

AQUATIC FARMING INDUSTRY STATUS



CYNTHIA PRING-HAM

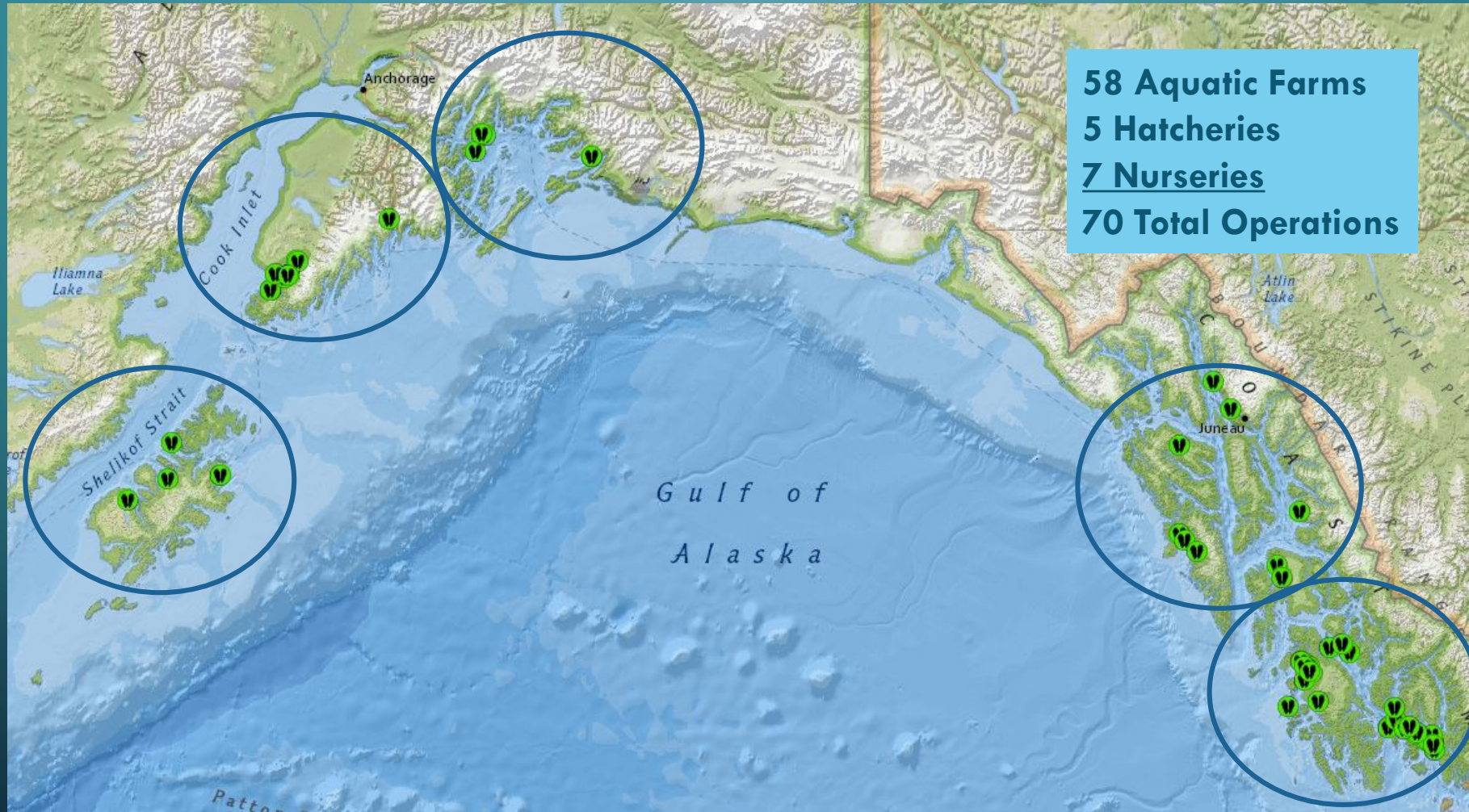
ADF&G AQUATIC FARMING COORDINATOR

ALASKA SHELLFISH GROWERS ASSOCIATION
CONFERENCE

DECEMBER 7, 2018

CORDOVA, AK

WHERE ARE PERMITTED AQUATIC FARMS IN ALASKA? OPERATION LOCATIONS



AQUATIC FARM SHELLFISH PRODUCTS CULTURED AND SOLD



PACIFIC OYSTER

(*Magallana gigas*)

~1.8 million produced

29 operations

36% INC



1^o species sold (95.2%)



BLUE MUSSEL

(*Mytilus trossulus*)

1,790 lbs. produced

7 operations

64% DEC



PACIFIC GEODUCK

(*Panopea generosa*)

11,181 lbs. produced

4 operations

74% DEC



Data based on 2017 annual reports provided by operators

AQUATIC FARM AQUATIC PLANT PRODUCTS CULTURED AND SOLD



In 2016, the 1st kelp farm operations were permitted in Alaska.



SUGAR KELP (*Saccharina latissima*)

RIBBON KELP (*Alaria marginata*)

By 2017, 4 farms produced 16,570 lbs. of these 2 kelp species combined.

Data based on 2017 annual reports provided by operators

OYSTER PRODUCTION ONLY*

COMPARISON BY GROUP

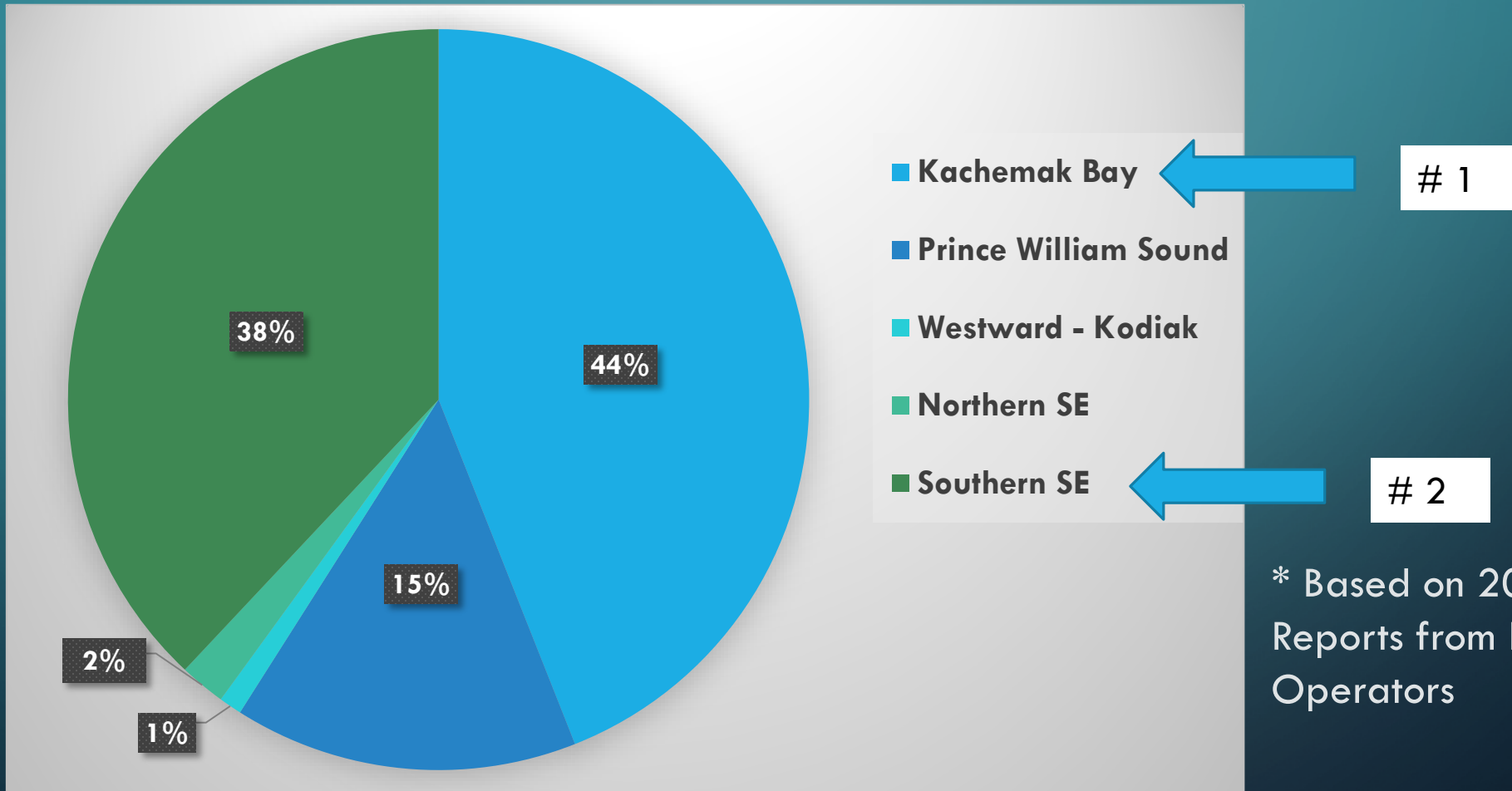
Production	Number of Permits in this Range	% of Total Permits	Avg Farm Acreage	Total Production (no. of oysters)	Total Production (no. of oyster dozen)	% of Total Production
1. Small (0 - <100,000 oysters)	23	79.3%	3.22	497,089	41,424	27.6%
2. Medium (100,000 - <332,000 oysters) & Large (332,000-631,000 oysters)	6	20.7%	13.78	1,305,348	108,779	72.4%
Grand Total	29	100.0%	5.41	1,802,437	150,203	100.0%



Comparison to 2016: 45% Small Production
55% Medium Production

* Based on 2017 Annual Reports from Permitted Operators

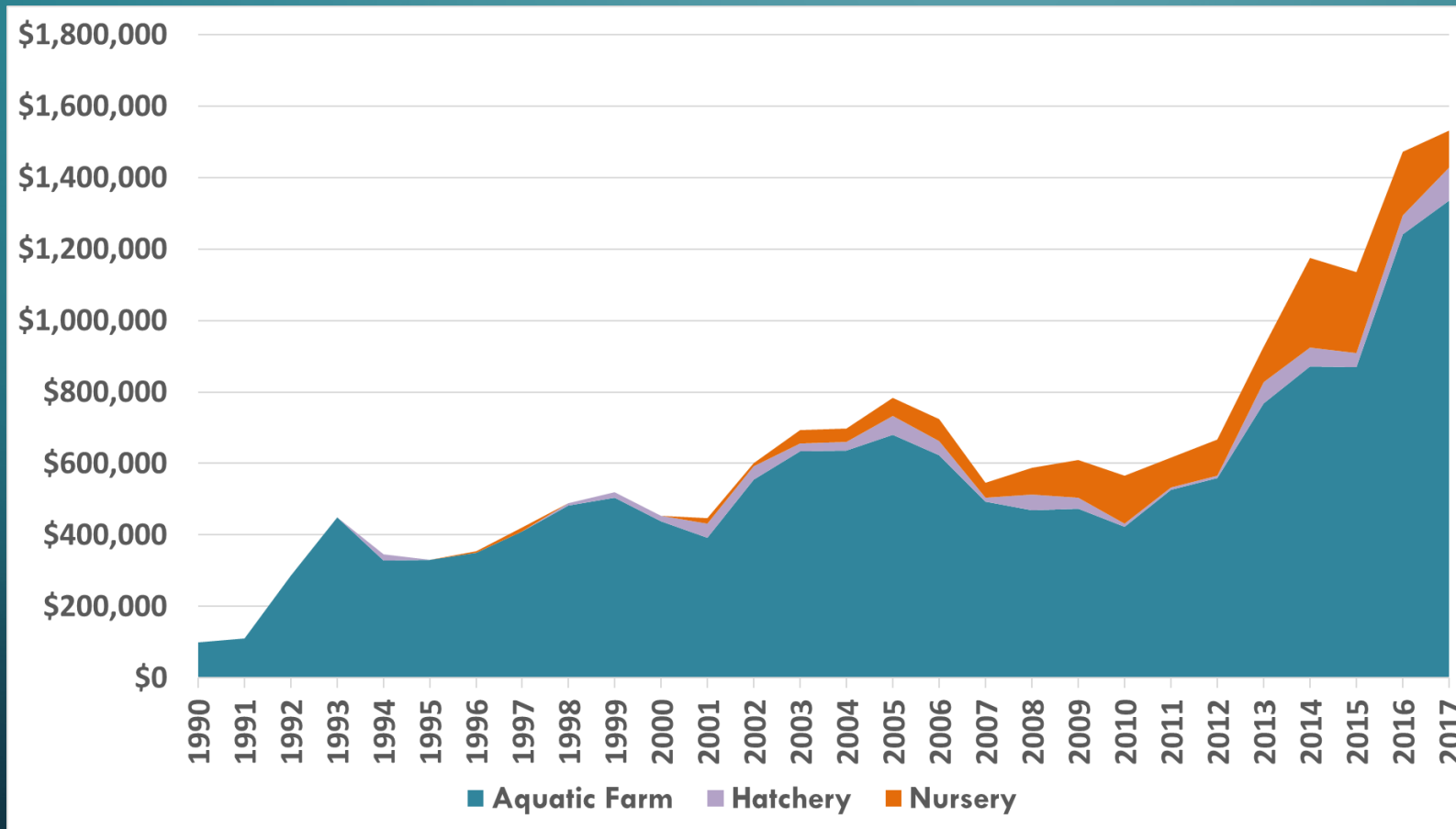
AQUATIC FARM PRODUCTION REGIONAL DISTRIBUTION



* Based on 2017 Annual Reports from Permitted Operators

AQUATIC FARMING INDUSTRY SALES PRODUCTION (1990 TO 2017)

S
A
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E
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In 2017:

41 operations with production*

Aquatic Farms = \$1.34 Million

Hatcheries = \$91,519

Nurseries = \$104,448

Total Sales = \$1.53 Million

4% increase from 2016

* Farm gate value

ALASKA DEPARTMENT OF FISH AND GAME AQUATIC FARMING ROLE*



Permit and regulate aquatic farming in the state in a manner that ensures:

- a. the protection of the state's fish and game resources (and uses of those resources) and
- b. improves the economy, and well being of the citizens of the state.

* AK Statutes 16.40.100-199; 1988, Aquatic Farm Act Implementation

ADF&G AQUATIC FARMING STOCK TRANSPORT PERMIT - 1 YR.

Purpose: Required to transfer stock to, from, or between an aquatic farm, hatchery, or stock acquisition site (waters of the state)

Why Needed: 1. To minimize risk of disease transmission that may impact aquatic farm stock and wild stock. 2. To monitor and track movement and nos. of stock. 3. Determine consistency with permit and operation plans.



ADF&G AQUATIC FARMING STOCK TRANSPORT PERMIT - 1 YR.

Shellfish Seed Supplier Verification:

- ✓ Acceptable disease history report
 - No pathogens of transport concern
- ✓ Low risk of transmitting diseases site to site.

Note: This is not a disease-free verification.

Alaska does not have Denman Island Disease, *Haplosporidium* sp., or Herpes virus (OsHV-1).



ADF&G AQUATIC FARMING STOCK TRANSPORT PERMIT - 1 YR.

Aquatic Plant Verification:

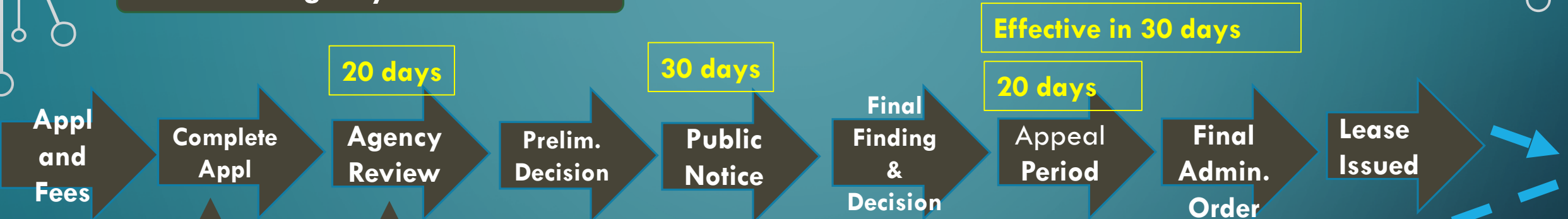
- ✓ *No pathology experience for species
and also genetic data gaps for seaweed*

Implementation of Precautionary measures:

1. 50 km by water transport zone (broodstock and outplanting location) and
2. ≥ 50 broodstock used to produce progeny met.



DNR Lead Agency - Lease Process






ADF&G - Operation Permit Process



OPERATION PERMIT REVIEW CRITERIA

OPERATION, DEVELOPMENT, AND STAFFING PLANS MUST DEMONSTRATE TECHNICAL AND OPERATIONAL FEASIBILITY

1. One operation and development plan for each species intended to be cultured
2. Demonstrates technical and operational feasibility – plans show improvement of productivity of the culture organism over time by increase harvestable biomass.
3. Summarizes installation and maintenance of support facilities / culture gear/ anchoring systems
4. Schedule is consistent with life history of species intended to be cultured

***Complete one operation and development plan for each species**

AQUATIC FARM OPERATION AND DEVELOPMENT PLAN – PART A

Part A includes questions regarding your proposed operation. Your proposed aquatic farm or hatchery plans must demonstrate technical and operational feasibility (AS 16.40.105(4)). Please provide any additional information that you consider pertinent to your operating plan on additional sheets of paper as necessary.

Name _____ Species _____
 ADNR Lease ADL No.: _____ ADF&G Permit No. _____ -AF- _____

1. Provide an estimate of the total days and number of people (including yourself) that will be needed to operate your farm site for each year:

Year 1:	Number of Days _____	Number of People _____
Year 2:	Number of Days _____	Number of People _____
Year 3:	Number of Days _____	Number of People _____
Year 4:	Number of Days _____	Number of People _____
Year 5:	Number of Days _____	Number of People _____

Name _____ ADL Number _____ ADF&G Permit No. _____ -AF- _____ Species _____								
Calendar Year	Installation Schedule			# of Hatchery-Produced Seed	# of Seed Collected Onsite <small>(Only applies to indigenous sp.)</small>	Aquatic Farm Production Projected Harvest and Sales		
	Support Facilities ¹	Equipment/ Gear Types And Numbers ²	Anchoring Systems			Projected Sales ³ (\$)	# of Animals	# of Pounds
(Year 1) 20__						\$		
(Year 2) 20__						\$		
(Year 3) 20__						\$		
(Year 4) 20__						\$		
(Year 5) 20__						⁴ \$		

PUBLIC ACCESS TO ESTABLISHED USES FISHERY AND WILDLIFE



- Known Conflicts: Dive Fishery, Crab Fishery, Duck Hunting



OPERATION PERMIT CONDITION

- *The permit holder must prevent aquatic farm operations from significantly altering an established use of fish and wildlife resources.
(5 AAC 41.250(a)(5))*
- *The project may not impede access to plants, fish, and wildlife resources, and shellfish, other than the species being cultured at the site, to the extent that such access does not disrupt the operation of the aquatic farm, disturb the species being cultured, or damage any of the shellfish aquatic farm culture equipment, facilities, or gear.*

QUESTIONS

For additional assistance, please contact:
Aquaculture Section/Commercial Fisheries Division
Alaska Department of Fish and Game
P.O. Box 115526, Juneau, AK 99811-5526



(907) 465-6150 - cynthia.pring-ham@alaska.gov (Permit Coordinator)
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General Aquatic Farming email: dfg.dcf.aquaticfarming@alaska.gov

WEB: <http://www.adfg.alaska.gov/index.cfm?adfg=fishingaquaticfarming.main>