

ALASKA STATE LEGISLATURE
SENATE RESOURCES STANDING COMMITTEE

January 30, 2019

3:30 p.m.

MEMBERS PRESENT

Senator Chris Birch, Chair
Senator John Coghill, Vice Chair
Senator Cathy Giessel
Senator Lora Reinbold
Senator Click Bishop
Senator Scott Kawasaki
Senator Jesse Kiehl

MEMBERS ABSENT

All members present

OTHER LEGISLATORS PRESENT

Representative Daniel Ortiz

COMMITTEE CALENDAR

OVERVIEW: Alaska Mariculture Development Plan/Task Force

- HEARD

SENATE BILL NO. 22

"An Act relating to management of enhanced stocks of shellfish; authorizing certain nonprofit organizations to engage in shellfish enhancement projects; relating to application fees for salmon hatchery permits; and providing for an effective date."

- HEARD & HELD

PREVIOUS COMMITTEE ACTION

BILL: SB 22

SHORT TITLE: SHELLFISH ENHANCE. PROJECTS; HATCHERIES

SPONSOR(s): SENATOR(s) STEVENS

01/16/19	(S)	READ THE FIRST TIME - REFERRALS
01/16/19	(S)	RES, FIN
01/30/19	(S)	RES AT 3:30 PM BUTROVICH 205

WITNESS REGISTER

JULIE DECKER, Chair
Alaska Mariculture Task Force
Wasilla, Alaska

POSITION STATEMENT: Provided an overview of the task force's Alaska Mariculture Development Plan.

SAM RABUNG, Section Chief-Aquaculture Section
Division of Commercial Fisheries
Alaska Department of Fish and Game
Juneau, Alaska

POSITION STATEMENT: Answered questions regarding the Alaska Mariculture Development Plan.

SENATOR GARY STEVENS
Alaska State Legislature
Juneau, Alaska

POSITION STATEMENT: Sponsor of SB 22, provided an overview.

TIM LAMKIN, Staff
Senator Stevens
Alaska State Legislature
Juneau, Alaska

POSITION STATEMENT: Provided an overview of SB 22 and answered questions.

TOMI MARSH, President
Oceans Alaska
Ketchikan, Alaska

POSITION STATEMENT: Testified in support of SB 22.

JEFF HETRICK, Director
Alutiiq Pride Shellfish Hatchery
Seward, Alaska

POSITION STATEMENT: Testified in support of SB 22.

TREVOR SANDE, Member
Alaska Fisheries Development Foundation
Ketchikan, Alaska

POSITION STATEMENT: Testified in support of SB 22.

STEVE RICCI, Staff
Aleutian Pribilof Island Community Development Association
Juneau, Alaska

POSITION STATEMENT: Testified in support of SB 22.

TOMMY SHERIDAN, Director of Government Affairs
Silver Bay Seafoods, LLC
Cordova, Alaska

POSITION STATEMENT: Testified in support of SB 22.

NANCY HILLSTRAND, Shareholder
Pioneer Alaskan Fisheries, Inc.
Homer, Alaska

POSITION STATEMENT: Testified in opposition of SB 22.

MARCOS SCHEER, Second Vice President
Southeast Conference
Juneau, Alaska

POSITION STATEMENT: Testified in support of SB 22.

JULIE DECKER, Executive Director
Alaska Fisheries Development Foundation, Inc.
Wrangell, Alaska

POSITION STATEMENT: Testified in support of SB 22.

JERRY MACCUNE, President
Cordova District
Fishermen United
Cordova, Alaska

POSITION STATEMENT: Testified in support of SB 22.

ACTION NARRATIVE

[3:30:04 PM](#)

CHAIR CHRIS BIRCH called the Senate Resources Standing Committee meeting to order at 3:30 p.m. Present at the call to order were Senators Giessel, Kawasaki, Bishop, Kiel, Reinbold, and Chair Birch.

OVERVIEW: Alaska Mariculture Development Plan/Task Force

[3:31:24 PM](#)

CHAIR BIRCH read a statement on the committee's intention for the session as it pertains to the meeting's presentation on the Alaska Mariculture Development Plan as follows:

With the primary focus of this legislative session being where it should be, on the budget, it's our intent over the coming months to have the Senate

Resources Committee explore topics that might be able to help the state diversify and improve our economy. We will be exploring ways to encourage new industries, to resolve resource access issues, and to make practical improvements to state permitting processes, in other words, we will be looking for ways to show that Alaska is indeed, "open for business;" in that spirit, we've invited folks from the Alaska Mariculture Task Force to give us a brief presentation and an update on this promising industry.

[3:32:19 PM](#)

SENATOR COGHILL joined the committee meeting.

[3:32:30 PM](#)

JULIE DECKER, Chair, Alaska Mariculture Task Force, Wasilla, Alaska, said the committee will be provided with an update on what the task force has done over the last two years as well as a presentation on the task force's comprehensive plan.

She addressed "What is Mariculture?" and specified that Alaska mariculture does not mean "finfish" farming. She specified that "finfish" farming is prohibited and is not what the task force is talking about.

She said mariculture is enhancement, restoration and farming of shellfish and seaweeds; for example, Pacific oysters, king crabs, seaweed, blue mussels, sea cucumbers, and geoducks. She noted that the previously mentioned sea creatures are some of the species which have had the most activity so far in mariculture.

She detailed that mariculture entails the following three activities:

1. Fishery Enhancement (public/private).
2. Restoration (public/private).
3. Aquatic Farming (private).

She explained that "aquatic farming" is currently what is legally allowed, "fishery enhancement" and "restoration" are not allowed by statute and that is what Senate Bill 22 (SB 22) would allow for. She said SB 22 is needed to do "fishery enhancement" and "restoration." She explained that the "overlap" for all three activities is at the hatchery site; in other words, where the seed is produced or the juveniles to put into the water to

grow and that is the purpose of either the shellfish or seaweed hatcheries.

[3:34:45 PM](#)

MS. DECKER addressed "Why Mariculture" and explained that mariculture is an area of potential economic development and diversification. She noted "Hump Island Oyster Company" as a mariculture company in Ketchikan that won "Entrepreneur of the Year" award from the Ketchikan Chamber of Commerce. She detailed that Hump Island Oyster Company continues to expand and noted their involvement in aquatic-farm tourism as well.

She addressed mariculture's "Opportunities and Benefits: Cultural," connects Alaskans with traditional food sources, harvesting activities and skills; and "Opportunities and Benefits: Food Security" for increasing access to local foods.

She referenced mariculture's "Opportunities & Benefits: Industrial:"

- Compliments and expands existing \$6 billion seafood industry.
- Builds on assets:
 - Vessels,
 - Plants,
 - Sustainable fisheries,
 - Salmon hatcheries,
 - Alaska seafood brand and Alaska Seafood Marketing Institute (ASMI).

She summarized that mariculture is complementary to Alaska's existing seafood industry. She noted that if Alaska were its own country, the state would be the ninth largest seafood producer in the world. She emphasized that mariculture is a natural component and would build on the state's existing assets. She added that ASMI created a "name brand" for the state's seafood.

She referenced "Opportunities & Benefits: Environmental" as follows:

- Potential climate change mitigation and habitat improvements through ecosystem services:
 - Water filtration,
 - Carbon,
 - Nitrogen,
 - Phosphorus removal.

[3:36:28 PM](#)

SAM RABUNG, Section Chief-Aquaculture Section, Division of Commercial Fisheries, Alaska Department of Fish and Game, Juneau, Alaska, [Note: Chair Birch previously mentioned that Mr. Rabung is vice-chair of the Alaska Mariculture Task Force], said mariculture's ecosystem services is a positive. He noted that recent studies have shown that kelp and seaweed cultures can help to mitigate ocean acidification, and oyster farms are starting to integrate kelp or seaweed cultures. He added that oysters have been touted for their use in cleaning polluted waterways by removing nitrogen and phosphorus.

MS. DECKER referenced news stories from "Mariculture in the World" as follows:

- Aqua-Spark seafood investment fund plans up to 10 new deals by the end of 2018.
- Chinese companies to invest \$200 million for scallop growing in Russia.
- Taylor Shellfish eyes \$100 million in sales by 2019, up from \$70 million in 2016.

She detailed that the \$200 million Chinese development in eastern Russia is just for three species: scallops, sea cucumbers, and mussels. The three noted species are also in Alaska.

She said Taylor Shellfish is the largest shellfish farming company in the United States, based in Washington state. Taylor Farms' projected growth from \$70 million in sales to \$100 million in sales is nearly a 50-percent growth over a 3-year period. She opined that Taylor Shellfish shows that mariculture in Alaska is something that the state can do, but a lot of steps need to be put into place to make mariculture a reality.

[3:38:24 PM](#)

She referenced "Alaska Mariculture Task Force" as follows:

- Administrative Orders (AO):
 - By request of industry leaders, Governor Walker established the Alaska Mariculture Task Force (MTF) by AO 280 in 2016 and extended it by AO 297 in 2018.
 - AO 280 Directive:
 - TO develop a comprehensive plan for a viable and sustainable mariculture industry producing shellfish and aquatic plants for the long-term

benefit of Alaska's economy, environment and communities.

o AO 297 Directive:

- The Task Force shall serve as an advisory panel to the governor and will work with the appropriate state, federal, and tribal entities, industry and other stakeholders to encourage and support implementation of the plan. The Task Force shall make recommendations to present to the governor by May 1, 2021, along with a report regarding progress toward the plan's goal to grow a \$100 million mariculture industry in 20 years.

MS. DECKER emphasized that involving the state through the task force's effort is important.

She detailed the Mariculture Task Force's membership and research practices as follows:

- 11 members:
 - o 2 members from state departments including Sam Rabung from ADF&G and a representative from the Department of Commerce, Community, and Economic Development.
 - o 5 advisory committees to provide additional input.
- Utilization of existing research that the state had done including the Alaska Shellfish Farm Size Feasibility Study.
 - o Key finding was that new farms should really be medium to large scale because small scale operations struggle to be profitable.

[3:40:51 PM](#)

She explained that the task force commissioned two additional economic analysis. She said the "phase one" study was a set of case studies from other regions around world who were somewhat like Alaska where six-key elements were found for successful mariculture development as follows:

1. Pre-existing seafood industry.
2. Public acceptance and support.
3. Favorable growing areas.
4. Existing development plan with coordinated research and development strategy.
5. Successful business plans and growing technology.
6. Workforce development.

She pointed out that Alaska has many of the noted key elements and the task force felt it was on the right track. She admitted

that the state needs to work on "successful business plans and growing technology" and "workforce development."

MS. DECKER said the McDowell Group was commissioned to do the phase-2 economic analysis to provide a reasonable idea of expectations over time of how the industry could develop given market demand, existing industry, and prioritizing the six species that were previously noted. She referenced the McDowell Group's economic framework expectations as follows:

- Total economic output:
 - \$100 million in 20 years.
 - \$275 million in 30 years.
 - \$445 million in 40 years.
 - \$570 million in 50 years.

She said the McDowell Group focused the task force on the first 20 years because the time period was believed to be the most predictable. She disclosed that the McDowell Group noted in their plan that the first five years is going to be the most important to getting on the trajectory of growth to hit the 20-year target. She said the task force adopted the 20-year target as its overall goal in the plan. She referenced the printed version of the Alaska Mariculture's Development Plan to committee members that breaks down projections by species as well as the plan's important parts.

[3:43:40 PM](#)

She addressed the "Alaska Mariculture Development Plan: Vision and Goal" as follows:

- Vision:
 - Develop a viable and sustainable mariculture industry producing shellfish and aquatic plants for the long-term benefit of Alaska's economy, environment, and communities.
- Goal:
 - Grow a \$100 million mariculture industry in 20 years.

She referenced the "guiding principles" in attaining the \$100 million goal as follows:

- Scope:
 - For the purpose of this plan, mariculture is defined as enhancement, restoration, and farming of shellfish (marine invertebrates) and seaweeds (macroalgae). Finfish farming is not legal in Alaska waters.

- Coordination and Leadership:
 - Effective implementation of this comprehensive plan requires coordination and commitment of time and resources from local, state, federal and tribal governments, industry, communities, the University, and other interested stakeholders.
- Sustainability:
 - Development of mariculture will be compatible with sustainability principles to maintain and improve environmental integrity, as required by the Alaska Constitution and ADF&G management practices.
- Alaska Native Participation:
 - Mariculture development will benefit from the involvement of Alaska Natives in every element of the process.
- Innovation:
 - Alaska presents many unique challenges, and developers will look globally to applicable research and solutions to apply to Alaska's circumstances and geography.
- Compatibility:
 - Implementation of this plan must protect existing marine uses such as subsistence, commercial fishing, and recreation; it will also utilize Alaska assets and infrastructure.

[3:44:50 PM](#)

MS. DECKER addressed priority recommendations for the Alaska Mariculture Development Plan as follows:

- Secure seed supply through hatcheries.
- Pass state legislation to:
 - Help fund hatcheries through the Mariculture Revolving Loan Fund:
 - Note: passed the Legislature in 2018.
 - Allow shellfish enhancement:
 - Note: SB 22.
- Establish the Alaska Mariculture Development Council:
 - Note: The current "task force" is an intermediary step until the industry can establish its own council.
- Establish a Mariculture Research Center at the University of Alaska:
 - Note: important to coordinate research so that it fits within the industry priorities and needs and is not duplicative.
- Fill key position to enable the growth of the industry:

- o NOAA Aquaculture Coordinator in Alaska:
 - Note: NOAA has created the position and is currently in the process of filling the position.
- o Alaska Sea Grant Mariculture Specialist:
 - Note: position connects workforce development efforts.

[3:47:36 PM](#)

MS. DECKER addressed "Mariculture: Latest Developments," two new NOAA mariculture positions for policy and research will be added in Alaska.

She said Congress introduced the "Marine Aquaculture Act" in 2018 and the act will be reintroduced in 2019. She noted that the U.S. Secretary of Commerce was interested in aquaculture to reduce the country's trade deficit. She said the act includes a state opt-out provision for any type of aquaculture a state does not want from its shores, a key provision that the Alaska congressional delegation asked to be inserted.

She explained that the University of Alaska is adding a mariculture research lead position in Kodiak that dovetails with seaweed activity that is occurring in Kodiak.

She referenced "Mariculture: Latest Developments, Industry Activity as follows:

- 400 percent increase in new farm lease applications to DNR:
 - o 2016: 4;
 - o 2017: 16;
 - o 2018: 18;
 - o 2019: Application period is open until April 30.
- 1,500 acres of new farms would provide approximately \$150,000 of new revenue to state in annual lease fees.
- Largest farm to date has been approved:
 - o Premium Aquatics received approval for 127-acre farm site near Craig/Klawock.
- Medium-scale operations (\$5 million to \$10 million initial investments) are forming.
- Alaska seafood processors are taking interest in process and farming.
- Clusters of development emerging in multiple regions of the state:
 - o Ketchikan;
 - o Prince William Sound (PWS);
 - o Homer;

- o Kodiak;
- o Aleutians under investigation.
- New interest by Community Development Quota (CDQ) Groups and Alaska Native Corporations.
- Fishermen are interested in diversifying into seaweed farming. She explained that seaweed farming fits nicely with the seasonality of many fisheries because seaweed is planted in the fall and harvested in the spring.

[3:51:45 PM](#)

MS. DECKER referenced "Mariculture: Latest Developments: Demonstration Farm" as follows:

- OceansAlaska in Ketchikan permitted seaweed demonstration farm to show the local community farming techniques for growing, harvesting, and seeding seaweed.
- Collaboration with ASG, Metlakatla, POW and local schools.

She referenced "Mariculture: Latest Developments: Tourism" as follows:

- Tourism partnership between Hump Island Oyster Company (Ketchikan) and Princess Cruises.

She referenced "Mariculture: Latest Developments: Kodiak Seaweed Cluster" as follows:

- Companies are getting involved in the processing of seaweed:
 - o Blue Evolution;
 - o Ocean Beauty;
 - o Trident committed to processing.
- Six or seven seaweed farms are permitted.
- Some seaweed farmers are working cooperatively on a project with the U.S. Department of Energy to look at how to grow and harvest seaweed more efficiently to potential be used as a biofuel.

She addressed "Mariculture: Latest Developments: New Food Products" in the State of Alaska that includes kelp beer, kelp salsa, kelp pickles, and kelp pasta. She said the recent mariculture food products is, "Just the tip of the iceberg."

[3:53:36 PM](#)

MS. DECKER referenced "Mariculture: Latest Developments: Seaweed Farming 101" for seaweed farming as follows:

- Learn to identify seaweed species (get a book).
- Find a site and determine which species are available within 50 kilometers of the site (walk the beaches, take a boat ride).
- Learn about Alaska Department of Natural Resources (DNR) Aquatic Farm Program and Lease Application Process.
- Find a market, product form.
- Develop a business plan.
- Find seed supply (Blue Evolution, OceansAlaska).
- Consider layout/design of farm.

She addressed "Alaska King Crab Research Rehabilitation and Biology (AKCRRAB): Rehabilitation of depressed king crab stocks in Alaska" as follows:

- Focus:
 - Red king crab in Kodiak,
 - Blue king crab near Pribilof Islands.
- Activities since 2006:
 - Hatching and rearing at Alutiiq Pride hatchery,
 - Experimental releases near Kodiak (2 years),
 - Planning releases near Pribilof Islands.

She noted that activity is halted until SB 22 is passed.

She referenced "Mariculture Development: Immediate Needs" as follows:

- Secure source of seed.
- Reduce statutory, regulatory and policy hurdles.
- Reduce backlog of permit applications at DNR.
- SB 22 passage to allow for shellfish enhancement and provide regulatory framework.
- Coordination across stakeholders through Mariculture Task Force.

[3:55:18 PM](#)

SENATOR BISHOP asked if the task force has interfaced with other countries or provinces that are already involved in mariculture.

MS. DECKER replied that during the planning process the task force had looked at documents from New Zealand, Scotland, British Columbia as well as U.S. states.

MR. RABUNG answered that ADF&G focused mainly in Alaska but noted that the task force did utilize comprehensive plans and interfaced with individuals from other countries and states.

SENATOR BISHOP commented that the state was going in the right direction with mariculture, especially from a food security standpoint for Alaska.

SENATOR KIEHL asked Ms. Decker to address the mariculture's growth from \$1 million to \$100 million in 20 years. He asked if the growth would be steady or would keystone moments occur with leaps-and-bounds.

MS. DECKER replied that growth would not be constant. She opined that growth would be slow in the beginning and then taking-off. She surmised that one keystone moment would occur when there is an example of the successful business in the medium-sized scale.

[3:57:49 PM](#)

MR. RABUNG remarked that achieving the goal will occur if the current permits in the pipeline come to fruition.

SENATOR KAWASAKI called attention to the pink salmon fishery in Valdez and noted recent studies that pink salmon might be competing red and king salmon. He asked if there are rules that would make it so that science and research is done for non-natural competing with natural stock.

MR. RABUNG replied that there is no evidence of "outcompeting." He remarked that "outcompeting" is speculative. He emphasized that ADF&G is always cognizant of "outcompeting." He explained that ADF&G's guiding statutes, regulations and policies, including SB 22 should it pass, requires a priority of sustainability of wild production. ADF&G applies genetics and fish pathology policies. ADF&G has the sustainable fisheries policy where its principle can be applied to any species. He pointed out that shellfish fishery enhancement means local stocks will be used where breeding is not allowed, and large enough effective populations are used so there is no genetic bottlenecking, something that ADF&G has done with salmon from the beginning. He detailed that ADF&G starts at a very small level as a precautionary approach for evaluation to make sure there are not any unforeseen effects before the species can grow. He noted that ADF&G's approach is required by the Alaska Constitution and state statutes.

[4:00:40 PM](#)

CHAIR BIRCH asked what the "high bar" projections are for mariculture regarding tax revenues, economic indicators, and job creation.

MR. RABUNG replied that a "McDowell Group" analysis can be done on aquatic farm programs to study input to the general fund from annual fees for using state waters, economic generation from selling aquatic farm products, and employment. He explained that fishery enhancement, which SB 22 addresses, targets existing common-property fisheries; for example, a larger harvestable amount will occur from wild-capture fisheries or commercial fisheries harvests that are subject to the same raw-fish tax, fishery business tax, and all the different license and fees that currently occur.

MS. DECKER explained that the task force did not perform a "high bar" analysis at the \$100 million market level. She said the task force could provide additional analysis.

CHAIR BIRCH asked if the task force members could follow up with a brief discussion about the permitting process. He asked if permitting is working or are there areas for improvement. He opined that permitting is a key piece for any business operation.

[4:02:40 PM](#)

MR. RABUNG explained that a joint agency application is used for aquatic farming so that ADF&G, DNR, and DEC all get the same application. The permitting process starts with DNR going through the leasing process where there is an agency review from ADF&G, DEC, and federal agencies to make sure there is nothing that will hold up and prohibit leasing a farm site. When ADF&G looks at a permit, the department addresses what are the existing traditional uses of an area. He pointed out that an application area is a high-use, important-use, or other-use area, then aquatic farming will have the lowest priority in the department's regulations.

He explained that the next area that ADF&G looks at is the potential impacts or negative effects on fish wildlife and habitat to find out if harm will occur to natural wild stocks.

He said once a permit gets through the agency reviews, the DNR leasing process proceeds to public notice for a public review and comment period. He noted that a permit can have a public hearing if the public requests one, afterwards the permit goes

to a lease adjudicator as a real estate transaction. Once the lease is issued by DNR then ADF&G issues its permit.

MR. RABUNG said ADF&G's issues have been impacted by DNR's downsizing due to budget cuts and there was not a lot of activity in the area, but at the same time interest increased. DNR has been struggling to keep up with the demand of the leasing process. He noted that ADF&G can issue its permit within 30 days or less of a lease being issued because the department has a review head start during the DNR's agency review.

He explained that DEC steps in when the "farm is in the water" to certify the water and certify that the product is safe for human health. He said all three agencies work together. He added that there are federal permits required to have Army Corps of Engineers permits because an aquatic farm is in navigable waters, something that has created potential issues because a general permit that encompassed all aquaculture was not renewed because there was not much activity until recently. He detailed that each farm must get an individual permit because there is no general permit, resulting in the "marine mammals" program looking at the individual permits. He pointed out that "marine mammals" is starting to say they might require consultation which can slow things down. He explained that there are a lot of concern from the "marine mammals" people about interaction with harbor seals in Southeast Alaska, for example.

[4:06:24 PM](#)

SENATOR COGHILL said he guessed permit submissions tend to be near communities due to transportation. He asked if permits end up around communities that crowd the communities. He addressed SB 22 and asked if investors watching the progress of the bill may ultimately "load up communities with comment."

MR. RABUNG replied that for aquatic farming, the closer to a community or transportation hub the better; however, the closer to a community the greater the potential for conflict with other users, an issue that requires a balance between users. He noted that ADF&G has maps that identifies no-go zones; for example, harbor seal haul outs, seine troll drags, or popular personal use dungeness crab fishing areas. He said mariculture farmers must work hard to find the right fit, a reason why most farms to date have been small. He explained that not a lot of large operations are going to be close to large communities and the benefit will be for rural coastal communities.

[4:09:04 PM](#)

MR. RABUNG noted that commercial king crab have been depressed for 40 years and all the department can do to manage for recovery is not allow fishing. He said SB 22 will allow for another tool to bring back king crab. He noted that AKCRRAB is stakeholder-driven and funded which is like the salmon hatchery program. He emphasized that the AKCRRAB program will start slowly and cautiously because there are a lot of unknowns. He detailed that a bay will be chosen that has a depressed king crab population, the broodstock will be collected from pregnant females in a hatchery and protected until the larva turns into juvenile crabs where the crabs are released where their parents came from. He summarized that different models will be applied to different species.

MS. DECKER addressed farm proximity to towns and noted a case in Craig where a new farm worked with the community to locate close enough where workers can daytrip to the facility and Craig benefits from new jobs. She said farming projects will be addressed on a case-by-case basis to find the balance for communities in how close a farm location fits.

[4:12:17 PM](#)

SENATOR COGHILL asked what products have the highest demand.

MS. DECKER replied that oysters and seaweed have had the most industry interest. She noted that king crab is high on the list for international demand.

SENATOR REINBOLD emphasized she wants to make sure Alaska's wild seafood is protected.

MR. RABUNG replied that ADF&G's primary directive is the sustainability of wild stock and natural production. He pointed out that the department is directed by statute, AS 16.05.092, to supplement without doing harm to wild stock and natural production; however, the department must first ensure significant negative effect on natural productivity does not happen.

CHAIR BIRCH noted a freshwater clam species in Interior Alaska and inquired about possible farming. He asked what the production cycle is for an oyster that is farmed.

[4:16:58 PM](#)

MR. RABUNG replied that ADF&G does not know a lot about freshwater species and the clam Chair Birch referenced is not exploitable.

MR. RABUNG revealed that the Pacific oyster is not indigenous to Alaska and is the one species exemption for aquaculture, everything else is indigenous to Alaska. He detailed times-to-market for aquaculture as follows:

- Pacific oysters:
 - 3-4 years.
- Kelp:
 - Planted in the fall, harvested in the spring.
 - Commercial fishing industry is interested because infrastructure that is typically idle during the winter can be used.
- Geoduck:
 - 7-10 years.
- Sea cucumber:
 - 3 years.
- Razor and littleneck clams:
 - 3-4 years.

SENATOR KIEHL noted that kelp and oysters will be "proprietary" whereas crab will be "common property." He asked if the other species will be "proprietary" or "common property."

[4:20:25 PM](#)

MR. RABUNG replied that a farm project that maintains positive control in captivity is private property. Fishery enhancement or fisheries rehabilitation is common property that is owned by anybody who can legally access fisheries, including: subsistence, personal use, sport and commercial.

[4:22:02 PM](#)

CHAIR BIRCH recognized that Representative Ortiz was in attendance.

[4:22:25 PM](#)

At ease.

SB 22-SHELLFISH ENHANCE. PROJECTS; HATCHERIES

[4:23:44 PM](#)

CHAIR BIRCH announced the consideration of Senate Bill 22 (SB 22).

[4:24:01 PM](#)

SENATOR GARY STEVENS, Alaska State Legislature, Juneau, Alaska, sponsor of SB 22, revealed that he worked at his family's cannery in Kodiak from 1970-1975 where king crab and shrimp was canned. His family's cannery was ultimately sold when, "things fell apart" in the Kodiak fishery. He said Kodiak still has king crab, but not of a commercial nature.

SENATOR STEVENS set forth that SB 22 would lend itself to creating a commercial fishery as well as a personal-use fishery which is very important in Kodiak. He said SB 22 is about enhancing and restoring the state's shellfish industry and the usage of shellfish by Alaskans, particularly for crabs and clams. He added that the bill promotes the constitutional duty of the "sustained yield principle" for the state's fisheries. He said SB 22 establishes a framework to permit and monitor improvements of the state's shellfish population.

He summarized that 40 years of no fishing in Kodiak is a shame where a regime change occurred that went from crab to mostly pollock. He said his hope is to go back to crab with a shellfish enhancement project.

4:26:23 PM

TIM LAMKIN, Staff, Senator Stevens, Alaska State Legislature, Juneau, Alaska, said he appreciated Chairman Birch's earlier comments regarding the committee's goals of economic diversification, building the state's portfolio and spurring other economic development, goals that he believes SB 22 speaks to.

He explained that SB 22 is the result of a lot of work by stakeholders and the state's scientists and biologists. He noted that the same legislation was introduced during the previous session but did not make it.

He detailed that the state's fish industry is a multi-billion-dollar industry that is the largest private employer in Alaska. He noted that most of the wild crab fisheries have been dormant and shutdown for quite some time for reasons that are not entirely understood by the scientific community, but in part might be for over harvesting. He opined that the state has not provided any tools to fix the fisheries other than to simply stop fishing. He said SB 22 will help try to bring a fix to the table.

He explained that there has been an "environmental regime shift" where crustaceans were once the oceans' dominant biomass and now

the finfish dominate. He detailed that the bill's intent is to provide a legal framework where crabs can be raised in hatcheries and released into the wild to provide a better shot at growing to maturity for harvest. He said the policy addition from SB 22 should have a positive effect on the state's economy, science investment, fisheries-related jobs, and bolster the constitution's principle of sustainable yield that will ultimately show up on Alaskans' supper table.

[4:29:51 PM](#)

SENATOR KAWASAKI referenced the sponsor's statement for SB 22 and addressed the fifth paragraph as follows:

The bill creates a regulatory framework with which Alaska Department of Fish & Game (ADF&G) can manage shellfish enhancement projects and outlines criteria for issuance of permits. It sets out stringent safety standards to ensure sustainability and health of existing natural stocks. The commissioner of ADF&G must also make a determination of substantial public benefit before a project can proceed.

He asked Mr. Lamkin to confirm that SB 22 sets out stringent safety standards to ensure sustainability and health of existing natural stocks.

MR. LAMKIN replied that SB 22 is closely modeled after existing salmon hatchery permit language so in the spirit of it being closely monitored in high standards of safety for those hatcheries, they will likewise be applied for shellfish hatchery projects.

SENATOR KAWASAKI readdressed the sponsor statement where the fifth paragraph had stated, "The commissioner of ADF&G must also make a determination of substantial public benefit before a project can proceed." He asked what "substantial public benefit" is defined as.

MR. LAMKIN replied that he did not have the definition memorized but noted that the definition is either in statute or regulation that is consistent with other preexisting statutory language with salmon hatcheries which are applied to the shellfish hatcheries.

CHAIR BIRCH asked Mr. Lamkim or ADF&G to address the bill's fiscal note as it relates to commercial fishing as well as the permitting process.

MR. LAMKIN replied that he will defer to ADF&G to address the fiscal note for SB 22.

SENATOR GIESSEL asked that Mr. Lamkin provide a sectional analysis for the bill.

MR. RAYBUNG explained that the fiscal note is indeterminate, but if the fisheries grow there could be a fiscal impact if additional staffing is required.

CHAIR BIRCH asked Mr. Lamkin to proceed with a sectional analysis for SB 22.

[4:33:08 PM](#)

MR. LAMKIN referenced the sectional analysis for SB 22 as follows:

Section 1:

Provides the Alaska Board of Fisheries authority to direct the department to manage production of enhanced shellfish stocks, beyond broodstock needs, for cost recovery harvest.

Section 2:

Increases the permit application fee for new private nonprofit salmon hatcheries from \$100 to \$1,000.

Section 3:

Adds a new Chapter 12 to Title 16, "Shellfish Stock Enhancement Projects:"

- AS 16.12.010: Provides direction to the commissioner of the Department of Fish and Game on issuance of permits for private nonprofit shellfish fishery enhancement projects and establishes a \$1,000 permit application fee. This section directs the commissioner to consult with technical experts in the relevant areas before permit issuance;
- AS 16.12.020: Provides for a hearing and public notification and input process prior to issuance of a permit;
- AS 16.12.030: Describes terms and conditions for permit holders to conduct their work, including cost recovery fisheries, harvest, sale, and release of enhancement project produced shellfish, and selection of broodstock sources;

- AS 16.12.040: Describes the revocation process should a permit holder fail to comply with the terms and conditions of the permit;
- AS 16.12.050: Specifies that shellfish produced under an approved enhancement project are a common property resource, with a provision for special harvest areas by permit holders. This section also specifies the Board of Fisheries to establish regulations relating to this chapter;
- AS 16.12.060: Directs the department to advise and assist permit holders in their planning, operations, and construction of facilities to a reasonable and appropriate extent;
- AS 16.12.070: Provides department authority to approve source and number of shellfish taken for use as broodstock;
- AS 16.12.080: Places restrictions on how monies received from sale of shellfish may be used only for operating costs associated with their facilities;
- AS 16.12.090: Relates to Cost Recovery Fisheries and provides a means by which a shellfish hatchery may contract to either harvest and sell shellfish, or to implement a self-assessment from amongst its membership, for purposes of recovering operational costs associated with the hatchery;
- AS 16.12.100: Gives the department authority to inspect facilities at any time while the facility is in operation;
- AS 16.12.110: Requires a permit holder to submit an annual report to the department;
- AS 16.12.199: Provides definitions for "enhancement project," "facility," "genetically modified shellfish," "hatchery," and "shellfish."

Section 4:

Provides the Commercial Fisheries Entry Commission (CFEC) authority to issue special harvest area entry permits to holders of private nonprofit shellfish rehabilitation, or enhancement project permits.

Section 5:

Defines legal fishing gear for special harvest area entry permit holders.

Section 6:

Exempts shellfish raised in a private nonprofit shellfish project from the farmed fish definition.

Sections 7-8:

Establish state corporate income tax exemption for a nonprofit corporation holding a shellfish fishery enhancement permit.

Section 9:

Exempts shellfish harvested under a special harvest area entry permit from seafood development taxes.

Section 10:

Establishes an effective date for the salmon hatchery permit application fee described in section 2.

Section 11:

Authorizes the Department of Fish and Game to adopt implementing regulations.

Section 12:

Establishes an immediate effective date for section 11 pursuant to AS 01.10.070(c).

Section 13:

Establishes an effective date for section 8 concomitant with section 2, Chapter 55, SLA 2013.

[4:39:50 PM](#)

SENATOR COGHILL addressed AS 16.12.070 in section 3 regarding taking broodstock "where feasible." He asked Mr. Lamkin to elaborate on taking approved broodstock "where feasible."

MR. LAMKIN answered that his understanding is the broodstock is delicate and to the extent possible, practical, or feasible, broodstock will be taken from the first selected location to maximize quality. If the first choice is not available or feasible, the appropriate next steps will be taken. He asked that ADF&G confirm his previous assessment.

SENATOR COGHILL replied that ADF&G can corroborate later. He said there have been discussions on how to keep the integrity of local broodstocks. He said the concern moving forward is, "Where the exception becomes the rule."

[4:41:50 PM](#)

CHAIR BIRCH [opened invited and public testimony].

4:42:22 PM

TOMI MARSH, President, Oceans Alaska, Ketchikan, Alaska, testified in support of SB 22. She explained that Oceans Alaska is a nonprofit shellfish hatchery located in Ketchikan.

We believe mariculture is important for economic diversification, existing businesses, education, and fisheries. SB 22 helps create the regulatory framework for which ADF&G can manage shellfish fishery enhancement, restoration, and shellfish hatcheries; this will allow interested stakeholders to either continue or begin enhancement and or restoration of certain species.

At Oceans Alaska we support SB 22 as it will diversify economic development and increase environmental stewardship through enhancement of traditional and economically important commercially harvested shellfish species such sea cumbers and geoducks which have been impacted by sea otter predation; two, enhance a shellfish species as integral to marine ecosystems and habitat restoration; three, enhancement of shellfish species that are vital to climate change and pollution mitigation.

4:43:48 PM

CHAIR BIRCH announced that he "officially" opened public testimony.

4:44:09 PM

JEFF HETRICK, Director, Alutiiq Pride Shellfish Hatchery, Seward, Alaska, testified in support of SB 22. He explained that Alutiiq is the institute that has been doing most of the work towards shellfish enhancement for almost 20 years. He summarized that Alutiiq worked on the following projects and species:

- Littleneck and butter clam's enhancement;
- Cockle projects;
- Red and blue king crab research;
- Worked with NOAA and AKCRRAB on king crab enhancement;
- Sea cucumber project with the Southeast Alaska Regional Dive Fisheries Association (SARDFA) to test the feasibility for large-scale enhancement;
- Abalone;

- Purple hinge rock scallops.

MR. HETRICK specified that Alutiiq's programs have been done under a commissioner's permit or a research permit through ADF&G.

He noted an earlier question by a committee member regarding working with other regions and countries. He disclosed that Alutiiq has been, "Sitting on this technology now for quite some time and they look to us for advice and direction trying to raise some of these species."

He disclosed that Alutiiq is in the final year of doing its out-stock and experiments of Kodiak. Alutiiq has developed hatchery technology and is currently working on out-stocking in terms of size of release, location, density, and all the things that scientists look for to maximize survival once stock is released. He said Alutiiq believes they are at the point to do a large-scale release of 500,000 crabs. He noted that a large-scale release is needed to find out if king crab enhancement is going to work.

He summarized that Alutiiq's primary focus is to bring back the depressed stocks and is standing by for the approval of SB 22.

[4:47:29 PM](#)

TREVOR SANDE, member, Alaska Fisheries Development Foundation, Ketchikan, Alaska, testified in support of SB 22. He disclosed that he has operated an oyster farm for eight years. He explained that hatcheries are learning how to adapt to changing pH levels in the ocean. He opined that mariculture enhancement will be a tool when ocean acidification impacts Alaska's wild stock.

[4:49:04 PM](#)

STEVE RICCI, Staff, Aleutian Pribilof Island Community Development Association (APICDA), Juneau, Alaska, testified in support of SB 22. He referenced his support letter, paraphrased as follows:

APICDA is one of six Community Development Quota (CDQ) organizations created in 1992 by the Magnuson-Stevens Act. Our mission is to increase direct participation in the Bering Sea and Aleutian Islands fisheries for our members and to develop fisheries related economic opportunities in our communities.

The CDQ program utilizes fisheries resources to create jobs, build infrastructure, and provide scholarships and workforce development training. The CDQ program has generated critically important and sustainable economic opportunities to 65 coastal communities for over 25 years and help leverage private sector dollars through partnerships and investments.

We see tremendous opportunity in mariculture in western Alaska. Business and revenue generation are part of a larger picture. Potential increases to subsistence fisheries, workforce development, and furthering research efforts to better understand the impacts of climatic related ocean changes are all potential long-run benefits.

APICDA is a member organization of the [Alaska Fisheries Development Foundation, Inc.] (AFDF), which spearheaded the mariculture initiative. We have also been involved in the AKCRRAB program which researches the rehabilitation of king crab stocks. SB 22 will fill a current gap that exists for permitting and regulating restoration efforts such as the AKCRRAB program and will provide a very important framework for future enhancement efforts. We believe that SB 22 is consistent with the objectives of the Alaska Mariculture Initiative and we fully support the bill.

[4:51:37 PM](#)

TOMMY SHERIDAN, Director of Government Affairs, Silver Bay Seafoods, LLC, Cordova, Alaska, testified in support of SB 22. He referenced his letter of support, paraphrased as follows:

Silver Bay Seafoods began in 2007 as a single salmon processing facility in Sitka, Alaska and has since grown into one of the largest seafood companies in the state, currently operating large scale processing facilities in Sitka, Craig, Valdez, and Naknek. The company is also active in the California squid fishery and is currently constructing a seafood processing facility in False Pass where we will process salmon, pollock, and cod. We also hope to expand into Kodiak in the future as well. Silver Bay has aspirations for developing production-scale mariculture operations in Sitka Sound which at full production would yield up to 20 million Pacific oysters per year, bringing year-round employment to the area along with the production

of an environmentally friendly, sustainable, and healthy food source for sale and distribution both locally and worldwide.

SB 22 creates a regulatory framework for the effective management of shellfish fishery enhancement, shellfish restoration activities, and shellfish hatcheries. Seed security for such operations has been identified as an impediment to mariculture development in Alaska and it certainly has been a consideration in the development of our own program. This act will allow interested stakeholders to either begin or continue with the enhancement and or restoration of species such as king crab, sea cucumber, geoduck, abalone, or razor clams, thereby supporting shellfish hatchery development in the state.

4:54:01 PM

NANCY HILLSTRAND, Shareholder, Pioneer Alaskan Fisheries, Inc., Homer, Alaska, testified in opposition of SB 22. She detailed that Pioneer Alaskan Fisheries has been a corporation in Alaska since 1964, primarily crab fishermen in addition to salmon, herring, and seafood processing.

She explained that she is concerned with SB 22 based upon what she has seen with legislation that has been used for salmon hatcheries. She noted that she submitted to the committee an ADF&G review regarding the potential for the legislation to devolve into a problem for wild stocks as well as the wild stock fishermen.

She asserted that AKCRRAB needs to take a step-by-step approach for research rather than opening wide open to the large-scale industrial activities that will happen with SB 22. She contended that ADF&G does not have the money to adequately monitor and provide oversight. She opined that ADF&G should have additional funds to do a good job or not do the project at all.

She pointed out that some wild stocks are rebounding and noted that a similar situation occurred with salmon wild stocks were naturally coming back when hatcheries were coming on.

She asked if the program has an on-off switch and noted that an on-off switch with salmon hatcheries is not used. She disclosed that king crab was released in the Barents Sea and the crab became an invasive species that impacted its cod fishery. She

asked that a feasibility study, cost analysis, and risk assessment be done ahead of time.

CHAIR BIRCH confirmed that Ms. Hillstrand had submitted a 2009 ADF&G review to the committee.

5:00:31 PM

MARCOS SCHEER, Second Vice President, Southeast Conference, Juneau, Alaska, testified in support of SB 22. He disclosed that he is the founder and CEO of Premium Aquatics which is an aquatics farming company. He added that he has served on the board as well as being a member for Alaska Fisheries Development Foundation since 2007.

He explained that Southeast Conference is a state and federally funded designated regional economic development organization for southeast Alaska. He continued as follows:

For more than 60 years, Southeast Conference has served as a collective voice in advancing the southeast region's economy. Southeast Conference has over 200 members from organizations representing business and governments from 32 regional communities. My company is also a member of Southeast Conference.

The mission of Southeast Conference is to undertake and support activities that promote strong economies, healthy communities, and quality environment in southeast Alaska.

He set forth that SB 22 is important to the communities and user groups in southeast Alaska that might be advantaged by the legislation, particularly for the rehabilitation of the stocks that have been decimated by sea otter predation.

5:02:49 PM

JULIE DECKER, Executive Director, Alaska Fisheries Development Foundation, Inc. (AFDF), Wrangell, Alaska, testified in support of SB 22. She noted in her previous presentation that she failed to mention that AFDF partakes in facilitating seafood sustainability certification in some of Alaska's fisheries. She explained that Alaska's major fisheries are certified as sustainably managed by two international standards via two different programs: The Marine Stewardship Council, and the Alaska Responsible Fisheries Management Program. She said the reason why AFDF seeks certification is because ADF&G puts a priority on wild stocks and uses a precautionary approach to

managing Alaska's fisheries. She disclosed that the noted language is included in SB 22 and ADF&G expects the same would happen moving forward with shellfish enhancement.

[5:04:11 PM](#)

SENATOR KIEHL noted that SB 22 does not address seaweed, a subject that Ms. Decker addressed in her previous presentation. He asked if ADF&G looks at seaweed seed producers elsewhere and how seaweed is addressed.

MS. DECKER explained that there is no commercial fishery in the state for seaweed, therefore a fisheries enhancement is not eligible for seaweed. She specified that when seaweed is addressed as a mariculture development species, seaweed is expressed only in the aquatic farming realm.

SENATOR KAWASAKI asked where in the bill does it have protections for "existing" or "natural" stocks. He referenced the pink salmon issue where studies talk about the possible impact on red and king salmon stocks in Prince William Sound.

MS. DECKER replied that ADF&G would be best suited to answer Senator Kawasaki's question. She noted that ADF&G has strict policies around genetics, marking, disease, and where to site enhancement activities in order to reduce conflicts. She said some of ADF&G's policies are embedded and do help with a precautionary approach.

[5:06:49 PM](#)

JERRY MACCUNE, President, Cordova District, Fishermen United, Cordova, Alaska, testified in support of SB 22. He revealed that Cordova was once known as the "clam capital of the world." He noted that the legislation does not involve a "full blown" hatchery for all the shellfish. He specified that the intent is to boost the stock in some places to see if it will take root.

He said in reference to pink salmon, he disclosed that a multi-million-dollar study being paid for by the processors and hatcheries will be completed within two years. He explained that the study will address the interaction between wild stocks and pink salmon. He emphasized that there is no direct evidence at this time that pink salmon are impacting red or king salmon. He opined that SB 22 is a great opportunity. He noted that seaweed is taking off in the world and will be productive for a lot of people in Alaska.

[5:08:30 PM](#)

CHAIR BIRCH closed public testimony.

5:08:33 PM

CHAIR BIRCH held SB 22 in committee.

5:08:58 PM

There being no further business to come before the committee, Chair Birch adjourned the Senate Resources Committee meeting at 5:08 p.m.