-17th) with the Governor opening the meeting; overall a younger crowd
   xi. Julie Decker voted into board of Alaska Mariculture Alliance for a three year term

xii. Alaska Blue Economy Center; Tommy Sheridan now working with them. Garrett and Julie D met with a team from ABEC. An opportunity ~~to knitting together~~for closer collaboration between university and industry

xiii. ~~S~~Bringing back secondary processing to Alaska and/or lower 48; looking for feedback on this and potential symmetries with Murkowski's Working Waterfront framework

xiv. Grant submitted to MSC's Ocean Fund for seabirds and gillnet interactions

b. Ekaterina Ratzlaff, Finance Director

i. Updated budget on payroll expense, with $130,000 as of Sept. 30th, 2022 left in indirect

ii. EDA BBB phase 1 and USDA grant closing

iii. Highest year for sponsorships and tickets for Symphony, although carrying more expenses this year

iv. Mike Cusack asked - Where did we land on third party auditing? ~~Especially as we receive grant funding; his feeling is we will be required to eventually… good to have it started now~~

1. Julie D- Accountant described three options: financial statement review, financial statement audit (prior to threshold- $9,500), federal single audit (unable to do this until threshold of $750,000 in federal funds is met- (cost is ~$11,000)
2. Board direction to go ahead with financial statement audit, need~~ing~~ to ~~connect with~~get accountant started ~~auditor~~ on this

c. Julie Cisco, Executive Administrator, Membership & Symphony

i. BBRSDA, reworked~~ing~~ the grant agreement with them to allow no-cost extension ~~due to lapse~~; next installment April 2024; we will develop~~they have~~ a list of deliverables with BBRSDA in April, 2023;~~upcoming,~~ looking for more direct support and developing a guide of service sector providers

ii. ~~AFDF will be requesting a~~ Board ~~meeting in August to~~can have future discussions about other associations joining the Juneau event as co-sponsors

iii. Membership update

iv. Board portal still working on, future packets will be uploaded there

d. Hannah Wilson, Development Director, Sustainability Certification & Mariculture

Julie Decker gave Hannah's report, including communications work, website and Sea Grant fellow applications

i. Seafood sustainability certifications

1. Leading invoicing
2. Working with assessment team

ii. Alaska salmon site visit for MSC

iii. Orca issue will not impact RFM or MSC certification; however the issue could close the fishery (concern it could bleed into other sectors like gillnet or seine~~industries~~)

e. Ben Americus, Science Policy Coordinator, Synthesis & contextualization of AHRP

i. Produced 70 page synthesis document for MSC and RFM teams (in addition to Hannah's ERA- available online), will be cutting down synthesis for publication
ii. Sablefish and halibut RFM
    1. Unknown spatial footprint of longline fisheries; worried about sensitive benthic habitats (Bering, Gulf, PWS); wWorking on mapping this overlap now but bathymetric data not available publicly

f. Ann Robertson, Technical Facilitator, RFM & MSC, cod/halibut/sablefish certifications. ~~Pacific cod is wrapping up second audit~~
    i. Pacific cod is wrapping up second audit
    ~~i.~~ii. Halibut & Sablefish: Major non-conformance – gear loss and ghost fishing haven't been adequately evaluated in ~~halibut and sablefish~~these fisheries
    ~~ii.~~iii. Halibut: Minor non-conformance – Halibut fishery- spatial footprint and potential overlap with sensitive areas. We will need to demonstrate an action plan for this
    ~~iii.~~iv. Contact info: ann@akwadc.com
g. Robin McKnight, Mariculture Development Coordinator, reviewed and presented infographics and outreach plans

h. Garrett Evridge, Director, AFDF Startup Accelerator. Focusing on engagement and support for startups; Thunder's Catch (in context with BBRSDA); Foraged and Found (connecting with Thunder's Catch); Kempy Energetics (electric troll gurneys ~~out of Sitka~~), Net Your Problem ~~which Keith Singleton would like some focus on~~
    i. Completion of AOC / AFDF integration; ~~with~~ issued a press release
    ii. IAC (~~l~~Industry A~~a~~dvisory C~~c~~ommittee) will be~~is~~ developing a list of priority~~ambitious~~ topics, such as reshoring of Alaska seafood processing; scouting pollock using unmanned vessels in the Bering Sea; IAC to have first meeting soon
    Iii Fishing for the Cold Pool NSF opportunity to improve the data we have around the development and recession of the cold pool

Old Business:

9) Discussion and action: structure of Industry Advisory Committee. **Motion to approve and form an Executive Committee of Mike Cusack, Keith Singleton, and a Trident representative to be determined, made by Matt Alward, seconded by John Sund.** Discussion included President Scheer appointing Mike Cusack as the Chair and collaboration with industry partners. No opposition.

10) Discussion and action: EDA BBB Phase 2 – Alaska Mariculture Cluster - Research & Development Component - Joint Innovation Projects – draft RFP outline provided. **Motion made to approve the draft RFP outline for submission to SE Conference and EDA ~~as amended to add additional categories such as crab enhancement~~, by John Sund, seconded by Matt Alward.** Discussion included how the Board would like to handle proposal review, and that some Board members may be in a position to bid on the RFP. Board direction

to have staff do initial vetting of proposals and provide summary and recommendations to the Board for their input at that time. No opposition.

New Business:

11) Discussion and action – investment of Grantham Foundation $1.25M cash match with First Bank by authorizing ED to open a checking account and CD, with authorized signers to be Markos Scheer, Trevor Sande, Chris Mierzejek and Decker. To open an account requires Board approval and providing a copy of ~~ratified~~ Board minutes to First Bank. **Motion to approve the recommendation, made by John Sund and seconded by Mike Cusack.** No opposition.

12) Discussion and action – recommend forming a Bylaw Review Committee and reactivation of the Alaska Symphony of Seafood Steering Committee. **Motion made by Matt Alward to approve and seconded by Mike Cusack.** Discussion included President Scheer appointing Matt Alward as Chair of the Bylaw Review Committee, with Mierzejek to also serve on this committee, and Mike Cusack as Chair of the ASOS Steering Committee. Symphony Steering Committee to be made up of (2) AFDF, (1-2) ASMI, (1-2) BBRSDA, (1) UFA. No opposition.

13) Discussion and action: Guest Heather McCarthy, Co-Chair of ~~presented that~~ AKCRRAB Steering Committee, presented about AKCRRAB's ~~is~~ work~~ing~~ on crab hatchery cultivation and releases~~work and gathering data.~~. With recent King crab crash, AKCRRAB is looking to scale up an ~~much more~~ aggressive project around Bristol Bay/ St. Paul and Kodiak. AFDF could be the lead entity to receive~~for~~ funding. Discussion included a deadline in 1-2~~a~~ weeks for Murkowski earmark requests, to be backed by Senator Murray of Washington, staff time being included in the request., ~~and~~ Board discussion - ~~that~~ this project fits into the core function of AFDF. The anticipated funding is approximately $5m over 3-5~~five~~ years. **Motion to approve AFDF/AKCRRAB to proceed made by John Sund, seconded by Keith Singleton.** No opposition.

14) Discussion and action: Julie Decker nominated for Global Seafood Alliance's (GSA) Board. Discussion included that she already attends the SENA show (one of 2 annual meetings)~~ir conferences~~ and the time commitment involved should be minimal and manageable. **Motion to approve the nomination to GSA's Board made by Mike Cusack, seconded by John Sund.** No opposition.

15) Information only: Matt Alward provided an SK Grant update as Chair of the AFAC, first AFAC meeting was in December~~February~~, next meeting for SK review panel will be in May and then awards will be announced~~out~~

16) Information only: Matt Alward provided an update of the UFA Board discussion of the UFA/ASOS legislative reception ~~as respects~~regarding other organizations co-hosting and relayed the UFA Board's desire to remain the only co-host with AFDF ~~says if there are more hosts included then UFA might not want to participate in it anymore~~. **Next steps:** ~~Set an AFDF~~

~~Board meeting toward the end of the summer to discuss further~~The Symphony Steering Committee will discuss, along with other issues, and bring a report and recommendations back to the AFDF Board.~~, and noted~~ UFA's preference is noted for the record.

15) Discussion and recommendations: ARPA-E summit, Decker to serve on panel: Energy & the Blue Economy; input requested for seafood & aquaculture priority needs related to energy. DOE program focused on moonshot energy research and goals; besides the Kodiak seaweed farm project, ARPA-E also has 3 current projects funded in Alaska on small hydro and river energy~~ in Alaska~~. Looking for ideas and input, huge opportunity for industry to discuss priorities and potential impact future federal investments~~needs~~. **Next steps:** ED to keep Board updated.

16) Information only: NOAA Draft National Seafood Strategy; public comment due~~ever~~ on March 13, with listening sessions on March 2 and 10.

17) Set date for next Board meeting – May and August, 2023. Julie Cisco will send out dates for the week of May 8th.

18) **Motion to adjourn made by Matt Alward and seconded by Keith Singleton.** No opposition, meeting adjourned at 12:02 PM AKST

AFDF
Alaska Fisheries Development Foundation, Inc.

Julie Cisco <jcisco@afdf.org>

Form Response Received: Membership Application Form - Jim Hunt

1 message

Alaska Fisheries Development Foundation <no-replay@afdf.org> Tue, Jan 24, 2023 at 9:54 AM
Reply-To: citymanager@whittieralaska.gov
To: jcisco@afdf.org

Alaska Fisheries Development Foundation

"Membership Application Form" Received A Response

I am applying for:

Voting Member - $500/year

First Name

Jim

Last Name

Hunt

Company Name

City of Whittier, Alaska

Street Address

PO Box 608

City

Whittier

State / Province / Region

AK

ZIP / Postal Code

AFDF
Alaska Fisheries Development Foundation, Inc.

Julie Cisco <jcisco@afdf.org>

Form Response Received: Membership Application Form - Renee Schneider

1 message

Alaska Fisheries Development Foundation <no-replay@afdf.org> Wed, Mar 1, 2023 at 1:20 PM
Reply-To: renee@purrferred.com
To: jcisco@afdf.org

Alaska Fisheries Development Foundation

"Membership Application Form" Received A Response

I am applying for:

Individual Member - $250/year

First Name

Renee

Last Name

Schneider

Company Name

PURR-FERRED PET FOOD LLC

Street Address

2548 N POST RD

City

ANCHORAGE

State / Province / Region

AK

ZIP / Postal Code

AFDF
Alaska Fisheries Development Foundation, Inc.

Julie Cisco <jcisco@afdf.org>

Form Response Received: Membership Application Form - Erik Velsko

3 messages

Alaska Fisheries Development Foundation <no-replay@afdf.org> Tue, Feb 28, 2023 at 6:52 AM
Reply-To: kaiafisheries@gmail.com
To: jcisco@afdf.org

Alaska Fisheries Development Foundation

"Membership Application Form" Received A Response

First Name

Erik

Last Name

Velsko

Company Name

Kaia Fisheries LLC

Street Address

2357 W. Highland Dr.

City

Homer

State / Province / Region

AK

ZIP / Postal Code

99603

Country

To: Board of Directors, AFDF
From: Executive Director
Date: May 9, 2023

Alaska Fisheries Development Foundation, Inc.

Staff: See individual staff reports.

ASOS: Two of the ASOS winners from this year were in the top 11 finalists at the SENA Seafood Excellence Awards (Peter Pan's sockeye salmon with kelp chimichurri, and Thunder's Catch Wild Salmon Chowder, also utilizing sockeye salmon). Last year, we also saw 3 ASOS winners in the finalists. However, for the first time ever, a ASOS winner also won the SENA Seafood Excellence Awards in the retail category – Thunder's Catch! This was very exciting and a great reminder of how the ASOS can help to promote new products on the national stage.

Alaska Red King Crab Enhancement in Bristol Bay: AFDF submitted an appropriations request to Senator Murkowski's office for $6.75 million on behalf of a large team to begin enhancement efforts in Bristol Bay. Working with Murkowski's office, we scaled down the request to $4 million and it has been included in Senator Murkowski's list of requests submitted to the committee. Staff also said there is a lot of excitement around this proposal. Fingers crossed that Congress passes a budget!

MSC & Association of Sustainable Fisheries (ASF): ASF met with MSC in Barcelona on April 22. The conversations were not viewed as positive by ASF members. I included a draft of the questions MSC wants to begin asking Clients to report on for labor issues.

Certified Seafood Collaborative (CSC) and the RFM Program: Around Barcelona and other events, I believe we are finally seeing a groundswell of support for a truly global RFM program that can be stand up to MSC in the marketplace. I actually believe that if done properly, the global RFM program will be a better program than MSC. CSC and RFM are now working with the Global Seafood Alliance (GSA). I also serve on this board and the org will take some time to appropriately integrate the perspectives of the wild seafood industry. Also, CSC is working with more potential certified fisheries and regions around North America, as well as sharing the Chain of Custody standard with others regions (Japan, Norway, Iceland). This is an exciting time for RFM!

South Korea Seaweed Knowledge Exchange: WWF sponsored this trip in early April. Three Alaskans participated (Decker, Scheer and Mangini). A group of 18 went. Someone from the State of Alaska was invited, but could not attend due to timing. We visited abalone farms and

farms of several species of seaweed. We also visited processing facilities of at least 2 species of seaweed, met with seaweed processing companies, a hatchery/nursery company, and a seaweed farmer coop.

Important learnings from South Korea:

1) In South Korea, the farming is primarily conducted by small family businesses. The processing is a mixture of small, medium and large businesses. This is somewhat similar to the Alaska salmon industry. In some cases, cooperatives are utilized by farmers.
2) 90% of all seaweed production in South Korea is three species: gim (nori), saccharina japonica (similar to our sugar kelp, but different), and undaria.
3) The farms are limited and there is little to no ability for expansion, except through genetics that allow greater production over the same area. Farmers are finding it harder to get young people to work on their farms. They are increasingly turning to imported labor.
4) The farm technology is simple and inexpensive. The processing technology and genetics research is more complicated, expensive and sophisticated.
5) Seaweed farm licenses (single species) = 2,185 for 90,547 hectares
   Farm licenses (multiple species) = 1,205 for 13,368 hectares
   Total employees = 14,449 in 2020
6) The largest processor with whom we met, Daesang, is interested in expanding production and diversify species in the USA and Europe. I invited him to come to Alaska and have further conversations around potential joint venture businesses relationships.
7) The Incheon National University is interested in partnerships with the University of Alaska and we encouraged further exploring this relationship.

Potential new ARPA-E project: ARPA-E has issued a FOA for exploring a new topic around bio-mining REE with seaweed. They specifically call out Bokan Mountain on POW in SE AK as a potential site. UAF and UAA are organizing a team to submit a proposal. AFDF is a part of the team, working on the potential to scale-up the development.

Alaska Sustainable Energy Conference: I was asked by the Governor's office to moderate a panel on mariculture during this conference, May 23-25, 2023, in Anchorage. The title will be "Mariculture – Beyond Food". I have confirmed 5 panelists, including 2 researchers, 2 companies, and 1 funder. I think it is important to support the Governor's interest in renewable energy in Alaska, and I am looking for ways to influence these discussions at every point. The Governor recently appointed a new Energy Task Force, and I was also asked by the Governor's office to serve on one of its subcommittees on coastal communities. I agree to do

this and will keep the Board informed as I get more information about this Task Force and future meetings.

ARPA-E Summit Panel - Energy and the Blue Economy: I sat on a panel on March 24, 2023, to discuss energy and the blue economy and represent the interests and needs of fisheries and aquaculture. Others on the panel were Richard Spinrad (NOAA), Tom Fu (Office of Naval Research), Jennifer States (Blue Sky Maritime Coalition). Take-aways:

1) *I would like AFDF to become a member of Blue Sky Maritime Coalition (no cost for non-profits) – any concerns from Board members?*
2) *I will be following up with Tom Fu about the potential to fund e-vessel demonstrations and training through the University of Alaska, utilizing industry advisors*

EVOS Mariculture ReCon: farmers beginning to work with researchers to set up site visits and training for data collection at sites.

EDA BBB Phase 2 - AFDF Components:

- Green Energy: Received 2 proposals; one withdrawn; will review and make sure the remaining proposal covers the issues identified in the RFP.
- Research & Development: RFP issued and proposals due May 31. *Are Board members without conflicts interested in serving on a proposal review committee?*

Grantham Foundation to visit Alaska, May 20-27, 2023: I am working to organize site visits to seaweed and/or oyster farms, and seaweed processing, and a meeting with Jeremy Grantham while he and his wife and other members of eNGO, Client Earth, cruise Southeast AK on a vessel owned by the Boat Company.

Alaska Mariculture Alliance (AMA): The AMA Board and staff continues to work with ADCCED on development of a mariculture matching grant program that will supply matching grants for farmers, processors, or hatcheries/nurseries.

Grant projects closing out by Sept., 30, 2023:

- WWF – Alaska Mariculture Alliance – Increasing Social License for Seaweed Farms
- PSMFC (Pacific States Marine Fisheries Commission) – Alaska Mariculture Initiative – Phase 3
- NOAA SK – Hatchery Capacity & Technology Development to Secure Seed Supply for Oyster Farming in Alaska
- ARPA-E – Phase 2 - Seaweed Farming Demonstration in Kodiak

New grants awarded: MSC Ocean Fund - working on conditions related to seabirds and salmon hatcheries.

New grant applications submitted: Alaska King Crab Enhancement ($6.75 million, reduced to $4 million); Denali Commission (3): 1) KelpMeal – Phase 2, 2) Reshoring Alaska Seafood Processing, 3) ASOS Expansion

New grant applications coming soon: ARPA-E bio-mining, NOAA SK pre-proposals, PSMFC

We are in the middle of the fiscal year. So far, we spent $889,122, which is about 1/3 of the proposed and approved budget expenses ($2,794,646) and received $1,222,377 (plus $1,250,000 match from Grantham Foundation (part of EDA R&D grant), $1,200,000 were deposited to a separate CD account at First Bank). Our projected budget receivables are $2,903,302. Current net income is $333,255 (the breakdown of those funds is below):

- $105,102 for FY 2022 expenses
- $82,645 – expenses will accumulate during FY 2023 and FY 2024
- $171,875 – we just collected these funds for MSC and RFM P. Cod and expenses will accumulate during the remainder of FY 2023 and beginning of FY 2024
- We collected $64,689 of Indirect funds and $30,182 for membership and other miscellaneous income, we spent $77,538 in Indirect account, which leaves us with $17,334 balance of indirect funds as of today.

Currently we are billing for MSC and RFM Salmon certs.

Alaska Fisheries Development Foundation Inc.
Balance Sheet
As of April 30, 2023

	Apr 30, 23
ASSETS	
Current Assets	
Checking/Savings	
1506 · FB CD - 5620	1,200,000.00
1515 · Unrestricted Checking - 1035	31,955.89
1520 · MSC Salmon - 0955	77,788.04
1530 · Cod Certification - 9698	166,653.41
1535 · RFM Halibut Sablefish - 9594	128,098.13
1540 · ASOS - 9706	5,485.22
1545 · EDA BBB_ARPA_E - 9586	38,675.02
1570 · Startup Accelerator - 7017	81,079.86
1580 · AMI - 2156	33,839.89
1585 · RFM Salmon - 3253	19,264.40
1590 · EVOS_Bigelow - 1997	500.00
Total Checking/Savings	1,783,339.96
Accounts Receivable	87,378.44
Other Current Assets	2,180.66
Total Current Assets	1,872,899.06
TOTAL ASSETS	**1,872,899.06**
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	39,407.77
Credit Cards	-387.13
Other Current Liabilities	51,431.29
Total Current Liabilities	90,451.93
Total Liabilities	90,451.93
Equity	1,782,447.13
TOTAL LIABILITIES & EQUITY	**1,872,899.06**

FY 2023 Budget Actual for All Programs (no match) as of Apr 30, 2023

Last Revision 2023-5-2

	Indirect	Federal Programs						Non Federal Programs											Total All Programs
		EDA BBB Phase 1	EDA BBB - Research & Dev*	EDA BBB - Green Energy	USDOE - ARPA-E II	NOAA - Oysters	USDA	ASOS	Bigelow	Builders Vision	BSFA	EVOS	GAPP	MSC & RFM P. Cod	MSC Salmon	RFM Salmon	RFM Halibut and Sablefish	PSFMC - AMI Phase III	WWF	
4000 · REVENUES																				
4100 · Grant & Contractual Revenues		$ 22,684	$ 59,456	$ 7,176	$ 11,747	$68,547	$ 25,764		$ 26,483	$ 90,000	$ 20,201	$ 110,742	$12,567	$ -	$ 41,806	$ -	$ 144,381	$ 8,442	$ 84,456	**$ 734,454**
4105 · Miscellaneous Income	$ 1,163	$ -	$ -	$ -				$ 8,910								$ -			$ -	**$ 10,072**
4300 · Membership Dues	$ 29,000	$ -	$ -	$ -												$ -			$ -	**$ 29,000**
4310 · Contributions		$ -	$ -	$ -				$ 130,549						$ 251,199	$ 5,399	$ 1,148			$ -	**$ 388,295**
4500 · Interest	$ 20	$ -	$ -	$ -												$ -			$ -	**$ 20**
Indirect Cost		$ 2,268	$ 5,946	$ 718	$ -	$ 1,943			$ 2,549	$ 10,000		$ 8,851	$ -	$ 9,319	$ 8,985	$ -	$ 1,869	$ 1,643	$ 6,447	**$ 60,536**
Total 4000 · REVENUES	**$ 30,182**	**$ 24,953**	**$ 65,402**	**$ 7,894**	**$ 11,747**	**$70,490**	**$ 25,764**	**$ 139,459**	**$ 29,032**	**$ 100,000**	**$ 20,201**	**$ 119,593**	**$12,567**	**$ 260,518**	**$ 56,189**	**$ 1,148**	**$ 146,250**	**$ 10,085**	**$ 90,904**	**$ 1,222,377**
5000 · EXPENSES																				
Total 5100 · Payroll Expenses	$ 52,908	$ 4,956	$ 15,727	$ 6,543	$ 1,959	$ 4,451	$ -	$ 15,189	$ 3,254	$ 17,355	$ 16,634	$ 21,583	$12,567	$ 14,859	$ 18,787	$ 15,539	$ 8,124	$ 8,432	$ 10,041	**$ 248,909**
5200 · Business Insurance	$ 3,211	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -		$ -		$ -	$ -	$ -	$ -	$ -	$ -	**$ 3,211**
5250 · Business License	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -		$ -		$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
5300 · Property/Space Rents	$ 665	$ -	$ -	$ -	$ -	$ -		$ 21,490	$ 8,000	$ -		$ -		$ -	$ -	$ -	$ -	$ -	$ -	**$ 30,155**
5400 · Professional Services	$ 7,150	$ -	$ 3,750	$ -	$ 12,147	$39,333	$ -	$ 88,241	$ 12,619	$ -		$ 60,000	$ -	$ 66,520	$ 43,167	$ 7,755	$ 7,346	$ -	$ -	**$ 348,028**
5450 · Advertising and Promotion	$ 1,951	$ -	$ 1,598	$ -	$ -	$ -	$ -	$ 12,308	$ -	$ -		$ -		$ -	$ -	$ -	$ -	$ -	$ -	**$ 15,856**
5500 · Telephone	$ 3,682	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -		$ -		$ -	$ -	$ -	$ -	$ -	$ -	**$ 3,682**
5510 · Printing & Copying	$ 454	$ 490	$ -	$ -	$ -	$ -	$ -	$ 2,165	$ -	$ -		$ -		$ -	$ -	$ -	$ -	$ 490	$ 1,740	**$ 5,340**
5520 · Shipping & Postage	$ 179	$ -	$ 248	$ -	$ -	$ -		$ 3,724	$ -	$ -		$ -		$ -	$ -	$ -	$ -	$ 34	$ 956	**$ 5,143**
5530 · Subscriptions & Publication Fee	$ 1,526	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -		$ -		$ -	$ -	$ -	$ -		$ 10	**$ 1,535**
5560 · Memberships & Contributions	$ 2,010	$ -	$ -	$ -	$ -	$ -		$ 1,500	$ -	$ -		$ -		$ 1,500	$ 1,500	$ -	$ -		$ -	**$ 6,510**
5610 · Meetings & Workshops	$ 2,667	$ -	$ 29,843	$ 313	$ 800	$ -		$ 3,079	$ -	$ -		$ -		$ -	$ 238	$ 238	$ -		$ -	**$ 37,177**
5700 · Bank Charges	$ 146	$ -	$ -	$ -	$ -	$ -		$ 266	$ -	$ -		$ -		$ 66	$ 50	$ 48	$ 48		$ -	**$ 623**
Total 5810 · Travel Expense	$ 929	$ 1,201	$ 17,484	$ 2,370	$ 923	$ 4,066	$ -	$ 20,700	$ 2,945	$ -	$ 3,567.21	$ 6,924	$ -	$ 5,697	$ 6,644	$ 7,779	$ 3,167	$ 4,910	$ 11,727	**$ 101,033**
5830 · Project Supplies and Equipment	$ 60	$ -	$ 6,699	$ -	$ -	$19,123	$ -	$ 11,992	$ 4,045	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 40,000	**$ 81,919**
Total 5000 · EXPENSES	**$ 77,538**	**$ 6,648**	**$ 75,348**	**$ 9,225**	**$ 15,829**	**$66,973**	**$ -**	**$ 180,653**	**$ 30,862**	**$ 17,355**	**$ 20,201**	**$ 88,507**	**$12,567**	**$ 88,642**	**$ 70,387**	**$ 31,360**	**$ 18,685**	**$ 13,867**	**$ 64,474**	**$ 889,122**
Net Income	**$ (47,356)**	**$ 18,305**	**$ (9,946)**	**$ (1,332)**	**$ (4,082)**	**$ 3,517**	**$ 25,764**	**$ (41,194)**	**$ (1,830)**	**$ 82,645**	**$ (0)**	**$ 31,086**	**$ 0**	**$ 171,875**	**$ (14,198)**	**$ (30,212)**	**$ 127,564**	**$ (3,782)**	**$ 26,430**	**$ 333,255**
Overhead - helps to cover Indirect expenses	**$ -**	**$ 2,268**	**$ 5,946**	**$ 718**	**$ -**	**$ 1,943**	**$ -**	**$ -**	**$ 2,549**	**$ 10,000**	**$ -**	**$ 8,851**	**$ -**	**$ 9,319**	**$ 8,985**	**$ -**	**$ 1,869**	**$ 1,643**	**$ 6,447**	**$ 60,536**

Julie Cisco Staff report

May 2, 2023

Continuing the transition of Alaska Symphony of Seafood from Val Motley, met with Val in Seattle in April.

ASOS Steering Committee: 2024 is the 30 year anniversary. Prepping the Call for Products; issues for Board include discussing a new category “Around the Plate” for snacks, appetizers, desserts, condiments, surimi, etc.

Collecting membership dues

Continuing to update the website

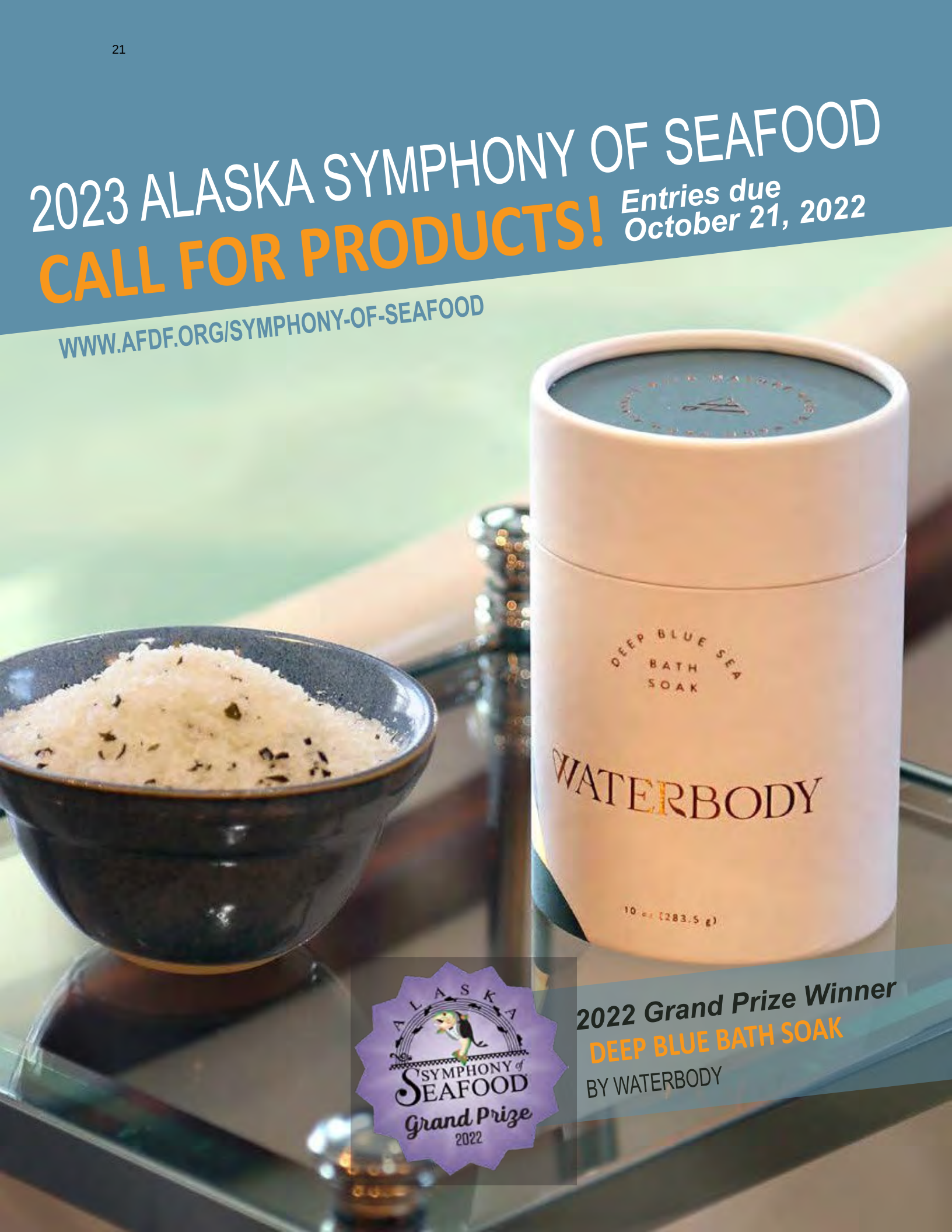
GAPP functions: invoicing dues assessments, website, preparing for September Annual Meeting

2023 ALASKA SYMPHONY OF SEAFOOD

CALL FOR PRODUCTS!

Entries due October 21, 2022

WWW.AFDF.ORG/SYMPHONY-OF-SEAFOOD



2022 Grand Prize Winner

DEEP BLUE BATH SOAK

BY WATERBODY

ALASKA SYMPHONY of SEAFOOD®

Inspiring better use of Alaska's natural seafood resource

Dear Seafood Representative,

AFDF is proud to announce the 2024 Alaska Symphony of Seafood!

Since 1994, the Alaska Fisheries Development Foundation has conducted the Alaska Symphony of Seafood celebrating creative products made from Alaska seafood. The purpose of the event is to encourage and promote the development of value-added products made from fisheries resources taken from the pristine waters of Alaska. This year we have **Retail, Foodservice, Beyond the Plate and Around the Plate** categories. Additionally, products will be eligible to win special awards in the following categories: Seattle People's Choice, Juneau People's Choice, Bristol Bay Choice, whitefish, salmon and the coveted Grand Prize. Any questions about qualifications of products should be directed to Julie Cisco (jcisco@afdf.org)

The Alaska Symphony of Seafood begins with the private judging of qualified entries in Seattle on November 15, 2023. All products will be prepared and displayed by professional culinary staff. Following the judging, an Open House will be held for all entrants, seafood industry invitees, sponsors, the press and the judges. The next event will be an awards ceremony in Juneau on February 21, 2024, allowing the display and sampling of products by the Alaska Legislature and other special guests. Again this year, first place winners in each category will also be entered into the Seafood Expo North America's competition for new products (or another food show to be determined by winners and AFDF), called the Seafood Excellence Award.

In order to participate in the Alaska Symphony of Seafood, your product must be **market ready and in commercial production** by the date of the event. First place winners from each category are sent to Seafood Expo North America in Boston in March, 2024 (or another food show to be determined by winners and AFDF). Additionally, if your product wins in any category, including People's Choice or the Grand Prize, you will be able to market your product as an Alaska Symphony of Seafood winner, helping to distinguish it from others as a high-quality product. After the contest is over, you will also receive the judges' scores and comments about your product. This kind of feedback is invaluable to any new product development effort.

The Alaska Symphony of Seafood enjoys excellent coverage by national and international seafood trade publications. For anyone interested in Alaska seafood, the renowned Alaska Symphony of Seafood is a great way to learn about the extraordinary efforts the industry has made to develop value-added products, to reduce fish waste, and to increase the value of Alaska's seafood.

From start to finish, the Alaska Symphony of Seafood offers a means to publicize new products, promote healthy foods, and help expand the worldwide markets for products made from Alaska seafood. We look forward to having your products participate in this exciting event!

Sincerely,

Julie Decker
Executive Director, Alaska Fisheries Development Foundation

2024 Alaska Symphony of Seafood
BENEFITS & MISSION

Purpose of the Symphony of Seafood

The Alaska Symphony of Seafood was created to encourage the development of value-added products made from Alaska seafood. Its three goals are:

- To promote innovative product development for Alaska seafood;
- To publicize new products, ideas, and opportunities in the area of product development and market expansion for Alaska seafood;
- To encourage participation and sponsorship by a wide variety of companies and organizations that are working to build the future of the seafood industry.

Why Enter?

First place winners from each product category, including the Grand Prize winner and Bristol Bay Choice awardee, will receive free booth space at the Seafood Expo North America in Boston in March, 2024. Airfare for one company representative to attend the show will be provided by Alaska Air Cargo and Bristol Bay Regional Seafood Development Association (BBRSDA). All first place products will be photographed by a professional photographer, featured on the Symphony website, and made available for marketing and sales efforts. Winners will also have the use of a winner's sticker that can be featured on the winning product's packaging and used for other marketing efforts. The media opportunities associated with the Alaska Symphony of Seafood are endless. Many articles and editorials will be written featuring the event and its winners. It is a great promotional boost for any new product!

The Symphony events in Seattle and Juneau are also great networking opportunities. Even entrants who did not win any of the prizes felt that the competition was useful for them: "We got exactly what we wanted from the event—contacts for production partners. Overall, a very positive experience," said David Chessik of Ed's Kasilof Seafoods with Baltica Fish Broth.

"I encourage all companies that are using Alaska seafood to develop a product and compete. It keeps all of us striving to be better and promote Alaska seafood as the world's best on the world stage!"

— Keith Singleton from Alaskan Leader
2018 Grand Prize and Retail 1st Place for Alaskan Cod with Lemon Herb Butter

2024 Alaska Symphony of Seafood
RULES & GUIDELINES

Who can participate in the Alaska Symphony of Seafood contest?

Any company, domestic or foreign, that is commercially producing value-added products and by-products made from Alaska seafood. Products must have been produced within the last two years, be market ready, and fit into one of the contest categories listed below. A product that has been submitted to the Alaska Symphony of Seafood in the last two years may re-enter as long as the product did not take first, second, third place, the Grand Prize, or the People's Choice Award.

Product Categories

Your product must fit into one of the following contest categories:

- Retail
  Best product for retail
  Eligibility: all Alaska seafood species sold as retail products are eligible

- Foodservice
  Best overall product for Food Service
  Eligibility: all Alaska seafood species sold as food service products are eligible

- Beyond the Plate
  Best value-added product made for use outside of human consumption, such as pet treats, supplements or bath products. Must be manufactured from seafood waste or be byproducts of the primary processing

  Around the Plate
  Best value-added product that is not center of the plate, such as condiments, snacks, appetizers, desserts

We will also be awarding six special awards this year:

- Seattle People's Choice
  Awarded by ballot voting at Seattle event

- Juneau People's Choice
  Awarded by ballot voting at Juneau event

- Grand Prize
  Awarded to any category product with best overall score from judges

- Bristol Bay Choice
  Awarded by by BBRSDA to the best Sockeye salmon product. Includes promotional and marketing support from BBRSDA team, including a feature on website and booth space at both PME and SENA at the BBRSDA booth.

- Whitefish Choice
  Best overall Alaska whitefish product
  Eligibility: cod, pollock, halibut, flounder, rockfish

- Salmon Choice
  Best overall Alaska salmon product
  Eligibility: all Alaska salmon species—Pink, Sockeye, Chum, King, Coho

How to enter

1. Make sure your product qualifies.
2. Select the appropriate product category.
3. Fill out the entry form completely. Submit one entry form per product entered.
4. Include a $150, non-refundable entry fee for each product submitted.
5. Follow the contest entry checklist provided. Any incomplete entries will be disqualified.
6. Send photos (digital or hard copies) of your product and any handouts or spec sheets you have available with your application. **The completed form and entry fee is due by 5PM on Friday, October 21, 2022.** Sorry, late entries will not be accepted.

About the entry form

Please provide clear and precise information about your product for all questions on the application. The details will be used to determine the eligibility of your product. Please also provide as much information as possible for the judging criteria. We ask for serving suggestions that will represent your product in an advantageous way, e.g. "slightly grill with olive oil and basil," "serve hot on a bed of lettuce," or "thaw and serve with drawn butter." No complex recipes, please! The purpose is to present your product, not a meal.

RULES & GUIDELINES *PAGE 2*

What's next?

Your company will be notified by **Friday, October 28, 2022** if your product qualifies for participation in the Symphony. If your product qualifies, you will need to arrange for shipment of enough product to serve 300 sample size portions at the event venue in Seattle, and 400 samples at the Awards Ceremony in Juneau. A sample size is approximately 2 ounces or larger, at the discretion of the manufacturer. If you are entering a non-edible product, you will need to arrange for shipment of at least 20 product samples. Product will be used for the official judging and for the public tasting at the Open Houses.

Eligible applicants must provide a representative sample of the product's packaging that will be displayed and judged along with the product. You are also welcome to send copies of company brochures, product specification sheets or other relevant handouts for display during the events.

We reserve the right to limit the number of products.

About the contest judging

Each product entered in the Alaska Symphony of Seafood contest will be evaluated individually by a panel of expert judges during a private judging session on November 15, 2023. Each product will be prepared and displayed by professional staff. Each product will be judged on criteria such as its packaging/presentation; overall eating experience that includes aroma, flavor and texture; perceived value for its niche in the market; and its potential for commercial success. Products will be judged with respect to the market category in which it is entered. Results will be tabulated and held in confidence by a third party for announcement at the Awards Ceremony in Juneau. First, second, and third place winners will be selected from each contest category. The product receiving the highest overall score will be awarded the 2024 Grand Prize, and, at each event, attendees taste, evaluate and vote for the "People's Choice" award. This year, the Bristol Bay Choice (sponsored by BBRSDA) will be awarded to the best Sockeye salmon product.

About the Awards Ceremony

In February 2024, the Alaska Symphony of Seafood will open their doors to a very special Awards Ceremony in Juneau, Alaska. All contest entrants, seafood industry invitees, sponsors, the press and the interested public will join the festivities to taste and evaluate each contest entry and vote for the coveted "People's Choice" award.

This event culminates with the announcements of the winners of the Alaska Symphony of Seafood. All entrants are encouraged to attend. This event presents an opportunity to talk with judges, media and potential buyers, and to get additional feedback from the people tasting your new product.

Acceptance of the rules

By entering the Alaska Symphony of Seafood, each contestant agrees to the rules, accepts the limitations of a dynamic competitive environment, and waives all claims against the Alaska Symphony of Seafood, its organizers, judges or sponsors, for the outcome of the contest. All judges' decisions are final. The Alaska Symphony of Seafood is not liable for any inconvenience, expense, or damages associated with participation in this contest.

Complaints

Complaints about the contest or its outcome should be submitted to the Alaska Symphony of Seafood organizer, the Alaska Fisheries Development Foundation (AFDF). If such communication is unsatisfactory, further complaints may be made to the Board of Directors of the Alaska Fisheries Development Foundation, P.O. Box 2223, Wrangell, Alaska 99929-2223. AFDF is a non-profit group, representing harvesters, processors and others interested in the Alaska seafood industry.

IMPORTANT DATES

Friday, October 21, 2022
Contest entry deadline

Friday, October 28, 2022
Contest entrants notified

Thursday, November 10, 2022
Product due - Seattle

Wednesday, November 16, 2022
Private Judging & Open House - Seattle

Friday, February 17, 2023
Product due – Juneau

Thursday, February 23, 2023
Awards Ceremony & Open House - Juneau

2024 Alaska Symphony of Seafood
ENTRY FORM

Fill out one Entry Form per product

Please answer all questions to the best of your knowledge. Judging criteria is based on information provided by entrants from this questionnaire. Any information you choose to leave out may negatively affect the final score of your product. Information will be confidential to other entrants. By entering this contest you guarantee that your product uses Alaska seafood.

Product name: _____

Company name: _____

Address: _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Contact name: _____ **Title:** _____

Product's market category (select only one):

☐ Foodservice ☐ Retail ☐ Beyond the Plate

Product ingredients: _____

Nutritional information: _____

Product description and use (please be clear, concise, and complete): _____

What is innovative or cutting edge about this product? _____

Preparation and serving suggestion: _____

ENTRY FORM *PAGE 2*

Describe any requirement for storage and handling of the shipped product: _____

_____

_____

How long has your product been commercially manufactured? _____

In what other varieties or flavors is this product available? Be specific: _____

_____

List methods of distribution (where or how can your product be purchased? / region or regions): _____

_____

_____

What is your product's annual sales volume? _____

Product pricing (If actual price is not known, please estimate.)

Serving / unit size: _____

Serving / unit price: _____

Use the CONTEST ENTRY CHECKLIST to make sure your entry is complete.

Entry deadline: **October 21, 2022**

Return entries to: Julie Cisco, Alaska Fisheries Development Foundation, jcisco@afdf.org

Include $150.00 per entry. See payment options below:

- **Check:** Payable to Alaska Fisheries Development Foundation (AFDF).
  Mail to: P.O. 2223, Wrangell, Alaska 99929-2223
- **Venmo:** @afdfish
- **Email:** jcisco@afdf.org

2023 Alaska Symphony of Seafood
CHECKLIST

Please make sure your contest submission is complete, and that it arrives in time. Late submissions will be disqualified.

TO ENTER:

_____ Fill out the Official Contest Entry Form completely.

_____ Are your preparation instructions clear and complete?

_____ Does your product information sheet tell everything you want the judges to know about your product? This is your chance to make sure they fully understand your product.

_____ Attach $150 entry fee (non-refundable) for each product entered.

Payment options are on Page 2 of the Entry Form.

_____ This year we do not require a representative sample of your product shipped to us with the application, but please do send photos of your product, any product brochures, spec sheets, company brochure, or other literature that would provide more information about your product.

_____ ***We must receive your entry by 5:00 PM on Friday, October 21, 2022.***

_____ Mail to: FPN Events
6523 California Ave., SW#314
Seattle, WA 98136
Or email to: valmotley@fpnevents.com

FOR THE CONTEST:

_____ We must receive the 300 sample-sized portions of your product by Thursday, November 10, 2022 for the Seattle event.

_____ We must receive the 400 sample-sized portions of your product by Friday, February 17, 2023 for the Juneau event.

_____ Include the product's commercial packaging.

_____ Send along any brochures, handouts, product spec sheets that you would like distributed at the Alaska Symphony of Seafood events.

_____ Please plan to attend the Alaska Symphony of Seafood events in Seattle & Juneau.

?ee you at the Symphony!

Development Director Staff Report
May 9, 2023

Seafood Sustainability Certifications:

- MSC & RFM Salmon:
    - Client update and invoices sent out April 25th; currently collecting payments.
    - A couple of former client group members have rejoined MSC-hoping to continue to recruit members for both certs
    - MSC Salmon 4th surveillance audit report published in Feb; the Assessment Team closed Condition 2 regarding Kodiak hatchery salmon and all other conditions were deemed on target.
    - RFM Salmon 2nd surveillance audit report published in March; deemed ahead of schedule addressing minor non-conformance regarding marking Kodiak pink salmon.
- MSC & RFM Cod:
    - Successfully collected annual client group fees and client group list is updated on the AFDF website for 2023.
    - BOF groundfish management proposal passed with some significant amendments (see RC055 in packet). This was sufficient to close condition 2 on MSC cod!
    - MSC cod surveillance audit report published in April.
    - RFM cod recertified and final report published in February.
- RFM Halibut & Sablefish:
    - Client group list now on AFDF website (halibut & sablefish).
    - See update from AFDF Technical Facilitator on major and minor conformance.
    - AFDF will begin billing the client group next year (Feb/March 2024).

Grants:

- AFDF staff collaborated on three grants submitted to Denali Commission in early April: *KelpMeal Phase 2, Alaska Symphony of Seafood: Expanding Business Development & Manufacturing Services, Initiative to Reshore Alaska Seafood Processing* (see packet for project narratives). Successful projects will be announced in June.
- AFDF received a grant from MSC to run a pilot project this summer in collaboration with SkipperScience to work with 10 gillnetters in Southeast and Prince William Sound to collect data about seabird interactions (or lack thereof) during the season. We're currently in the app development process and are getting ready to train the selected fishermen. Data will be collected between July 1st and August 31st. We hope to receive additional funds from an SK proposal to continue the project for two more seasons (successful projects to be announced in May).

Mariculture:

AFDF published two RFPs recently as part of the BBB RC project. The first was for the Green Energy Project (see packet), which closed April 20th. We received two proposals, which are being reviewed by Julie Decker, myself, and Juliana Melin, the BBB project

manager at Southeast Conference. The second is the Mariculture Joint Innovation Projects (see packet). This RFP closes May 31st. The selection panel is TBD but could include interested AFDF board members.

Alaska Sea Grant Fellow:

AFDF staff interviewed five excellent candidates to serve as our 2023/24 Sea Grant Fellow. We were matched with Kelly Drummond (see packet for application materials), who will start August 14th. Kelly has a strong background in science communication and outreach, has worked in Alaska in various capacities including gillnetting in Bristol Bay, and is graduating with a *Master of Advanced Studies in Marine Biodiversity and Conservation* this spring from Scripps Oceanographic Institute. She will primarily be working on mariculture projects, but is also interested in sustainability certification and excited to get exposure to the wide range of topics AFDF works on. She has big shoes to fill in replacing Ben and Robin!

a. Project Narrative

Community Description:

This project will impact coastal communities and businesses across the state that participate in the Alaska seafood industry, with a focus on developing more small seafood value-added processing businesses, including mariculture; specifically, harvesters, farmers, primary and secondary processors, and those who provide value-added services will be served by this project.

Alaska's coastal communities rely heavily on the seafood industry for their livelihoods. These communities are typically underserved, have limited economic opportunities, are characterized by their strong ties to the ocean, their cultural and economic dependence on fishing and seafood processing, and their commitment to sustainable practices. The proposed project aims to serve these communities by addressing the challenges they face in developing businesses related to value-added seafood products.

Problem Statement:

The Alaska Fisheries Development Foundation (AFDF) is the founder and organizer of the Alaska Symphony of Seafood (Symphony) which is an annual competition for new value-added, commercial-ready products manufactured from Alaska seafood. The Symphony encourages product innovation, to maximize utilization and value of fishery resources, while diversifying markets for Alaska seafood.

Product development is critically important to the entire seafood industry. Innovative new products position the industry to remain competitive and relevant to consumers and utilize more of the resource, helping Alaskans realize greater economic benefits and reducing seafood waste in the environment. In the words of Alaskan Leader Seafoods, 2018 Grand Prize and Retail 1st Place for Alaskan Cod with Lemon Herb Butter, *"Winning the Grand Prize Symphony award in 2018 spotlighted our company. . . Many retailers are always looking for a popular and sustainable product to showcase in their seafood departments, so the Symphony put us on the map in several regions."* The Symphony helps connect innovators of new products to markets and sales, benefiting the Alaska seafood industry and the communities that rely on it. The Symphony is particularly impactful to small or startup businesses. This project will support an expansion of the event to amplify the impact of the Symphony, for the benefits of coastal Alaska and the broader seafood industry, with additional emphasis and support for startups.

Project Description:

We propose to improve and expand components of the Symphony to better serve small Alaska companies and stimulate additional economic development in the communities where these companies are based. AFDF plans to invest more outreach efforts toward Alaska businesses in small communities about the benefits of entering the Symphony, particularly in communities with a robust seafood industry (Homer, Dillingham, Wrangell, Sitka, Cordova, Kodiak, etc.) where nascent businesses may exist that need some additional support to become viable. Second, we plan to add a "pre-commercial" category to the Symphony competition. This category will be for early stage companies and individuals to pitch products to a panel of industry experts who will provide feedback about commercial viability. After participating in the pre-commercial process, companies will have the opportunity to receive coaching from the AFDF Startup Accelerator, which could include helping to secure investment or loans for expansion, connection to additional supply of raw product, custom processing capacity, packaging and technical expertise, connection to sales, or other company needs.

AFDF has already seen the success of helping elevate and grow small Alaska seafood companies via the Symphony and the AFDF Startup Accelerator. This year, Thunder's Catch, a small company owned and

operated by a young Bristol Bay fishing couple, won the Bristol Bay Choice and Juneau People's Choice awards during the Symphony. Part of their prize was financial support from AFDF to attend the Seafood Expo North America (SENA) in Boston and enter their product into SENA's new products contest, the Seafood Excellence Awards (SEA). Wild Salmon Chowder by Thunder's Catch, won first place for best new retail item in the prestigious Seafood Excellence Awards, representing the best in all of North America. A story about Thunder's Catch is included in the Appendix, and can also be found here. We are excited to focus on more small companies like Thunder's Catch, for whom the support and visibility that comes from participating in the Symphony and the Startup Accelerator can make or break launching a new company or product.

Impact/Value Statement:
This project will benefit communities across coastal Alaska, particularly underserved rural communities that are in need of additional economic opportunities through increased value-added processing, product development, and small businesses development. Additionally, new products created through these efforts that utilize more parts of the resource (e.g. fish waste) will reduce environmental impacts. Service providers such as packaging suppliers, digital designers, advertising agencies, media outlets, and others will also see some economic benefits in communities of all sizes.

Product development supports the mission of increasing the value of Alaska seafood through product innovation, maximizing utilization, and diversifying markets. Significant opportunity exists to transition commodity production in Alaska to value-add production, with new products at the center of this effort.

b. Scope of Work and Schedule

Background: AFDF plans to expand the positive impacts of the event by providing additional support to small companies with innovative new product ideas, increasing the number of entrants, demonstrating the value of the event to the public, and supporting long-term revenue growth to support the event. This restructuring will particularly aim to serve small, coastal Alaska communities and businesses involved in the seafood industry.

Purpose: The purpose of this project is to use the Symphony platform to bring additional value to Alaska seafood and Alaska coastal communities that would benefit from development of local businesses and new seafood products in the marketplace.

PLEASE SEE DETAILED PROJECT TIMELINE AND TASK ASSIGNMENTS IN THE APPENDIX

Task 1: Conduct outreach to small, coastal Alaska communities and businesses about the Symphony 04/2024-09/2025

1.1. Identify communities and small businesses with interest or capacity for entrance into the Symphony.
1.2. Provide information about the event and how to those entities with direct outreach to companies and presenting at community events.

Task 1 consists of two components which will occur before the Symphony competitions for the 2025 and 2026 events. The first will be to work with AFDF staff, board, and key partners to identify individuals or companies in small, coastal Alaska communities that could be a good fit for participating in the Symphony. Second, AFDF staff will conduct outreach to individual companies via phone, email, or in person to provide information about the Symphony and how to enter. AFDF staff will also provide information about the event to key communities more broadly by presenting at appropriate community events.

Deliverables: Five new product entries from coastal Alaska communities in year one and year two of the project each for a total of ten over two years.

Task 2: Expansion of Symphony Categories and Business Support Services 01/2024-12/2025

2.1. Identify key industry seafood experts and assemble a judging panel for "pre-commercial" Symphony competition.

2.2. Identify Symphony entrants or businesses from Task 1 that have products for entry in the Symphony.

2.3. Integration of the "pre-commercial" competition into the Symphony event and provide feedback from judges panel to participants

2.4. Provide additional exposure for Symphony entrants and winners at the Seafood Expo North America (SENA) in Boston

Task 2 consists of four components that will occur during both the 2024 and 2025 Symphony competition seasons. The first will be for AFDF staff and board members to identify and invite key seafood experts to judge and give constructive feedback to products in the "pre-commercial" part of the symphony competition. Second, AFDF staff will identify Symphony entrants or other businesses identified in Task 1 that they believe would be a good fit for this category and help them to apply if they have not already. Third, AFDF staff will organize and put on the Symphony events in 2024 and 2025 including the "pre-production" competition. Outside judges will offer feedback to participants. Fourth, AFDF will provide additional exposure for Symphony entrants and winners by supporting their attendance at SENA.

Deliverables: 1) Panel of industry expert judges assembled; 2) Incorporation of the "pre-commercial" category into the Symphony competition; 3) Cohort of companies participating in the "pre-commercial" competition; 4) Individualized feedback document for each participating company; 5) Exposure for companies via introductions, social media posts, and supported attendance at SENA

Task 3: Integration of AFDF's Startup Accelerator and Alaska Symphony of Seafood 01/2024-12/2025

3.1. Articulation of a financial model and business plan for each startup

3.2. Introductions to key business mentors

3.3. Presentation and pitch development and refinement including for winners to pitch products to judges at Seafood Expo North America's Seafood Excellence Awards competition, and other pertinent venues.

3.4. Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis for each startup

Task 3 consists of three components that will occur during both the 2024 and 2025 Symphony competition seasons. The first will be for the AFDF Startup Accelerator to assist each business in articulating a financial model and business plan. The second will be introduction of business owners to key mentors in relevant industries and roles. The third will be to guide startups in developing a presentation and pitch appropriate for both the SENA Seafood Excellence Awards competition and other venues.

Deliverables: 1) AFDF Startup Accelerator coaching schedule set up with each participant; 2) Articulated financial model and business plan for each startup; 3) Pitch and presentation developed for each startup; 4) SWOT Analysis written for each startup

Task 4: Provide Project Management 01/2024-12/2025

3.1. Provide Financial Management

3.2. Maintain project schedule
3.3. Write grant progress reports and final report.

Task 4 consists of three components. First, AFDF staff will provide financial management of the project including adhering to the project budget, submitting invoices for reimbursement, and other tasks. Second, AFDF will manage all other aspects of the project to make sure that the project is staying on schedule and tasks are being completed. And finally, AFDF staff will write grant progress and final reports and submit them in a timely manner.

Deliverables: Grant reporting materials required by Denali Commission.

c. Organization, Capacity, and Delivery Method

Founded in 1978, the Alaska Fisheries Development Foundation (AFDF) is a nonprofit, 50 member collaboration of harvesters, processors, and support sector businesses dedicated to making opportunities out of challenges. AFDF identifies problems common to the Alaska seafood industry and collaborates with coastal communities, research institutes and government agencies to develop effective solutions with shared benefits. Along with the Executive Director and six other staff (including two Alaska Sea Grant Fellows), AFDF is managed by a Board of Directors (14 members) representing a variety of membership stakeholder groups. Broadly, AFDF is funded by membership dues and grants from a variety of private, NGO, and governmental entities. In her role as Executive Director of AFDF for the past nine years, Julie Decker has had extensive experience successfully managing federal grants on behalf of the organization. Most recently, AFDF, along with the other members of the Alaska Mariculture Cluster, was awarded a $49 million grant from the EDA for mariculture development in Alaska after successfully developing a project idea with an initial $500,000 EDA planning grant.

One of AFDF's flagship programs, The Alaska Symphony of Seafood, was created in 1994 with a focus on Alaska salmon in the categories of Retail, Food Service, and Smoked Products. Within a few years, the event expanded to include all Alaska seafood. Since this time, over 400 new products entries have been submitted and promoted. Event categories have been changed to appropriately support the trends in the industry. Current categories include: Salmon and Whitefish in addition to Retail, Food Service, and Beyond the Plate. Roe products are entered for all eligible categories and Beyond the Plate focuses on seafood byproducts, taking the Symphony *BEYOND* the realm of traditional center-of-the-plate food products. Relevant entries have included oil supplements, leathers, cosmetics, high-value pet treats, broths, and shelf-stable roe. The Symphony incorporates new principles such as full utilization of the resource, capturing full value for those who depend on the resource and maximizing the health benefits to consumers.

The project will be managed by AFDF Executive Director Julie Decker. The AFDF Executive Administrator, who also manages the Symphony program, will oversee outreach, event planning, and providing support to Symphony entrants. The AFDF Startup Accelerator Director will provide one-on-one coaching for businesses. The AFDF Finance Director will oversee financial management of the grant including submitting invoices and paying contractors. Contractors will be engaged for graphic design work. See timeline above for more detail.

d. Partnerships and Leveraged Funds

A significant source of match funds for this project include sponsorships for the Symphony raised every year. AFDF commits $200,000 in cash match raised through sponsorships over the 2-year period, and funds received to support the AFDF Startup Accelerator through the Builders Initiative.

Alaska Fisheries Development Foundation, Inc.

Request for Proposals

RFP #: 2023-01

Date of Issue: March 20, 2023

Incorporating Green Energy into Alaska Mariculture

The Alaska Fisheries Development Foundation (AFDF) is soliciting proposals from individuals, companies, or organizations that can provide services and technical support for the integration of renewable sources of energy (green energy) into the development of the mariculture industry in Alaska. This is a part of the Green Energy component of the Alaska Mariculture Cluster, funded by a grant from the Economic Development Administration (EDA) to the lead entity, Southeast Conference (SEC). AFDF is one of several coalition partners on the Alaska Mariculture Cluster, and in particular is a subaward recipient managing the Green Energy component. This Green Energy component, for which we are soliciting proposals, has three objectives: 1) to develop a long-term renewable energy plan, 2) to collect baseline data measurements of how energy is currently being used in the mariculture industry and generate an analysis with recommendations for renewable energy alternatives, and 3) to develop a "best practices guide" through energy audit procedures and standards for the Alaska mariculture industry. These three objectives will help ensure that the industry develops sustainably and minimizes fossil fuel combustion by improving energy efficiency and using renewable energy when feasible. Without an intervening investment in renewable energy technology, expertise, planning and deployment, the mariculture industry would continue to develop with a reliance on fossil fuels. Conducting this work now allows the mariculture industry to grow with energy efficiency, renewable energy, and best practices incorporated into initial designs rather than hoping for a transition in the future. This effort also is designed to make technology and technical support available and accessible in rural and Alaska Native communities, providing a more equitable development of this industry.

Background

This series of objectives makes up the Green Energy component of the Alaska Mariculture Cluster (AMC), a coalition funded by an EDA Build Back Better Regional Challenge (BBBRC) grant. AFDF, as part of its subaward, will oversee the Green Energy component. The Green

Energy component is one of seven components, which have been purposely designed to be complementary in order to break down barriers to growth and break out of the "chicken or egg" cycle of industry development. More information on the Alaska Mariculture Cluster is available at alaskamariculturecluster.org, including the Overarching Narrative which explains how the seven components work together to grow the mariculture industry in an equitable and environmentally responsible manner, and the Green Energy Component Narrative.

About AFDF

Since 1978, the AFDF has broadly represented the Alaska seafood industry (harvesters, processors and support sector businesses) in the areas of research and development. Since 2014, AFDF spearheaded the Alaska Mariculture Initiative, an effort to expedite the development of growing shellfish and seaweed in Alaska. As a result of those efforts, Governor Walker created the Mariculture Task Force (MTF) by Administrative Order from 2016-2021, during which time the AFDF Executive Director served as either Chair or Vice-Chair. The MTF was designed to sunset and in its place has been created the Alaska Mariculture Alliance (AMA); the AFDF Executive Director serves on its Board of Directors.

Additionally, in 2013, AFDF began a project to help commercial fishermen increase energy efficiency onboard small vessels. [Note - Alaska has over 9,000 registered commercial fishing vessels, of which approximately 8,500 are under 60 feet in length and owner-operated.] With grant funds from the Alaska Legislature and NOAA, AFDF worked with Alaska Longline Fishermen's Association (ALFA) and a licensed chief engineer with expertise in energy management to conduct vessel energy audits, measuring actual energy use on a set of vessels while engaged in commercial fishing activities. Then, the team designed an online tool based on those results that allows other commercial fishermen to analyze energy use and determine which onboard energy systems are worth investing in energy conservation measures that yield the best return on investment. This project also trained and certified an Alaskan in vessel energy auditing techniques, and supplied this person with necessary equipment, which built capacity in-state to continue conducting vessel energy audits.

Scope of Work:

Objective 1: Develop a long-term Green Energy Plan for Alaska's Mariculture Industry ($175,000-$200,000)

The baseline data collected (objective 2) while developing standardized energy auditing assumptions (objective 3) will provide information for creating a comprehensive green energy plan for the mariculture industry in Alaska. A comprehensive plan will chart a path toward zero carbon operations while minimizing energy costs, capitalizing on the intersection between types of energy loads and maximizing benefits for local communities. The Green Energy Plan

should consider energy use on vessels, aquatic farms, hatcheries, nurseries, processing facilities, and certain shoreside support (e.g. dockside electric charging stations, larger electricity demands, etc). The Plan should also consider "right-sizing" energy use with financially and technically feasible renewable energy options, which may include heat pumps, solar, diesel-electric hybrid, fully electric, battery storage, and other options. The Plan should additionally consider that some rural communities have renewable power generation (e.g. hydro and/or wind), while some communities are still using diesel power generation.

Execution Goals: Release a renewable energy plan by year four of the project.
Performance Goals: Achieve 25% green energy by 2027 and 90% by 2040.
Equity Goals: Equal renewable energy penetration across all four regions of the project, with an emphasis on rural and Alaska Native communities.

Objective 2: Collect baseline data of current energy usage & generate recommendations for renewable energy alternatives ($225,000-$250,000)
In this project, energy audits will be performed at sites/vessels throughout the four regions of the project. Data loggers that measure fuel consumption, electrical and hydraulic loads will be installed to record energy consumption throughout one year of operation, the results will be compiled in a publicly accessible database (which maintains confidentiality of individuals).

***Execution Goals*:** Create a publicly accessible database of energy usage; Release a report documenting patterns and results from the measurement campaign.
***Performance Goals*:** Measure energy usage at 20 mariculture sites/vessels.
Equity Goals: 25% of sites/vessels surveyed will be owned by Alaska Natives & 25% will be rural; Survey at least one site/vessel in each of the four regions in the project (SE, PWS, KP, SW).

Objective 3: Develop best practices guide via energy audit procedures & standards for the industry ($130,000-$150,000)
Using the data collected in Project 2, a model will be developed that allows energy auditors to estimate energy usage based on conversations with mariculture site operators. AFDF will work with the contractor to release a report documenting standard assumptions that should be used in energy assessments of mariculture sites.

Execution Goals: Release a best practices guide by the third year of the project.
Performance Goals: 25% of sites/vessels powered with renewable energy by 2027.
Equity Goals: 25% of rural and 25% Alaska Native owned sites/vessels either powered with green energy or receive training or support services towards implementation of green energy.

General Information

The three objectives listed above should be completed in parallel, but also with feedback loops in which outputs from one objective feed into inputs in another objective. Additionally, the contractor should understand that the mariculture industry currently incorporates a small number of individuals/businesses, however, the intent of the Alaska Mariculture Cluster, with investment by EDA, is to grow the industry substantially in the next 10 years. It is expected that this growth will draw many new participants into the industry and that these participants will likely live in rural communities and/or Alaska Native communities, which is why it is required that an emphasis be placed on rural and Alaska Native communities to receive services and technical support from this project. Additionally, many of the current and new participants are expected to also be participants in the Alaska seafood industry due the significant overlap in knowledge, skills and abilities (working on the water), as well as equipment and infrastructure needs (vessels and processing plants). This context should be taken into consideration when developing the long-term Green Energy Plan (objective 1), as well as when considering participants and communities to target in the completion of these objectives.

Additionally, as the industry grows, the need will grow for additional technical capacity to support implementation of the Green Energy Plan. Consequently, one of the criteria on which proposals will be scored is how the contractor/team/partners build capacity for continued work in decarbonization and the blue economy within Alaska and/or the University of Alaska system (i.e. by including graduate students or interns in the project).

This Green Energy component should establish energy auditing procedures for the mariculture industry. For example, in objective 2, energy audits will be performed at sites throughout the state. Data loggers that measure fuel consumption, electrical and hydraulic loads will be installed to record energy consumption throughout one year of operation, the results will be compiled in a publicly accessible database and a model will be developed that allows energy auditors to estimate energy usage based on conversations with mariculture site operators. Finally, a report will be completed documenting standard assumptions that should be used in energy assessments of mariculture sites. These standard assumptions will allow fair energy audits to be conducted remotely, allowing isolated, rural communities to access federal funding programs like REAP that require energy audits. Remote energy audits are essential to ensuring equitable distribution of energy efficiency funds. When small businesses may see savings of a few thousand dollars per year through energy efficiency improvements, justifying travel costs of thousands of dollars for an energy auditor from Anchorage to access a remote site is impossible. Providing a baseline collection of energy audit measurements and standard assumptions will support energy efficiency efforts for years to come.

The baseline data collected while developing standardized energy auditing assumptions will support a comprehensive Green Energy Plan for the mariculture industry. We expect four types of energy demand within the industry: marine site operation, vessel operation, hatcheries/nurseries, and shoreside processing infrastructure. Each of these types of energy demand warrants a unique renewable energy approach. Existing mariculture sites in Alaska have intermittent loads of less than one kilowatt that may be well served by solar installations with battery infrastructure. Reducing emissions from vessels will require different technologies depending on operations. Skiffs that remain at the mariculture sites may be fully battery-electric and recharge at the site, depending on the solar resource availability. Larger vessels that provide transportation to the sites may be best served by hybrid diesel-electric systems, renewable liquid fuels, or hydrogen fuel cell systems. Any of these technologies will require shoreside infrastructure to provide recharging or refueling opportunities. Finally, shoreside infrastructure may increase load on local electric grids or develop their own power sources. A comprehensive plan will chart a path toward zero carbon operations while minimizing energy costs, capitalizing on the intersection between types of energy loads and maximizing benefits for local communities.

In addition to the industry-wide Green Energy Plan, this component will also create resources designed to serve Indigenous and rural mariculture enterprises. For example, the Green Energy Plan may recommend small solar power systems to serve mariculture sites. Standard guidelines should be developed for mounting solar panels at marine sites, purchasing and installing panels, batteries and charge controllers, and financing the systems. This information will be compiled online, in written reports, and distributed through in-person and virtual workshops, as well as during the Annual Mariculture Conferences. The solutions presented here will accelerate industry growth and innovation by reducing barriers to sustainable energy and limiting exposure to volatile fuel costs. Stable energy costs will reduce risk for entrepreneurs as they start and grow their businesses. The reduced risk will encourage additional private investment in these businesses. Mariculture sites that rely on sustainable energy will also have access to premium markets for sustainable seafood. Utilizing renewable energy will increase reinvestment of mariculture profits in local communities by reducing fuel costs. The reinvestment will support additional local employment. Early investment in sustainable energy will create a virtuous cycle as entrepreneurs benefit from the reliable energy source and create a market for renewable energy technology that spurs further investment in developing technologies for the mariculture industry. This component aligns with EDA’s Recovery and Resilience investment priority by ensuring that the industry is resilient to volatile fuel prices and increasing pressure to reduce greenhouse gas emissions. This component project empowers the Mariculture Cluster to reduce greenhouse gas emissions from their energy infrastructure in order to fulfill the EDA’s environmentally-sustainable development investment priority.

Deliverables:

Objective 1: Develop a long-term Green Energy Plan for Alaska's Mariculture Industry

- Produce literature review of existing green energy plans for other industries and locations and submit to the project advisory panel for review.
- Create an Green Energy Plan outline based on information gathered during literature review and submit to the project advisory panel for review.
- Create a draft Green Energy Plan that is based on outline and feedback from the advisory panel, and submit to the project advisory panel for review.
- Create final Green Energy Plan which incorporates feedback from advisory panel
- In collaboration with AFDF, SEC, and regional liaisons, distribute the final report through professional networks and the annual Alaska Mariculture Conference.
- Produce summaries of work completed to be incorporated into a semi-annual report to EDA.

Objective 2: Collect baseline data of current energy usage & generate recommendations for renewable energy alternatives

- Select sites/vessels to survey for baseline data collection and create publicly accessible database for recording energy usage.
- Collect baseline data about current energy use from selected sites/vessels.
- Provide recommendations for renewable energy opportunities at monitored sites.
- Write a final report detailing findings from the data collection and recommendations for renewable energy alternatives.
- In collaboration with AFDF, SEC and regional liaisons, distribute the final report through professional networks and the annual Alaska Mariculture Conference.
- Produce summaries of work completed to be incorporated into a semi-annual report to EDA.

Objective 3: Develop best practices guide via energy audit procedures & standards for the industry

- Coordinate with the AMC Workforce Development team and incorporate findings from Project 2, draft the best practices guide.
- Review the draft guide with the advisory panel.
- Create the final version of the guide, incorporating input from the advisory panel.
- In collaboration with AFDF, SEC, and regional liaisons, provide additional outreach and training to industry regarding implementation of best practices.
- Produce summaries of work completed to be incorporated into a semi-annual report to EDA.

Timeline and Funding Available:

Funding is secured for the scope of this project over four years. A contractor's proposed budget should range $540,000-$600,000 over the duration of the project period, which is inclusive of travel, supplies, or other expenses incurred by the contractor in order to complete this work. AFDF will consider either one dedicated individual or organization who can fill this contract, or organizations can propose other arrangements/partnerships that meet the scope of work and provide the same level of dedicated capacity. See the attached Timeline for more details.

Proposal Contents:

Proposal submitted for consideration should contain the following information:

- Narrative (5 pgs max), which includes:
  - list of past experience on relevant or similar projects
  - description of in-state capacity building
  - strategy to meet execution, performance and equity goals
- Budget (1 pg max)
- Resume of lead contractor(s)
- Timeline (1 pg max)
- Additional attachments

Qualifications:

Scoring of each proposal against the criteria listed below will be conducted by a committee with recommendations and final approval made in cooperation with the lead entity, Southeast Conference. Criteria for selecting proposals is as follows:

- 20% Demonstration of knowledge and understanding of the project
- 20% Past experience on relevant and/or similar projects
- 20% Demonstration of capacity to complete all of the deliverables within the required timeline
- 20% Costs are reasonable and fall within available/projected funding levels
- 20% Builds capacity for continued work in decarbonization and the blue economy within Alaska and/or the University of Alaska system (i.e. by including graduate students or interns in the project).

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

Due Date: Proposals must be submitted via email no later than **5:00pm AST, Thursday, April 20, 2023** to Hannah Wilson at hwilson@afdf.org as either Adobe PDF or Microsoft Word documents. For questions, please call or email Hannah Wilson at 907-276-7315, hwilson@afdf.org.

Project Period: October 1, 2022 - September 30, 2026

Timeline & Tasks - Revised

Description of Goals/Objectives/Tasks	2022	2023				2024				2025				2026			Responsible Party (initials)	Metrics & Equity Measures	Target for metric/equity measure
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16			
GOAL: Grow a $100 million per year mariculture industry in 20 years; in next 4 years, implement eight component projects funded by $49 million EDA BBB grant. Component Project #6: Green Energy (AFDF)																			
Project 6-1: Develop a long-term Green Energy Plan for Alaska's Mariculture Industry ($200,000)																		Release plan; attendees @ conf; 25% renewable by 2027; 90% renewable by 2040	Renewable energy adopted @ 25% rural / Alaska Native sites; attendees = 25% + 25%
Task 6-1-1: Assemble advisors for consultation (ALFA, LaunchAlaska, ACEP)	■	■															JD, ADV		
Task 6-1-2: Develop scope of plan & criteria for proposal evaluation		■															JD, HW, ADV		
Task 6-1-3: Write & issue RFP soliciting proposals from contractors		■	■														JD, HW		
Task 6-1-4: Select, fund & sign contract		■	■														JD, HW, ADV, GB		
Task 6-1-5: Monitor progress; receive literature review; receive & review plan outline			■	■	■												JD, HW, CON		
Task 6-1-6: Monitor progress; receive & review draft plan from contractor						■	■	■	■	■							JD, HW, ADV		
Task 6-1-7: Monitor writing progress; receive & review final plan; distribute final plan											■	■	■	■	■	■	JD, HW, CON		
Project 6-2: Collect baseline data of current energy usage & generate recommendations for renewable energy alternatives ($250,000)																		Measure energy usage @ 20 sites; create database of energy usage; complete report of results & patterns	Sites will be 25% rural + 25% Alaska Native; at least 1 site from each Opportunity Zone; attendees = 25% + 25%
Task 6-2-1: Assemble advisors for consultation	■	■															JD, ADV		
Task 6-2-2: Develop scope of work & criteria for proposal evaluation		■															JD, HW, ADV		
Task 6-2-3: Write & issue RFP soliciting proposals from contractors (include 6-3)		■	■														JD, HW		
Task 6-2-4: Select, fund & sign contract		■	■														JD, HW, ADV, GB		
Tasks 6-2-5: Choose sites; create database				■													CON		
Task 6-2-6: Collect baseline data				■	■	■	■	■	■	■	■	■					CON		
Task 6-2-7: Provide recommendations for renewables at sites measured								■	■	■	■	■					CON		
Task 6-2-8: Receive & review final report developed by contractor											■	■	■				CON		
Task 6-2-9: Distribute final report of results thru network & annual conference														■	■	■	JD, HW, CON		
Project 6-3: Develop best practices guide via energy audit procedures & standards for the industry ($150,000)																		Guide released; attendees @ conf; 25% of sites powered with renewable # attendees @ conf	Renewable energy adopted @ 25% rural / Alaska Native sites; attendees = 25% + 25%
Task 6-3-1: Begin drafting guide, coordinate with WFD team, incorporate final report from 6-2										■	■	■	■				CON		
Task 6-3-2: Review draft best practices guide													■	■			JD, HW, ADV, CON		
Task 6-3-3: Receive & distribute final guide thru network & annual conference														■	■	■	JD, HW		
Task 6-3-4: Additional outreach/training to industry regarding implementation of best practices															■	■	CON		

JD=Julie Decker, ER=Ekaterina Ratzlaff, Hannah Wilson=HW, Robin McKnight=RM, Graduate Student=GRAD, contractor=CON, advisors=ADV, farmers=FARM, Steering Committee=SC, Governance Body=GB

Initiative to Reshore Alaska Seafood Processing
A project proposed by the Alaska Fisheries Development Foundation
Submitted to the Denali Commission
April 14, 2023

Abstract: The Alaska seafood industry generates 5-6 billion pounds of seafood annually, much of which is primary processed, then shipped overseas for secondary value-added processing. This current business model provides uncertainty in supply chains and food security, increases shipping costs and carbon footprint and challenges for maintaining quality control, and contains significant geo-political risk. Conducting secondary processing in coastal Alaska communities would provide significant opportunities for economic development. This project aims to explore the economic and technological feasibility of returning secondary seafood processing to Alaska, thereby reducing carbon footprint, creating jobs, increasing tax revenue, and providing other economic benefits to the region. Given the identified economic and technological challenges associated with secondary seafood processing, this project will then develop a strategic plan to encourage and incentivize making the necessary changes or improvements to reshore Alaska seafood processing. This project will contribute to the resilience and sustainability of Alaska's seafood industry while simultaneously supporting the economic well-being of rural coastal communities.

Project Narrative

Community Description and Problem Statement

Alaska's 100,000-plus coastal residents, living in communities heavily reliant on the seafood industry, face significant challenges in fostering economic growth and development. These communities are characterized by their strong ties to the ocean, their cultural and economic dependence on fishing and seafood processing, and their commitment to sustainable practices. While the benefits of this project will accrue statewide, coastal communities near seafood resources, but with only seasonal seafood processing capacity stand to benefit the most; examples include Ketchikan, Wrangell, Petersburg, Cordova, Valdez, Unalaska, Togiak Dillingham, Naknet, and others.

Currently, a significant portion of seafood harvested in Alaska is exported overseas, primarily to Asia, for secondary processing, resulting in less revenue and job opportunities for Alaskans. ***Global factors such as increasing labor, fuel, and insurance costs, along with tariffs, supply chain disruptions, and geo-political risk in this region make overseas processing less attractive and have created a critical opportunity to reverse the multi-decade trend of off-shoring manufacturing. It is urgent that Alaska take advantage of these global factors which necessitates exploring the feasibility of reshoring secondary seafood processing.*** If successful, this initiative will boost economic activity in the form of tax revenue, profitability, and higher-skilled jobs, while also reducing the carbon footprint, and supply chain and quality control risks.

Project Description

Returning secondary processing of seafood to Alaska’s coastal communities requires a viable cost-competitive alternative to the existing practice. A feasibility analysis is necessary to identify the critical operating conditions, technologies, workforce, incentives, and infrastructure required to enable companies to make this shift in their current business models. This project has generated broad interest and support from the Alaska seafood industry and will be supported by AFDF’s Industry Advisory Committee (IAC). The project is also aligned with strategic development goals of the State of Alaska and local communities.

The ***Initiative to Reshore Alaska Seafood Processing*** aims to analyze the economic and technological factors required to bring secondary processing back to Alaska. The project will focus on identifying the current costs and challenges associated with overseas processing and determining the necessary conditions for establishing competitive and viable alternatives which include processing operations within the state. This comprehensive and iterative approach will not only support the growth of Alaska's seafood industry, but also provide economic benefits to rural communities.

In the first phase of the project, we will assess the current state of seafood processing in Alaska and analyze the financial aspects of overseas processing. This analysis will include a detailed examination of labor, fuel, insurance, and transportation costs. By understanding the financial landscape of the industry, we can identify the costs that a domestic provider would need to meet in order to make in-state processing competitive.

In the second phase, we will conduct a technological audit to evaluate the potential for automating key reprocessing tasks and reducing operating costs. This assessment will involve exploring the current and anticipated capabilities of processing technology and identifying opportunities for innovation and efficiency gains. By leveraging advancements in automation and technology, Alaska's seafood industry can overcome some of the labor-intensive aspects of processing, making domestic operations more cost-effective.

Scope of Work and Schedule

The project includes three primary components - an economic analysis, technological analysis, and a strategic plan for increasing secondary processing in Alaska.

Economic Analysis

This analysis will identify and describe the economic and financial conditions required in Alaska to justify the capital investment associated with additional primary and secondary processing. A comparison of existing operating expenses in Alaska will be developed to compare against costs observed in other markets, specifically China and the Pacific Northwest. Operating categories including transportation, energy, labor, insurance will be considered, among others. A matrix comparing Alaska versus other regions will be developed. The topics of taxation, regulation, subsidies, incentives, and risk will be considered as possible. This analysis will be quantitative and qualitative, informed by both publicly available data and interviews with qualified stakeholders.

Technological Analysis

This section of the project focuses on understanding the current and anticipated state of seafood processing technology, under the assumption that increased second processing in Alaska will necessitate cutting-edge automated technologies, reliable and renewable energy, and a trained workforce. Despite high initial capital costs, these technologies are expected to yield lower operating costs. The analysis will concentrate on the most common processing activities performed outside Alaska, such as pinbone removal from pink salmon or fileting and portioning from Pacific cod, with a relatively small number of processes accounting for the majority of seafood processing outside the state. After identifying these processes, a review of existing and anticipated technologies will be conducted, exploring solutions from providers like Marel and Badder, as well as investigating other sectors for relevant technologies, such as pollock roe and milt separation. The research team will draw from other food manufacturing sectors, including chicken, fruit, nuts, and baked goods, among others.

Strategic Plan

The project will also involve developing a strategic plan that synthesizes the findings from the economic and technical analysis. A comprehensive set of recommendations and guidance for use by both public and private entities will be included. This strategic plan will outline actionable steps and best practices for reshoring secondary seafood processing, enabling stakeholders to capitalize on the trends and opportunities identified in the study. By offering a clear roadmap, the strategic plan aims to facilitate informed decision-making and drive successful implementation, contributing to the overall growth and sustainability of Alaska's seafood industry and fostering economic development in rural coastal communities.

Timeline

The project will be completed in six quarters, starting in Q1 2025. The project will be managed and completed by AFDF with support from an economic consulting contractor. Garrett Evridge, Project Manager, will be responsible for completion of all tasks with oversight from Julie Decker and support from other AFDF staff and an economic consultant. The project's success will depend on collaboration with industry stakeholders, including AFDF's Industry Advisory Committee (IAC), which currently includes Trident Seafoods, Alaskan Leader Seafoods, and American Seafoods. The Committee will provide critical guidance and information to support the project's completion, including quantitative and qualitative data and information on operating conditions and required technology.

- Project Development and Methodology - detailed methodology will be developed to successfully complete the financial and technological sections of the report. Data sources will be identified, interview candidates will be selected and scheduled, and key literature will be reviewed. Conferences and other public events will be identified for attendance.
- Engage Economic Consultant - AFDF will hire an economic consultant through a competitive request-for-proposal process.
- Economic Analysis - Relevant data will be reviewed and described. Regions will be selected for comparison. Interviews will be conducted and recorded.
- Technological Analysis - Data on key seafood processing requirements will be gathered and described. Selection of the most significant processing practices will be completed. Existing and anticipated technological solutions will be described.
- Strategic Plan Development - A report & strategic plan will be prepared describing key findings of the analysis. This is the primary deliverable of the project, emailed to Denali Commission.

Figure 1.0 Project Timeline and Key Tasks

	2025 Q1	2025 Q2	2025 Q3	2025 Q4	2026 Q1	2026 Q2*	Project manager	Project Oversight
Project Development and Methodology							Garrett Evridge	Julie Decker
Engage Economic Consultant							Garrett Evridge	Julie Decker
Financial Analysis							Garrett Evridge	Julie Decker
Technological Analysis							Garrett Evridge	Julie Decker
Strategic Plan Development							Garrett Evridge	Julie Decker

*Final deliverable completed and submitted in 2025 Q2.

Organization, Capacity, and Delivery Method

Founded in 1978, the Alaska Fisheries Development Foundation (AFDF) is a nonprofit, 50 member collaboration of harvesters, processors, and support sector businesses dedicated to making opportunities out of challenges. AFDF's mission is to identify problems common to the Alaska seafood industry and to develop efficient, sustainable outcomes that provide benefits to the economy, environment and communities. Along with the Executive Director and six other staff (including two Alaska Sea Grant Fellows), AFDF is managed by a Board of Directors (14 members) representing a variety of membership stakeholder groups. AFDF is funded by membership dues, fees for services, and grants from a variety of private, NGO, and governmental entities.

AFDF has extensive experience managing federal and state grants, including prior grants from the Denali Commission, NOAA, EDA, State of Alaska, and the Exxon Valdez Oil Spill (EVOS) Trustee Council.

The project will be managed and completed by AFDF with support from an economic consulting contractor, and AFDF's Industry Advisory Committee. Key personnel include Julie Decker (Executive Director - project oversight); Hannah Wilson (Development Director - project support); Ekaterina Ratzlaff (Finance Director - financial oversight); and Garrett Evridge (AFDF Startup Accelerator Director - Lead Project Manager). This team offers decades of experience in the seafood, maritime, and mariculture industry. Resumes are found in the appendix. The project will follow similar methods that AFDF followed in its *Alaska Mariculture Initiative* which resulted in a gubernatorial appointed Mariculture Task Force, stakeholder development, iterative economic analyses and strategic planning, creation of the Alaska Mariculture Alliance, increased mariculture farms and processing, and a $49 million grant awarded last year to grow the mariculture sector. This project will be completed in six quarters, starting in Q1 2025.

Partnerships and Leveraged Funds

This project is strategically aligned with the ongoing efforts at the AFDF Startup Accelerator, which focuses on economic development and modernization of Alaska's ocean sectors. Supported by a $200,000 grant from Builders Initiative, the Accelerator actively engages with early-stage companies in the maritime, mariculture, and seafood sectors. One of the core objectives of the program is to identify and support companies that can contribute to the reshoring of Alaska's seafood processing activities. AFDF will also draw on its network of partners, including Alaska Seafood Marketing Institute (ASMI), United Fishermen of Alaska (UFA), Pacific Seafood Processors Association (PSPA), and At-Sea Processors Association, Genuine Alaska Pollock Producers.

APPLICANT INFORMATION

1 First name
Kelly

2 Last name
Drummond

3 Email address
kldrummond@ucsd.edu

4 Phone number

5 Nationality
⊙ U.S. citizen

6 Your legal state of residence
California

7 Current institution/school (or recently attended, if finished)
Scripps Institution of Oceanography UC San Diego

8 In which state is your institution/school located?
California

9 Degree sought (or awarded, if finished)
⊙ Other Masters

10 Field of study for degree
Marine Biodiversity and Conservation

11 Expected completion of graduate degree, term and year (actual, if finished): e.g., Fall 2022, Spring 2023, Summer 2023
Summer 2023

Demographic information (not used for evaluating the application)

12 Ethnicity
⊙ Not Hispanic or Latino

13 Race
⊙ White

14 Alaska Native

15 Do you or your organization identify with any of the following groups that the federal government, in Executive Order 13985, has identified as underserved? Check all that apply. Note: It is required that this question be asked, but your response is voluntary. Please answer this question as the fellowship applicant.
☑ Lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons

16 Attach your personal and academic curriculum vitae, not to exceed two pages using 12 pt font (PDF).
KellyDrummond_SIO_CV.pdf

17 Attach your personal education and career goal statement emphasizing your abilities and states your career development expectations for the fellowship experience (PDF, 1000 words or less).
KellyDrummond_2023_AKSG_Essay.pdf

18 If you are requesting official transcripts from one or more colleges to be sent to mrcain@alaska.edu, enter the college(s) at which you have initiated the request. (Official transcripts are not required.)

19 Attach a copy of your most recent academic transcript. Attach all additional graduate/undergraduate transcripts below. (PDF)
KellyDrummond_UCSDTranscript_2023.pdf

20 Attach a copy of an additional graduate or undergraduate transcript (2). (PDF)
OCC_Academic_Transcript.pdf

21 Attach a copy of an additional graduate or undergraduate transcript (3). (PDF)
KellyDrummondTranscriptUPS.pdf

22 Attach a copy of an additional graduate or undergraduate transcript (4). (PDF)

Kelly Laurel Drummond
MAS MBC Scripps Institution of Oceanography - 2023
kldrummond@ucsd.edu (858) 254-3894

I have pursued my passion for the marine environment through a career in education and tourism. My work in outdoor guiding, and as an experiential educator and Montessori teacher allowed me to live and travel in ecosystems ranging from California, Oregon, Caribbean islands, South America, and British Columbia.

But my desire to pursue a career in conservation truly started in Alaska. Through the Alaska Sea Grant I hope to have the opportunity to give back to the state that has inspired my career path. I hope to continue to work at the nexus of science, policy, and outreach through stakeholder engagement in environmental decision making. I am interested in the future of sustainable seafood through aquaculture and algae farming initiatives, and in habitat protection and MPA designation to support Alaska's incredible biodiversity. I am eager to gain more experience in scientific research and field work, and work in whatever capacities support my host organization. My demonstrated experience traveling and connecting with communities in Alaska, work in teaching and education, and current interdisciplinary coursework at Scripps Institution of Oceanography would bring a unique perspective to the Alaska Sea Grant that would make the most of the fellowship.

My first season spent in Alaska was in 2014 as a deckhand on a gill-net fishing vessel in Bristol Bay. This sparked my interest in fishery management salmon ecology. I later moved to the shores of Lake Clark for three years and experienced subsistence fishing and off-grid living and studied watershed ecology and the Dena'ina history of the region. I involved myself in the current environmental issues in the region through supporting the Tribes of Bristol Bay and writing public comments during the recent Pebble Mine EIS process. In 2019 I worked as a backcountry wilderness guide and had the privilege to travel the state educating tourists on the history and ecology of Lake Clark National Park, Kenai Peninsula, Wrangell St. Elias mountains, and Denali National Park. Living on the shores of Lake Clark and traveling throughout that remote region deeply influenced me to study marine science and work at the forefront of conservation and natural resource management. I continued to study salmon ecology by volunteering in stream surveys for Chinook salmon restoration efforts with the Warm Springs Reservation fish biologists on Hood River in the Columbia River Gorge in 2021.

My time spent in the Alaskan wilderness invigorated my passion, and inspired me to return to school to pursue a career in conservation. Due to the pandemic I was able to start taking marine science classes online from my log cabin in Alaska. After returning to San Diego during the pandemic in 2020, I began an Associates in Marine Science, to complement my BA in Sociology. Throughout my work, study, and travel I investigated sustainability, social equities, community engagement, and how to connect people to the natural world. I've developed resilience, flexibility, and perseverance to achieve my goals. In 2022 I was accepted to the class of 2023 Masters of Advanced Studies in Marine Biodiversity and Conservation at Scripps Institution of Oceanography, and will graduate in June 2023.

Since starting at Scripps I have gained formal skills to bolster my existing passion and practical experience in ocean conservation. I have collected data at sea on two oceanographic cruises, and completed coursework in economics, law and policy, and biological oceanography. My studies have focused on fisheries management and research, with many experiential learning opportunities that have given me first-hand knowledge that would be invaluable interfacing with

fishermen, scientists, and administrators alike as an Alaska Sea Grant fellow. I have been involved with the local San Diego seafood scene through tours and interviews with fishermen at the local fish market, Catalina Offshore Products, and local chefs from non-profit Fishful Futures. Through time spent with fish biologists and management specialists at NOAA and the Cal-COFI program I have gained insight on how NOAA's surveys and stock assessments are done. I've learned about the Council process by attending and giving public comment at the Pacific Fishery Management Council meeting in November 2022. I have met with several members of the current Council, and continue to learn about the process through Heidi Taylor, my mentor at NOAA who served on the council for many years.

My previous work in outreach and education has been useful in my current work at NOAA with the Antarctic Ecosystem Resources Division (AERD) at the Southwest Fisheries Science Center. I create communication materials to support public outreach of the division. I am creating a Story Map with an interactive GIS map to communicate an ongoing rebuild of the field camp at Cape Shirreff, to be published on the AERD web page. I am also creating the first species pages for the Antarctic organisms to be published on the NOAA website. I actively participate in the division through weekly meetings with the Deputy Director, coordinating my work with several research scientists, and participating in their regular department meetings.

To further my experience in research science I work in the laboratory of esteemed taxonomist Greg Rouse. I organize and catalog data from several deep-sea cruises and examine hydrothermal vent communities through submersible photo records. I use the submersible cruise photos to classify organisms based on morphological traits of deep-sea ecosystems. This research assists in data collection for future papers on new species. I will continue to build my field experience and expertise after I complete the Scientific Diving certification in March. I look forward to building on my existing expertise in first aid and field work by learning underwater survey techniques and dive safety.

Through the Alaska Sea Grant Fellowship I hope to work at the nexus of policy, science, and communication preparing me for a career in government or with an NGO organization engaging with communities. My long career in education and outreach coupled with my rigorous graduate education positions me as a unique candidate that brings a social science perspective to the marine sciences.

Thank you for considering me for the opportunity.

KELLY DRUMMOND

kldrummond@ucsd.edu | 858.254.3894 | San Diego, CA

EDUCATION

UC San Diego, Scripps Institution of Oceanography (SIO) San Diego, CA
Master of Advanced Studies in Marine Biodiversity and Conservation June 2023

- Courses: Introduction to Marine Biodiversity and Conservation, Economics of the Environment, Ocean Law and Policy, Biological Oceanography, Marine GIS, Sustainable Seafood, Design Theory

University of Puget Sound Tacoma, WA
Bachelor of Arts in Comparative Sociology, Minor in Studio Art June 2010

- Thesis: Environmental Art & Public Spaces in Creating Social Change

EXPERIENCE

NOAA Antarctic Ecosystem Resources Division La Jolla, CA
Internship January 2023- present

- Produced a GIS Story Map about the rebuild of the Cape Shirreff field camp, for publishing on the NOAA website.
- Created web pages for species studied in the AERD program, to be published on the NOAA website.

UC San Diego, Scripps Institution of Oceanography (SIO) La Jolla, CA
Graduate Student Researcher, Rouse Lab July 2022–Present

- Organized and edited data in a database of deep-sea specimens collected during research expeditions.

Salty Cinema September-December 2022

- Market the student-run film festival that screens ocean-themed films and host expert panelists.

Art in the Archives, Benthic Invertebrates Collection October 2022- Present

- Co-founded a science-art collaboration club with the collection as a wellness resource to fellow students.

Surfrider, San Diego Chapter San Diego, CA
Agenda Monitor, Beach Preservation Committee October 2022-Present

- Monitor City Planning Agenda for coastal building out of accordance with Local Management Plan under Coastal Zone Management Act.

Chulitna Wilderness Lodge and Artist Residency Lake Clark National Park, Alaska
Hospitality Manager and Guest Coordinator 2018–2020

- Managed housekeeping staff and coordinated cabin turnovers and maintenance.
- Managed database of inventory and adjusted complex supply needs in remote location with limited supplies.
- Coordinated with executive management, all departments, and directly with clients to maximize client experience.
- Performed duties related to remote, off-grid living; including but not limited to installing solar panels and managing generator use, operating a power boat and ATV, and participating in all aspects of salmon harvest.

Children's Museum of Sonoma County Santa Rosa, CA
Art Studio Coordinator 2019–2021

- Planned curriculum and managed staff to facilitate experiential art projects for children and parents.
- Pivoted to producing educational videos for online distribution during Covid-19 pandemic closures.

Paz Oaxaca Oaxaca, México
Montessori Guide 2017–2018

- Taught in bilingual classroom and coordinated with Directors in founding new Montessori programs.
- Communicated with parents regularly regarding child development and performance.

CERTIFICATIONS

- PADI Advanced Open Water (2022)
- International Yacht Training: International Crew Certification (2017), Marine Communications (2017)
- Wilderness First Responder, NOLS (2022)
- Scientific Diver, Scripps Institution of Oceanography (Expected March 2023)

SKILLS

Computer: Microsoft Office (Excel, Word, PowerPoint), Microsoft Final Cut Pro, Arc GIS Pro + Story Maps
Language: English (native), Spanish (conversational)

PRESENTATIONS

- Pacific Sociological Association annual conference in Oakland, CA. April 2010, “Environmental Art & Public Spaces in Creating Social Change”

- National Park Service, Columbus Landing St. Croix USVI. 2012, “Artifacts of St. Croix’s Past”.

AWARDS

- Marine Science and Policy Leadership Scholarship, 2022
- Friends of the Solana Beach Library Academic Scholarship, 2022
- Solana Beach Historical Society Academic Scholarship, 2022

Academic History

*****This is Not an Official Transcript*****

Create Date: 02/04/2023 20:59:29

General Information

Student: Drummond, Kelly Laurel
PID: A59015965
Student Level: GR
College: Graduate Division
Major: Marine Biodiversity & Conserv
Intended Degree: Master of Advanced Studies

Cumulative Summary

Grade Option	UC-Crdts Attm	Crdts Pssd	UC-GPA Crdts	UC-Grade Points	UC-GPA
Letter	30.00	30.00	30.00	112.00	3.733
TOTAL	30.00	30.00	30.00	112.00	3.733

All credits are in quarter units. Cumulative summaries on this record may reflect adjustments for repeated courses and/or other adjustments made in accordance with UCSD academic policies.

UCSD Graduate Courses by Term

Term: Winter Qtr 2023

Subject	Course	Course Title	Units	Grade	Points	Repeat
MBC	259	Marine Consrv/Comm Practicum 2	2.00		0.00	
SIO	299	Research	2.00		0.00	
SIOB	286	Marine Sci, Econ & Policy	4.00		0.00	
SIOB	296	Special Topics/Ocean Bio Marine GIS	2.00		0.00	
VIS	262	Design Studies	4.00		0.00	

Term Credits Passed: 0.00 Term GPA: 0.000
Term Grade Points: 0.00 Academic Status:
Term GPA Credits: 0.00

Term: Fall Qtr 2022

Subject	Course	Course Title	Units	Grade	Points	Repeat
ECON	281	Special Topics in Economics	4.00	B+	13.20	
MBC	258	Marine Consrv/Comm Practicum 1	2.00	A	8.00	
SIOB	218	Ocean & Coastal Law and Policy	4.00	B	12.00	
SIOB	280	Biological Oceanography	4.00	A-	14.80	

Term Credits Passed: 14.00 Term GPA: 3.428
Term Grade Points: 48.00 Academic Status: Good Standing
Term GPA Credits: 14.00

Term: SpecSumSes 2022

Subject	Course	Course Title	Units	Grade	Points	Repeat
SIO	295LS	Lab Marine Biodivrsty&Consrvtn	8.00	A	32.00	
SIO	295S	Marine Biodiversity&Conservatn	8.00	A	32.00	

Term Credits Passed: 16.00 Term GPA: 4.000
Term Grade Points: 64.00 Academic Status:
Term GPA Credits: 16.00

C02959430 Kelly L. Drummond
May 27, 2022 04:48 pm

Academic Transcript

This is not an official transcript. Courses which are in progress may also be included on this transcript.

Transfer Credit Institution Credit Transcript Totals

Transcript Data

STUDENT INFORMATION

Name : Kelly L. Drummond, C02959430
Birth Date: May 13, 1988

Curriculum Information

Current Program
Associate in Science
Program: Marine Science
Major: Marine Science

***Transcript type:Unofficial Transcript is NOT Official ***

PLACEMENT RESULTS

OCC English:	ENGL A100 (Freshman Comp)	08/17/20
OCC Math:	MATH A100, A104, A115, A120, A155, A160	08/17/20
	No support recommended	
	See a counselor to select a math course according to ed goal	

TRANSFER CREDIT ACCEPTED BY INSTITUTION -Top-

ATTENDED: PALOMAR COLLEGE

Subject	Course	Title	Grade	Credit Hours	Quality Points	R	Equiv
BIOL	114	Ecosystem Biology (Lecture)	A	3.000	12.00		(TRAN A100)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	3.000	3.000	3.000	3.000	12.00	4.00

Unofficial Transcript

ATTENDED: Advanced Placement Exam

Subject	Course	Title	Grade	Credit Hours	Quality Points	R	Equiv
ENGL	1	Freshman Composition	P	3.000	0.00		(ENGL A100)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	3.000	3.000	3.000	0.000	0.00	0.00

Unofficial Transcript

INSTITUTION CREDIT -Top-

Term: Fall 2020

Academic Transcript

Additional Standing: OCC Honor's List

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
MRSC	A100	OC	Oceanography	A	3.000	12.00	
MRSC	A180	OC	Marine Biology	A	3.000	12.00	

Term Totals (OCC Undergraduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	6.000	6.000	6.000	6.000	24.00	4.00
Cumulative:	6.000	6.000	6.000	6.000	24.00	4.00

Unofficial Transcript

Term: Intersession/Spring 2021

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
MRSC	A100L	OC	Oceanography Lab	A	1.000	4.00	
MRSC	A180L	OC	Marine Biology Lab	B	1.000	3.00	
MRSC	A185	OC	Coastal Oceanography	A	3.000	12.00	

Term Totals (OCC Undergraduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	5.000	5.000	5.000	5.000	19.00	3.80
Cumulative:	11.000	11.000	11.000	11.000	43.00	3.91

Unofficial Transcript

Term: Fall 2021

Last Academic Standing: OCC Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
MRSC	A195	OC	Marine Policy and Conservation	A	3.000	12.00	

Term Totals (OCC Undergraduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	3.000	3.000	3.000	3.000	12.00	4.00
Cumulative:	14.000	14.000	14.000	14.000	55.00	3.93

Unofficial Transcript

TRANSCRIPT TOTALS (OCC UNDERGRADUATE) **-Top-**

Events: Phi Theta Kappa

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Total Institution:	14.000	14.000	14.000	14.000	55.00	3.93
Total Transfer:	6.000	6.000	6.000	3.000	12.00	4.00
Overall:	20.000	20.000	20.000	17.000	67.00	3.94

Unofficial Transcript

Information provided for advisory purposes only.

IGETC

IGETC Courses Completed:

5A Physical Science	MRSC A185	202130
5B Biological Sciences	MRSC A100	202070

5B Biological Sciences	MRSC	A180	202070
5C Laboratory Activity	MRSC	A100L	202130
5C Laboratory Activity	MRSC	A180L	202130

IGETC Courses In Progress:

2A Math Concepts	MATH	G160	202130
5A Physical Science	PHYS	A110	202130

CSU

CSU Courses Completed:

Physical Science	MRSC	A185	202130
Life Science	MRSC	A100	202070
Life Science	MRSC	A180	202070
Laboratory Activity	MRSC	A100L	202130
Laboratory Activity	MRSC	A180L	202130

CSU Courses In Progress:

B1 Physical Science	PHYS	A110	202130
B4 Math/Quant.Reasoning	MATH	G160	202130

Transcripts Received

College	Date Received	Official
PALOMAR COLLEGE	22-OCT-2020	Y
PUGET SOUND CHRISTIAN COLLEGE	03-DEC-2020	Y
SANTA ROSA JUNIOR COLLEGE	13-JAN-2021	Y
Advanced Placement Exam	13-MAY-2021	Y

RELEASE: 8.7.1

University of Puget Sound

ACADEMIC RECORD
NOT AN OFFICIAL TRANSCRIPT WITHOUT OFFICIAL SIGNATURE AND SEAL
January 21, 2016 11:17 / Page 1 of 2

University of Puget Sound Unofficial Transcript

Name: Drummond, Kelly L.
ID: 947460
SSN: XXX-XX-0782

Matriculated: Fall 2006

San Dieguito Academy
High School Diploma January 2006

		Earned
Advanced Placement	English Language & Comp	1.00

Fall 2006 (08/28/2006 - 12/15/2006)		Grade	Units	Earned	Points	GPA
ART 101	2D Foundations	C+	1.00	1.00	2.33	
CSOC 125	Culture Wars: A Global Context	B	1.00	1.00	3.00	
PG 103	Intro International Relations	B-	1.00	1.00	2.67	
SPAN 101	Elementary Spanish	C+	1.00	1.00	2.33	

Transfer Credit from Mira Costa College

			Earned		
Transfer Totals			1.50		
TRANSFER/EXAM TOTALS			2.50		
TERM TOTALS	4.00		4.00	10.33	2.58
CUMULATIVE TOTALS	4.00		6.50	10.33	2.58

Spring 2007 (01/16/2007 - 05/11/2007)		Grade	Units	Earned	Points	GPA
ASIA 350	Tibet Real/Imagined/Perceived	C+	1.00	1.00	2.33	
CSOC 200	Cultural Anthropology	A-	1.00	1.00	3.67	
ENGL 137	Representing Multiculturalism	B	1.00	1.00	3.00	
SPAN 102	Elementary Spanish	C	1.00	1.00	2.00	
	TERM TOTALS	4.00		4.00	11.00	2.75
	CUMULATIVE TOTALS	8.00		10.50	21.33	2.67

Fall 2007 (09/04/2007 - 12/21/2007)		Grade	Units	Earned	Points	GPA
CSOC 202	The Family in Society	B-	1.00	1.00	2.67	
CSOC 296	Anthropological Theory	A	1.00	1.00	4.00	
MATH 160	Intro to Applied Statistics	D	1.00	1.00	1.00	
REL 204	Religions of the Book	B-	1.00	1.00	2.67	
	TERM TOTALS	4.00		4.00	10.34	2.59
	CUMULATIVE TOTALS	12.00		14.50	31.67	2.64

Spring 2008 (01/22/2008 - 05/16/2008)		Grade	Units	Earned	Points	GPA
CSOC 204	Social Stratification	A-	1.00	1.00	3.67	
CSOC 302	Social Research II	B	1.00	1.00	3.00	
GEOL 101	Physical Geology *Laboratory included*	B-	1.00	1.00	2.67	
MUS 222	Music of the World's Peoples	A-	1.00	1.00	3.67	
	TERM TOTALS	4.00		4.00	13.01	3.25
	CUMULATIVE TOTALS	16.00		18.50	44.68	2.79

Fall 2008
Partnership Study Abroad Credit from School for International Training

Course			Earned		
LACB 3000	Cult/Devlp/Soc Jus		1.25		
ANTH 3500	Field Study Seminr		0.50		
PORT 1505	Begin Portuguese 2		1.25		
	TRANSFER/EXAM TOTALS		3.00		
	TERM TOTALS	0.00	0.00	0.00	0.00
	CUMULATIVE TOTALS	16.00	21.50	44.68	2.79

Spring 2009 (01/20/2009 - 05/15/2009)		Grade	Units	Earned	Points	GPA
ART 251	Painting	A-	1.00	1.00	3.67	
CONN 335	Race in the American Context	B	1.00	1.00	3.00	
CSOC 301	Social Research I	B-	1.00	1.00	2.67	
CSOC 316	Social and Cultural Change	B-	1.00	1.00	2.67	
	TERM TOTALS	4.00		4.00	12.01	3.00
	CUMULATIVE TOTALS	20.00		25.50	56.69	2.83

Fall 2009 (08/31/2009 - 12/18/2009)		Grade	Units	Earned	Points	GPA
ART 102	3-D Foundations	A-	1.00	1.00	3.67	
ART 350	Intermediate Painting/Drawing	A-	1.00	1.00	3.67	
CSOC 490	Senior Thesis I	B-	1.00	1.00	2.67	
PE 135	Basic Sailing +	P	0.25	0.25	0.00	
STS 344	History of Ecology	B+	1.00	1.00	3.33	
	TERM TOTALS	4.00		4.25	13.34	3.34
	CUMULATIVE TOTALS	24.00		29.75	70.03	2.92

Spring 2010 (01/19/2010 - 05/14/2010)		Grade	Units	Earned	Points	GPA
ART 266	Sculpture/Wood	B+	1.00	1.00	3.33	
ART 275	Western Art I: Ancient - Ren	B+	1.00	1.00	3.33	
ART 282	Beg Lithography/Screenprinting	A-	1.00	1.00	3.67	
CSOC 491	Senior Thesis II	B	1.00	1.00	3.00	
	TERM TOTALS	4.00		4.00	13.33	3.33

University of Puget Sound Unofficial Transcript

Name: Drummond, Kelly L.
ID: 947460
SSN: XXX-XX-0782

Matriculated: Fall 2006

CUMULATIVE TOTALS	28.00	33.75	83.36	2.98	

Degrees Awarded
Bachelor of Arts
05/16/2010
Comparative Sociology Major
Studio Art Minor

End of University of Puget Sound Unofficial Transcript

University of Puget Sound

Office of the Registrar
Tacoma, WA 98416-1034
(253) 879-3217

The University of Puget Sound was founded in 1888. It was known as the College of Puget Sound from 1913 to 1960, when it again became the University of Puget Sound. The University is fully accredited by the Northwest Commission on Colleges and Universities, an institutional accrediting body recognized by the United States Department of Education and by the Council for Higher Education Accreditation.

CREDIT VALUE

Prior to Fall 1969, the University of Puget Sound operated on a semester calendar and granted credit in semester hours. From Fall 1969 through Spring 1984, the University operated on a 4-1-4 calendar and granted credit in units, with one unit as the equivalent of 3½ semester credits or 5 quarter credits. Beginning Summer 1984, the University returned to a semester calendar, granting credit in units, with one unit as the equivalent of 4 semester credits or 6 quarter credits.

DEGREE REQUIREMENTS

Prior to Fall 1969, 125 semester credits were required for graduation. From Fall 1969 to Fall 1971, 35 units plus 4 PE activities were required for graduation. From Fall 1971 to Spring 1984, 36 units were required for graduation, with a maximum of 2 activity units allowed within the 36. Beginning Summer 1984, 32 units are required for graduation, with a maximum of 1.5 activity units allowed within the 32. Beginning Fall 1984, activity overload grades are excluded from the grade point average. To help track degree progress of students enrolled under both the 4-1-4 calendar (36 unit degree) and semester calendar (32 unit degree), units earned prior to Summer 1984 were converted by a factor of 8/9. (The conversion factor derives from the change in units required from 36 to 32. Note that 32/36=8/9.) This conversion notation on the transcript is solely for the purpose of internal University degree tracking. For purpose of transfer, unit equivalencies described above in Credit Value apply. Beginning in Fall 2011, 32 units are required for graduation, with a maximum of 2 activity units allowed within the 32.

END-OF-TERM TOTALS

Totals computed at the end of each academic term's work prior to Fall 1979 were (reading from left to right): (1) cumulative grade point average, (2) cumulative units earned, (3) term grade point average, and (4) term units earned. Beginning Fall 1979, term (top line) and cumulative (bottom line) totals are: (1) grade point average, (2) units earned, (3) grade points, and (4) graded units. Beginning Fall 1985, term (top line) and cumulative (bottom line) totals are: (1) graded units, (2) units earned, (3) grade points, and (4) grade point average.

COURSE NUMBERING SYSTEM

1922-1939		1939-August, 1955		September, 1955-Present*	
1-20	Freshman Level	1-49	Freshman Level	100-199	Freshman Level
20-29	Sophomore Level	50-99	Sophomore Level	200-299	Sophomore Level
Above 29	Upper Level and Advanced Credit	100-149	Junior Level	300-399	Junior Level
		150-199	Senior Level	400-499	Senior Level
		200-Above	Graduate Level	500-799	Graduate Level

** Winterim courses and PE activity courses have used different numbering systems, but all courses offered by the University of Puget Sound are college level courses.*

TRANSCRIPT SYMBOLS

◊	indicates activity credit
*	indicates activity credit limit exceeded
( )	indicates credit not counted in term or cumulative totals
L	indicates course includes a laboratory (*discontinued*)
G	indicates credit accepted towards graduate degree
H	indicates Honors enriched course

GRADING SYSTEM (Beginning Fall 1979, transfer grades are NOT included in Puget Sound grade average.)

Prior to 1926

1	Superior
1-, 2	Good
2-, 2, 3	Average
3-, 4	Poor
5	Barely Passed
6	Conditioned
7	Failure
Inc	Incomplete

1926-1946

A	Superior
B	Good
C	Average
D	Passing
D	Poor (*Re-exam*)
E	Passing (1926 only)
F	Failure
K	Conditional
I	Incomplete

1947-Fall 1976

A	Unusual Excellence
B	Superior
C	Average
D	Passing
F	Failure
P	Pass (*Beginning Fall 1968*)
I	Incomplete
IP	In Progress
AU	Audit
W	Satisfactory at Withdrawal
UF	Unsatisfactory at Withdrawal
WM	Unofficial Withdrawal

Spring 1977-Present

Grade	Points
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	0.67
F	0.00

Grade	Points	Explanation
P	-	Pass (C- or above)
W	-	Withdrawal
WF	0.00	Withdrawal Failing (*Discontinued Summer 1990*)
AU	-	Audit
I	-	Incomplete
INC	-	Permanent Incomplete (*Fall 1972 - Spring 1980*)
IP	-	In Progress

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SCRIPPS INSTITUTION OF OCEANOGRAPHY
UC San Diego

PROF. GREG ROUSE
SCRIPPS INSTITUTION OF OCEANOGRAPHY
MARINE BIOLOGY RESEARCH DIVISION
LA JOLLA, CA, 92093-0202, USA

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Admissions Committee
Alaska Sea Grant
218 O'Neil Building
PO Box 755040
Fairbanks, AK 99775-5040

Feb 7, 2023

Dear Admissions Committee,

I am currently co-Chair of the Masters in Advanced Studies, Marine Biodiversity and Conservation (MAS-MBC) degree that is offered here at SIO. It is my pleasure to enthusiastically recommend one of our current students, Kelly Drummond, to the 2023 Alaska Sea Grant Fellowship program. Kelly is an excellent student who earns high marks in her classes at Scripps and received honors in her associate studies in marine science. Prior to pursuing a MAS-MBC degree Kelly was an educator and an outdoor guide for over a decade in the Caribbean, Brazil, Mexico, California, Canada, and Alaska.

Her first introduction to Alaska was as a fishermen in Bristol Bay, and this sparked her interest in fish ecology and sustainable seafood. She later lived in the same watershed for three years on Lake Clark and learned subsistence salmon fishing and studied the salmon ecology and native Alaskan history of the region. During her years spent in Alaska she traveled throughout the states as a backcountry guide and learned to live off-grid in rural Alaska.

Kelly now works for the Antarctic Ecosystem Resources Division at NOAA creating web-based communication materials for the division. In addition to her course work in policy, GIS, biology, and economics she volunteers her time in my lab doing a valuable job cataloging data from our archive of deep-sea cruises. Compassionate towards the stress levels of her fellow students, she founded an art club with the Benthic Invertebrates Collection)of which I am Curator) to facilitate a creative space to get to know the archives. She also monitors local development plans for problematic coastal development for the Policy Director of Surfrider's San Diego Chapter.

Kelly is passionate about the future of sustainable seafood, and fish ecology and would like to give back to the state that has inspired her pursue a career in conservation.

From my knowledge of Kelly in several avenues of endeavor, I can enthusiastically recommend her as an Alaska Sea Grant fellow for 2023.

Yours sincerely,

Professor and Curator

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February 8, 2023

Dr. Ginny Eckert
Alaska Sea Grant
218 O'Neill Building
PO Box 755040
Fairbanks, AK 99775-5040

Re: Support for Kelly Drummond for Alaska Sea Grant Fellowship

Dear Dr. Eckert and Fellowship Review Committee:

I am writing to strongly recommend Kelly Drummond for the Alaska Sea Grant Fellowship (Fellowship). I am the Executive Director of the Master of Advanced Studies Program in Marine Biodiversity and Conservation (MAS MBC Program) at Scripps Institution of Oceanography, UCSD. I have known Kelly for the last eight months as a member of the MAS MBC Program's 2023 cohort. I have closely overseen Kelly's studies as the Program's lead, an instructor (I teach several courses, including Ocean Law and Policy), and as a personal and career mentor.

Kelly is a bright, thoughtful, and energetic student who earns high marks in her classes at Scripps and received honors in her associate studies in marine science. She is an essential member of the 2023 cohort who has fostered creativity, collaboration and camaraderie with her peers.

While studying at Scripps, Kelly also works for the Antarctic Ecosystem Resources Division at NOAA creating web-based communication materials for the division. In addition to her course work in policy, GIS, biology, and economics, she volunteers her time in the lab of esteemed taxonomist Dr. Greg Rouse cataloging data from deep sea cruises. Compassionate towards the stress levels of her fellow students, she founded an art club with the Benthic Invertebrates Collection to facilitate a creative space to get to know the archives. She also monitors local coastal development plans under the guidance of the Policy Director of Surfrider's San Diego Chapter.

Prior to pursuing a master's degree with us, Kelly was an educator and an outdoor guide for over a decade in the Caribbean, Brazil, Mexico, California, Canada, and Alaska. Her first introduction to Alaska was as a fisherman in Bristol Bay, which sparked her interest in fish ecology and sustainable seafood. She later lived in the same watershed for three years on Lake Clark and learned subsistence salmon fishing and studied the salmon ecology and native Alaskan history of the region. During her years spent in Alaska she traveled throughout the states as a backcountry guide and learned to live off-grid in rural Alaska.

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Kelly is passionate about the future of sustainable seafood and fish ecology and would like to give back to the state that has inspired her to pursue a career in conservation. I highly recommend Kelly as an Alaska Sea Grant fellow for 2023.

Please do not hesitate to contact me with any questions.

Sincerely,

Samantha Murray, J.D.
Executive Director, Master of Advanced Studies Program
Marine Biodiversity & Conservation
Scripps Institution of Oceanography, University of California San Diego
smurray@ucsd.edu

Robin McKnight
Alaska Sea Grant Fellow
Mariculture Development Coordinator

ARPA-E outreach:

- Working on additional infographic outreach materials for ongoing ARPA-E outreach projects (see attached draft)
- Collaborating with GreeWave on production of a series of videos around this years harvest including an overview of the project,
- Considering additional avenues/ formats for future ARPA-E engagement and outreach with communities

Alaska Mariculture Conference:

- Followed up/ discussed outcome of the Mariculture Meet and Greet with the Alaska Mariculture Alliance and planning team
- Working with stakeholders and AFDF Finance Director to support the travel of conference speakers and Alaska Mariculture Alliance members traveling from rural communities as well as Alaska Native participants
- Helping coordinate the fulfillment of vendor invoices with Alaska Sea Grant, Juneau Arts and Culture Center, and AFDF Finance Director

Seaweed Tissue Analysis project:

- Coordinating with graduate student, Cameron Jardell, AFDF Development Director, and AFDF Executive Director on seaweed tissue analysis project goals and objectives
- Drew up and edited contract between participating kelp farmers and AFDF
- Assisted graduate student in purchasing and reimbursing for necessary project equipment and supplies
- Working with graduate student and AFDF team members on ironing out project logistics
- Coordinating with National Renewable Energy Laboratory and graduate student on logistics and relevant agreements for seaweed tissue sample analysis

Bigelow Laboratory Bull Kelp Cultivation project:

- Collaborating with AFDF Development Director to devise a social media and communications plan around the ongoing Bull kelp cultivation project funded by the Bigelow Laboratory
- Drafting several texts about the project details, objectives, and team to be edited and finalized for publication on AFDF social media platforms and/or website
- Sourced photos and input from project team members; continuing to follow up to encourage perspective from project team

Project Overview:

Led by the University of Alaska Fairbanks, this 4-year project focuses on the integrated cultivation and harvest system design of kelp farms with the goal to increase efficiency and/or reduce costs. This project was funded by the U.S. Dept. of Energy (DOE), Advanced Research Projects Agency-Energy (ARPA-E) which is interested in the scalable production of macroalgae for potential future use as a biofuel.

The intent of this project was to design replicable farms that are cost-effective systems for growing sugar kelp. Through innovative technology and practical solutions, the project team's objective was to reduce costs associated with kelp farming at the test site in Kodiak, Alaska.

Funding source:

U.S. Department of Energy
Advanced Research Projects Agency-Energy (ARPA-E)
Macroalgae Research Inspiring Novel Energy Resources (MARINER)

The first outplanting at the Kodiak farm site took place in the fall of 2019. Since then, the CAT-1 team has integrated what it's learned into expanding the farm and management techniques! The farm system is a catenary array, designed by C.A Goudey & Associates and the entire farm was fabricated by TendOcean™ LLC of Newburyport, MA and transported to Kodiak by barge and truck. The array is a pair of 150'-wide catenary modules that is supported by ten anchors. Learn more about the catenary array design at the Kodiak farm on the next page!

Partners make this project possible:

University of Alaska
Principal Investigator: Dr. Michael Stekoll, UAF

Woods Hole Oceanographic Institute

Blue Evolution

Kodiak Island Sustainable Seaweed

Alaska Ocean Farms

TendOcean™ LLC

C.A. Goudey & Associates

GreenWave

Alaska Fisheries Development Foundation

F/V Savage

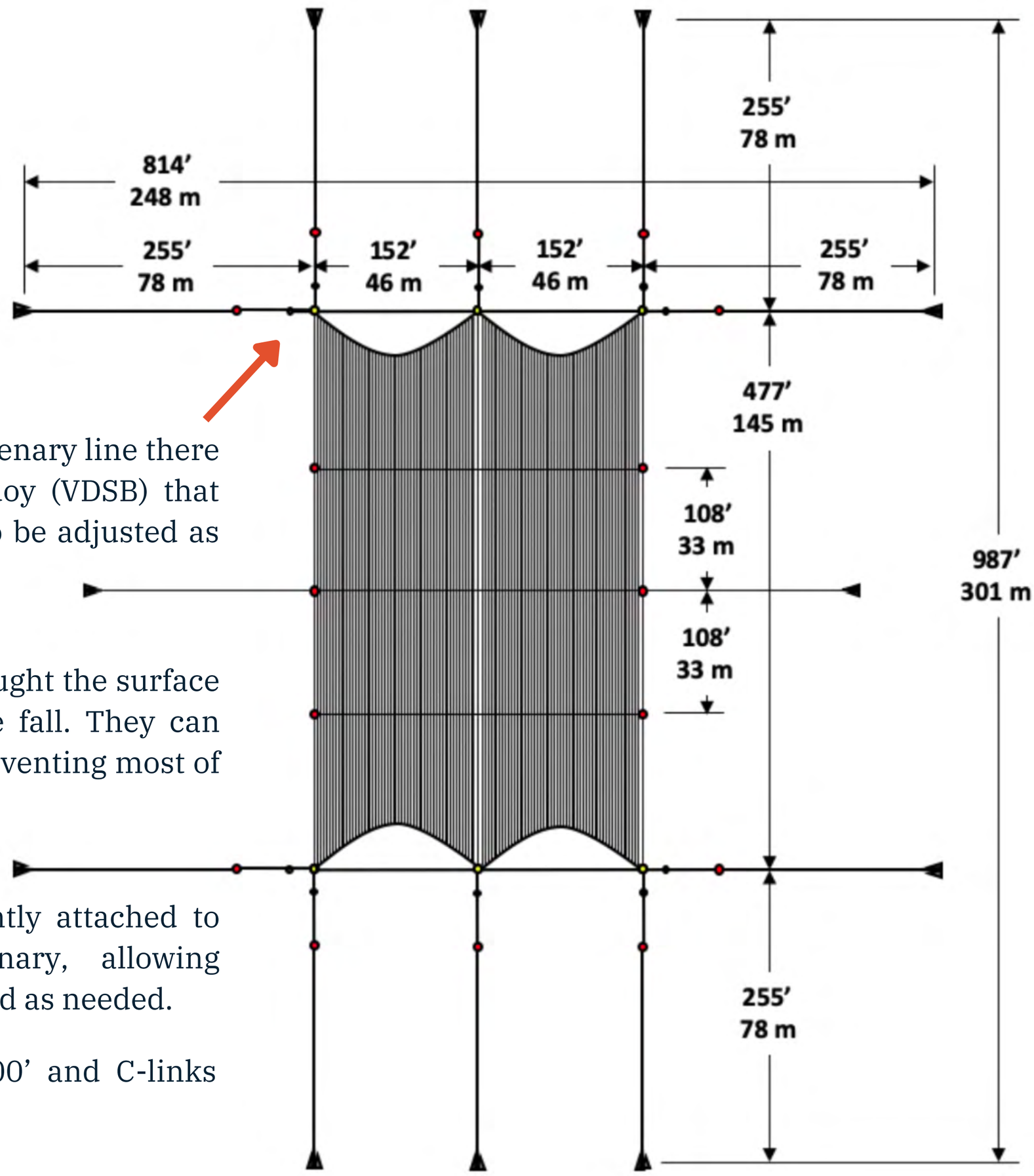
Kelson Marine

University of Connecticut

The Catenary Array

In the first year of the project, both array modules supported 200’ growlines. One incorporated 5-line spreader bars with lines 2.5’ apart and the other module had individual growlines spaced 2.7’ apart. In year two, the farm length was increased to 400’. Intermediate support kept the growlines 7 feet from the surface.

The array is designed to maintain tension across a farm structure. The diagram below depicts the year-three design after the spreader bars were eliminated and replaced by set lines to accommodate the needed flotation along the growlines.



Where the anchor lines meet the catenary line there is a variable-displacement spar buoy (VDSB) that allows the depth of the growlines to be adjusted as needed.

VDSBs also allow the farm to be brought the surface during growline deployment in the fall. They can also be sunk as storms approach by venting most of their air.

Growline extensions are permanently attached to their positions along the catenary, allowing growlines to be inserted and removed as needed.

All growlines are measured to 200’ and C-links spliced into each end.

Pretension is needed to reduce growline sag between the set line flotation. Deadeye tensioners were added to each of the ten anchor lines to allow each to be adjusted as needed.

These tensioners operate as a kind of underwater block and tackle! It allows for slack during seeding and harvest and proper tension during the growing season.

There is still more to come with this project. The fourth growing season (Fall 2022- Summer 2023) is underway and will provide further project results!

Thank you to Cliff Goudey and the project team for input and expertise!

Learn more about the project at https://arpa-e.energy.gov/

a. Project Narrative

Community Description:
Communities served by this project include all coastal Alaska communities that participate in seaweed farming or are interested in doing so in the future. In particular, the logistics of transporting and processing seaweed into sellable products from rural Alaska communities increases the risk for those looking to enter the industry. This project will create future pathways to de-risk the industry in terms of transportation, processing and product development for farmers and for processors, opening access for mariculture to grow across the state's more rural coastal areas.

Problem Statement:
From 2017 through 2022, approximately 80 new seaweed farm applications were submitted to the State of Alaska, for a total of approximately 3,500 acres if all are approved. Farmed production increased from 15,000 lbs to 650,000 lbs between 2017 to 2022. The production of Alaska seaweed farmers has already exceeded existing local market capacity. New farmers will be hesitant to expand and seed more acres and local value-added seaweed product developers will be hesitant to develop new value-added products if they do not have a viable brand and marketplace to sell their seaweed and seaweed-based products. This is now the primary bottleneck to continued growth and the associated economic development of the Alaska mariculture industry.

In an effort to address the processing bottleneck, AFDF also commissioned a study, Assessment of Alaska Seaweed Processing Locations (2021), to analyze the logistics and economics of six different communities in Alaska as potential seaweed processing hubs. In this analysis, one of the considerations was a hub-and-spoke example for primary processing from several locations to feed into a centralized secondary processing location. For this to be economically feasible, stabilization of the product by primary processing needs to be highly efficient. In addition, the industry needs to know what products to produce, how to produce them, and where to sell them in order to be commercially viable and justify investments in new equipment to scale-up to maximize the benefits to communities. This information is necessary and will help drive business planning (by farmers and processors) related to the types of seaweed grown, locations and volumes. All of these related needs come back to requiring improved processing methods that efficiently create a stable product that can be shipped to appropriate markets at a financially viable cost to both growers and buyers while retaining the key product characteristics that buyers require.

Project Description:
The Alaska seaweed industry has identified a need for efficient, low-cost processing methods that will provide increased daily throughput and initial stabilization (primary processing) of kelp, allowing the mariculture industry to continue to expand. The *KelpMeal* project Phase 2 will continue efforts to evaluate the feasibility of using a fishmeal processing plant for primary stabilization of kelp prior to further value-added processing by conducting a trial production of 50,000 pounds fresh frozen *Saccharina latissima*.

In Phase 1, funded by the World Wildlife Fund, we used a fish meal plant to process 50,000 lbs of frozen kelp sourced from Seagrove Kelp Co. into various different liquid and solid residuals. In Phase 2, the project will analyze the composition of the liquid and solid residuals produced at commercial laboratories to determine potential market applications and value, and, if the results of the analysis are promising, ship the liquid and solid kelp residuals to multiple manufacturers for continued product development research. Understanding the commercial viability of this production method will benefit

kelp farmers entering this new industry, processing working towards economic feasibility of processing in combination with product development, and the existing commercial fishing industry through facility co-use and/or equipment repurposing. A final report summarizing the results and costs of production will be written. The research results will be reported to the public for the benefit of all users.

AFDF acknowledges that Denali Commission funded a seaweed processing project in 2022 exploring fermentation as a possible technique to access livestock feed markets. We believe that while this project is similar in that it is looking at innovative processing techniques to access new markets for Alaska kelp, we are using an entirely different processing method (fish meal facility) to access different markets (likely cosmetics, supplements for human consumption, and biostimulants). Additionally, only two fish meal facilities exist on land in Alaska (Kodiak and Dutch Harbor), and this could lead to additional buyers/products/markets for Kodiak kelp farmers, while utilizing the existing fish meal facility in Kodiak. While the Alaska seaweed industry is in its infancy, we believe the investing in a variety of projects looking at innovative processing is crucial to addressing the processing technology bottleneck currently limiting industry growth. We are deeply committed to sharing all project findings widely with the Alaska mariculture industry in hopes that any lessons learned will benefit coastal communities across the state by leveraging existing partnerships with mariculture stakeholders in the industry to create meaningful outreach materials and opportunities.

Impact/Value Statement:
This project will benefit communities across coastal Alaska, particularly rural communities that have limited access to large-scale processing facilities, face logistical challenges with getting seaweed to markets in a timely manner in a form that is economically valuable, or have prohibitively high shipping costs for wet product. By addressing the current bottleneck in the mariculture industry regarding processing technology and ability to access broader markets, this project will allow for building stable markets for Alaska seaweed, providing an economic opportunity for communities wishing to participate in the Alaska mariculture industry and providing additional work opportunities for the existing maritime workforce.

b. Scope of Work and Schedule

Background: The Alaska seaweed industry has identified a need for efficient, low-cost processing methods that will provide increased daily throughput and initial stabilization (primary processing) of kelp, allowing the mariculture industry to continue to expand. *KelpMeal* Phase 2 will continue efforts to evaluate the feasibility of using a fishmeal processing plant for primary stabilization of kelp prior to further value-added processing by analyzing liquid and solid residuals from Phase 1, evaluating the results and economic implications of those results, and sharing a report of those findings with the Alaska mariculture industry. This project will benefit coastal communities across the state.

Purpose: The purpose of this project is to address the current bottleneck in the mariculture industry regarding processing technology and ability to access broader markets, allow for building stable markets for Alaska seaweed, and providing an economic opportunity for communities wishing to participate in the Alaska mariculture industry.

PLEASE SEE DETAILED PROJECT TIMELINE AND TASK ASSIGNMENTS IN THE APPENDIX

Task 1: Analysis of liquid and solid residuals collected during project Phase 1.
01/2024-03/2024

1.1. Compile liquid and solid samples

1.2. Ship samples to lab for composition analysis
1.3. Analyze samples

Task 1, the analysis of phase 1 residuals, will consist of three components. The first will be to compile the liquid and solid samples currently in storage from Phase 1 into shippable containers. Second, the samples will be shipped to a lab for composition analysis. Prior to shipping the samples, a scope of work will be outlined and a contract with the lab will be signed. Third, the samples will be analyzed at the lab. AFDF staff will be responsible for compiling and shipping samples to the lab. The lab staff will be contracted for sample analysis.

Deliverables: Composition analysis of *Saccharina latissima* residuals (liquids and solids)

Task 2: Results Evaluation and Reporting
03/2024-06/2024

2.1. Evaluate production logistics and economics
2.2. Evaluate composition analysis data for potential commercial application
2.3. Generate research report regarding composition, economics and market analysis
2.4. Ship residuals to end-users for continued product and market research

Task 2, the evaluation of lab results and project reporting will consist of four components. The first will be to evaluate production logistics and economics of creating the seaweed residuals while using the fishmeal processing equipment. This will allow for better understanding of the economic viability of this processing technique. Second, evaluating the composition analysis data will allow us to identify areas for commercial applications, such as beauty products or food supplements. Third, this information will be combined into a report outlining all findings and recommendations for farmers and processors. Finally, we will ship the residuals to interested end-users who will conduct more product and market research, hopefully leading to increased interest in and economic viability for this type of processing. Work will be conducted by AFDF staff and an Alaska Sea Grant Fellow.

Deliverables:

1. Research report available to the public regarding composition analysis, economic analysis, and market analysis
2. Primary processed products (residuals) available for continued product and market research

Task 3: Provide Project Management
01/2024-06/2023

3.1. Provide Financial Management
3.2. Check in with contractors as needed on project progress.
3.3. Write grant progress reports and final report.

Task 3, providing project management will consist of three components. First, AFDF staff will provide financial management of the project including adhering to the project budget, submitting invoices for reimbursement, paying contractors, and other tasks. Second, AFDF will manage contractors as needed to make sure that the project is staying on schedule and tasks are being completed. And finally, AFDF staff will write grant progress and final reports and submit them in a timely manner.

Deliverables: Grant reporting materials required by Denali Commission.

c. Organization, Capacity, and Delivery Method

Founded in 1978, the Alaska Fisheries Development Foundation (AFDF) is a nonprofit, 50 member collaboration of harvesters, processors, and support sector businesses dedicated to making opportunities out of challenges. AFDF identifies problems common to the Alaska seafood industry and collaborates with coastal communities, research institutes and government agencies to develop effective solutions with shared benefits. Along with the Executive Director and five other staff (including two Alaska Sea Grant Fellows), AFDF is managed by a Board of Directors (14 members) representing a variety of membership stakeholder groups. Broadly, AFDF is funded by membership dues and grants from a variety of private, NGO, and governmental entities.

Recognizing Alaska's massive potential regarding mariculture development, in 2014, AFDF began spearheading the *Alaska Mariculture Initiative* – a strategy to accelerate the development of mariculture in Alaska. The Initiative led to the establishment of the Alaska Mariculture Task Force (Task Force) by Administrative Orders #280 and #297 under then Governor Walker and the adoption of a statewide comprehensive plan, called the Alaska Mariculture Development Plan (*Plan*) with the goal to grow a $100 million mariculture industry in 20 years. The Final Report to Governor Dunleavy (2021) included a *Five-Year Action Plan*, as well as *Indicators of Progress*. Besides receiving funding from the aforementioned sources, the AFDF mariculture program has received significant grant funding from several sources including the State of Alaska's EDA Statewide Planning Grant ($150K) and the EDA BBB Phase 2 grant ($4.8 M). Executive Director Julie Decker (see resume in the appendix), has overseen all of these efforts and led project management on many federal grants in her nine years in the position.

The project will be managed by AFDF Executive Director Julie Decker with assistance from the AFDF Development Director for reporting, drafting and managing contracts, and other project management tasks as needed. The AFDF Finance Director will oversee financial management of the grant including submitting invoices and paying contractors. The AFDF Alaska Sea Grant Fellow will provide analysis and support in writing the final report. See timeline above for more detail. Several labs have been considered for the analysis, and it will likely be conducted with EuroFins food testing company unless a better option is found.

d. Partnerships and Leveraged Funds

This project is Phase 2 of an effort already funded by the World Wildlife Fund (WWF). In 2022, WWF provided AFDF with $50,000 to purchase kelp from Alaska farmers, process it using a fish meal processor, and freeze the liquid and solid residuals until funding for Phase 2 work can be secured. Phase 1 of the project is complete.

We foresee a variety of outreach partnerships after residual analysis has occurred and a report has been produced. Beyond our own website and social media accounts, we plan to leverage the platforms and audiences of partner organizations such as the Alaska Mariculture Alliance and the Alaska Mariculture Research and Training Center to share the final project report and associated materials with as many Alaska mariculture stakeholders as possible.

Ben Americus
Alaska Sea Grant Fellow
Science Policy Coordinator

Update to AFDF Board: May 9th, 2023

RFM-certification of halibut and sablefish

In March, I worked with Ann Robertson and Hannah Wilson to address one major and one minor non-conformances for halibut and sablefish RFM certification. The major non-conformance related to a lack of information on lost gear and ghost fishing in the Alaskan Sablefish fishery. Ann summarized existing regulations and voluntary measures in place to prevent lost gear and ghost fishing. These include biodegradable escape panels, AIS beacons on buoys, pots on longlines rather than individual buoys, and high-resolution bathymetric mapping performed by Alaska Longline Fishermen's Association (ALFA). Ann also solicited statements from ADF&G and NMFS explaining that gear loss is not a major conservation concern to sablefish stocks.

The minor non-conformance related to a lack of information on the spatial footprint of the halibut longline fishery on sensitive benthic habitats. I used catch data provided by ADF&G and GIS software to map the relative intensity of halibut fisheries in Alaska. I compared areas of high catch to known sensitive habitat areas. We determined the fishery overlaps sensitive habitat areas in approximately 1,647 nm^2 of the total 177,155 nm^2 of fishing area, or 0.9%. This small degree of overlap, the presence of 17,653 nm^2 special restricted conservation area and ALFA's proactive bathymetric mapping suggest the spatial footprint of the halibut fishery is small and conservation measures are in place to prevent benthic impact. We have submitted a letter of response to RFM and are awaiting a reply.

Salmon hatchery discharge permitting

In February, Scott Wagner of NSRAA notified AFDF of issues related to salmon hatchery discharge permitting. A new DEC discharge permit (AKG 130000) was proposed for salmon hatcheries that places hatcheries under the same restrictions as seafood processors. If enforced, this will require hatcheries to install costly mixing zones and perform zone of deposit monitoring estimated to cost $22 million over 5 years. Scott expressed concerns that the requirement for zone of deposit monitoring might also apply to mariculture operations. I prepared a review of integrated multi-trophic aquaculture for Scott to use in conversations with DEC.

AFDF outreach at conferences in Fairbanks and Dillingham

On March 29th, in Fairbanks, I spoke at the American Fisheries Society Alaska Chapter meeting in a section organized by Tommy Sheridan. The section was titled "*Salmon Hatcheries 2.0: Opportunities for Mariculture, Economic Development, and Ecosystem Services*". It included

presentations and roundtable discussion by academic researchers and hatchery operators. My presentation described my experience with RFM/MSC certification of Alaska salmon and the role of AFDF in certifying halibut, sablefish, and Pacific cod. On April 6th, in Dillingham, I gave a similar presentation at the Western Alaska Interdisciplinary Science Conference. Both talks received positive feedback and informed attendees of the work AFDF is doing to support Alaskan fisheries.

NSRAA Hydropower DOE Proposal

In April, I collaborated with Scott Wagner of NSRAA to prepare an eight-page concept paper for a US Department of Energy funding opportunity. The Office of Clean Energy Demonstrations is releasing several rounds of funding for rural communities with less than 10,000 people. Our concept paper calls for $6 million (with 20% match) to install four new hydropower facilities at NSRAA Hatcheries in Southeast Alaska. This includes Sawmill Creek in Sitka, Gunnuk Creek in Kake, and the remote sites of Hidden Falls and Little Port Walter. New hydropower infrastructure will reduce diesel generator usage. In Sitka and Kake, excess power will be provided at no cost to the grid. The invitation to submit a full application will be sent out in mid-May with a deadline of June 28th.

Roadmap to Organic Certification for Kelp Farmers

I am currently working on an informative brochure describing the process of organic certification of Alaskan Kelp. Our hope is that this will live on Alaska Sea Grant's "Aquaculture in Alaska" webpage. Kelp consumers and processors have expressed interest in expanding organic certification to more farms in Alaska.

Integrated Multi-Trophic Aquaculture for Fish Waste Remediation

Prepared By Ben Americus for consideration by NSRAA, March 2023

Introduction

Integrated multi-trophic aquaculture (IMTA) uses mariculture (seaweed, shellfish, sea cucumbers) to remediate discharge from concentrated aquaculture animal production. IMTA has been explored in many systems worldwide, and it may convey some benefit if introduced in Alaska. Much of what is known about discharge from finfish aquaculture comes from studies on salmon farms in Europe and Canada. Salmon farms produce dissolved ammonia and phosphate excreted by fish and particulate phosphorus, nitrogen, and carbon from fish defecation and uneaten feed (Wang et al. 2012). Nutrient flux from net pens can create anaerobic conditions in the benthic environment or drive shifts in seafloor diversity. The extent of these effects relies greatly on fish age and density, length of net pen activities, water depth, and hydrodynamic regime (Dauvin et al. 2020), thus direct comparisons between salmon farming and hatchery rearing should be avoided.

Seaweed

In Europe and Canada, sugar kelp (*Saccharina latissima*) has been grown alongside Atlantic salmon net pens. For one Atlantic salmon farm with seven 150m diameter cages, kelp grown closer to salmon farms grew more quickly than kelp grown further away. A model generated from the study estimated that a 0.25 square kilometer kelp farm could uptake 12% of the ammonia released by the salmon farm during kelp cultivation, and the kelp farm would produce 60% more fresh-weight biomass than a non-IMTA kelp farm (Fossberg et al. 2018). In the US, kelp has shown promising results for wastewater treatment (Wu et al. 2022).

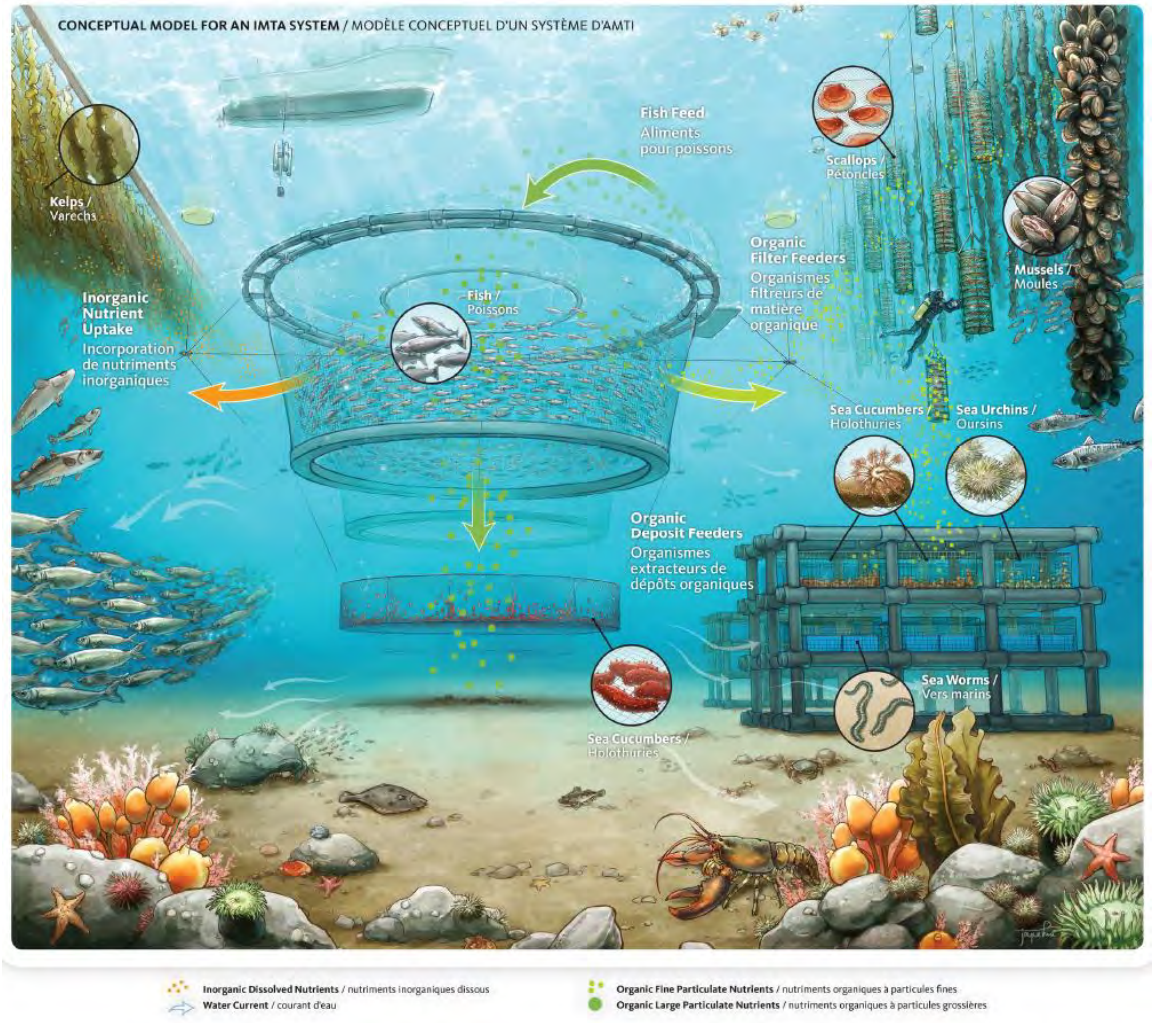
Shellfish

In Canada, locally harvested blue mussels (*Mytilus edulis*) were grown nearby two Atlantic salmon farms. Mussels grown on the salmon net pens grew more quickly and larger than mussels grown 200m and 500m away (Lander et al. 2012). In that study, the remediating effects of mussels were not quantified. However, mussels filter phytoplankton and can improve water transparency and uptake nitrogen and phosphorus (Suplicy 2020). Muscles can feed directly on discarded pellet food and fish feces (Deudero et al. 2011).

Sea Cucumbers

On Mayoette Island, in the Indian Ocean, sea cucumbers were grown underneath red drum sea cages. In that study, the sea cucumbers slightly reduced benthic impact and eutrophication, though density limitations constrained their remediating effect (Chary et al. 2020). Sea cucumbers, unlike kelp and shellfish, are motile and can respond to past waste discharge events. In a study in Southeast Alaska, red sea cucumbers naturally aggregated to a net pen fouled with excess pellet food, fish feces, and algae and partially cleared the net of fouling. The sea cucumbers feeding on the fouled net assimilated nutrients more efficiently and grew more muscle than those feeding in their natural habitat (Ahlgren 1998).

Image below: Conceptual Model for an Integrated multi-trophic aquaculture (IMTA) system. Image from Fisheries and Oceans Canada. For more information, see here.



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Hydropower for Southeast Alaska Salmon Hatcheries

Topic Area 1: Community Scale Demonstrations, Region: Alaska

Proposed Budget: $6,000,000
Proposed Non-Federal Cost Share: 20%
Proposed Award Duration: 7 Years

Business Point of Contact:	Benjamin Americus Science Policy Coordinator Alaska Fisheries Development Foundation Wrangell, AK bamericus@afdf.org
Technical Point of Contact/Project Lead:	Scott Wagner General Manager Northern Southeast Regional Aquaculture Association Sitka, AK scott_wagner@nsraa.org
Team Members:	Benjamin Americus Alaska Fisheries Development Foundation Scott Wagner Northern Southeast Regional Aquaculture Association
Project Locations	Baranof Island, City and Borough of Sitka, AK Sawmill Creek Hatchery, Sitka, AK Hidden Falls Hatchery Little Port Walters Hatchery Kupreanof Island Gunnuk Creek Hatchery in, Kake AK

Reduced cost share
The Northern Southeast Regional Aquaculture Association (NSRAA) is a domestic non-profit entity and qualifies for the special reduced cost share of 20%.

Communities benefiting from the project
This proposal calls for the installation of four small hydropower facilities at salmon hatcheries in Southeast Alaska. Baranof Island containing three of the four project sites has a total population of 9562 (2021 census). Most residents of Baranof Island live in Sitka which has a population of 8,407 (2010 RUCA Code 7). The fourth project site is located in Kake, which has a population of 543 (2010 RUCA Code 10). Hydroelectric enhancement at the Sawmill Creek and Gunnuk Creek hatcheries will provide direct benefit to Sitka and Kake respectively by providing no cost clean energy to the local community power grids. All four of the proposed projects indirectly benefit Sitka, Kake, and other communities in Southeast Alaska that contain commercial fishing fleets and fish processors by reducing costs and providing security for Northern Southeast Regional Aquaculture Association (NSRAA) hatcheries. Both Sitka and Kake are located more than 100 miles from the road-system or an urban center.

Confidentiality Statement: Not Applicable

Mission and Objectives

Proposed project

The proposal is for the installation of hydropower facilities to support four salmon hatcheries in Southeast Alaska. We describe them in greater detail in the Demonstration Plan.

1.) At the Sawmill Creek Hatchery in Sitka on Baranof Island, there is an opportunity to install a turbine on the existing penstock.
2.) At the Hidden Falls Hatchery on Baranof Island there is an opportunity to replace the existing aged hydroelectric infrastructure.
3.) At the Gunnuk Creek Hatchery, in Kake on Kupreanof Island, there is an opportunity to install a turbine in an existing penstock.
4.) At the Little Port Walter Hatchery (LPW) on Baranof Island, there is an opportunity to install a run of the river hydroelectric turbine at the existing penstock water intake.

Current energy challenges

All four proposed project sites are off the road system, so diesel must be transported by barge, which poses some inherent risks to the environmental and energy-security. In Sitka, the least remote of the sites, diesel costs $5.05 per gallon, 40% more than the national average (April, 2023).

In 2021, Sitka was selected for the Department of Energy's Energy Transitions Initiative Partnership Project, which provided guidance for decarbonization. Sitka is currently undergoing community-wide electrification, with increased interest in electric vehicles and heat pumps. In March 2023, Sitka held its first ever "Electrification Expo" where these technologies were demonstrated. Sitka currently meets most of its energy demand with hydroelectricity, however increased electrification may surpass the capacity of the current hydroelectric infrastructure.

Kake has approximately 40% of its current electricity demand met by the existing Gunnuk Creek hydroelectric facility. Residents and small businesses pay 47 and 50 cents per kWh respectively, more than twice the state average (as of February 2023). At the remote of Hidden Falls Hatchery, 40-year old hydroelectric infrastructure is nearing the end of its lifespan, and poses a risk of catastrophic failure. In case of failure, the hatchery would rely on a small 80kW turbine and backup diesel generator usage. At Little Port Walter, no hydroelectric infrastructure currently exists. Diesel generators run year-round at substantial cost to the hatchery.

Potential impacts of proposed project

All penstocks utilized in the proposed projects are located above barriers to fish passage, posing little risk to fish habitat. In both Sitka and Kake, hydropower would provide electricity to hatchery facilities and community grids, reducing the use of diesel generators in dry periods and summer months, and contributing in winter months when electricity use is greatest. Reduction in diesel usage from the proposed project are estimated to save NSRAA $100,000 annually. This will improve the economic resilience of the salmon hatchery program, which has broad benefit to Southeast Alaska. In Sitka and Kake, excess power will be provided at no cost to the local grids, potentially reducing costs for all ratepayers. At all project sites, reductions in diesel generator usage will reduce greenhouse gas emissions and improve local air quality.

Demonstration Plan

Map of proposed energy improvement sites.

1.) At the Sawmill Creek Hatchery in Sitka on Baranof Island, there is an opportunity to install a turbine on the existing penstock. This hatchery draws water from Blue Lake Dam. An existing 15.9MW hydropower facility at Blue Lake Dam provides power to the city of Sitka, but the penstock to the hatchery is not utilized for power production. The Northern Southeast Regional Aquaculture Association (NSRAA), which operates the facilities, has completed an analysis of water supply, energy production and diesel-powered energy replacement cost for this location. Depending on final design, the proposed hydroelectric system may provide energy directly to the Sawmill Hatchery and provide excess to the electrical grid of the City of Sitka.

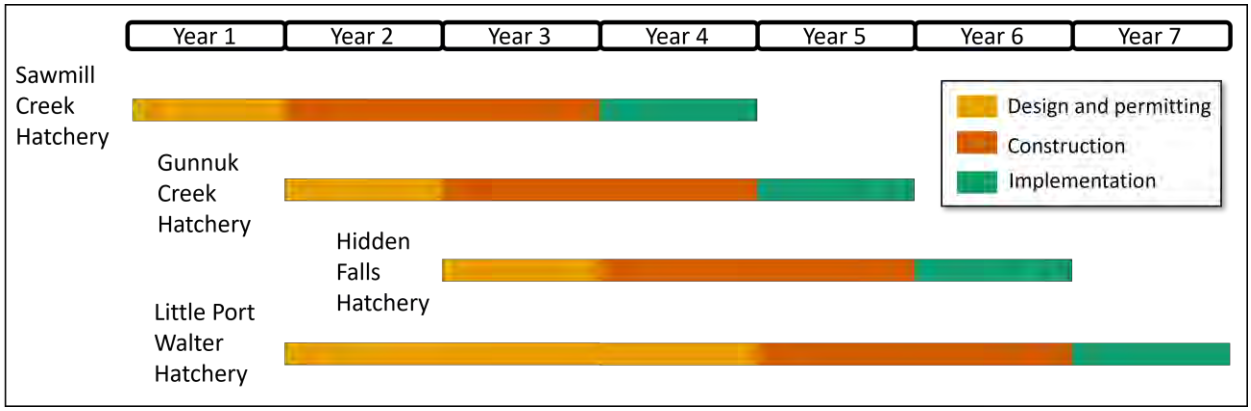
2.) At the Hidden Falls Hatchery on Baranof Island, there is an opportunity to replace the existing aged hydroelectric infrastructure. NSRAA currently maintains a 40-year-old 250kW hydroelectric turbine which provides power to the hatchery. A retrofit would reduce the risk of catastrophic failure, improve energy production efficiency, and enhance the energy security of the facility. NSRAA has currently budgeted $85,000 for FY24 to finalize the engineering, design and obtain initial drawings of the replacement.

3.) At the Gunnuk Creek Hatchery in Kake on Kupreanof Island, there is an opportunity to install a turbine in an existing penstock. NSRAA operates and maintains a small (14kW) in-line Cornel pump turbine providing power for the facility and provides excess power when available to the local electrical cooperative grid at no cost to the community. A 500kW hydroelectric plant was installed on Gunnuk Creek in 2020 by the Inside Passage Electric Company (IPEC). IPEC is a non-profit energy cooperative providing power to the rural Southeast Alaska communities of Hoonah, Kake, Chilkat Valley, Angoon, and Klukwan. This 500kW turbine provides power to the city of Kake when sufficient water is available in

Gunnuk Creek. The proposed project would install a 58kW cross flow turbine improving efficiency for hatchery and community energy production. This new turbine would utilize water flows between 2.5 cfs and 13 cfs. Neither of the existing turbines can operate in this flow range. NSRAA has obtained a technical proposal and quotation for this project.

4.) At the Little Port Walter Hatchery (LPW) on Baranof Island, there is an opportunity to install a run of the river hydroelectric turbine at the existing penstock water intake. The National Marine Fisheries Service (NMFS) maintains this hatchery, which has been used since the 1930's for salmon and other fresh and marine waters species research. LPW was built in the 1930s using Civilian Conservation Corps labor and materials from an abandoned saltery onsite. Since 2020, NSRAA has partnered with NMFS on a king salmon brood stock development and research project. Currently NSRAA is in the process of applying for an Alaska Department of Fish and Game (ADFG) hatchery permit to incubate, hatch and rear king salmon at this site. There is currently no hydropower facility at Little Port Walter, with all electricity produced by diesel generators 24 hours a day, 365 days a year. NOAA previously investigated hydropower potential from a lake source approximately 1 mile away which was deemed too costly to construct and maintain as it would have required an extensive section of undersea power cable to be constructed.

Timeline



We propose a phased approach to this project, with work beginning at Sawmill Hatchery, then progressing stepwise to Gunnuk Creek, then Hidden Falls and Little Port Walter. We have budgeted one year for design, two years for construction, and one year for implementation. This stepwise process will provide long-term work for design and construction crews and allow NSRAA to budget incrementally. In Alaska, construction season is limited to the summer months. The proposed systems would integrate into existing hatchery penstock, so implementation would occur mid-summer when few fish are present at the hatcheries.

We have budgeted two additional years for design and permitting of a hydropower facility at Little Port Walter Hatchery. Unlike the three other proposed projects, no hydroelectric infrastructure currently exists at this site, and the facility is operated by the National Marine Fisheries Service rather than NSRAA. In years two, three and four, NSRAA will collaborate with NMFS in the design process.

Risks and Challenges

The remote locations of Hidden Falls and Little Port Walter hatcheries pose some challenges for construction. All materials and staff must be transported via vessel or float plane. NSRAA charters a landing craft to move heavy materials. The typical construction window for this region of Alaska is from early May until late September. The added time delays from working in these locations are taken into consideration in our proposed timeline. Construction will begin as soon as possible in the Spring season. As a contingency plan, work can be postponed until later seasons, and as a last resort, the most high-priority projects will be completed: Sawmill Creek and Hidden Falls.

Permitting for the Sawmill Creek, Hidden Falls and Little Port Walter facility will require permitting or exemption through FERC. The existing Hidden Falls facility currently has a FERC exemption. The Gunnuk Creek facility does not have a federal nexus and does not require FERC permitting. NSRAA has recent experience working with the FERC permitting process in 2019 at the Hidden Falls Hatchery.

If NSRAA is unable to meet the required cost share through existing holdings and revenue streams, there is opportunity to obtain funding through the State of Alaska's Revolving Loan Fund for commercial fishing and mariculture.

Impact of DOE Funding

DOE funding will maximize the ability of NSRAA to implement these critical projects. Without DOE funding it is likely that most of these projects will remain unfunded for the foreseeable future. Existing turbines will likely only be replaced if there is a catastrophic failure.

Long Term Operation and Maintenance Plan

After federal funding for this project is expended, NSRAA and NMFS would maintain the hydroelectric facilities at their respective hatcheries. Presently, NSRAA operates three hydroelectric turbines at two of its hatchery locations. Since its establishment in 1979, NSRAA has demonstrated economic viability, and its hatcheries have a positive environmental track record. NSRAA has a 25-person board of directors consisting of commercial salmon fishermen, processors, representatives from the local municipalities, sport fishermen, subsistence, and Native organizations. NSRAA maintains an adjustable revenue stream by recouping facility costs via cost recovery harvests on returning adult salmon. NSRAA currently expends approximately $1 million annually in facility maintenance and capital improvements to their facilities. The proposed projects will add an estimated $10,000 annually in added maintenance expenses. Existing hydropower systems at NSRAA facilities have required relatively little maintenance relative to diesel generators. Added maintenance costs are expected to be offset by reduced diesel consumption estimated to save NSRAA $100,000 annually.

Management and Organization

Project Team

Name	Organization	Role
Scott Wagner	NSRAA	Lead Project Manager, NSRAA General Manager
Benjamin Americus	Alaska Fisheries Development Foundation	Assistance with grant writing
Rebecca Olson	NSRAA – Sawmill Creek	Hatchery Manager
Vince Lour Blanc	NSRAA – Sawmill Creek	Hatchery Maintenance Engineer
Kevin Connell	NSRAA – Hidden Falls	Hatchery Manager
Steve Sanderson	NSRAA – Hidden Falls	Hatchery Maintenance Engineer
Charlie Waters	National Marine Fisheries Service – Little Port Walter Hatchery	Hatchery Manager
Ryan Schuman	NSRAA – Gunnuk Creek	Hatchery Manager

NSRAA has a 45-year track record of collaborating with Southeast Alaska communities, operating and maintaining micro-grid hydroelectric facilities and supporting the fishing industry in Alaska. Scott Wagner has worked for NSRAA for 32 years, serving as general manager for the last 3 years.

Members of the project team have recent experience implementing hydropower at hatchery facilities. In 2018 NSRAA installed an 80kW pump turbine at its Hidden Falls facility as a backup hydroelectric option. This addition allows the facility to maintain zero diesel generator use during planned shutdowns of it larger 250kW turbine for maintenance. Additionally, this smaller turbine will greatly reduce the diesel generated power needed if there is a catastrophic failure of the larger turbine. The time for repair or replacement if there was a catastrophic failure of the 250kW unit is over one year. This past year NSRAA utilized the 80kW turbine for over one month during a prolonged shutdown of the 250kW unit to address some significant maintenance issues related to metal fatigue in main bearing housing.

The four proposed hydropower installations will be smaller than the existing 250kW system, and NSRAA's engineers will be able to travel between hatcheries to address maintenance needs.

Community Benefit Plan

Investing in American workforce

NSRAA employs 33 year-round staff and additional seasonal aquaculture technicians. All employees work in rural Southeast Alaska and support the regional commercial, sport and subsistence salmon fisheries. In Alaska, the fishing industry is the largest private-sector employer with more than 62,200 individuals involved. Skills gained at NSRAA hatcheries are applicable at the other 26 non-NSRAA salmon hatcheries in Alaska, and in other areas of the fishing industry. NSRAA recoups funding for facilities, staff, and operations by harvesting and selling a portion of the salmon returns for cost recovery. Reductions in energy costs by reducing diesel usage will reduce the proportion of the salmon returns required for cost recovery. This will provide more fish for common property harvests by commercial fishermen. In Southeast Alaska, most commercial fishing salmon operations are family businesses, consisting of small vessels with crews of 1—5 individuals.

Community and labor engagement

In Southeast Alaska, salmon hatcheries contribute to local economies by providing jobs for hatchery employees, commercial fishermen, seafood processors, and sport fishing operations. A 2018 report estimated salmon hatcheries accounted for 2,000 jobs and $90 million in annual wages in Southeast Alaska. Many large and small seafood processors operate in Sitka, including Silver Bay Seafoods, the largest property taxpayer in the city. Sitka also applies a 6% sales tax on goods and services purchased by fishermen and processors, and a $10 per fish box export tax. NSRAA is the largest producer of hatchery salmon in the region. In Northern Southeast Alaska, non-profit salmon hatcheries are also operated by Armstrong-Keta Inc., Douglas Island Pink and Chum Inc, and the Sitka Sound Science Center. In Southern Southeast Alaska, the Southern Southeast Regional Aquaculture Association operates seven hatcheries.

Hatchery operators in Alaska work collaboratively, and energy costs and security are a shared concern. The proposed project may influence other hatcheries and small communities in the area to replace diesel infrastructure with hydropower. The Alaska Fish Culture Conference is held every other year in an alternating location and brings together hatchery operators from around the state, state and federal fisheries biologists, commercial fishermen, and city and tribal stakeholders. At this event, the costs, benefits, and effectiveness of the proposed project could be shared.

In planning and carrying out the proposed work, there are many opportunities to involve the local communities and stakeholders. During the design phase in year 1 and 2, NSRAA would hold kickoff events in Sitka and Kake to gain input from residents, Tribal groups, and local organizations. This would include the Sitka Sound Science Center with which NSRAA maintains a close relationship. NSRAA holds public board meetings twice a year, with a designated time slot for public comments. These meetings are advertised locally 2—3 weeks prior to the event. At board meetings, NSRAA would inform stakeholders of the progress of the proposed work. When the hydropower systems are integrated, the performance and effectiveness of the systems would be summarized.

Advancing diversity, equity, inclusion, and accessibility

Southeast Alaska is home to the Tlinget, Haida, Aleut, and Tsimpsian peoples who have inhabited the region for thousands of years. The community of Kake is more than 50% Alaskan Native. Kake is home to the Organized Village of Kake and the Kake Tribal Corporation which together serve Native shareholders. Sitka is home to the Sitka Tribe of Alaska, which has more than 4,000 members. The goal of the NSRAA is to support salmon harvests and the economic resilience of Southeast communities. Collaboration with these Tribal entities is beneficial to all parties. In the planning phase of Sawmill Creek and Gunnuk Creek projects, representatives from the Tribal parties will be briefed on potential costs and benefits of the projects. These parties will be continuously consulted and updated throughout the construction and implementation phases.

NSRAA maintains good relationships with the Native community of Kake. The current Gunnuk Creek hydropower facility shares infrastructure with the Gunnuk Creek Hatchery. On the 25-person NSRAA board, a seat is reserved for a member of Native Organization. This seat is currently filled by Henrich Kadake, Sr. of the Kake Tribal Corporation. In both Sitka and Kake, excess power not used by hatchery facilities would be provided back to local electric cooperatives at no cost. In Kake particularly, this could reduce diesel generator usage and support energy resilience and independence.

Contributing to the Justice40 Initiative goal

Sitka and Kake, where two of the four projects will occur, are recognized as Tribal lands, and categorized as disadvantaged in accordance with the DOE Office of Management and Budget's Interim Justice40 Implementation Guidance M-21-28. Contributions to the grid in Kake may indirectly benefit the Native Alaskan communities of Hoonah, Angoon, and Klukwan, which are all also categorized as disadvantaged by the DEC. With Kake, these communities are served by the Inside Passage Electric Cooperative (IPEC). By providing no-cost power to the grid in Kake, the proposed Gunnuk Creek project will reduce diesel consumption for IPEC, which may lead to rate reductions for all communities.

The two other project locations, Hidden Falls and Little Port Walter, are remote sites unattached to census areas. The salmon produced at these locations are harvested by commercial fishermen from Sitka, Kake, Hoonah, Angoon, and other communities on Tribal lands in Southeast Alaska.

In other rural, disadvantaged communities in Alaska, the EPA Diesel Reductions (DERA) program has funded the replacement of stationary diesel generators with low-emission marine engines. The work described in this proposal aligns with the Justice40 initiative as well as the DERA, reducing diesel costs and harmful emissions for rural communities.

AFDF Board Meeting
May 9, 2023
Staff Update - Garrett Evridge

The following is an update on what I've been working on since the last board meeting. Attached, you will find two supporting documents: Kempy Energetics pitch deck and the EDA Final Report.

Accelerator Activity:

Over the past quarter, I have participated in 48 meetings with various companies, divided into two categories: ongoing support and specific support. Ongoing support meetings are 30-minute advisory sessions focused on market strategy, product-market fit, customer discovery, pricing strategy, mental health, recruiting, and more. Specific support is tailored to address key challenges identified during ongoing support meetings, such as financial modeling, cash flow problems, and financial projections.

Companies we have been working with include PolArctic, Noble Ocean Farms, DeepVision, Alaska Salmon Sisters, Alaskins, SafetyNet Technologies, Ivaldi, Saildrone, Kempy Energetics, TriJet Manufacturing, FlyWire, Photon Marine, Certified Quality Foods, and Ladon Robotics.

I have also been assisting Craig Rose with his active excluder work, finding a contract programmer to help with a technical challenge. One of our noteworthy projects is with Kempy Energetics, where we have provided guidance on company formation, business strategy, and communications.

Industry Advisory Committee (IAC):

We successfully held the first IAC meeting on May 2nd, during which we identified and prioritized topics aligned with the AFDF mission. Topics discussed included rebuilding shoreside facilities and vessels, automation technology, carbon credits, carbon footprint, seafood quality, and product innovation.

Other Activities:

- Assisted in the development and submission of Denali Commission grants.
- Met with the national Manufacturing Extension Program to discuss seafood automation.
- Met with the University of Alaska SBIR program coordinator.
- Completed the final report for the initial EDA grant that funded the Alaska Ocean Cluster (abridged version attached).
- Participated in two panels at Arctic Encounter, discussing the seafood industry and maritime innovation.
- Supported the Sea Grant Fellow interview process.
- Attended Boston Seafood show.
- I will be in Bristol Bay from June 28th to July 17th.

Blue Pipeline Venture Studio Cluster Development Project Final Report

ED20HDQ0200040

PROGRAM TITLE:	Blue Pipeline Venture Studio Cluster Development Project
RECIPIENT:	Bering Sea Fishermen's Association
FUNDING AGREEMENT:	ED20HDQ0200040
PERIOD COVERED BY THIS REPORT:	10/01/2020-03/31/2023
AWARD PERIOD:	10/01/2020-09/30/2023
PREPARED ON:	04/28/2023
PREPARED BY:	Garrett Evridge

Contents

Executive Summary 3
Working with Early-Stage Companies 3
Project Development & Management 3
Merger with AFDF and Additional Funding 4
Section 1.0 Early-stage Company Support 5
Approach 5
Early-Stage Support 5
Intake & Strategy 6
Financial Modeling 6
Mentorship 6
Partner Companies 7
Partner Companies 7
Section 2.0 Project Development and Management 11
Section 3.0 Results & Outcomes 13
Challenges and Mitigation 14
Presentations 15
Alaska Fisheries Development Merger 15
Iterative Process 16
Funding 16
Partners 17
Appendix 18

Executive Summary

The Alaska Ocean Cluster, supported by a grant from the Economic Development Administration (EDA), has made significant strides in fostering innovation and sustainable growth in the fishing and seafood industries. Through its work with early-stage companies and project development, the Alaska Ocean Cluster has achieved numerous milestones, including the notable merger with the Alaska Fisheries Development Foundation (AFDF), resulting in the formation of the AFDF Startup Accelerator (the "Program" or "Accelerator").

The Program has successfully collaborated with various partners, including companies across the fishing and seafood sectors, academic institutions, government agencies, and non-governmental organizations. These partnerships have provided valuable resources, expertise, and networks that have supported the growth of startups and innovative projects in the industry. As the organization moves forward as the AFDF Startup Accelerator, it will continue to strengthen these relationships, while forging new partnerships to promote innovation, sustainability, and growth in the fishing and seafood industries.

Working with Early-Stage Companies

The Accelerator played a crucial role in supporting early-stage companies in the fishing and seafood sectors. Through various initiatives, the Program has facilitated over 30 introductions to potential investors, held 300+ meetings with early-stage companies, supported the formation of one new business, assisted with approximately 10 grants, and developed seven project concepts. We directly supported increased revenue generation of at least $40,000 due to customer introductions. Indirectly, we supported revenue of more than $300k. By providing resources, mentorship, and growth opportunities, the Accelerator has driven innovation and sustainability within the industry.

Project Development & Management

The Program has actively engaged in project development by partnering with diverse stakeholders to pilot, test, and implement new technologies and solutions in the fishing and seafood sectors. Some key projects include:

- Deploying and testing LED lights in trawl nets to reduce non-target species bycatch in Alaska waters.
- Testing an innovative ice forecasting tool to improve operational safety for the fishing fleet.
- Developing an improved method for unloading crab from commercial fishing vessels in collaboration with a university engineering department.
- Exploring the use of unmanned surface vehicles for scouting fish populations in the Bering Sea to reduce carbon emissions and operating costs.
- Submitting a project proposal to study the feasibility of increased seafood processing in Alaska.

Merger with AFDF and Additional Funding

A key outcome of the EDA grant is the merger of the Alaska Ocean Cluster with the Alaska Fisheries Development Foundation, resulting in the formation of the AFDF Startup Accelerator. This collaboration has amplified the impact of both organizations, combining their expertise and resources to support the fishing and seafood industries more effectively.

In addition to the EDA grant, the Program secured $200,000 in funding from Builders Vision. This additional grant will not only support existing activities but also enable further development and refinement of the program, ensuring its long-term success and growth.

Through its work with early-stage companies, project development, the successful merger with AFDF, and the acquisition of additional funding, the Program has demonstrated a strong commitment to advancing the fishing and seafood industries. As the newly formed AFDF Startup Accelerator, the organization will continue to focus on key priorities, driving innovation, sustainable growth, and environmental responsibility for the long-term benefit of the industry and its stakeholders.

Section 1.0 Early-stage Company Support

Our primary goal is to assist early-stage companies in the seafood and maritime industries as they develop innovative solutions and sustainable practices. We collaborate with these startups to help them grow and achieve their objectives by offering support in areas such as funding, business strategy, networking, and resource provision. This section highlights our efforts and the outcomes of working with these promising ventures.

Approach

We are supporting more than 25 early-stage startups and entrepreneurs. We provide assistance in various areas, including customer identification, business model development, financial modeling pricing strategy, and general professional services advising. This report outlines our comprehensive approach to working with early-stage companies, highlighting our program structure, strategy development, technical assistance, mentorship, networking opportunities, and the importance of fostering economic development, wages, and jobs through the support of early-stage companies.

Helping early-stage companies is crucial for driving economic development and deploying creative solutions in our maritime sector. By supporting the growth of innovative startups, we are contributing to the diversification of the Alaska economy and fostering resilience and adaptability in the face of changing market conditions. Startups often introduce new products, services, and technologies, which can lead to increased productivity and competitiveness, ultimately benefiting the broader economy. Moreover, as these startups grow, they create high-quality jobs with competitive wages, contributing to the overall well-being of the communities in which they operate.

Early-Stage Support

Our approach to supporting early-stage companies is tailored to their unique characteristics, such as sector, stage of development, aspirations, and skillset. Early in our relationship with a startup, we identify specific goals to pursue. Our most common arrangement involves meeting with a company for 30 minutes every two weeks to discuss progress towards these goals. Additionally, we provide resources and tools that companies can use independently to address challenges, streamline operations, and optimize their growth potential.

Our program structure and curriculum have been developed based on survey work, established best practices, and practical insights. We focus on our "member companies," startups that we select, review, and ultimately admit into the program based on their specific needs, size, team, sector, technology, and relevance to Alaska. Before admitting a startup to our portfolio, we work closely with the founding team to identify challenges they face and potential solutions we can provide. As a result, each startup in our portfolio has a bespoke work plan tailored to their individual needs.

Intake & Strategy

The first step in our collaboration with a startup involves an intake and strategy session, where we hold a broad conversation focused on discussing basic and fundamental questions. Some of these questions include:

- Among all the things you could be doing with your life, why this?
- What do you want your company to be known for? What are its values?
- What do you dislike about your business? What gives you joy?
- What would your business spend an extra $100k on?
- What is your goal with this business?

The answers to these questions support business model refinement, strategic decision-making, and development of timelines. During this initial phase, we also work with startups to identify their unique selling points, analyze their competitive landscape, and explore potential market opportunities.

Financial Modeling

We develop a basic financial model for most early-stage companies, which typically includes five years of estimated revenues, costs, capital expenditures, profit, and production. The development of this model supports further strategic alignment, and companies are encouraged to continually refine and improve their estimates. Moreover, we provide guidance on financial management best practices, cash flow forecasting, and risk mitigation strategies to help startups maintain a healthy financial position and attract investment.

Mentorship

Mentorship is a vital component of the success of early-stage companies. By engaging with experienced mentors, startups can navigate the challenges and uncertainties associated with building a new business. Mentors offer crucial advice, share their experiences, provide emotional support, and provide practical guidance on essential aspects of business development, such as product development, market entry, customer acquisition, and fundraising. Additionally, mentors can help startups expand their networks by introducing them to potential investors, partners, and customers, opening doors to new opportunities for growth. The mentorship relationship also benefits the mentors themselves, as they gain exposure to innovative ideas, emerging trends, and fresh perspectives while experiencing the satisfaction of contributing to the growth and success of the next generation of entrepreneurs.

Our program connects early-stage companies with our network of 50+ suitable mentors who can provide valuable guidance and insights. We carefully match startups with mentors who possess relevant expertise and experience in their industry, ensuring that the mentorship relationship is both fruitful and effective. This process begins with a thorough evaluation of each startup's specific needs and the identification of the skills, knowledge, and connections that would be most beneficial for their growth. We then leverage our extensive network of industry professionals, entrepreneurs, and subject matter experts to find appropriate mentors for each startup.

Once the mentorship pairing has been established, we encourage regular communication and collaboration between the mentor and the startup. Our preferred path is to help initial a company-mentor relationship which grows to a long-term relationship independent from the program.

Partner Companies

Our primary focus is on early-stage companies operating in the seafood and maritime space, as these sectors represent key areas of growth and innovation in Alaska and beyond. We recognize the immense potential that these industries hold, particularly in terms of environmental sustainability, resource management, and technological advancements. By supporting startups in these sectors, we aim to foster the development of innovative solutions that address current challenges, such as plastic pollution, declining profitability, climate change, and supply chain inefficiencies, among others. We believe that investing in seafood and maritime startups contributes to the creation of new jobs and economic opportunities, while promoting responsible and sustainable use of our ocean resources.

Our program is dedicated to working with capable entrepreneurs who possess a strong work ethic, clear vision, and determination to succeed. We value entrepreneurs who are open to learning, adaptable, and receptive to feedback, as these qualities are crucial for navigating the dynamic and competitive landscape of the seafood and maritime industries. By partnering with driven and committed entrepreneurs, we can ensure that our support and resources are effectively utilized, ultimately leading to the growth and success of their businesses. Our goal is to empower these entrepreneurs to reach their full potential, and in doing so, contribute to the overall development and growth of the seafood and maritime sectors.

We place emphasis on identifying and supporting startups with high-quality ideas and business models. These are ventures that not only have a clear and compelling value proposition but also demonstrate a thorough understanding of their target markets and customers' needs.

Over the term of the award, we’ve engaged with approximately 50 entrepreneurs and early-stage companies. We’ve provided advice and support to all. Today, we maintain relationships with approximately 25 companies.

Partner Companies

The following is a description of many, but not all, of the companies we’ve supported as well as some of the specific activities we’ve collaborated on.

PolArctic LLC, owned by two Alaska native women, focuses on providing innovative remote sensing and oceanographic modeling in the Arctic. We have been working closely with the company to identify product-market fit, find customers, and support their data needs. We have also provided assistance for PolArctic's business development objectives, including support at the Arctic Circle Assembly. Furthermore, we aided in their Phase II application for an NSF SBIR and connected them with the owner of a crab vessel, leading to a pilot project aimed at developing their sea ice forecasting model and a beta dashboard to assist crab vessels in the Bering Sea and Aleutian Islands.

Beadedstream specializes in designing and manufacturing advanced data acquisition systems, enabling clients to monitor environmental conditions in remote locations with high precision and reliability. We have helped the company develop a forecasting tool that leverages proprietary data to inform operations in remote areas of Alaska.

Flywire offers electronic monitoring platform that enhances ocean data fidelity and business intelligence for commercial fishing companies. We have supported the company in identifying a business strategy for Alaska and connected them with key stakeholders in the seafood industry.

Thunder's Catch is committed to providing sustainably harvested, wild-caught seafood from Alaska. The two-person team won the 2023 Boston Seafood Show's Best New Retail Product award with their Wild Smoked Salmon Chowder, surpassing larger and more established companies.

Alaska Salmon Sisters celebrates Alaskan fishing culture, empowering women in the industry, fostering a sense of community among fishermen, and providing fresh, sustainably sourced salmon to consumers. Owned by two sisters who continue to fish commercially in Alaska, the company operates two retail outlets in Homer, Alaska, sells seafood online, and collaborates with a variety of values-aligned brands, including XtraTuff Boots and Darned Tough Socks, among others. We have supported the company define their strategic plan, make strategic decisions, and develop financial projections.

AlaSkins produces high-quality dog treats made from Alaska salmon, halibut, and Pacific cod. The women-owned business manufactures products on the Kenai Peninsula and has plans to expand. We have worked with the company to identify sources of both non-dilutive and dilutive capital to fund their expansion into a new processing facility and increase available freezer capacity, currently imposing a constraint on short-term sales growth.

Net Your Problem addresses the issue of derelict fishing gear by offering responsible disposal solutions and recycling services to reduce marine pollution and minimize its impact on marine life and ecosystems. The women-owned business actively gathers fishing nets and lines throughout Alaska, in addition to other domestic U.S. fishing regions. We helped Net Your Problem identify cash flow issues that currently create short-term cash shortfalls. We built a financial model and worked with the company lessons to improve cash management during peak and off-peak seasons.

Kempy Energetics is developing specialized electric deck gear to support decarbonization in commercial fishing and workboat applications. We helped incubate this company, providing general business formation and strategic guidance. The Alaska-based company has developed a prototype and is currently raising funds to support additional development and growth.

Noble Ocean Farms, a seaweed farming company located in Cordova, Alaska, was among the first Alaska-based farms established to take advantage of the growing mariculture sector in the State. The company has pioneered different grow methods while supporting community engagement and other seaweed farmers. We’ve coordinated a relationship between Noble Ocean Farm and Blue Ocean Gear which supported testing of novel technology. Other support includes financial modeling, introductions to key contacts, and general business strategy advice.

Foraged & Found, based in Ketchikan, specializes in creating consumer packaged goods that incorporate wild kelp and sea asparagus. The company is currently expanding its distribution throughout Alaska, with plans to develop a national presence. We provided direct assistance in formulating their business development strategy and connected the founders with a private equity investor who has extensive experience in consumer-packaged goods product development. Additionally, we assisted the company in applying for a grant that supports the development and cultivation of sea asparagus, a wild tidelands plant featured in one of their most popular products.

Ivaldi leverages cutting-edge additive manufacturing technology to create high-quality, cost-effective parts for a variety of industries, minimizing waste and promoting sustainable production practices. The company's local manufacturing model is particularly well-suited for supplying as-needed manufactured goods in remote locations, such as Alaska. This approach has the potential to bolster economic development in rural Alaskan communities while enhancing supply chain resiliency. We collaborated with Ivaldi to identify potential customers and advanced manufacturers in Alaska and helped the company secure admission to Launch Alaska, a cleantech-focused startup accelerator supported by the Department of Energy and the Office of Naval Research.

Saildrone is a pioneer in designing and manufacturing advanced uncrewed surface vehicles (USVs), providing real-time, high-resolution ocean data for a wide array of applications, such as climate research, fisheries management, and maritime surveillance. We continue to work closely with Saildrone to develop a pilot project utilizing USVs in Alaskan fisheries, aiming to reduce operating expenses and greenhouse gas emissions.

Blue Ocean Gear creates innovative marine technologies to prevent, track, and mitigate the impacts of lost and abandoned fishing gear, thus promoting sustainable fisheries and protecting marine ecosystems. Their GPS-equipped buoy enables seafood harvesters to monitor the location of fishing gear and other parameters, including temperature and depth below water. We introduced the company to a seaweed farmer in Southeast which resulted in sales of six buoys. We've provided significant data and network support to the company.

SafetyNet Technology is at the forefront of designing and manufacturing intelligent fishing gear, utilizing advanced technologies to minimize bycatch and encourage more sustainable fishing practices worldwide. We collaborated with the company to test their bycatch reduction devices on three pollock trawl vessels in the Bering Sea, with the results detailed in the appendix. This project generated $27,000 in revenue for the company. We are supporting active discussions about another, larger project that would test additional precision fishing devices in the Bering Sea.

BlueDot Kitchen, a consumer-packaged goods company, produces seaweed snacks using sustainably harvested seaweed. Representing a crucial component of the growing seaweed sector, BlueDot Kitchen plans to source seaweed from Alaskan producers in the future. We supported BlueDot Kitchen in developing a go-to-market strategy for both Alaska and the broader Pacific Northwest and connected the founder with multiple seaweed farmers and key stakeholders in Alaska's burgeoning mariculture sector, who are likely to become future customers as the company seeks to secure supplies beyond its own seaweed farm in Washington state.

TriJet Manufacturing specializes in advanced manufacturing and coating techniques in Palmer, Alaska. We are helping them identify opportunities in the Alaska seafood and maritime sector. We coordinated a discussion with a leading Alaska seafood processing company to discuss high-end manufacturing needs of the seafood industry.

BlueTrace has developed a novel tracing and inventory system for shellfish and seaweed producers. The tablet and cloud-based system allows farmers to maintain detailed internal records while complying with increasingly demanding regulatory requirements. We've supported their go-to-market strategy in Alaska through strategic advice and introductions to key participants. exploration examination of the Alaska mariculture sector

Certified Quality Foods has developed a handheld device to measure food quality. Their quantitative quality index provides objective, third-party assurance to harvesters, processors, and buyers of seafoods.

OpenTug offers a marine transportation platform which matches excess capacity aboard cargo vessels. We helped OpenTug assess market data, identify potential early adopters of their platform, connect with sales leads, and refine their sales and marketing strategy. We introduced OpenTug to multiple potential project partners and advisors. We continue to provide investor relations support as well as pursue deployment projects with partners in Alaska.

In addition, we've supported a variety of other companies and entrepreneurs:

- Hullbot, an Australian company developing autonomous vessel hull cleaning technology.
- Sitkana, an Alaska company designing modular 1-megawatt turbines.
- Ladon Robotics, a Washington startup developing autonomous marine transportation technology.
- An entrepreneur developing a hydration drink from deep-ocean water in Seward, Alaska.
- An entrepreneur producing plastic building supplies from recycled plastic, including marine debris.

Section 2.0 Project Development and Management

Our project-development work focuses on fostering innovation and sustainability in the maritime and seafood industries. We collaborate with various stakeholders, including academic institutions, research organizations, and private companies, to design and implement projects that address challenges and capitalize on emerging opportunities. In this section, we showcase our dedication to developing initiatives that contribute to the advancement of these industries and promote responsible practices.

SafetyNet Technologies/Coastal Villages Region Fund

Our first project entailed the deployment and testing of SafetyNet Technologies' innovative Pisces LED lights, designed to minimize bycatch in trawl nets. With financial support from the Denali Commission and Coastal Villages Region Fund, we facilitated the implementation of Pisces lights on three trawlers in the Bering Sea. This marked the first commercial use of these lights in Alaska waters, aiming to reduce the bycatch of chinook and chum salmon. The final report on the project's outcomes is available in the Appendix.

PolArctic LLC/Alaska Harvesters

We orchestrated a collaboration between PolArctic LLC and a group of dedicated Alaska harvesters to test a groundbreaking ice forecasting tool. This tool enhances the fishing fleet's operational safety by providing more accurate 5, 10, and 15-day forecasts compared to existing NOAA ice forecasts. The success of this project could lead to the development of new technologies for weather prediction and maritime safety.

UAF Crab Unloading Project

We partnered with the University of Alaska Fairbanks Mechanical Engineering Department to create a more efficient method for unloading crab from commercial fishing vessels. Four students, as part of their capstone project, designed a modular unloading system under our guidance and mentorship from commercial fishermen and vessel owners. Full documentation of the project can be found in the Appendix.

Saildrone Carbon Reduction Initiative

Our second project involved using Saildrone's unmanned surface vehicles (USVs) to scout for Alaska pollock populations in the Bering Sea. The goal is to replace current fishing efforts carried out by fuel-intensive pollock catcher vessels, thereby reducing carbon emissions, operating costs, and improving data collection and sustainability across the fishery. While the $400k project is still in development, it has garnered support from Saildrone and Phoenix Processors Limited Partnership. We previously applied for funding from Schmidt Marine Technology Partners but were unsuccessful. The proposal is included in the Appendix.

Reshoring Alaska Seafood Processing

In April 2023, we submitted a $100k project proposal to the Denali Commission to explore the feasibility of increasing seafood processing in Alaska. With about one billion pounds of Alaska seafood exported for additional processing, bringing this volume back to Alaska can boost economic activity, support wages, jobs, and tax revenue. The study will focus on determining the financial and technological conditions necessary to attract capital investment. We expect a decision on the proposal by June 2023, and it is included in the Appendix.

AFDF Industry Advisory Committee

We have developed an industry advisory committee process and scheduled the inaugural meeting for May 2023. Representatives from Trident Seafoods, American Seafoods, and Alaskan Leader Seafoods will participate. The committee aims to identify and prioritize initiatives for AFDF and the AFAF Accelerator to pursue. Expected outcomes include the identification of three to five priorities supported by the industry, such as vessel decarbonization, plastic packaging alternatives, seafood quality, carbon footprint quantification, and more.

Section 3.0 Results & Outcomes

Measuring the impact of an accelerator program can be challenging due to the diverse range of outcomes and long-term effects on participating companies. However, we can highlight some tangible achievements that demonstrate the program's success thus far.

- Over 30 introductions to potential investors have been made, connecting early-stage companies with crucial funding sources, and fostering partnerships that drive innovation and growth.
- We presented at more than 10 public forums on topics including ocean technology, the role of venture capital in the Blue Economy, and challenges in the Alaska seafood economy.
- Our team has conducted more than 300 meetings with early-stage companies, offering guidance, mentorship, and resources that help them navigate the complex world of entrepreneurship and develop their business models.
- We directly supported increased revenue generation of at least $40,000 due to customer introductions. Indirectly, we supported revenue of more than $300k. This indirect support included proposal writing, grant application, customer discovery, and general strategic advice. This is a conservative estimate.
- The program's support has led to the formation of one new business.
- Approximately 10 grants have been supported, providing essential financial resources for the development and implementation of innovative solutions and technologies in the industry.
- Our accelerator has facilitated the development of seven project concepts, paving the way for novel ideas that can shape the future of the seafood and maritime sectors.

These results offer a glimpse into the positive impact of our accelerator program. However, it is essential to recognize that the full extent of the program's success may only be truly understood over time as the participating companies continue to evolve and make their mark on the industry.

In addition to the tangible achievements highlighted previously, our accelerator program has likely fostered a range of other outcomes that contribute to the overall success and impact on the seafood and maritime industries. Some of these potential outcomes include:

- Creation of new jobs: As participating companies grow and expand their operations, they will require additional workforce, leading to job creation within the seafood and maritime sectors and promoting economic development in the regions where these businesses are based.
- Strengthening of industry networks: Our accelerator program has facilitated numerous connections and collaborations between entrepreneurs, investors, industry experts, and other stakeholders. These connections contribute to a stronger industry network, promoting knowledge sharing, collaboration, and innovation.

- Environmental sustainability: The support and resources provided by our accelerator program have enabled early-stage companies to develop and implement sustainable practices, technologies, and solutions that have a positive impact on the environment and contribute to the long-term health of the seafood and maritime industries.
- Increased consumer awareness: As participating companies grow and gain visibility, they can help raise consumer awareness about the importance of sustainable seafood and maritime practices. This increased awareness may lead to more informed consumer choices and greater demand for sustainable products, driving industry-wide change.
- Mentorship and knowledge transfer: The relationships built between entrepreneurs and industry experts during the accelerator program foster a culture of mentorship and knowledge transfer. This collaborative environment not only benefits the participating companies but also strengthens the entire industry by encouraging the sharing of best practices and innovative ideas.
- Global competitiveness: Our accelerator program supports the development of cutting-edge solutions and technologies that can enhance the global competitiveness of the seafood and maritime sectors. By fostering innovation and growth, the program helps to position these industries as leaders in their respective fields.
- Encouragement of entrepreneurship: The success of our accelerator program can inspire and encourage others to pursue entrepreneurial endeavors within the seafood and maritime industries. This surge in entrepreneurial activity can contribute to a more vibrant, diverse, and innovative industry landscape.

These are just a few examples of the potential outcomes that may have resulted from our accelerator program. The true extent of the program's impact will continue to unfold as the participating companies evolves and develops.

Challenges and Mitigation

The primary challenges encountered in program development and growth of startups are degrading economic conditions and the ongoing effects of various external factors, including the COVID-19 pandemic. The pandemic resulted in travel restrictions, business closures, and event cancellations, causing economic disruptions and limiting opportunities for staff travel and networking. However, as restrictions began to ease towards the end of the second quarter in 2022, many travel restrictions were lifted entirely by the start of July 2022. To address these challenges, remote working has been enabled and virtual networking events have been hosted for staff, clients, and strategic partners.

In addition to external factors, startups have faced challenges in accessing investment capital due to the limited number of accredited investors and experienced fund managers operating in the region. To overcome this challenge, efforts have been made to cultivate a global network of accredited investors and fund managers interested in ocean technologies. Industry partners might also be willing to invest on an ad hoc basis, as evidenced by the initial success of the program’s pilot project supported by a local seafood processor.

Another challenge for the program is finding technical talent, particularly for companies with high technology products and services. Due to the high demand for technical workers, such as programmers, developers, and engineers, finding and hiring workers has proven to be difficult. To tackle this issue, long-term relationships have been established with universities and other strategic partners to source technical talent, particularly recent graduates. Additionally, individual technical workers have been contacted to assess their interest in working for a member company or a studio-backed startup.

The economic downturn, characterized by rising interest rates, layoffs, and reductions in valuations, has created further difficulties for startups in raising venture and angel capital and in gaining sales traction. To mitigate these challenges, focus has been placed on strengthening relationships with existing investors, exploring alternative funding sources such as grants and government programs, and providing support to member companies in improving their business models and financial management practices. Additionally, targeted marketing strategies have been developed to help startups gain sales traction despite economic challenges. By addressing these challenges and implementing effective mitigation strategies, the program can continue to support the growth and success of its member companies and the ocean technology sector as a whole.

Presentations

Staff presented at a variety of public events. Several example presentations are included in the appendix.

- Comfish, 2022
- Pacific Marine Expo, 2022
- Pacific Marine Expo, 2023
- Arctic Encounter, 2022
- Arctic Encounter, 2023
- Alaska Bycatch Reduction Taskforce, 2022
- Nature Conservancy Alaska Climate Change Seminar, 2022
- Seafood Harvesters of America Technical Symposium, 2022

Alaska Fisheries Development Merger

In early 2023, the Alaska Ocean Cluster merged with the Alaska Fisheries development foundation and renamed the AFDF Startup Accelerator. It will work closely with industry through a newly formed Industry Advisory Committee which has been tasked with identifying and supporting 3-5 priorities for the Accelerator to focus on. These priorities may include:

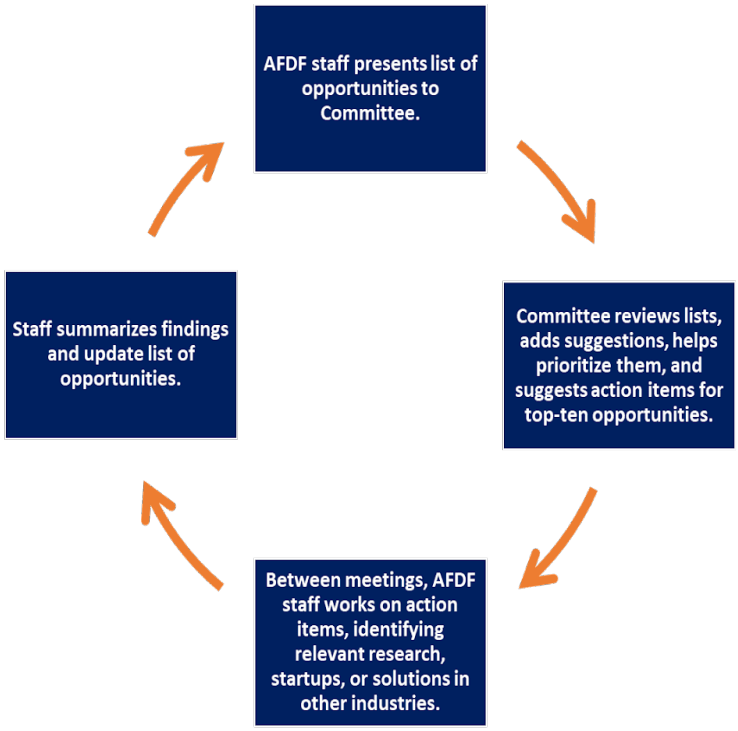
- Processing automation & robotics
- Decarbonization & energy efficiency
- Catcher vessel quality improvements
- Bycatch reduction
- Product utilization & value-add processing
- Vessel construction & materials
- Marine coatings, deck gear & hardware
- Harvesting gear improvements

- Finance & insurance
- Ocean data & monitoring
- Safety
- Communications
- Bait
- Packaging
- Transportation

Iterative Process

The following process has been developed for AFDF to work with the IAC:

1. AFDF staff presents a list of opportunities to the IAC. These opportunities can range from broad ideas to specific, defined projects.
2. The IAC reviews this list at the meeting, adds/removes opportunities, prioritizes opportunities, and suggests action items.
3. Between meetings, AFDF staff work on the action items. This may mean developing a briefing paper on a topic, finding a relevant startup, or consulting experts.
4. AFDF staff summarizes findings and adds any opportunities to be presented to the IAC.



Funding

The Accelerator received a significant boost in the form of a $200,000 two-year grant from Builders Vision, which will support and expand the program's activities. This funding allows the Cluster to continue working with early-stage companies, fostering innovation and development in the Alaskan fishing and seafood sectors, while also promoting sustainable practices, technological advancements, and economic growth in the region. The grant enables the Alaska Ocean Cluster to further develop and refine the program to address emerging challenges and

opportunities, increase collaboration with stakeholders, pursue new projects, and provide valuable resources to participating companies. With financial support from Builders Vision, the Program is well-positioned to contribute to a thriving and sustainable future for Alaska's fishing and seafood industries.

Partners

We continue to work with a broad coalition of partners from across private industry, academia, nonprofits, and the public sector. A sample follows:

- Coastal Villages Region Fund
- University of Alaska
- Launch Alaska
- Office of Senator Lisa Murkowski
- Office of Senator Dan Sullivan
- Office of Rep. Mary Peltola
- Pt Capital
- McKinley Capital Management
- Blue Wood Capital
- Journey Partners
- S2G Ventures
- Builders Vision
- Bering Sea Fishermen’s Association
- Schmidt Marine Technology Partners
- Washington Maritime Blue
- University of Alaska
- Alaska Blue Economy Center
- Portland Incubator Experiment
- Oregon State University’s Hatfield Marine Science Center
- Seafood Harvesters of America
- Alaska Bering Sea Crabbers
- Alaska Longline Fishermen’s Association
- At-sea Processors Association

Appendix

This appendix includes a variety of project reports, proposals, presentations, and other documentation.

1. Salmon Bycatch Reduction Project Summary
2. Improved Crab Offloading Project Report
3. AFDF/AFDF Press Release
4. NSF Cold Pool Project Proposal
5. Autonomous Scouting of Alaska Pollock (ASAP) Project
6. Presentation to Alaska Bycatch Review Task Force
7. Update Presentation on the AFDF Startup Accelerator
8. Presentation to Pacific Marine Expo
9. Pitch deck from Kempy Energetics
10. Declaration of Support from the Alaska State Legislature

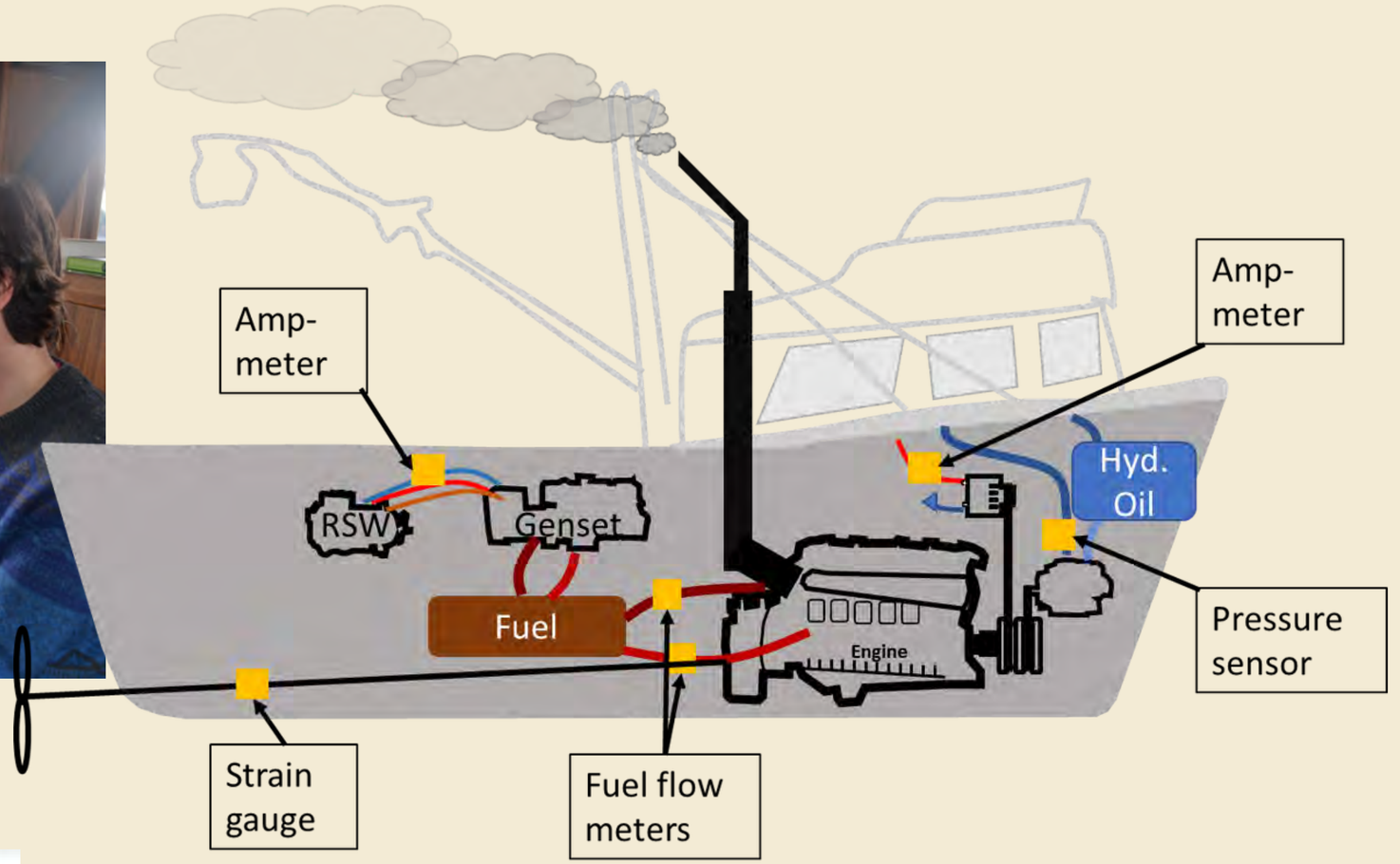
KEMPY ENERGETICS

Hauling fish efficiently, quietly, simply

CHANDLER KEMP, FOUNDER & CEO
BEN MATTHYS, ENERGY ANALYST
29 MARCH, 2023

KEMPY ENERGETICS

How we got here:



The Team

Chandler Kemp
Founder & CEO

- peer reviewed research
- energy audits
- develop new technologies

Ben Matthys
Data Analyst

- product development
- software tuning
- public outreach

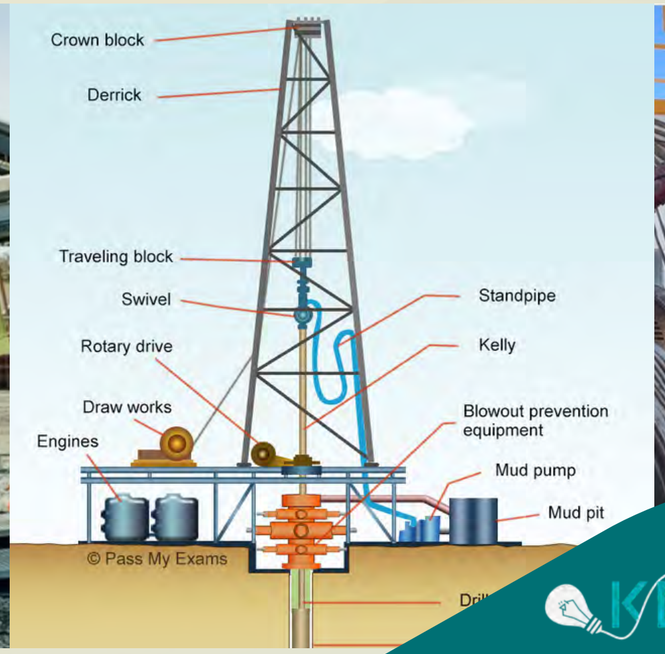
AFDF
Alaska Fisheries Development Foundation, Inc.

Alaska Longline
FISHERMEN'S ASSOCIATION

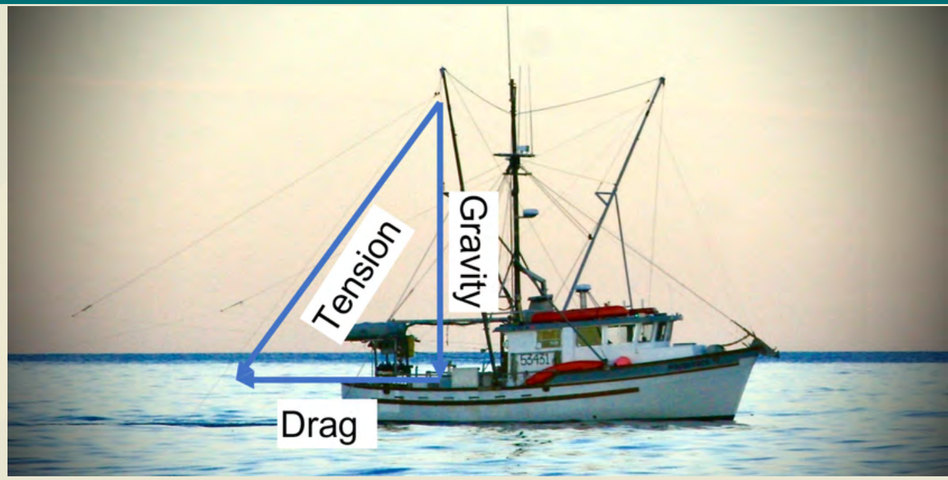
KEMPY ENERGETICS

Change across industries

- Many industries see the benefits of converting to electric



The Fishers' Challenge:



- Pressure to improve sustainability
- Tens of thousands of fish to haul in a short time
- Lost fishing time is very expensive

The Solution

- Electric Deck Gear
  - Adapt to Most Fisheries
  - Customizable controls
  - Highly efficient
  - Reduced Maintenance
  - Simple integration with electric propulsion
  - A piece of the marine decarbonization puzzle

KEMPY ENERGETICS

Hydraulic vs Electric

Inefficient

Spill risk

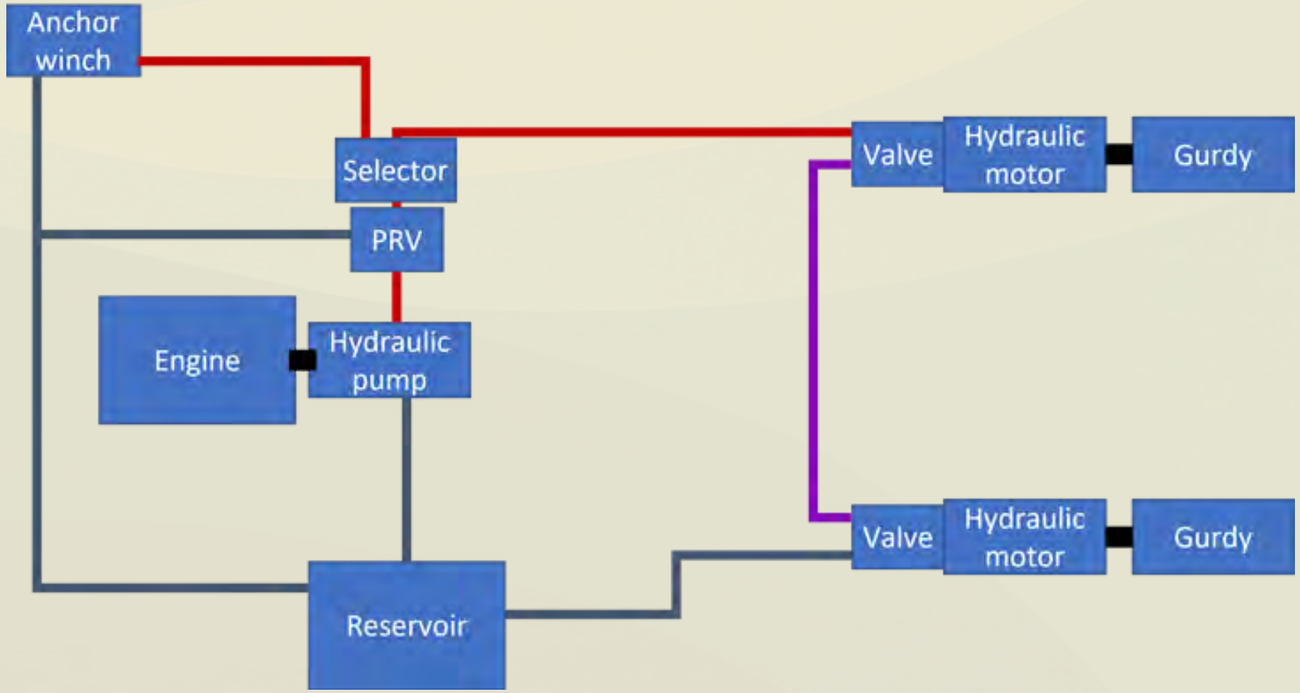
Fluid filtering and changing

Only powered in use

Nothing to spill

Fewer moving parts

Quieter operations



KEMPY ENERGETICS

Electric

Only powered in use

Nothing to spill

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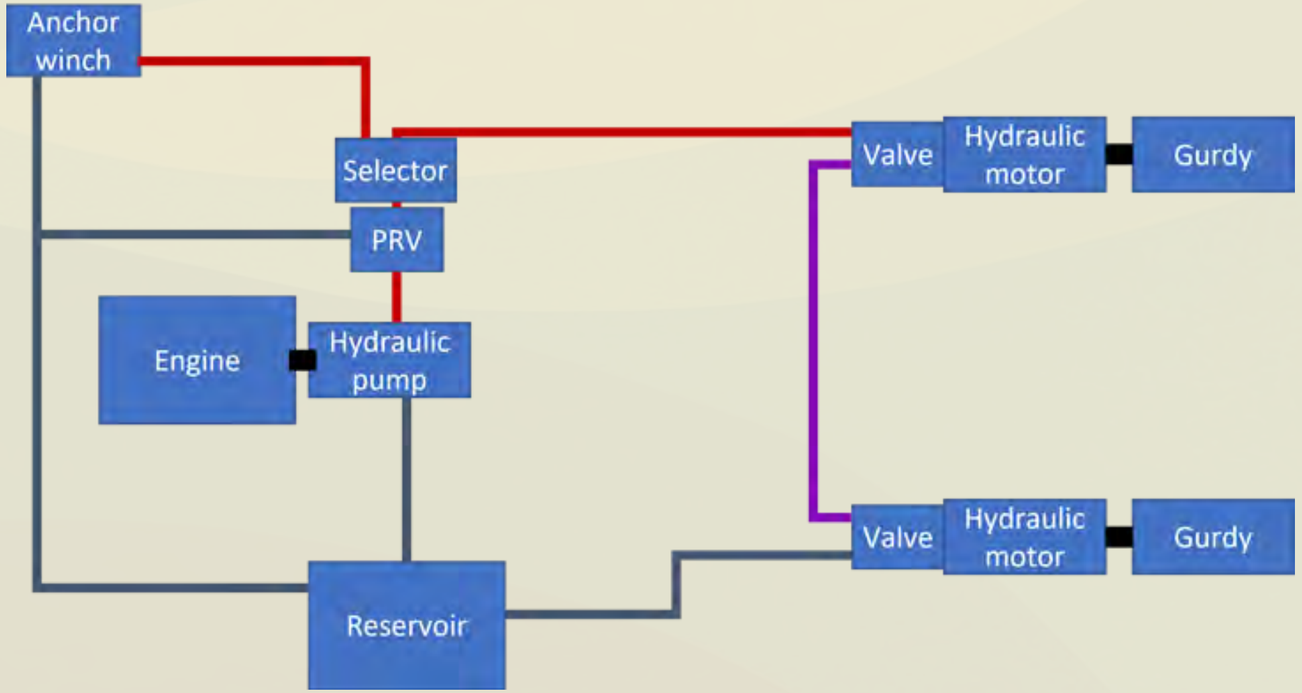
Quieter operations



The Market: >35,000 vessels

Commercial Fishing Market:

- 9,000 Alaska Commercial Fishing Vessels
- 35,000 Commercial F/V in US and Canada
- 2.8 million powered F/V worldwide

The Market: >35,000 vessels

Commercial Fishing Market:

- 9,000 Alaska Commercial Fishing Vessels
- 35,000 Commercial F/V in US and Canada
- 2.8 million powered F/V worldwide

Gross revenue >$12k per vessel

$420 million US/Canada market

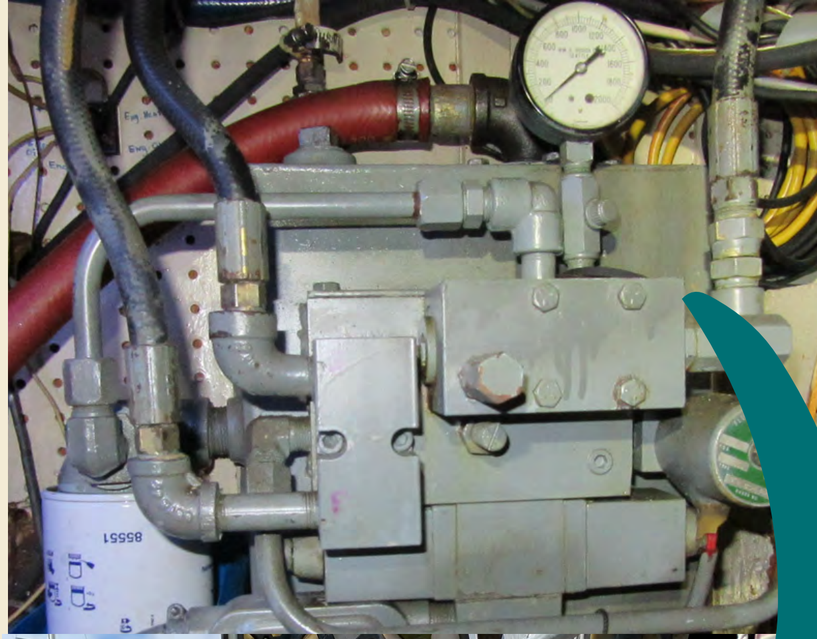
Beachhead Market:

- Sitka Technology Innovation
- 900+ Southeast trollers

KEMPY ENERGETICS

Business case

- $2,600 cost for proof of concept electric drive (materials only)
- ~$6000 retail price per e-component
- Full conversion of at least two e-components per vessel
    - anchor winch, wash down, gurdy, hauler



The Path

We are asking for $100k to:

- secure a work space
- stress test product reliability
- research markets
- expand staffing

Research/Ideas
Spring 2022

Proof of Concept
Summer 2022

Develop Production
Summer 2023

Implement Five Systems
Spring 2024

Implement E-Systems
Summer 2025-2026

KEMPY ENERGETICS

Hauling fish efficiently, quietly, simply

CHANDLER KEMP, FOUNDER & CEO
BEN MATTHYS, ENERGY ANALYST
29 MARCH, 2023

Technical Appendix

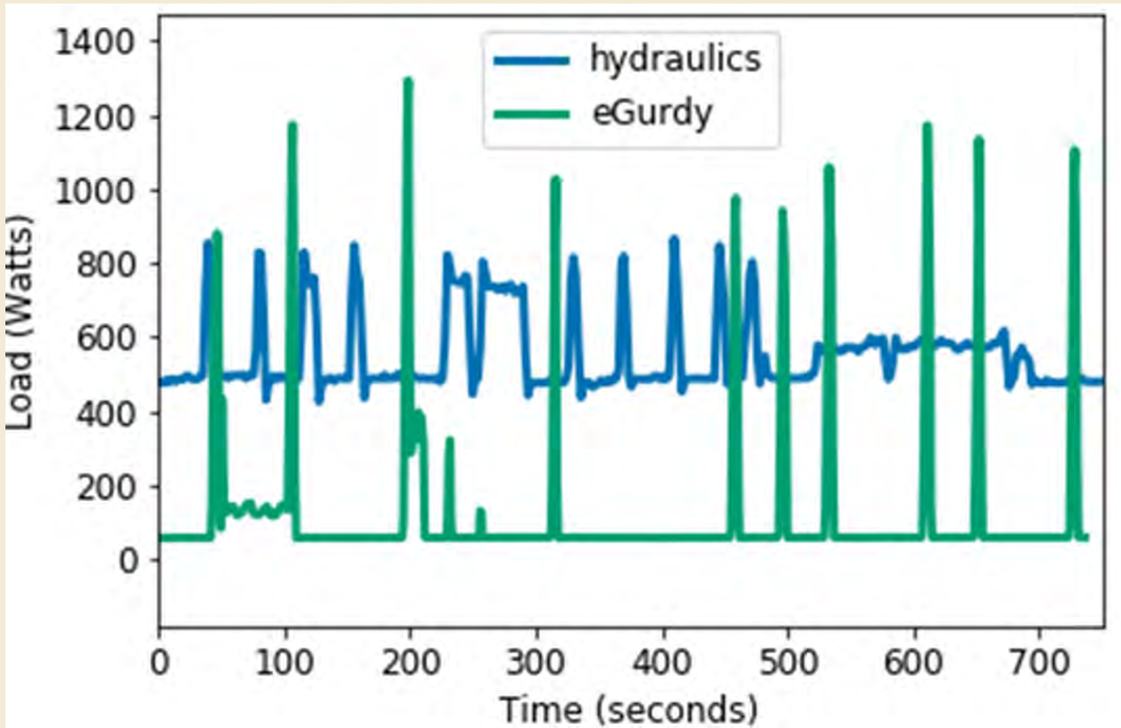
Baseline for hydraulic flow approx 500 watts

Communicating with Industrial Coatings Group

Scientific Goals to Observe

Deck Gear Duty Cycle

- measured temperature
- service life of exterior components
    - produce sea worthy components in house



Alaska Fisheries Development Foundation, Inc.

Request for Proposals

RFP #: 2023-02

Date of Issue: April 21, 2023

Joint Innovation Projects

The Alaska Fisheries Development Foundation (AFDF) is soliciting proposals from individuals, companies, or organizations, as part of a new program designed to accelerate innovation in the Alaska mariculture industry by funding applied research and development projects which address barriers to growth in Alaska's mariculture industry. Through this competitive RFP process, AFDF will select, and fund Joint Innovation Projects proposed by businesses (hatcheries/nurseries, aquatic farmers, processors, technology companies), or other eligible organizations. Findings and data from these projects will be compiled into reports and distributed to the public, ensuring benefits are available to all current or future industry participants, and the public in general.

Background

This new program, Joint Innovation Projects, is a part of the Research and Development component of the Alaska Mariculture Cluster (AMC), a coalition funded by a U.S. Economic Development Administration (EDA) Build Back Better Regional Challenge (BBBRC) grant (project number 07-79-07901). A Governance Body will guide the work and equity metrics of the Alaska Mariculture Cluster. AFDF is a part of the coalition, one of the subaward recipients, and the AFDF executive director serves on the Governance Body. As part of its subaward, AFDF will oversee a portion of the Research and Development component, and in particular, the Joint Innovation Projects. The Research and Development component is one of seven components, which have been purposely designed to be complementary in order to break down barriers to growth, and break out of the "chicken or egg" cycle of industry development. More information on the Alaska Mariculture Cluster is available at alaskamariculturecluster.org, including the Overarching Narrative which explains how the seven components work together to grow the mariculture industry in an equitable and environmentally responsible manner, and the Research and Development Component.

About AFDF

Since 1978, the AFDF has broadly represented the Alaska seafood industry (harvesters, processors and support service businesses) in the areas of research and development. AFDF

has previous experience with projects similar to the Joint Innovation Projects related to Alaska's seafood industry. Since 2014, AFDF has spearheaded the Alaska Mariculture Initiative, an effort to expedite the development of growing shellfish and seaweed in Alaska. As a result of those efforts, Governor Walker created the Mariculture Task Force (MTF) by Administrative Order from 2016-2021, during which time the AFDF Executive Director served as either Chair or Vice-Chair. The MTF was designed to sunset and in its place has been created the Alaska Mariculture Alliance (AMA); the AFDF Executive Director serves on its Board of Directors.

Eligible Entities

The following entities are eligible to submit proposals for funding under the Joint Innovation Projects:

- Companies doing work in Alaska, with an Alaska team member
- Alaska companies (hatcheries, nurseries, aquatic farmers, primary processors, or secondary processors)
- Alaska non-profits
- Alaska tribes
- Alaska Native Corporations
- Alaska communities

Eligible Project Categories

The following project categories were chosen to address identified barriers to growth. Project proposals must identify one of the following eligible categories for which to apply:

- Innovations in processing (oysters or seaweed)
  Examples:
  - Primary stabilization of seaweed (freezing, drying, fermentation, meal)
  - Secondary processing
  - Freezing oysters
  - Other product development
- Innovations in bull kelp farming
  Examples:
  - Farm design
  - Cultivation techniques
  - Seeding density
  - High current sites
- Innovations in mooring system technology, design and/or deployment
- Boosting oyster growth at nurseries or farms
- Shellfish enhancement

Tribal Entity Engagement

Proposals must demonstrate engagement with a local or regional tribal entity near the project location throughout the project timeline. A tribal entity includes tribes, Alaska Native corporations (ANC), or Community Development Quota (CDQ) groups.

Deliverables

The following deliverables will be a requirement of all funded Joint Innovation Projects:

- Signed contract between AFDF and the project lead.
- Semi-annual reports to AFDF detailing progress, engagement with tribal entity, problems and how they are being addressed
- Summary of the project to be presented and shared at the annual Alaska Mariculture Conference. The project lead will collaborate with AFDF and other funded project leads.
- A copy of all data produced in conducting the Joint Innovation Project. Data should be provided in commonly-used formats that allow other researchers to re-analyze the data.
- A final report submitted to AFDF detailing the project outcomes including successes, challenges, and lessons learned, which will be posted online for the public.

Timeline and Funding Available

Funding is secured for the Joint Innovation Projects program through the EDA BBBRC and matching funds. Selected proposals will be funded for a timeline of up to 18-month projects. Start dates must be between July 1 to December 31, 2023. The number of projects funded and award amount will depend on the quantity and quality of proposals received. Proposals may only request funding up to $100,000. Matching funds are not required, but will score extra points.

Restrictions on Funds

Funding is not eligible to be used for infrastructure, including real property or improvements to real property. Funding cannot be used by a for-profit enterprise to purchase equipment. "Equipment" means purchases of single units with a total purchase price, delivered, in excess of $5,000.00. Only EDA-eligible entities (non-profits, tribes, Alaska Native Corporations, Universities, or communities) are eligible to use funds to purchase equipment and retain ownership of the equipment. If a private company proposes to purchase equipment as a part of a project, it may be possible for AFDF, or another EDA-eligible entity, to purchase and retain ownership of the equipment for future lease and use by the public. This will be decided on a case-by-case basis.

Insurance Requirements

Funding of projects will be contingent upon providing proof of required insurance policies for project activities, which may include: 1) commercial general liability insurance, with property damage; 2) hull and machinery insurance with limits sufficient to cover any vessels used, 3) protection and indemnity insurance, with limits of not less than one million dollars per event, and/or 4) workers compensation insurance.

Proposal Content Requirements

The proposal must consist of the following (maximum 5 pages):

1. Project Title
2. Entity Name & Contact Information
3. Identification of Project Category
4. Entity Eligibility
5. Project Summary (1 paragraph)
6. Problem Statement (1 sentence)
7. Project Objectives, Tasks, and Measures of success
8. Project Engagement with local or regional tribal entity
9. Project Timeline (including tasks)
10. Project Budget (including any matching funds or in-kind contributions)
11. Qualifications of Project Team

Scoring Criteria

Scoring of each proposal against the criteria listed below will be conducted by a committee with recommendations and final approval made in cooperation with the lead entity, Southeast Conference. Criteria and maximum potential scores for selecting proposals are as follows:

- 10 points: Completion of proposal content requirements
- 15 points: Demonstration of knowledge and understanding of the barrier to growth that the project plans to address
- 10 points: Feasibility of the proposed joint innovation project
- 10 points: Potential impact of the project on removing barriers to mariculture industry growth
- 10 points: Other resources committed by the project team (i.e. matching funds, existing equipment, staff time, etc.)
- 15 points: Past experience on relevant and/or similar projects
- 10 points: Demonstration of capacity to complete all of the deliverables within the required timeline
- 10 points: Costs are reasonable and fall within available/projected funding levels
- 10 points: Equity metrics - If members of the proposal team are Alaska Native, or if the project location is in a rural coastal Alaska community, additional points will be awarded.

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

Due Date: Proposals must be submitted via email no later than **5:00pm AST, Wednesday, May 31, 2023** to Hannah Wilson at hwilson@afdf.org as either Adobe PDF or Microsoft Word documents. For questions, please call or email Hannah Wilson at 907-276-7315, hwilson@afdf.org, or Julie Decker at jdecker@afdf.org.

Alaska Fisheries Development Foundation, Inc.

Date: May 9, 2023

Bank of America

PO Box 66044

Dallas, TX 75266-0441

RE: Small Business Credit Application #4154995009

We, the undersigned, hereby authorize Julie Decker, Executive Director, Ekatrina Ratzlaff, Finance Director, and Julie Cisco, Executive Administrator, by a vote of the Board of Directors on May 9, 2023, to establish and use the Alaska Airlines credit card account with Bank of America.

Signed: _____

Name: Position: Date:

Signed: _____

Name: Position: Date:

120

US court orders new federal review of king salmon fishing plan in Southeast Alaska

By National Fisherman

May 5, 2023

The chinook salmon troll fishery in the U.S. state of Alaska is under renewed threat of potential suspension after a U.S. federal judge ruled the National Marine Fisheries Service must remake its management plan for king salmon.

The long-anticipated ruling from U.S. District Court Judge Richard Jones, issued 2 May, requires that NMFS come up with a new biological opinion that analyzes the impact of the king salmon fishery on the Southern Resident killer whale population in the U.S. state of Washington.

The endangered orca whale population is down to 73 animals. The Wild Fish Conservancy sued over NMFS' last plan, arguing the agency's proposed mitigation measures to boost salmon stocks are insufficient to ensure the orcas have enough food to slow their population decline.

The Southeast Alaska chinook salmon troll fishery summer salmon season opener on 1 July is now in doubt as a result of the ruling. NMFS and Alaska state fisheries officials have been preparing for the possibility since an earlier judgement in August 2022 faulted NMFS for failing to meet requirements under the Endangered Species Act. Commercial fishing industry groups said they are looking to appeal the decision.

"The court's decision is disappointing, not only because it puts the future of Alaska's small-boat fishing families in jeopardy, but it distracts from the larger, more-urgent issues that are causing the continued decline of the Pacific Northwest's Chinook and orca populations," Alaska Longline Fishermen's Association Director Linda Behnken said. "The science and data clearly show that habitat loss, dams, climate change, water pollution, and urbanization are harming salmon and orcas in the Northwest – not our hook-and-line fishery that operates almost 1,000 miles away and has done so sustainably for over 100 years."

The court order and a fishery closure could immediately boost the king salmon food supply for orcas, according to Wild Fish Conservancy Executive Director Emma Helverson.

“After years of inaction by our federal government to address the prey crisis facing the Southern Residents, Judge Jones’ decision will finally provide starving orcas immediate access to their primary prey,” Helverson said. “[Closing the fishery] is also helping to recover and restore wild chinook from rivers throughout Oregon, Washington, and British Columbia, essential to rebuilding both populations in the long-term.”

Alaska Trollers Association and Alaska Longline Fishermen’s Association issued a joint statement expressing its frustration at the ruling.

“The Southeast Alaska troll fishery directly employs 1,500 fishermen, with 85 percent of troll fishery permit holders living in Southeast Alaska, and is consistently one of Southeast Alaska’s top-three most valuable fisheries, providing renewable income for fishing families living in the region’s rural, isolated communities,” they said. “Prized around the world for its premium quality salmon, the troll fishery generates $148 million annually in economic outputs that include restaurant sales, consumer purchases, transportation jobs and other benefits accruing throughout the West Coast of the U.S. and beyond.”

Both associations said they are working with NMFS and Alaska state officials about potential next steps, and planning with their lawyers to appeal the court ruling.

The Wild Fish Conservancy contends fewer king salmon have been a key factor in the decline of the Southern Resident orca population from almost 100 animals 25 years ago. Closing the summer and winter Southeast Alaska troll seasons would leave about 172,000 king salmon in the water, the group said.

“Research has shown an alarming 69 percent of Southern Resident killer whale pregnancies are aborted due to insufficient chinook salmon, inbreeding, [and] depression [have] been identified as a growing threat to the population’s survival and recovery,” the group said. “[Closing the troll fishery] would increase prey availability by approximately 6 percent, which would be enough to stabilize the population and stop their decline toward extinction, though additional actions would be required to begin to grow the population.”

U.S. senators Lisa Murkowski and Dan Sullivan, Republicans representing Alaska, and U.S. Rep. Mary Sattler Peltola (D-Alaska), issued a joint statement condemning the ruling. The Alaska congressional delegation filed an amicus brief on 6 March supporting Southeast Alaska troll fishermen.

“This is a disastrous decision for Southeast Alaska that will only serve to harm those small boat troll fishermen who are trying to provide for their families. This lawsuit should have been dismissed months ago, but now threatens devastating restrictions that will harm hundreds of Alaskans and dozens of coastal communities – all while doing nothing to actually benefit the Puget Sound orca population,” Murkowski said. “Common sense and sound science must guide efforts to protect species. This uniquely awful decision blames Alaska for Washington’s problems, and suggests that an end to sustainable fishing in Southeast Alaska can cure decades of destructive environmental practices in Washington. If you want my ‘biological opinion,’ this is beyond ridiculous and cannot stand. The delegation will stand together, along with the State of Alaska, to fight this ruling.”

Peltola, first elected in 2022 on a fisheries-focused platform, also railed against the ruling.

"If this order is allowed to stand, Southeast Alaska will suffer a devastating loss, putting thousands of jobs at risk in communities that depend on this sustainably-managed fishery,” Peltola said. “I will be joining the state of Alaska, NOAA, Alaskan fishermen, and other conservation groups who agree that this lawsuit is frivolous and incapable of protecting a

whale population that faces much greater threats such as pollution and habitat loss in its home region near Seattle. I strongly support the governor's movement to appeal this ruling and save the summer fishing season, and I encourage NOAA to complete an update to the biological opinion at the center of this case."

Reporting by Kirk Moore

Photo courtesy of NOAA/Joe McCabe

National Fisherman

National Fisherman is an online resource for commercial fishing professionals, providing access to the latest news and information about the commercial marine industry in a single place.

123

jdecker@afdf.org

From: jdecker@afdf.org
Sent: Friday, May 5, 2023 11:10 AM
To: 'Decker, Julie'
Subject: FW: FOR ASF: Message for Members on Labour Issues

From: Geraldine Espejo <gespejo@nfi.org>
Sent: Monday, April 17, 2023 9:22 AM
To: Cc: Rob Blyth-Skyrme - Ichthys Marine Ecological Consulting (rob@ichthysmarine.com) <rob@ichthysmarine.com>
Subject: FOR ASF: Message for Members on Labour Issues

Dear Members,
In advance of our meeting on Monday 24 April, we wanted to get some feedback in advance of the discussion with the MSC.
MSC is developing a new framework for labour/social issues, especially forced labour and child labour.
The draft framework for discussion would require certificate holders to answer the questions below in the affirmative as a condition of eligibility.

Labour—Forced/Child

Is there a grievance mechanism in place?
2. Are there "procedures" to implement the grievance mechanism, and are those procedures being followed?
3. Is there protection for whistle-blowers?
4. Are the procedures transparent and are workers aware of them?
5. Is the grievance mechanism subject to continuous improvement?
It is possible that an affirmative answer to the first three could allow some kind of interim status.

Human Rights
1. Is there a satisfactory human rights policy in place?
2. Are the workers aware of the policy?
3. Is the policy publicly available?
4. Is it signed by leadership?
5. Is it reviewed regularly?

These questions raise many other questions for certificate holders, including mandate/governance, regulatory frameworks, liability, practicality, communications and public relations.
Hard to see that it would get the MSC much further while adding significantly to the costs of at least some certificate holders.
We would welcome your thoughts in advance of the meeting.
By the way, my injury means I won't be able to attend so there will be a virtual set-up as well as in person.
We'll send out more details once everything is booked.

C/
ASF Chair/BC Seafood Alliance
+1.604.377.9213

Submitted by Board Member John Jensen , prepared by the Alaska Department of Fish and Game[i].

March 11, 2023

Substitute language for proposal 161:

Chapter 28 is amended by adding a new section to read:

5 AAC 28.015. Guiding policy on groundfish fisheries resource management.
The Board of Fisheries and the department when taking actions regarding the management of groundfish fisheries should be based on the following principles and criteria:

(1) conservation of the groundfish resource to ensure sustained yield, which requires that the total allowable catch in any fishery be based upon the biological abundance of the stock;

(2) minimization of bycatch of other associated fish and shellfish and prevention of the localized depletion of stocks;

(3) protection of the habitat and other associated fish and shellfish species from nonsustainable fishing practices with consideration of ecosystem interactions;

(4) maintenance of slower harvest rates by methods and means and time and area restrictions to ensure adequate reporting and analysis necessary for management of the fishery and ensuring adherence to annual and seasonal total allowable catch limits;

(5) extension of the length of fishing seasons by methods and means and time and area restrictions to provide for the maximum benefit to the state ~~and to regions~~ and local areas of the state;

(6) harvest of the resource in a manner that emphasizes the quality and value of the fishery product;

(7) provide opportunities for subsistence, sport, commercial and personal use fisheries;

(8) cooperation with federal agencies associated with groundfish fisheries;

(9) management of the groundfish fisheries are based on information that, in the commissioner's discretion, will tend to promote the purposes of Alaska statutes pertaining to fisheries management.

[i] Preparation of draft substitute language at the request of a Board member does not imply ADF&G support. The Department will state its position on the language during deliberation.

To protect orcas, federal judge orders closure of iconic Southeast Alaska troll fishery

A federal judge issued an order Tuesday voiding an environmental review that helped authorize the small-scale fishery, a $30 million industry that employs hundreds of people in Southeast Alaska.

NATHANIEL HERZ
MAY 2, 2023

A troller plies the waters of Sitka Sound earlier this year. (Max Graham)

Northern Journal is a newsletter written by Anchorage journalist Nat Herz, with the help of occasional freelancers like Max Graham, who co-bylined this piece. It's free to subscribe, and

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y that closes an iconic Southeast Alaska salmon
— a decision that threatens hundreds of jobs and
conservation group's lawsuit.

***t Alaska salmon fishery to save 73 orcas. Critics say
ok closer to home.]***

tate-based Wild Fish Conservancy, seeks to
of the Lower 48 and British Columbia — whales
harvested by Southeast Alaska troll fishermen.

adopted, a preliminary, 40-page recommendation
ould have the effect of closing the chinook
fishery, in which some 900 permit holders harvest roughly 200,000 salmon each year.

But the ruling wasn't final until Tuesday, when a Seattle-based federal district judge, Richard Jones, issued a two-page order upholding the magistrate's recommendation.

"I'm in a mild state of shock," said Amy Daugherty, executive director of the Alaska Trollers Association, which intervened as a defendant in the lawsuit. "Of course, we are disappointed."

Alaska Republican Gov. Mike Dunleavy's administration, which also intervened in the lawsuit on the trollers' behalf, issued a statement saying the Department of Law will ask for Jones' ruling to be set aside while an appeal plays out. It said the department will "immediately" notify the Ninth Circuit Court of Appeals that an appeal is pending.

Jones' ruling is "a radical step," the statement quoted Attorney General Treg Taylor as saying.

"We'll continue to pursue every available avenue in defense of Alaska's fisheries," Taylor said. "We understand the critical importance of this fishery to the affected fishermen and communities across Southeast."

The order from Jones does not explicitly call for the closure of the summer chinook fishery. Instead, it vacates a key federal authorization that allowed the state of Alaska to open the fishery without violating the Endangered Species Act.

But Taylor's statement said the ruling "has the practical effect" of canceling the chinook harvest, which can generate as much as 40% of trollers' annual income. The summer troll fishery runs from July through September.

One key question is how Jones' decision will affect trollers' harvests of coho and chum salmon, which make up the rest of their catch. Tuesday's order did not specifically address cohos and chums, but some fishermen feared it could have the effect of closing those harvests, too, because trollers could still accidentally hook chinook while fishing for the other species.

A spokesperson for the National Marine Fisheries Service, which is named as the primary defendant in the case, said the agency is still reviewing the order. An official from the Wild Fish Conservancy did not respond to a request for comment.

Trollers typically fish alone or with a single deckhand on their small boats, and most live in communities across Southeast Alaska. Their harvests also help sustain processing plants and processing jobs around the region.

Unlike net fishermen, trollers catch salmon one at a time, on individual hooks. Careful treatment and icing keeps fish fresh and allows troll-caught salmon to sell at a higher

market price: Filets are shipped around the country and can fetch $40 a pound at high-end grocery stores.

Numerous local governments and industry players throughout the region contributed to a legal fund defending the fishery against the lawsuit. And Alaska's entire Congressional delegation, Dunleavy's administration and the state Legislature all weighed in on the trollers' behalf — along with multiple Alaska-based conservation groups.

Critics of the lawsuit said that closing Alaska's troll fishery would have devastating economic effects without generating meaningful benefits for the 73 whales remaining in the "Southern Resident" orca population.

They say the orcas' decline is driven by other factors like industrial pollution, habitat destruction and ship traffic — particularly in Puget Sound, near Seattle, where the whales spend much of their time.

Juneau-based SalmonState, a conservation group that has fought to protect other salmon fisheries across Alaska from threats like industrial-scale mining and factory trawling, issued a statement Tuesday that called Southeast trollers the "poster child for sustainable fisheries" and blasted Wild Fish Conservancy for filing its lawsuit.

"As a wild salmon-focused environmental organization, SalmonState condemns the Wild Fish Conservancy's misguided, irresponsible litigation — which in all probability won't save a single endangered killer whale, but will ruin the livelihoods of thousands of Southeast Alaska's most committed, long-term conservationists and wild salmon allies," said SalmonState executive director Tim Bristol. "This is an abuse of the Endangered Species Act by out-of-touch, ideological, serial litigants."

—Max Graham reported from Homer; Nat Herz reported from Anchorage. This story was updated to add detail from a prepared statement by the Alaska Trollers Association, a brief comment from the National Marine Fisheries Service, information from a Department of Law press release and a statement from SalmonState.

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