



Bivalve Shellfish Aquatic Farming in Alaska



Cynthia Pring-Ham
Mariculture Program Coordinator
Alaska Department of Fish and Game
AFS Conference, Juneau
October 23, 2014

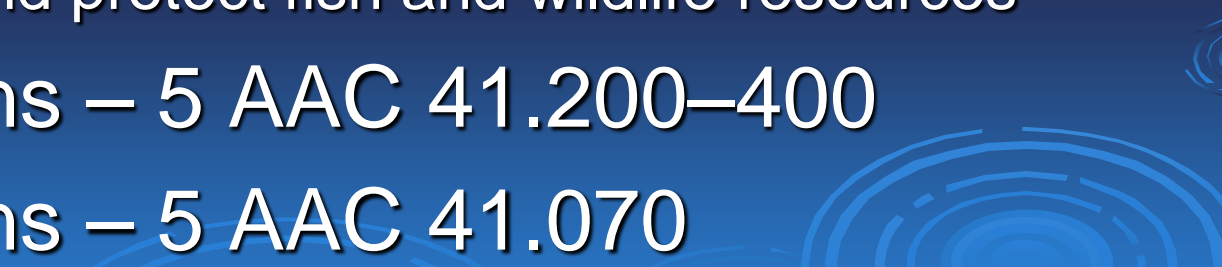
Overview

- Authorizations
- Permits/Approvals
- Industry at a Glance
- Benefits
- New Developments





Dept. of Fish and Game Authorizations

- Aquatic Farm Act, 1988
 - Allowed aquatic farming of shellfish and aquatic plant for commercial use
 - Moratorium and later prohibition on finfish farming
 - Statutes – AS 16.40.100–199
 - Promote efficient development AND
 - Manage and protect fish and wildlife resources
 - Regulations – 5 AAC 41.200–400
 - Regulations – 5 AAC 41.070
- 

Operation Permit



➤ Review Criteria Determination

- Site suitability for proposed species and gear
- Established fishery resources uses not altered
- Compatibility with fish and wildlife resources
 - Eel grass or kelp beds maintained
 - Anadromous fish streams > 300 ft away
 - Herring spawning areas
 - Sea bird colonies, eagle nests, sea mammal haulouts
- Feasible operation and development plan
- On-bottom sites - insignificant populations of existing wild stock shellfish of species to be cultured

Managed Cultivation

Good Husbandry Practices

Acquire Seed



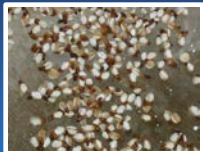
Cleaning/Sorting
Defouling



Density Manipulation



Predator Removal



Approved Culture Gear

Raft & Trays



Longlines & Lantern Nets



Longlines & Trays



Flip-flop Bags



PVC Tubes



Predator Netting



Stock Transport and Acquisition Permits

➤ Overarching Principles

- Protect health of Alaskan shellfish
- Protect genetic integrity of stocks
- Prevent the introduction of invasive species



➤ By applicant, location, species, life stage

➤ Acceptable disease history

➤ Issued by calendar year

Seed Source Approvals

➤ Out-of-state Seed Import Certifications

- Pacific oysters only ($<$ or $=$ 20 mm)
- Acceptable disease history
- Pathology examinations of all stocks
- Prevents import of exotic diseases
- Issued by calendar year



➤ Instate Seed Distributor Approvals

- Acceptable disease history
- Pathology examination of stock
- Issued yearly to every 3 years



Industry at a Glance

No. and Size

- 68 aquatic farms, 2 hatcheries and 8 nurseries
- Small-scale Aquatic Farm Operations
 - 5 acre average, range: 1 – 24 acres, 346 total
 - 83% seasonal or part-time operations
- Work Force
 - 161 workers at aquatic farms (22% ↑)
 - 37 workers at hatcheries/nurseries (124% ↑)

Industry at a Glance

Aquatic Farm Production and Sales

➤ Production

- 1.2 million Pacific oysters (49%↑↑)
- 9,722 lbs of blue mussel, Pacific littleneck clam, and Pacific geoduck combined (65%↑↑)

➤ Sales* = \$769,146 (37%↑↑)

- Average \$6,309/acre
- Average Price Per Unit

Oysters – \$9.35/dz, Clams – \$5.96/lb, Mussels – \$5.55/lb

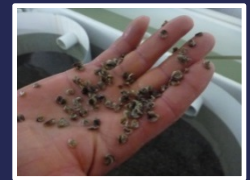
*Farm gate value

Industry at A Glance

Seed Source Contribution

➤ Production by Hatcheries and Nurseries

- 5.9 million Pacific oysters
- 164 thousand Pacific geoduck



➤ HA and NU Seed Sales = \$157,283 (46% )

Overall Sales for

Permitted Operations = \$926,429





Shellfish Aquatic Farming Benefits

- Sustainable
 - Economic opportunity
 - Habitat for other species
 - Opportunity to innovate
 - Opportunity to transfer technology
 - Opportunity to educate
 - Quality of life
 - Heritage
- 



New Developments

- Littleneck Clam Managed Cultivation Study
 - Alaska Mariculture Initiative
 - NOAA Grant to AK Fisheries Development Foundation
 - Economic analysis and strategic planning
 - Adds enhancement and restoration components
 - Mussel Demonstration Farm and Workshop 
 - Alaska Shellfish Growers Association Annual Conference – Anchorage, Nov 5–7 
- 

Questions?

