

Alaska Mariculture Task Force

Meeting Packet

September 30, 2016

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ALASKA MARICULTURE TASK FORCE

Established by Governor Walker's Administrative Order #280

AGENDA

September 30, 2016, 8:00am – noon

DCCED Commissioner's Conference Room, 333 W Willoughby 9th Floor, Juneau, AK

Teleconference info: 1-800-315-6338 access code: 29660

- 1) Roll Call
- 2) Review and approve agenda
- 3) Review and approve minutes: June 20, 2016
- 4) Public comments
- 5) Review Administrative Order #280:
 - a. Directive: *"to provide recommendations to develop a viable and sustainable mariculture industry producing shellfish and aquatic plants for the long-term benefit of Alaska's economy, environment and communities".*
- 6) Old business
 - a. Status of homework assignments
 - i. Update on press release (Blake)
 - ii. HB 300 – will it be reintroduced next session (Rabung)
 - iii. ListServ idea for interested members of public (Pring-ham)
 - iv. Identify resources (Decker – industry; Cullenberg – Sea Grant; Hladick & Rabung – ADCCED & ADF&G)
 - v. Updates from Advisory Committee Chairs
 - Draft Guidance to Committees – changes?
 - Notice of meetings
 - Problems/challenges
- 7) New Business
 - a. Communications
 - i. Website – where should it be housed?
 - ii. Designate authority for decision-making between meetings
 - iii. Internal – point person for flow of communication
 - iv. External (press releases, public notices, list serve/email distribution list, public presentations, public opinion, etc)
 - v. Scheduled or potential presentations (Southeast Conference, United Fishermen of Alaska, Pacific Marine Expo, Alaska Shellfish Growers Association, others?)
 - b. Outline of comprehensive plan
 - c. Discuss using economic analysis (phases 1, 2 & 3) to inform the plan

- d. Discussion of potential guest experts to present to MTF in future
 - i. Marc Von Keitz, ARPA-E, macroalgae as fuel
 - ii. Carter Newell, Maine Shellfish R&D
 - iii. Michael Rubino, Director, Office of Aquaculture, NOAA
 - iv. John Forster, aquaculture consultant, expertise in seaweeds
 - v. Brad Warren, Global Ocean Health
 - vi. Others?
 - e. Other data/info needed
- 8) Next Steps & homework assignments
- 9) Set next 3 meetings - date/time/place (Nov. 9, Dec. 10?, and ?)
- 10) Closing Comments



Alaska Mariculture Task Force Meeting Minutes

Attendees

Mariculture Task Force members: Kate Sullivan, Eric Wyatt, Julie Decker, Mike Stekoll, Jeff Hetrick, Sam Rabung, Paula Cullenberg, Angel Drobnica

Members of the Public: Tomi Marsh,, Pam Harrington,,Dustin Clyman,Hope Ricker,Abby with Shikat Bay Oysters.

Barbara Blake- Office of the Lieutenant Governor

Cynthia Pring-Ham- Department of Fish & Game

Micaela Fowler- Department of Commerce, Community, and Economic Development

Materials distributed to task force members included: Agenda for June 20 meeting; Meeting Minutes for June 1 meeting; Draft of Mariculture Press release; Draft of Mariculture Task Force Advisory Committees; Mariculture Task Force Draft Plan

9:02am Vice-Chair Julie Decker called the meeting to order as acting chair for this meeting

Agenda was reviewed and the following changes were made:

Julie Decker- Add a Communications agenda item under old business

June 1 meeting minutes were reviewed and the following changes were made

Mike: identify task force members in a different way than members of the public

Mike: he is University of Alaska not just UAA

Sam Rabung motioned to approve the minutes as amended

Mike Stekoll seconded the motion

No opposed

Public Comments:

Opened by chair Decker at 9:09am

No public comments

Old Business:

Discussion to the press release: Angel offered the idea that the press release should also include information that those interested in serving as advisory committee members should contact a certain person. Also what the task force is looking for in members.

Linda Mattson volunteered to be the first point of contact for those interested in being on the advisory committees for purposes of the press release. She will compile a spreadsheet and send to Barbara Blake.

Communication

Discussion regarding how to get information out to Task Force members, to advisory committees, and to the public. Ideas included adding a new page to F&G under their mariculture

section; creating a list of interested stakeholders housed at ADF&G, adding attachments to the online public notice system notices that the task force sends out; keeping a source of background documents on AFDF's website, or sending items in a dropbox format. State employees cannot access DropBox or G-drive, so those options were set aside.

For large working documents for now it would be good to just email task force members
Utilize the Online Public Notice system for communications with the public

New Business:

6A overview of comprehensive plan

Micaela Fowler led discussion of changes or feedback from task force members

This document is viewed as a working document but it will be tracked as a timeline

The advisory committees will also have an input in the comprehensive plan

Identify a mission statement

9:15 Discussion on advisory committees

Chair Decker read over the Draft Advisory committees draft and changed the word "changes" under Environmental Changes Advisory Committee to "information"

Chair Decker outlined two priorities for this portion

1. Finalize list of advisory committees
2. Identify task force members who will serve on committees
3. Describe each advisory committee and what is expected from each

Discussion of ideas on individuals or groups that should be identified to serve on the advisory committees

Discussion brought back to the advisory committees and work began to finalize the list. Sam suggested combining Research and Development needs and Environmental Info.

Paula suggested having a safety committee; decision was made to tuck it into other advisory committees.

Final List of Advisory Committees

1. Public & Private Investment and Infrastructure Advisory Committee
 - A. Chairs: Jeff and Angel; Tomi is interested in serving on this committee
 - B. Homework

Eric: look into potential investors who wanted to invest in the mariculture industry but didn't and the reasons why.

Micaela Fowler: coordinate with Angel and Jeff to discuss legislative options for the Mariculture revolving loan fund

- C. Other Discussion

What should be addressed in this advisory committee? Investment side should deal with the money and identifying potential funding resources and putting them to work for the mariculture industry. The infrastructure side should address needs of hatcheries

Under Infrastructure: If an individual/organization wants to develop infrastructure it needs to address what the needs are to do so

Paula suggested to do an overview of Public/ Private investment and infrastructure that has been already been done in Alaska. Look at our history.

2. Regulatory Issues Advisory Committee
 - A. Chair: Sam with Eric and Chris Whitehead involved;
 - B. Agencies to be contacted by Rabung for involvement DNR, DEC, DCCED, NOAA & Army Corps of Engineers. Plus industry.
3. Research & Development needs/ Environmental Information Advisory Committee
 - A. Chair: Mike Stekoll with Eric Wyatt serving on
 - B. Other Discussion - Brief discussion on whether or not to combine these committees; final decision made to combine them
4. Public Education and Marketing Advisory Committee
 - A. Chair: Heather?; Paula and Tomi would like to serve on this committee
 - B. Homework: Julie will reach out to Heather to inquire about chairing this advisory committee
 - C. Other Discussion
What is expectation of committee: outreach to educate the public and also discuss public perception of mariculture
Marketing: increase sales and market development; get ASMI involved
Discussion on whether to combine this committee with either Workforce Development or Marketing. Final decision was to combine Public Education and Marketing
5. Workforce Development Advisory Committee
 - A. Chair: Paula; Hope, Eric, and Tomi interested in serving and Sam will participate
 - B. Homework: Sam will reach out to Jim Kaiser and Jim Agair to serve Maritime Workforce Development Plan; and surveys of shellfish farmers and workforce needs to committee members
Julie: pull draft apprenticeship document that Oceans Alaska and others had worked on previously with the Department of Labor & Workforce Development and distribute to task force members
 - C. Other Discussion
Draft objective of advisory committee: Training program for qualified workers

Sam motioned to approve the five final advisory committees

Seconded by Mike

No opposed

Homework:

Identify resources from stakeholders and departments

Julie- industry

Paula- Sea Grant

Chris and Sam- their respective departments

Task Force members send one to two sentences for inclusion in the Press Release about their background that is relevant to Mariculture Task Force- due by Friday, June 24, 2016 to Linda Mattson

Press Release: changes suggested to Linda Mattson by Friday, June 24, 2016

Chairs of advisory committees: define their advisory committee with a short description in a way that task force members can use to communicate with members of the public

Chairs of advisory committees: contact individuals that they believe would be a good fit to serve on their respective committees and provide Linda Mattson's contact information

(linda.mattson@alaska.gov) to them if they are interested in serving

Chairs of advisory committees: schedule first meeting of your advisory committee to occur prior to September 15 task force meeting

Cynthia Pring-Ham: research a list serve idea of people who are interested in communications with public

Julie with help from Cynthia, Jeff, and Tomi: Come up with a draft list of questions that the advisory committees should answer and a common format in which they should be answered

Sam: find out if HB 300 will be reintroduced next legislative session

Item for task force members to think about in advance of next meeting: identify main questions that you would like the advisory committees to answer.

Down the line homework for Micaela Fowler: assist in compiling drafts from advisory committees into a comprehensive document when the task force reaches that point

Next meeting dates scheduled:

September 15, 2016, 1-5pm, in Juneau

November 9, 2016, time TBD, in Juneau

December 10, 2016 in Anchorage, time TBD

11:04am Meeting adjourned by Chairman Decker

Alaska Mariculture Task Force

Packet for Advisory Committee Members

DRAFT

September 7, 2016

Alaska Mariculture Task Force

List of Advisory Committees – Revised

Updated 9/29/2016

1) Investment and Infrastructure

Chairs: Angel Drobnica and Jeff Hetrick

Interested AC Members: Tomi Marsh, Julie Decker, Erik O'Brien, Jim Gibbons (Seattle Shellfish), USDA,

2) Regulatory Issues

Chair: Sam Rabung

Interested AC Members: Eric Wyatt (ASGA), Jim Aguiar (ASGA), John Kiser (ASGA), Chris Whitehead (Sitka Tribe), Kimberly Striker (DEC), Adam Smith (DNR), Christianna Colles (DNR), Margo Reveil (ASGA).

3) Research, Development and Environmental Information

Chair: Mike Stekoll

Interested AC Members: Eric Wyatt, Bob Foy, Ginny Eckert, Carter Newell, Kate Sullivan, Keith Criddle, Cynthia Pring-ham.

4) Public Education and Marketing

Chair: Heather McCarty

Interested AC Members: Tomi Marsh, Julie Decker, Laine Welch? (Alaska Fish Radio), Bobbi Hudson?(PSI), others?

5) Workforce Development

Chair: Paula Cullenberg

Interested AC Members: Eric Wyatt, Tomi Marsh, Hope Becker (SWAMC), Reid Brewer, John Kiser, Myrna Gardner, John Fear, Sam Rabung.

List of others interested to serve on ACs to date (no particular order):

Other applicants for MTF who were not appointed:

- Anthony Lindoff, Aquatic Farmer (oysters and sugar kelp); Mariculture Coordinator, previously for Sealaska, currently working for Goldbelt Inc.
- Robert Hartley, former Aquatic Farmer '93 –'06; former President of Alaska Shellfish Grower Association (ASGA)
- Don Nicholson, Aquatic Farmer - Oysters 20+ years
- Conor Eckholm, Hatchery Manager, OceansAlaska (oysters, geoduck, and sugar kelp)
- Kurt Morin, Aquatic Farmer – geoducks
- Scott Fell, Aquatic Farmer – oysters

- Angela Bowers, Sitka Sound Science Center Aquaculture Director
- Raymond May, Commercial Fisherman; Kodiak Island Storage

Others:

- Ian Dutton, consultant, Nautilus Impact Investing; previously VP at Rasmuson Foundation; previous work internationally in aquaculture
- Joth Davis, Aquatic farmer & researcher in WA; former NSA President
- Beau Perry, Premium Oceanic, contact for macroalgae hatchery in Juneau
- Ed Davis, Sealaska, Haa Aani
- Brad Warren, Director, Global Ocean Health
- John Forster, international aquaculture expert and consultant
- Kellus Sewell, consultant, aquaculture marketing
- Gunnar Knapp, retired Director/Economist, Institute for Social & Economic Research
- Ralph Townsend, Economist, Institute for Social & Economic Research

Alaska Mariculture Task Force Advisory Committee Guidance

DRAFT 8/29/16

Directive to the Alaska Mariculture Task Force (TF) by Administrative Order (AO) #280:

“To provide recommendations to develop a viable and sustainable mariculture industry producing shellfish and aquatic plants for the long-term benefit of Alaska’s economy, environment and communities.”

The TF has established the following Advisory Committees (ACs) and Chairs:

- 1) Investment and Infrastructure (Chairs Angel Drobnica and Jeff Hetrick)
- 2) Regulatory Issues (Chair Sam Rabung)
- 3) Research, Development and Environmental Information (Chair Mike Stekoll)
- 4) Public Education and Marketing (Chair Heather McCarty)
- 5) Workforce Development (Chair Paula Cullenberg)

Expectations of ACs:

- Work cooperatively for the benefit of the entire State of Alaska
- ACs will adhere to AO #280, including guiding principles and deadline (March 1, 2018)
- Chairs have the responsibility of calling and organizing meetings
- Membership in the ACs will be at the discretion of the Chairs
- Communication between the ACs and the TF will flow through the Chairs

Purposes of ACs:

- Each AC will assist the TF in addressing the essential element referred to in the AC name for purposes of integration and inclusion in the final comprehensive plan.
- Each AC will provide a connection to stakeholders and act as a two-way flow of communication between stakeholders and the TF.

Scope of Work – ACs and Chairs should use this as a general guide for their work:

- Conduct situational assessment relevant to each AC
 - Identify & utilize existing resources (information/orgs/Phases 2 & 3 eco analysis)
 - Identify opportunities or desired outcomes
 - Identify problems
 - Identify current or historic problems, impediments, obstacles, or needs
 - Identify past efforts to address problems
 - Identify why past efforts have failed
 - Identify information needs
- Identify solutions/strategies and new resources (info/orgs/\$)
- Recommend implementation plan
 - Identify who, what, when, where, how, funding & prioritization
 - Think in phases: Phase 1 (1-10 yrs), Phase 2 (10-20 yrs), Phase 3 (20-30 yrs)
- Recommend evaluation plan which tracks continued progress



Governor Bill Walker

STATE OF ALASKA

ADMINISTRATIVE ORDER NO. 280

I, Bill Walker, Governor of the State of Alaska, under the authority of Article III, Sections 1 and 24 of the Constitution of the State of Alaska, and in accordance with AS 44.19.145(c), establish the Alaska Mariculture Task Force.

FINDINGS

In 1988, Alaska allowed for farming of shellfish and aquatic plants with the enactment of AS 16.40.100 -16.40.199. Since 1988, Alaska's aquatic farming industry has struggled to grow with annual production values through 2013 below \$1,000,000.

The potential for increased and sustained economic development from mariculture of shellfish and aquatic plants in coastal communities is significant. Alaska has over 30,000 miles of coastline with clean, pristine, nutrient-rich water. Alaska produces over 50 percent of the seafood of the United States and is a leader in sustainability principles related to its responsible management of these resources. Shellfish and aquatic plants have historically been crucial to the subsistence and livelihoods of many Alaskans. Mariculture also offers the potential to provide resiliency to shellfish resources facing future environmental threats. Industry and policymakers acknowledge the importance of determining what is needed to fully develop this potential into a reality. Shellfish restoration programs are underway in other states and may ultimately be an effective tool to assist in the recovery of depleted wild shellfish stocks in Alaska. Due to ocean acidification and sea otter predation, the resiliency of shellfish resources in Alaska may become even more dependent upon the development of mariculture research, techniques, and enhancement efforts.

Research projects are underway in Alaska with respect to mariculture development. In 2013, NOAA researchers achieved the first experimental release of hatchery-reared red king crab in the state, as a part of the Alaska King Crab Research, Rehabilitation, and Biology Program. The Southeast Alaska Regional Dive Fisheries Association is working with the Alutiiq Pride Shellfish Hatchery to spawn sea cucumbers as a part of ongoing research into production of juveniles.

The farming of aquatic plants could provide diverse social, environmental, and economic benefits for Alaska residents. Aquatic plant culture can produce healthy foods and supplements, increase and preserve habitat for fish and invertebrates, and assist with bioremediation efforts in areas that contain excess carbon loads. Invertebrate culture can also assist with water filtration and removal of excessive nutrient loads.

Alaska's salmon fishery enhancement program offers a model of the potential for mariculture to grow the economy of coastal Alaska while applying sustainable management practices. The development of the mariculture industry in the state will provide the following benefits to Alaskans:

- (1) economic – providing jobs and commerce in coastal communities;
- (2) environmental – improving the local ecosystem in various ways, such as habitat improvement, carbon removal, or countering ocean acidification;
- (3) cultural – compatible with traditions, cultures, and skills in rural communities;
- (5) industrial – complements and expands our existing renewable seafood industry, which is Alaska’s largest private sector employer;
- (6) food security – increasing access to local foods for Alaskans.

PURPOSE AND RECOMMENDATIONS

The purpose of this Order is to establish the Alaska Mariculture Task Force (Task Force) to provide recommendations to develop a viable and sustainable mariculture industry producing shellfish and aquatic plants for the long-term benefit of Alaska’s economy, environment, and communities.

The Task Force shall present recommendations for a final comprehensive plan for the development of Alaska’s mariculture industry to the Governor by March 1, 2018.

The Task Force will use the following guiding principles in the development of its recommendations:

- (1) For the purposes of the task force, “mariculture” is defined as enhancement of wild fisheries and aquatic farming of shellfish and aquatic plants. Mariculture does not include finfish farming, which is not legal in Alaska.
- (2) The development of the mariculture industry will:
 - (A) be compatible with Alaska’s reputation as a world leader in responsible and sustainable management of its seafood resources;
 - (B) be stakeholder-driven;
 - (C) coordinate and integrate with those entities conducting ocean monitoring in order to inform research and management of changing ocean conditions; and
 - (D) include analysis of successful models that may be applicable to Alaska.
- (3) The comprehensive recommendations of the Task Force shall address, at a minimum:
 - (A) public and private investment;
 - (B) regulatory issues;
 - (C) research and development needs;
 - (D) environmental changes;
 - (E) public education; and
 - (F) workforce development.
- (4) The Task Force may establish advisory committees to assist in addressing the previously stated essential elements of the recommendations.

COMPOSITION AND CHAIR

The Task Force consists of eleven members who are appointed by the Governor and serve at the pleasure of the Governor.

The members of the Alaska Mariculture Task Force shall include the following:

- (1) the Commissioner of Fish and Game, or the Commissioner’s designee;

- (2) the Commissioner of Commerce, Community and Economic Development, or the Commissioner's designee;
- (3) a representative from the University of Alaska;
- (4) the Director of the Alaska Sea Grant Marine Advisory Program, or the Director's designee;
- (5) seven members of the public whose experience may include aquatic farming, seafood harvesting, seafood processing, nonprofit hatcheries, community sustainability, Alaska Native corporations, community development quota groups, tribal governments, or seafood marketing.

A chair and vice chair shall be selected annually by the Task Force from among its membership.

ADMINISTRATIVE SUPPORT

The Office of the Governor and the Office of the Lieutenant Governor shall provide necessary administrative support.

GENERAL PROVISIONS

Consistent with law and available appropriations, each designated State agency shall use existing personnel and monetary resources to comply with this Order.

Task force members receive no compensation or other remuneration from the State as members of the Task Force.

The Task Force will meet quarterly and may meet more frequently if determined by the Task Force. The Task Force may use teleconferencing or other electronic means, to the extent practicable, in order to gain the widest public participation possible at minimum cost.

Meetings of the Task Force shall be conducted, and notice of regular meetings provided, in accordance with AS 44.62.310 - AS 44.62.319 (Open Meetings Act). A majority of the members of the Task Force constitutes a quorum for conducting business. Records of the task force are subject to inspection and copying as public records under AS 40.25.110 - 40.25.220.

The Alaska Mariculture Task Force expires on June 30, 2018.

This Order takes effect immediately.

Dated at Anchorage, Alaska, this 20 day of February 2016.



Bill Walker
Governor

<u>Lname</u>	<u>Fname</u>	<u>Seat</u>	<u>City</u>	<u>State</u>	<u>Zip</u>	<u>Cell</u>	<u>Business</u>	<u>Email</u>
Cullenberg	Paula	Sea Grant	Anchorage	AK	99516	440-6704	274-9692	paula.cullenberg@alaska.edu
Decker	Julie	Public	Wrangell	AK	99929	305-0586	276-7315	jdecker@afdf.org
Drobnica	Angel	Public	Juneau	AK	99801	957-0496		adrobnica@apicda.com
Hetrick	James (Jeff)	Public	Moose Pass	AK	99631	362-2378	224-5181	jjh@seward.net
Hladick	Chris	DCCED	Juneau	AK	99811-0800		465-2500	chris.hladick@alaska.gov
McCarty	Heather	Public	Juneau	AK	99801	351-6794		hdmccarty@gmail.com
Rabung	Samuel	DF&G designee	Juneau	AK	99811-5526		465-4235	samuel.rabung@alaska.gov
Stekoll	Michael	UA Rep	Auke Bay	AK	99821	723-0058	796-6279	msstekoll@alaska.edu
Sullivan	Kate	Public	Anchorage	AK	99504	617-4115	247-5510	ksullivan@sardfa.org
Whitehead	Christopher	Public	Sitka	AK	99835	747-7395		chris.whitehead@sitkatriben-sns.gov
Wyatt	Eric	Public	Craig	AK	99921	401-1372	406-235-6059	alaskan@bluestarroysters.com

Reference Documents

**Note: Copies of these documents can be found at:*

<http://www.afdf.org/projects/current-projects/alaska-mariculture-initiative/>

Tab #	Document Title	Updated: June 7, 2016
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1) Alaska Fisheries Development Foundation (AFDF)

- a. Alaska Mariculture Initiative (AMI) Concept Paper
- b. RFP – AMI – Economic Analysis – 2014
- c. Northern Economics Proposal
- d. Economic Analysis to Inform the AMI – Phase I – Case Studies
- e. Economic Analysis – Phase I – References

2) State of Alaska

- a. Alaska Mariculture Development Prospectus – 2013 (ADCCED)
- b. Alaska Shellfish Farm Size Feasibility Study – 2015 (ADCCED)
- c. Shellfish Mariculture Industry Development Plan – 2006 (ADCCED & ADF&G)
- d. CS HB 300 / SB 172 – Shellfish Enhancement & Rehabilitation Legislation – 2016
- e. Invertebrate Restoration and Enhancement Guidelines DRAFT 2013 (ADF&G)
- f. Aquatic Farm Sites 2012 (ADF&G)
- g. Aquatic Farming Production Values 1990-2014 (ADF&G)
- h. Aquatic Farm Industry Report Summary 2013 (ADF&G)
- i. Aquatic Farm Industry Report Summary 2015 (ADF&G)
- j. Alaska Mariculture Status Report 2015 (ADF&G)
- k. Salmon Fisheries Enhancement Contribution to Fishery 1987-2012 (ADF&G)
- l. Abalone Recovery Priorities – Second Draft
- m. Alaska Abalone Recovery Working Group
- n. Abalone Recovery Plan – Goals and Objectives – DRAFT
- o. Administrative Order #280 – Mariculture Task Force
- p. Press Release – Governor Walker signs Administrative Order #280
- q. Alaska Mariculture Task Force – members

3) Alaska King Crab Research Rehabilitation and Biology (AKCRRAB)

- a. AKCRRAB website: initiative, mission & goal
- b. AKCRRAB Strategic Plan 2010-2014
- c. AKCRRAB Strategic Plan 2015-2020
- d. AKCRRAB Newsletter – August 2014
- e. Article – First Release of Hatchery-Reared Crab Coming This Fall (Pacific Fishing)
- f. Article – Hatchery Reared Crab Survive Well in the Wild (Fishermen's News)

4) Alaska Shellfish Farming Industry

- a. Shellfish Mariculture – Alaska Priorities – Research, Training, Development & Information Needs, 2011
- b. Shellfish Industry – Planning Session Outcomes, 2006
- c. Tipping the Balance: Bringing Alaska’s Shellfish Industry to the Takeoff Point
- d. ARTICLE – Plant a Patch of Water May 2016

5) American Fisheries Society – Alaska Chapter

- a. Newsletter, Fall 2014 – President’s Corner (excerpt)

6) State of Washington

- a. Washington Shellfish Initiative (WSI)
- b. WSI Factsheet
- c. WSI Phase 2 Overview
- d. WSI Phase 2 Work Plan (2016)
- e. WSI Phase 1 & 2 – Governor’s Office Presentation

7) Maine & California

- a. An Aquaculture Development Strategy for the State of Maine (1990)
- b. Maine Aquaculture R&D Summit – Agenda (2015)
- c. California Shellfish Initiative (2013)

8) NOAA

- a. National Shellfish Initiative
- b. Implementation of the National Shellfish Initiative
- c. NOAA Support for Puget Sound Shellfish
- d. Seaweed in the Spotlight
- e. NOAA Fisheries West Coast Region Strategic Plan 2016-2020
- f. NOAA 10-year Plan for Marine Aquaculture 2007
- g. NOAA Marine Aquaculture Policy 2011
- h. NOAA Marine Aquaculture Strategic Plan 2016-2020

9) USDA

- a. Investment Strategy in Support of Rural Communities in SE Alaska (excerpt)
- b. Intertribal Agriculture Council – USDA resources in support of mariculture

10) U.S. Interagency

- a. National Strategic Plan for Federal Aquaculture Research (2014-2019)

11) New Zealand

- a. New Zealand Aquaculture Strategy – Phase I
- b. New Zealand Aquaculture Strategy – Phase II

- c. New Zealand Aquaculture Strategy – Five Year Action Plan
- d. New Zealand Aquaculture Research Strategy
- e. New Zealand Aquaculture Market Development Strategy
- f. New Zealand Aquaculture – A Sustainable Growth Story
- g. Investment New Zealand

12) Food & Agriculture Organization (FAO) of the United Nations

- a. State of World Fisheries and Aquaculture (2014)
- b. World Aquaculture Production of Seafood by Country (2013)
- c. World Aquaculture Production of Aquatic Plants (2012)
- d. Global Aquaculture Advancement Partnership (GAAP) Program (2013)
- e. Regional Review of Status & Trends in Aquaculture Development in N. America

13) Ocean Acidification & Changes

- a. West Coast Ocean Acidification & Hypoxia Science Panel – Findings (2016)
- b. Sweetening the Waters – The Feasibility and Efficacy of Measures to Protect Washington’s Marine Resources from Ocean Acidification (2012)
- c. “We Can Lead”: Washington State’s Efforts to Address Ocean Acidification
- d. Tracking Ocean Acidification in an Alaskan Shellfish Hatchery (2015)
- e. Expansion of Vegetated Coastal Ecosystems in the Future Arctic (2014)

14) Public Education

- a. Maine Aquaculture Survey (2002)
- b. Public Perceptions of Aquaculture – New Zealand (2014)
- c. Public Opinion of Shellfish Farming in WA, OR, CA (2016)
- d. The Political Economics of Mariculture in the U.S. (2016)
- e. ARTICLE – Rubino & Knapp Lay out Political Economics of US Aquaculture (2016)

ALASKA MARICULTURE TASK FORCE

Established by Governor Walker's Administrative Order #280

REGULATORY ISSUES ADVISORY COMMITTEE

AGENDA

September 9, 2016, 9:30am–11:30 am
ADF&G HQ Comfish Conference Room, 1255 W. 8th St., Juneau, AK
Teleconference info: 1-800-315-6338 access code: 41601

- 1) Roll call/introductions and comments
- 2) Review Administrative Order #280:
 - a. Directive: *"to provide recommendations to develop a viable and sustainable mariculture industry producing shellfish and aquatic plants for the long-term benefit of Alaska's economy, environment and communities"*.
- 3) Determine purpose/goals of AC
- 4) Brief discussion of regulatory agency responsibilities related to mariculture
 - a. ADNR
 - b. ADF&G
 - c. ADEC
- 5) Discussion of issues related to specific regulations or agency operations and potential options to address
- 6) Closing Comments

ALASKA MARICULTURE TASK FORCE

Established by Governor Walker's Administrative Order #280

REGULATORY ISSUES ADVISORY COMMITTEE

September 9, 2016, 9:30am–11:30 am
ADF&G HQ Comfish Conference Room, 1255 W. 8th St., Juneau, AK
Teleconference info: 1-800-315-6338 access code: 41601

MEETING SUMMARY

1) Roll call/introductions and comments:

Chair-Sam Rabung, ADF&G Statewide Aquaculture planning and permitting. MTF member
John Kiser, Aquatic Farmer, SE AK
Christy Colles, ADNR (for Adam Smith), Shore Fishery Program Manager
Jim Aguiar, Aquatic Farmer, PWS AK
Chris Whitehead, Sitka Tribe, Environmental Program Manager. MTF member
Kim Stryker, ADEC, Food Safety and Sanitation
Eric Wyatt, Aquatic Farmer - SE AK. MTF member

Also in attendance: Julie Decker, AFDF Executive Director. MTF vice-chair

2) Review Administrative Order #280:

a. Directive: *"to provide recommendations to develop a viable and sustainable mariculture industry producing shellfish and aquatic plants for the long-term benefit of Alaska's economy, environment and communities".*

2) Determine purpose/goals of AC:

The AC will work to identify regulatory issues and identify potential means or actions to address them. These will be organized as short term, midterm and long term action items. This will be provided to the MTF for consideration for inclusion in the MTF recommendation to the Governor.

4) Brief discussion of regulatory agency responsibilities related to mariculture:

- A. ADNR: is responsible for authorizing the use of State land and waters.
- B. ADFG: is responsible for authorizing the use of live organisms in State waters.
- C. ADEC: is responsible for food safety and human health.

5) Discussion of issues related to specific regulations or agency operations and suggestions/potential options to address:

A. ADNR

- a) Lease fee was changed in middle of term; change when lease changes (renewal).
- b) Lease fee is high; potential cap in fee amount.
- c) Farms abandoned and DNR responsible for cleanup, but bond is not enough to cover cost of cleanup; consider requiring insurance and/or higher bond amounts, selling off farm assets to nearby farmers in exchange for site cleanup. Consider a bonding schedule or matrix utilizing criteria such as experience/training, proximity to other farms, ease of access, etc. to determine bond levels.

d) Commercial use requirement (CUR) not being met by many farms but these still require time and money to administer; enforce the CUR to encourage performance or revoke lease for non-performance.

B. ADFG

a) Requires irrelevant/unknowable information on application and reports; only request real information required by statute or regulation.

b) Amendments required for every minor change; only require amendments for substantive changes related to organisms.

c) “Overreach”; adhere to what is authorized/required by statute or regulation.

d) Restrictions on R&D; provide more flexibility in permit conditions.

e) State funding is being cut substantially; reduce footprint, only do what is required by law.

C. ADEC

a) Not following NSSP; Adhere to guidance in NSSP

b) Not consulting with industry when creating new regulations; improve communication and consult with effected industry during drafting process.

c) Erroneous interpretation/implementation of regulations by individuals;

d) Unequal application of regulations to aquatic farmers as compared to dive fishery;

e) Environmental data is collected but is unavailable and unused;

f) “Down South” regulations do not work in AK;

g) Growing area certification process is not efficient; proactive approach, utilize data from nearby areas where possible, etc.

h) Uncertainty around W.Q. criteria for new species;

i) Clusters of farms should ease permitting; see g above.

j) State funding is being cut substantially; seek other sources of funding, partnerships with other agencies/entities.

k) Actions often required by Federal government, State has no choice; push back on unworkable actions/requirements, offer workable alternatives.

6) Closing Comments

The simple act of having regulators meeting with the affected public to discuss regulatory issues will go a long way towards improving the regulatory climate for the mariculture industry.

Discussion with Aquatic Farmers as a group or industry is challenging for regulators because it is unorganized, made up of independent businesses.

Consider increasing input on AC to include geoduck and kelp farmers, and those interested in enhancement rather than farming.

Alaska Mariculture Task Force

Investment and Infrastructure Advisory Committee

Teleconference Meeting Notes

Date: 9.16.2016

Participants: Jeff Hetrick, Angel Drobnica, Julie Decker

The conversation was directed at looking at private and public investment opportunities and gaps. Jeff provided an outline which led the discussion:

Public Investment:

a) Regulatory support

- State needs to commit to providing secure and stable funding to agencies so they can continue to support a mariculture industry
- Already seeing effects of State budget cuts (e.g. pathology can't approve transport permits due to backlog)
- Identify existing challenges that industry is facing at agency level- i.e. extensive time it takes to get a land use permit from DNR (3 plus months). Are these issues due to capacity, funding, lack of formal directives, or something else?
- Need to understand what we can accomplish in current climate. State is receptive to supporting a growing industry but may not have tolerance for subsidizing it. Need to maintain and better define existing programs

b) Seed production:

- Are there opportunities for the state to support a mariculture industry other than through direct grants? Can the state become a customer/purchaser instead of just a funder/lender?

c) Workforce development: Briefly discussed that there is overlap between committees but that this should stay as a separate chapter and that primary flushing out of issues will be job of the WD advisory committee

d) Federal Agencies:

- Identify challenges that prevent access to federal funds. Examples discussed: inconsistent categorization of aquaculture as agriculture from federal agencies (well understood and accepted by some agencies and reluctance from others), reluctance of AK to categorize its fisheries/shellfish (hatcheries) with agriculture, well established directives that support mariculture from some agencies but not all

- Potential work focus:
 - USDA Farm Development-need to work with DNR to fully access this funding. Explore avenues to break down DNR resistance to acknowledging aquatic farming as farming. Consider avenues to develop a policy request from the agency.
 - USDA, EDA and NOAA all have programs or national directives that support mariculture to some degree. Leverage connections with these agencies to break down remaining barriers with other agencies. Look towards national directives to formulate a policy request to state agencies so that AK industry can access full federal support.
 - Strengthen mariculture presence at university level. Most USDA funding currently goes through land grant agencies and the university Ag system. Need to hone partnerships with these entities. Currently not a lot of focus on aquaculture. University system does not have aquaculture specialist.
 - Talk with intertribal organizations that assist tribes with accessing USDA funds for suggestions.
 - Need explicit policy statement from USDA that aquaculture is part of their funding program.
 - Potential resources: DNR state AG program, Chad Padgett (currently works for D. Young), Jim Nordland, Danny Constenstein, others?

Private Investment

a) Capital for farming-

- DCED (Revolving loan fund- intended for farmers up to 100K for each grant with max of 3 grants) terms are flexible, allow up to 6 years without payments, total amount of fund is 5 million dollars. Legislation moving forward for some portion to be accessed by shellfish hatcheries.
- Discussed need for consistent and stable source of funding. Having state on line for research and potential seed fails is not sustainable.
- Fisheries Enhancement Loan Fund: Healthy portfolio and fund. Established for salmon hatcheries. Need to continue exploring possibility of amending to include mariculture.
- Native Organizations and CDQ groups: Discussed potential partnerships and building upon previous business models.

b) Processing and Transportation: Investigation of regional strategic processing locations. What infrastructure currently exists? Does it overlap with resource? Is it near a

transportation hub that would be relevant for product type? Answers will influence scope and scale of operations.

- c) Partnerships with larger players in Pacific Northwest. Are there opportunities for synergies with existing smaller/mid-sized businesses in AK and entities like Taylor Shellfish/ Pacific Seafoods / Seattle Shellfish / Icicle Seafoods? Outreach needed to identify the level of desire for this potential, how to help attract new players and/or set a potential regulatory framework for protecting existing interests.
- d) ASMI -Marketing
- e) Regulatory Outreach: While perception of AK as unfriendly to mariculture development has slowly changed, we still need to continue working on sending the message to outside players in order to attract new development.
- f) Existing Processing companies in AK: Discussed how they could be one of the target groups for new entrants. Does the existing industry want this? Mom and pop scale operations can't support all of the necessary infrastructure. Need to find balance with small, medium and large players. Would there be a need to explore a tiered permitting process or something similar to protect small scale community based businesses?

Potential AC members: (small scale-start up) Erik Obrien (Mid-scale) Erik Wyatt, Trevor Sande, John Kiser. (large scale) Pacific Seafoods, Taylor, Icicle (additional members), Jim Gibbons (Seattle Shellfish), Tomi, Gunnar, Reps from: state department of commerce, ASMI, USDA, Rural Development and Farm Service

Other: Discussed how a pilot project could be useful in identifying gaps/challenges that early entrants face and helping to inform investment/infrastructure aspect of strategic plan.

Discussed the value of using APICDA, or similar entity interested in mariculture as a case study.

DRAFT

Mariculture Workforce Development Situation Analysis

(drafted by Paula Cullenberg, Alaska Sea Grant, September 2016)

Objectives for Workforce Development for shellfish farmers and hatchery workers

- Encourage new entry into industry
- Increase profits and business success for those already in it
- Ensure hatcheries have skilled workforce to draw from

Background

Shellfish farmed from Alaska are not market limited. The product has the reputation of coming from clean, cold, non-polluted coastal waters. Delicious product.

Shellfish farms are primarily found in Southeast and Southcentral. Young industry. There are open sites in Southeast, but sites for new farms in Southcentral are less available.

State added mariculture financing to state fisheries loan program last year and streamlined regulations. State is considering linking financing to training requirements to make investment more likely to succeed.

2015, according to ADF&G, there were 65 aquatic farms (SE, PWS and Kachemak Bay – either small businesses or part of a Native corporation enterprise), 7 nurseries and 2 hatcheries (Alutiiq Pride and OceansAlaska). The farms ranged in size from .6-23.6 acres, with average of 4.67 acres.

Value in 2015 was \$1.13M, In 2014, there were 1.2M oysters produced, 16,700 lbs mussels (a 400% increase) and 25 lbs of seaweed.

In 2015 – 21 farms reported oyster sales (15 in Southcentral and 11 in Southeast). The other farms are still developing (growing) product. 41 annual reports were submitted out of 46 farms producing oysters (5 farms were closed or transferred).

Shellfish hatcheries produce oysters, geoducks.

Shellfish farm operators must be multi-skilled or a large enough operation to employ people who specialize.

The Mariculture Workforce

Direct employment at aquatic farm operations includes owners, partners, employees, interns and family members. Positions include paid, part time, full-time, seasonal and year round. Most operations include volunteers, family members or interns to help keep labor costs down. Hatchery and nursery operations have more paid full-time and seasonal employees.

In 2015, 138 people were working at shellfish farms; 55 were paid employees. Paid positions, including laborers participated in 3,500 workdays (average 63 days or 12-13 weeks) and total workdays (including non-paid owners etc) were 9,600.

Hatchery and nursery operations had 36 workers; 3,420 days of paid workers (average 95 days employment or 23 weeks). 11 positions worked more than 150 days. 92% of the positions were reported as laborers. Overall seed supply employment opportunities grew with an increase in number of workers and number of days working.

Skills needed by mariculture operators include:

- Growing,
- harvesting,
- processing,
- marketing (selling bivalve seafood products, potentially macro algae)
- regulatory issues
- financial management

In 2014, the Alaska Maritime Workforce Development Plan was published. Shellfish farmers surveyed during the development of the plan identified the following occupation-specific action steps to expand the workforce:

- Increase awareness about small business loans to support entrepreneurs, by providing information about what loans are available and points of contacts and other references that can provide access to capital
- Provide access and support for financial management and business training.
- Explore the need for a program similar to the reduced loan fee incentive for an Alaska Housing Finance Corporation loan, linking financing to financial training.

Current training and education available:

Alaska Sea Grant offers workshops, technical assistance and training depending on demand. ASG's Aquaculture website is a good resource site for beginning and current farmers.

UAS has a Fisheries Technology program that targets hatchery technicians (primarily salmon enhancement).

Virginia Institute of Marine Sciences has an Oyster Aquaculture Training Program <http://www.vims.edu/research/units/centerspartners/abc/oat/index.php> Participants rotate through the stages of oyster aquaculture from the hatchery to field grow out operations. Brief classroom lectures on major topics will provide background information. This program will also include field trips to other research facilities and industry sites.

The Oyster Aquaculture Training (OAT) program is funded by non-State private funding. It offers prospective shellfish aquaculturists an opportunity to learn about all aspects of oyster culture, from hatchery to field operations—essentially, it is oyster culture “boot camp.” In the past, many of these trainees have ended up in local businesses, and some have gone far afield. Consideration is afforded all applicants who demonstrate a desire and aptitude for oyster aquaculture. The program draws from a national pool.

Maryland Extension has a broad suite of classes:
<http://extension.umd.edu/aquaculture/educational-programs>

Maine Sea Grant has extensive seaweed culture resources, other Sea Grant programs around the country have a range of aquaculture resource materials.

Potential Workforce Development partners: Haa Aani, Alaska Sea Grant, Alaska FFA

Alaska Mariculture Workforce Development Needs:

DRAFT-DRAFT-DRAFT

Governor Walker Announces Members of the Alaska Mariculture Task Force

DATE: ~~XXXXX~~September 21, 2016

PRESS RELEASE - Juneau – ~~T~~Governor Bill Walker announced the next meeting of ~~recently appointed members of the newly-formed~~ Alaska Mariculture Task Force. ~~The eleven member Task Force~~ held its first meeting ~~this summer focused on on June 1st, 2016, to begin its work to~~ developing a viable and sustainable Alaska mariculture industry ~~to contribute to the expansion of the State's economy.~~ ~~Mariculture in Alaska is the cultivation of -consisting of~~ shellfish and aquatic plants.

"Mariculture represents a tremendous opportunity to grow and diversify our state's economy, strengthen our coastal communities, and provide healthy food to the world ~~by~~ using sustainable ~~methods that are an extension of Alaska's successful practices that are a foundation of our current~~ fishery management practices," said Governor Walker.

Governor Walker signed ~~Administrative Order 280~~ ~~earlier this year on February 29, 2016~~, establishing the Alaska Mariculture Task Force, setting the guiding principles for the Task Force's work, and directing the Task Force to present recommendations for a comprehensive plan to him by March 1, 2018.

"Each of the Task Force members brings unique experiences and knowledge to the challenge of growing this new industry. The Task Force ~~will~~ represents interests of Alaskans from the Aleutian Islands to Southeast Alaska," said Governor Walker. "These Alaskans are committed to finding solutions to hurdles in the development of mariculture for the long-term benefit of Alaska's economy, environment and communities."

~~The Alaska Mariculture Task Force consists of the following eleven members: [] [] [] [] [] [] [] [] [] [] []~~

Paula Cullenberg

Paula Cullenberg is the director of Alaska Sea Grant, a partnership between NOAA and the University of Alaska Fairbanks. Alaska Sea Grant supports research, student fellowships, K-12 marine education and outreach to coastal communities by Marine Advisory agents across the state. Over the last 10 years, Alaska Sea Grant has invested over \$2.5M in mariculture development in Alaska including support for training and research in the shellfish farming industry, and research and technical support for the Alaska King Crab Research and Rehabilitation Program. Currently Alaska Sea Grant Marine Advisory is directing a demonstration project growing seaweed in Alaska's waters as well as new techniques for oyster farmers. Cullenberg has an MS in Fisheries, is a commercial salmon fisherman and has been involved in fisheries development and supporting fishing communities in Alaska for over 30 years.

Julie Decker, Vice Chair

Julie Decker is the Executive Director of the Alaska Fisheries Development Foundation (AFDF). Decker has been involved in seafood industry development projects in Alaska for over 20 years. Decker also completed her Master of Public Administration degree, including a concentration in Natural Resource Management, from the University of Alaska Southeast. Decker lives in Wrangell and also commercial fishes with her family on the F/V McCrea.

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Comment [HM1]: The list of members with or without bios could be offered as an appendix or at the end of the piece.

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▲ **Angel Drobnica**

Angel Drobnica works for the CDQ organization, the Aleutian Pribilof Island Community Development Association. Her experience includes working on state and federal fisheries regulatory issues, and energy and food security project development in remote Alaska communities.

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▲ **James Hetrick**

Jeff Hetrick has been the Director of the Alutiiq Pride Shellfish Hatchery since 2002. Previously he spent 20 years in the salmon enhancement business and has owned and operated an oyster farm in the Prince William Sound and has conducted numerous enhancement projects. The Alutiiq Pride Shellfish Hatchery raises blue and red king crab, sea cucumbers, abalone, cockles, butter clams and littleneck clams, razor clams oysters and geoducks. He has a B.S. and a M.B.A.

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▲ **Chris Hladick, Chair**

Mr. Chris Hladick is the Commissioner of the Department of Commerce, Community, and Economic Development. He has over 21 years of experience working with communities that have commercial fishing industries during his time as city manager for the cities of Dillingham and Unalaska.

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▲ **Heather McCarty**

Heather McCarty has been involved in the seafood industry in policy, research, development, marketing and harvesting for 40 years. On the Mariculture Task Force, McCarty is currently representing the Central Bering Sea Fishermen's Association (CBSFA) related to its interest in the Alaska King Crab Research Rehabilitation and Biology (AKCRRAB) project. McCarty is co-chair of the AKCRRAB Steering Committee and lives in Juneau.

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▲ **Samuel Rabung**

Delegated to fill the Alaska Department of Fish & Game Commissioner's seat on the MTF. He has over 35 years experience working in aquaculture programs in Alaska.

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▲ **Michael Stekoll**

Dr. Michael Stekoll is Professor of Chemistry and Biochemistry at the University of Alaska Southeast with a joint appointment in the School of Fisheries and Ocean Sciences at the University of Alaska Fairbanks. Dr. Stekoll has over 30 years of research experience on the biology, ecology and mariculture of Alaskan seaweeds. His recent focus is on the mariculture of kelps and sea lettuce.

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▲ **Kate Sullivan**

Kate Sullivan is the co-Executive Director of the Southeast Alaska Regional Dive Fisheries Association. Prior to this she was a faculty member in the UA system for ten years. During that time she worked extensively with the aquatic farm industry - providing educational workshops and classes and conducting applied research in collaboration with the farmers. She has and continues to conduct research on marine biotoxins and their impact on the shellfish industry in Alaska.

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▲ Christopher Whitehead

Chris Whitehead is the Environmental Program Manager for the Sitka Tribe of Alaska's Resource Protection Department. Chris manages all environmental projects including a harmful algal bloom monitoring program, designing and implementing a regulatory biotoxin lab, subsistence foods monitoring for heavy metals and mercury, and other climate change related work. He has worked as a researcher developing re-circulating aquaculture systems to rear shrimp and as a shellfish biologist managing commercial crab and geoduck fisheries as well as developing oyster, clam, and geoduck aquaculture farms for local Tribal governments.

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▲ Eric Wyatt

Eric R Wyatt is owner of the Blue Starr Oyster Co., which is located on the outer coast of Prince of Wales Island. Blue Starr grows market oysters and, also, oyster seed for farmers. Eric has worked with a wide variety of mariculture related groups and projects in Alaska, and currently is a board member of the Alaska Shellfish Growers Association and OceansAlaska, a shellfish hatchery.

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In order to incorporate additional knowledge and expertise, the Task Force created and is will also be filling positions on the following five Advisory Committees:

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- Investment and Infrastructure
- Regulatory Issues
- Research and Development ~~Needs~~ and Environmental Information
- Public Education and Marketing
- Workforce Development

If members of the public have knowledge and expertise in one of these topic areas related to the mariculture industry and are interested in serving on an Advisory Committee to the Task Force, please contact Linda Mattson at the Alaska Department of Commerce, Community and Economic Development at 907-465-2500 or linda.mattson@alaska.gov. For those who are interested in receiving future public meeting notices and other information related to the Alaska Mariculture Task Force via email, please sign up for the ListServ at the following link:

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<http://list.state.ak.us/mailman/listinfo>.

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Description

The listserv for the Alaska Postsecondary Access and Completion Network planning team, for use in attaining their goal of 65% of Alaskans who will have a postsecondary credential by the year 2025.

Department of Fish and Games South-Central Aquatic Education (Salmon in the classroom).

Department of Fish and Games workshops, classes, courses and meetings.

Email distribution list for AEA Media Notices

The AEA Affordable Energy Strategy listserve is to provide updates and information.

For applicants to the Renewable Energy Fund grant program.

This listserve is used to notify interested stakeholders of REFAC meetings.

Training date Announcements funded by Denali commission

Dissemination of information related to fire service standards and certification programs.

Email distribution list for public news and notices from the Alaska Gasline Development Corporation.

A monthly update of the activities of the Alaska Division of Agriculture.

Email distribution list for AIDEA Media Notices

Email distribution list for AIDEA Regulations Notices

AIDEA Weekly Interest Rates