

ALASKA STATE LEGISLATURE
HOUSE SPECIAL COMMITTEE ON FISHERIES

April 13, 2021
10:04 a.m.

MEMBERS PRESENT

Representative Geran Tarr, Chair
Representative Louise Stutes, Vice Chair
Representative Jonathan Kreiss-Tomkins
Representative Andi Story
Representative Dan Ortiz
Representative Sarah Vance
Representative Kevin McCabe

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

HOUSE CONCURRENT RESOLUTION NO. 2

Supporting the Alaska Ocean Cluster in its mission, efforts, and vision for a vibrant coastal economy in the state, its promotion of a diversified and resilient state economy that creates value from ocean resources, and its building of a statewide integrated ecosystem of innovation and entrepreneurship relating to the state's ocean economy.

- MOVED HCR 2 OUT OF COMMITTEE

HOUSE BILL NO. 162

"An Act relating to certain fish; and establishing a fisheries rehabilitation permit."

- HEARD & HELD

PREVIOUS COMMITTEE ACTION

BILL: HCR 2

SHORT TITLE: SUPPORTING ALASKA OCEAN CLUSTER

SPONSOR(S): REPRESENTATIVE(S) STUTES

02/18/21	(H)	READ THE FIRST TIME - REFERRALS
02/18/21	(H)	FSH, RES
04/08/21	(H)	FSH AT 10:00 AM GRUENBERG 120
04/08/21	(H)	Heard & Held

04/08/21 (H) MINUTE (FSH)
04/13/21 (H) FSH AT 10:00 AM GRUENBERG 120

BILL: HB 162

SHORT TITLE: FISHERIES REHABILITATION PERMITS

SPONSOR(s): REPRESENTATIVE(s) TUCK

04/05/21 (H) READ THE FIRST TIME - REFERRALS
04/05/21 (H) FSH, RES
04/13/21 (H) FSH AT 10:00 AM GRUENBERG 120

WITNESS REGISTER

SARA PERMAN, Staff
Representative Louise Stutes
Juneau, Alaska

POSITION STATEMENT: During the hearing on HCR 2, answered a question on behalf of Representative Stutes, prime sponsor.

REPRESENTATIVE CHRIS TUCK
Alaska State Legislature
Juneau, Alaska

POSITION STATEMENT: As prime sponsor, introduced HB 162.

TRYSTIN LUHR, Intern
Representative Chris Tuck
Alaska State Legislature
Juneau Alaska

POSITION STATEMENT: Presented HB 162 on behalf of Representative Tuck, prime sponsor.

SAM RABUNG, Director
Division of Commercial Fisheries
Alaska Department of Fish and Game (ADF&G)
Juneau, Alaska

POSITION STATEMENT: During the hearing of HB 162, answered questions and provided information.

CHARLES PARKER
Alaska Village Initiatives
Anchorage, Alaska

POSITION STATEMENT: Provided invited testimony in support of HB 162.

EMILY ANDERSON, Alaska Program Director
Wild Salmon Center
Anchorage, Alaska

POSITION STATEMENT: Testified in opposition to HB 162.

CATHERINE BURSCH
Homer, Alaska

POSITION STATEMENT: During the hearing of HB 162, expressed her concern about hatcheries.

TOM HARRIS
Anchorage, Alaska

POSITION STATEMENT: Testified in support of HB 162.

BRIAN ASHTON
Wrangell, Alaska

POSITION STATEMENT: During the hearing of HB 162, provided information at the sponsor's request.

JOSH VERHAGEN, Mayor
City of Nenana
Nenana, Alaska

POSITION STATEMENT: Testified in support of HB 162.

JESSICA WINNESTAFFER, Staff
Chickaloon Village Traditional Council
Moose Creek, Alaska

POSITION STATEMENT: Testified in support of HB 162.

PENELOPE HAAS
Kachemak Bay Conservation Society
Homer, Alaska

POSITION STATEMENT: Testified in opposition to HB 162.

LOUIE FLORA, Government Affairs Director
The Alaska Center
Homer, Alaska

POSITION STATEMENT: During the hearing of HB 162, urged that the bill have more emphasis on habitat restoration.

ACTION NARRATIVE

[10:04:30 AM](#)

CHAIR GERAN TARR called the House Special Committee on Fisheries meeting to order at 10:04 a.m. Representatives McCabe, Vance, Story, Kreiss-Tomkins, Ortiz, and Tarr were present at the call to order. Representative Stutes arrived as the meeting was in progress.

HCR 2-SUPPORTING ALASKA OCEAN CLUSTER

[10:05:42 AM](#)

CHAIR TARR announced that the first order of business would be HOUSE CONCURRENT RESOLUTION NO. 2, Supporting the Alaska Ocean Cluster in its mission, efforts, and vision for a vibrant coastal economy in the state, its promotion of a diversified and resilient state economy that creates value from ocean resources, and its building of a statewide integrated ecosystem of innovation and entrepreneurship relating to the state's ocean economy.

CHAIR TARR requested Ms. Sara Perman share the discussion that was had with Legislative Legal Services regarding the committee's question from the resolution's previous hearing on whether this should be a joint or concurrent resolution.

[10:06:09 AM](#)

SARA PERMAN, Staff, Representative Louise Stutes, on behalf of Representative Stutes, prime sponsor, explained that a joint resolution is usually reserved for addresses outside the state and is used mainly to express the view or wish of the legislature to the President, Congress, or agencies of the U.S. government, whereas a concurrent resolution reflects the will, wish, or view of the bodies and is usually for internal state policies. In speaking with the Alaska Ocean Cluster (AOC) itself, she related, this resolution is not intended to directly go to the Alaska Congressional Delegation, but rather to be a tool that AOC could display to the delegation or other parts of the administration showing that AOC has legislative support. Therefore, she continued, AOC has not asked for a joint resolution in this case. She further related that Megan Law (ph) has agreed that because this is the internal will of the body, it would be a concurrent resolution.

REPRESENTATIVE KREISS-TOMKINS thanked Ms. Perman for her research and said it is helpful to have this clarity.

[10:08:11 AM](#)

REPRESENTATIVE ORTIZ moved to report HCR 2 out of committee with individual recommendations and the accompanying [zero] fiscal note. There being no objection, HCR 2 was reported out of the House Special Committee on Fisheries.

[10:08:40 AM](#)

The committee took an at-ease from 10:08 a.m. to 10:10 a.m.

HB 162-FISHERIES REHABILITATION PERMITS

[10:10:27 AM](#)

CHAIR TARR announced that the final order of business would be HOUSE BILL NO. 162, "An Act relating to certain fish; and establishing a fisheries rehabilitation permit."

[10:10:53 AM](#)

REPRESENTATIVE CHRIS TUCK, Alaska State Legislature, as prime sponsor, introduced HB 162. He deferred to his intern, Trystin Luhr, to present the bill.

[10:11:23 AM](#)

TRYSTIN LUHR, Intern, Representative Chris Tuck, Alaska State Legislature, presented HB 162 on behalf of Representative Tuck, prime sponsor. He explained that HB 162 is a restoration and rehabilitation bill which would enable the private sector, including environmental nonprofits and Alaska Native corporations, to apply for permits. The permits would be vetted through the Alaska Department of Fish and Game (ADF&G). A processing fee of \$100 would be charged, and any other fees for prior work or following the permitting process would fall to the applicant. There are existing similar permits, particularly the aquatic resource permit (ARP), as well as multiple existing programs. Two of those are the Chickaloon Tribe Moose Creek Project and the Buskin River Works Project. The Buskin River Works Project is similar to what HB 162 proposes, primarily the fish stock rehabilitation and restoration as well as the environmental enhancement, particularly the removal of culverts to better enhance fish survival rates.

MR. LUHR said HB 162 is important culturally, economically, and environmentally. Culturally, everyone in Alaska talks about fish, even in landlocked areas. Economically, it is important to resupply fish stocks where they are taken out, which plays into the environmental factor. These tools should be used to leave Alaska's waterways better than they were found. Alaska has a long history dating back to the late 1970s when ADF&G successfully planted over 2 million sockeye eggs in the upper Karluk River, historically the second largest sockeye run in the

world, to restore depleted runs to the pre-1921 population levels. It is better to have this and not need it, he said in conclusion, than to need it and not have it.

[10:14:33 AM](#)

REPRESENTATIVE ORTIZ inquired about whether the bill, if passed, would all be in the name of trying to enhance existing stocks through a variety of methods, or whether there would be a set general area where these projects could have some similarities to them.

REPRESENTATIVE TUCK replied that it would be on a case-by-case situation because the permit would have to be applied for and approved by ADF&G and then ultimately approved by the [ADF&G] commissioner. A study would have to be done beforehand to determine what the proper stock levels should be for a particular wild species and then a game plan put together on how to replenish or rehabilitate those stocks. There would be criteria [in the permitting process] that ADF&G and the commissioner would have to follow.

[10:16:24 AM](#)

REPRESENTATIVE ORTIZ noted the term "wild species" and asked whether these enhancement projects would be conducted within the water system itself as opposed to a hatchery format.

REPRESENTATIVE TUCK responded that it would be a "moist air incubation process" - before the eggs become fry they are re-introduced back into their natural habitat; it is making sure that there is fertilization success. The warmer temperatures in Alaska's waters make it more difficult for the first incubation stages to survive, so this would control the environment to make sure that the eggs are fertilized and then re-introduced into their natural habitat.

[10:17:42 AM](#)

REPRESENTATIVE STORY stated she is interested in learning about the moist air incubation process. She asked why the bill is needed when the department says it already has a process for doing this. She further asked how many projects are currently ongoing and using this process.

MR. LUHR answered that the current ARP program is exclusive to government and university entities. The bill would open it to

more people. He deferred to ADF&G to answer the question in further detail.

[10:18:51 AM](#)

SAM RABUNG, Director, Division of Commercial Fisheries, Alaska Department of Fish and Game (ADF&G), responded that the only entities qualified for the propagative permits under the aquatic resource permit regulation are accredited institutes of higher education or cooperative governmental projects. Regarding how many, he said there is generally very few, he has never seen more than five at a time, and they are very limited in scope.

REPRESENTATIVE STORY offered her understanding that the bill is needed to expand it and make it available to other groups that are not a part of these two limited groups.

[10:19:55 AM](#)

REPRESENTATIVE KREISS-TOMKINS related that he had a hesitant orientation toward the bill during its previous rounds but is excited for the renewed conversation. He asked whether ADF&G has a position on HB 162.

MR. RABUNG replied that he has not inquired as to whether ADF&G has a position, but in previous administrations ADF&G was neutral. Noting that several people have referred to [HB 162] as enhancement, he clarified that enhancement and rehabilitation are defined terms and HB 162 would specifically not allow for enhancement, rather it would be rehabilitation. He explained that enhancement means producing augmented or supplemental production of a stock above what nature can produce on its own and continuing that. The purpose of enhancement is to create a harvestable surplus or additional harvestable surplus, and if the activity is stopped it drops back down to its normal production. A rehabilitation project, he continued, assists a depressed stock in getting back to its natural level of production and then the assistance is stopped. Under ADF&G's genetics policy, rehabilitation projects are limited to not more than one generation through the process; so, a chum salmon project would be done after five years and for most stocks it would be done after four years.

[10:22:00 AM](#)

REPRESENTATIVE VANCE stated she is excited to see the bill again because of its potential for rehabilitation. She observed that

Section 1 talks about the rehabilitation of freshwater finfish and eggs. She noted that the razor clams in Ninilchik were once [plentiful] but are now in need of rehabilitation. She asked whether a mechanism is already in place to assist in rehabilitation of shellfish or whether there is a need to include something specifically for shellfish in this bill.

MR. RABUNG confirmed that Section 1 limits it to anadromous or freshwater finfish, so it would not apply to razor clams. He advised that if the language were changed to just say "fish" then it would apply to all species of fish, which are broadly defined.

[10:23:52 AM](#)

REPRESENTATIVE VANCE remarked that making such a change could have a lot of impacts and the legislature may not want to open it so broadly. She requested Mr. Rabung's opinion given this would be under ADF&G's oversight. She further asked whether the commissioner, because it is under the commissioner's direction, would be able to determine what is and is not appropriate should the legislature open it that broadly or whether the legislature should keep the [current] defined language.

MR. RABUNG responded that currently ADF&G can permit the razor clam restoration work through the aquatic resource permit; it must be done by a different qualified user. So, a cooperative governmental project could mean a cooperative agreement with ADF&G to have a private entity do the work and that would qualify it. A tribal organization, a tribal government, counts as a governmental project. So, the ability to do that work is there now, but it isn't available to every resident of the state, as HB 162 would make it.

[10:25:21 AM](#)

REPRESENTATIVE VANCE asked whether the application fee of \$100 would be sufficient for the work that would be required within the department.

MR. RABUNG answered that it is probably a token amount. The processing and a permit for this would entail having a review by ADF&G's geneticists, pathologists, a management biologist, and a research biologist, as well as going through the commissioner's office chain of command for approval. To put it in context, he noted that the aquatic resource permit has no fee.

10:26:13 AM

REPRESENTATIVE MCCABE offered his understanding that some of the genetically modified hatchery fish can take over the habitat and possibly prevent the natural fish from returning to their habitat. He further offered his understanding that under HB 162 these fish would not be genetically modified because they would fall under that one generation clause in the regulations.

MR. RABUNG replied that genetically modified organisms are illegal in Alaska, no genetically modified organisms are produced or released in Alaska. He said he therefore he doesn't follow the question.

10:27:17 AM

REPRESENTATIVE MCCABE stated that the fish released in Diamond Lake where he lives are different, so perhaps genetically modified is the wrong term.

MR. RABUNG suggested that Representative McCabe may be referring to what are called "triploids," which is where a thermal shock is employed during the egg development stage so that they become sterile, but they are not genetically modified. He pointed out that using triploids or sterile organisms for this project would defeat the purpose because then they could not reproduce and there would be no rehabilitation, and the idea is for when there is a depressed stock for whatever reason.

MR. RABUNG described the Buskin Project as an example, which was done by the Sun'aq Tribe of Kodiak through an aquatic resource permit. Perched culverts that had barred coho from reaching their spawning grounds for generations were removed and the streams the coho would have to travel through to get to spawning grounds were reconditioned. Eggs were taken from the Buskin Lake stock which had not been using those spawning grounds but were using other. The eggs were incubated and then the eyed eggs were put above where the repaired habitat was; the resulting returns from those fry came back to those areas to spawn. The same stock was used, the stock wasn't manipulated, the project just brought the stock productivity back to what it was before the habitat was damaged.

MR. RABUNG said another example is propagative research. He related that the Norton Sound Economic Development Corporation (NSEDC) in Nome reconditioned tributary streams to several mainstem streams that had been impacted by placer mining. The

gravel was reconditioned by cleaning it, breaking up the compaction, and removing the silt. Eggs were then taken from mainstem spawners of those rivers, incubated to the eyed stage, and then replanted into the reconditioned gravel. When those fish came back as adults, they used those areas. The idea behind this project is to recondition areas that have been damaged and help those stocks recover to what they can naturally produce.

[10:30:11 AM](#)

REPRESENTATIVE MCCABE stated he is a fan. He surmised that the reintroduction of salmon into Eklutna would be the same sort of deal. He asked whether candidates for this would be the two lakes in Chignik.

MR. RABUNG answered that the spawning escapement goals for Chignik are in the hundreds of thousands. He pointed out that the scale of the proposal in HB 162 is limited to 500,000 eggs, which in salmon terms is miniscule when just 2 percent of those are expected to survive to adulthood, so it probably wouldn't make an impact in a place like Chignik. Rather, it is more appropriate for very small-scale reintroduction near communities and villages that have had road activity. The bill limits it to very small-scale projects.

[10:31:33 AM](#)

REPRESENTATIVE TUCK paraphrased from pages 1-2 of the written sectional analysis provided in the committee packet, which read as follows [original punctuation provided, with some formatting changes]:

Section 1 - Creates a new section in AS 16.05 to create a fisheries rehabilitation permit. AS 16.05.855 consists of the following subsections:

(a) Creates a new subsection for the activities that are allowed under the new fisheries rehabilitation permit: (1) Remove fish from water, collect gametes and milt, fertilize and incubate eggs, and place fertilized eggs or un-fed fry back in the same water (2) Enhance habitat in state water for survival of the fish.

(b) Creates a new subsection that prescribes an application form created by the department that states

what type of information must be on the application to obtain a fisheries rehabilitation permit. This information includes: 1) The applicant's name (2) Reasoning and feasibility of the proposed project 3) Documentation of conditions justifying the project, any collaboration with local stakeholders, and any other permits required for the project 4) Locations of water in which applicant will take fish and place fertilized eggs or unfed fry; 5) Species and number of fish taken from water 6) Applicant's management plan for propagation or repopulation in permitted water 7) Applicant's goals, schedule, scope of work, budget, means of data collection, plan for genetics management, plans for project evaluation, and watershed habitat rehabilitation plan, if applicable 8) Application fee of \$100.

(c) Creates a subsection allowing the Alaska Department of Fish & Game (ADF&G) Commissioner to issue a permit after determining if a project: (1) May restore a fish population in a body of water where subsistence and escapement goals have not been met, where there are no established escapement goals and local stakeholders have identified a decline in fish populations, or the species of fish is limited (2) Will result in public benefits (3) Will not harm indigenous wild fish stocks (4) Will not place fertilized eggs or un-fed fry into a body of water if there are enough fish for natural propagation of the species to occur (5) Will not introduce live fertilized eggs, larvae, or fry of nonindigenous fish in violations of AS 16.35.210.

(d) Creates a subsection regarding factors that the commissioner of ADF&G shall consider when determining if a permit will be issued, including: (1) The department's assessment of the project (2) The capabilities of the applicant (3) The degree of communication that exists between the applicant and individuals affected by the project (4) Comments relating to the project, including those by a regional planning team established under AS 16.10.375. (5) If the project is consistent with the comprehensive salmon plan and constitutional and statutory requirements imposed on the department for the area (6) If the project will increase scientific knowledge

and understanding of the natural resources affected by the project.

(e) Creates a new subsection requiring a permittee: (1) to collect and provide project data and reports requested by the department. (2) To reasonably communicate with individuals affected by the project.

(f) Creates a subsection which sets the timeline for when ADF&G must act on a permit application. Within 15 days, the department must notify an applicant whether their application is complete and can reject an incomplete application if it is not complete within 30 days of the notification. After the notification, ADF&G must approve or reject the application with 90 days, otherwise the application is automatically approved.

(g) Creates a new subsection to enact requirements of a permittee to: (1) Collect no more than 500,000 eggs for fertilization. (2) Implement controls to avoid the introduction of nonindigenous pathogens or to increase indigenous pathogens beyond acceptable levels.

[10:36:51 AM](#)

REPRESENTATIVE MCCABE inquired as to the origin of the figure of 500,000 eggs.

REPRESENTATIVE TUCK replied that it was from consultation with ADF&G. He deferred to Mr. Rabung to respond further.

MR. RABUNG explained that the 500,000 limit was the limit in the aquatic resource permit policy prior to it becoming a regulation, so the department just kept it consistent.

[10:37:33 AM](#)

REPRESENTATIVE MCCABE questioned why it was not situational depending on the stream and what is trying to be done. For example, he said, there might be a fishery with a bigger habitat. He asked how long the 500,000 number has been in ADF&G's books and whether it has been reconsidered.

MR. RABUNG answered that 500,000 eggs is a pretty low number in salmon terms. However, he explained, to go much lower than

that, depending on the species, would require violating ADF&G's genetics policy which has a minimum effective population number - a minimum number of adults must be used to not create a genetic bottleneck called a "founder effect." The intention is to maintain the genetic diversity of the stock, and that limits how small the number can go. The other side is limiting the upper end of it. If it becomes large and the if the desire is for large, then there is another avenue which is the private nonprofit hatchery permit. He said HB 162 is intended to be small-scale localized, and ADF&G is more comfortable with the smaller number given that to qualify for one of these the applicant just has to be a resident.

[10:39:26 AM](#)

REPRESENTATIVE VANCE observed that HB 162 overall allows a qualified person, which is defined on page 4 of the bill, lines 28-29, as "a state resident under AS 43.23.295 or a corporation organized under laws of this state". She asked whether there are other areas under ADF&G like this or whether this is a first that a qualified individual would be able to take on a project of this sort.

MR. RABUNG replied that currently there are only two permit avenues available to propagate finfish in Alaska. One is the private nonprofit hatchery permit which is a big deal and there are very few of those. They are intended for professionals with a background in fish culture, they are not for just anybody or amateurs. The second avenue is the aquatic resource permit, which is limited to research and educational objectives and for propagative research, which these fall under. The qualified individuals are institutes of higher education and cooperative governmental projects, so those are also limited to people who will generally know what they are doing. He said HB 162 opens it up to anybody who is a resident and that is the biggest difference. There are no other avenues for finfish in Alaska other than the two existing permits and this proposal would allow something that is kind of in between but still maintains a small scale. The aquatic resource permits can be used by tribal governments because they are a governmental entity. The department has entered into cooperative agreements with other entities that weren't governmental entities, such as NSEDC, to allow them to do that work because it is of interest to ADF&G to try to restore runs. The department used to have an entire division devoted to this kind of work, the Fisheries Rehabilitation, Enhancement, and Development Division (FRED Division), which went away in the mid-1990s and was absorbed by

the Division of Commercial Fisheries. [The Division of Commercial Fisheries] no longer does that kind of work, but still oversee it and permits it.

10:42:25 AM

REPRESENTATIVE VANCE inquired whether there are any similar qualified persons on the game side.

MR. RABUNG responded that he is not aware of any, although something that comes to mind is "moose mamas."

REPRESENTATIVE VANCE stated she is trying to get an idea of the impact that this could have with allowing anyone to undertake this. She said she likes the idea but sees why there is reservation from a lot of people. Since it would be under the oversight of the commissioner, she continued, it's not just anybody going to be doing this, but rather a qualified person.

10:43:24 AM

CHAIR TARR recalled that when this bill was seen before it was during many budget cuts and there is work that the department wants to do but does not have the resources to do. She asked whether these would be projects that the department would do if it had the resources, and so the bill would open an avenue for somebody else's resources to help support this work. She surmised the department would want to do rehabilitation projects if it had the resources and money.

MR. RABUNG answered that AS 16.05.092 directs the department to do all things necessary to do these things, but it is an unfunded mandate. So, HB 162 would be an avenue for the private sector to pick up some of those on a small, limited scale. The department doesn't have an accurate inventory of every single salmon or finfish producing stream or system in the state, the department tends to focus on the ones that are "important" and important is broadly defined as either economically important or important to the community, it is not a size necessarily. There are many smaller systems that may have produced more fish in the past that had something happen that could be addressed and while ADF&G is not tracking many of those things, locals are. He said his understanding is that this bill came from stakeholders, local users.

MR. RABUNG added that he has been aware of this bill for many years. He worked with Representative Talerico during the bill's

initial drafting to get it to its current state of comporting to existing statutes, regulations, and policies because it would be easy to build something that required ADF&G to permit things that were not in compliance with the statutes, regulations, and policies, which are designed to safeguard and sustain natural production. The department's mandate is to provide for sustained yield of natural production. This current bill comports with ADF&G's genetics policy, pathology requirements, and salmon plans for the areas. It would be a way for the private sector who wanted to do something for their local small system or stock to be able to do that.

[10:47:34 AM](#)

CHAIR TARR commented that the \$100 fee seems too modest for covering the staff work that would be necessary. She requested Mr. Rabung's thoughts about a number that might more closely reflect the costs to the department.

MR. RABUNG replied that he was not consulted on the \$100 fee and so doesn't know where it came from. If viewed as a filing fee, he said, then it may be adequate. The private nonprofit hatchery permit fee is \$100 and that was written in 1974 and is still in the statute. In inflationary terms the \$100 from 1974 is probably closer to \$900 or \$1,000 today. The department doesn't charge any fee for the aquatic resource permit, it's a scientific and educational objective. Regardless of what the fee amount is, it is unlikely to be a revenue generator as there probably will not be a lot of people doing this because it is hard work and expensive work.

[10:50:06 AM](#)

REPRESENTATIVE STORY inquired about the need for this around the state.

MR. RABUNG suggested that the need is probably a personal decision. He related that during his previous work visiting smaller communities and villages the elders would talk about where there used to be a run of reds in a stream but now there is none because it is full of weeds and mud from people riding four-wheelers. These are anecdotal sayings and traditional knowledge, so if they feel there is a need for those things this would provide them an opportunity to do that. The corporations can't qualify right now for this work unless they enter into a cooperative agreement with a governmental entity that is qualified for it under the aquatic resource permit. This gives

another avenue for doing similar work. It is built into this bill that one of the first things the applicant must document is the conditions justifying the project and the applicant must be in communication with stakeholders, so the nearby communities. The aquatic resource permits for propagative research came from local communities saying that there used to be fish here and they want to have fish here again. But first the applicant will have to identify what the problem is and have a plan to fix that, and this would be the rehabilitation step for the stock itself.

[10:52:53 AM](#)

REPRESENTATIVE STORY commented that based on one of the letters received by the committee on traditional knowledge, it seems very valuable work that needs to be done and this would be an avenue on how to do that.

MR. LUHR responded that when it comes to need, it is dependent on the city, village, or town. He said he is originally from Petersburg, and it is 100 percent fishing. This bill would add a tool for the private sector to have it and not need it or need it and not have it. Without fish, his hometown would not be a thing and that is why he feels so strongly for HB 162 as a tool for good.

[10:53:53 AM](#)

CHAIR TARR opened invited testimony.

[10:54:08 AM](#)

CHARLES PARKER, Alaska Village Initiatives, thanked Representative Tuck for putting HB 162 forward and stated that his organization has been a supporter of this bill for years. He explained that this is based on traditional Tlingit culture and the story of Fog Woman. This is something that has been utilized in the Pacific Northwest to great success. Currently, Indiana has a limit of five kings a day, while in Ketchikan it is only three. In Sacramento 80- and 90-pound kings are being caught out of rivers that were once thought dead. New Zealand is also outperforming [Alaska] in king salmon and traditionally New Zealand didn't even have king salmon.

MR. PARKER said he likens it to an acorn analogy - if all the acorns fall off the tree a very small percentage of them are going to grow into seedlings, but if someone carefully plants

each one as it drops, three to five times as many are going to sprout. It is the same thing with salmon eggs - if a small amount of effort is taken at just the right time all it is doing is maximizing the natural return, so more of those eggs are going to hatch and they will hatch stronger and be more successful. It has been proven time and again over thousands of years.

MR. PARKER related that 18 tribal conservation districts, and dozens of watershed councils and regional nonprofits, are looking to implement similar programs. He said [Alaska Village Initiatives] has been working with the USDA to consider this a traditional practice and to fund this if Native corporations were then eligible. This would provide an avenue to allow the local folks to participate and work with the state to rebuild stocks, as well as to then provide federal support and funding to those same projects. Alaska Village Initiatives is excited to see this move forward.

[10:56:31 AM](#)

CHAIR TARR opened public testimony on HB 162.

[10:57:01 AM](#)

EMILY ANDERSON, Alaska Program Director, Wild Salmon Center, testified in opposition to HB 162. She stated that while she appreciates the sponsor's desire to boost fish populations in areas where numbers are down, rehabilitation using hatchery enhancement can have unintended consequences and make the situation much worse. While they are not perfect, Alaska's current fish enhancement and hatchery development policies seek to segregate wild fish from hatchery fish where possible to avoid interbreeding, competition, and harvest management problems. The current law also establishes safeguards to protect wild fish from disease and inbreeding. Alaska's hatcheries are managed by professionals who work closely with pathologists to prevent disease outbreaks and geneticists to ensure inbreeding is not occurring.

MS. ANDERSON said that while HB 162 requires the commissioner to issue a permit to determine that the project will not harm indigenous wild fish populations, there is no requirement to segregate hatchery fish from wild fish. The bill contains inadequate safeguards to prevent inbreeding or disease outbreaks and there are no requirements that a permit holder needs to have any qualifications at all except to demonstrate residency in

this state. From a wild fish perspective when dealing with weak stocks, more care is needed, not less.

MS. ANDERSON stated that Alaska's policy up to this point has avoided many of the pitfalls that hatcheries in the Lower 48 have experienced. In the Pacific Northwest hatchery production is used to enhance and rehabilitate salmon runs that have been devastated by habitat destruction, dams, and overharvest. Rather than supporting wild salmon recovery, hatcheries developed to mitigate damage to fisheries or to increase fish numbers while wild stocks are struggling to make escapement goals, have only continued to drive those depleted wild salmon populations to the brink. As a result, not a single listed salmon population in the Pacific Northwest has been delisted as a result of these efforts. In short, hatchery rehabilitation projects that seek to recover weak stocks may appear to be a tool for increasing fish numbers but over a relatively short time they decrease the productivity of wild salmon stocks, thereby decreasing the ability of wild populations to rebound. The Wild Salmon Center hopes that efforts will focus on habitat rehabilitation and strong mixed stock fisheries management.

[11:00:20 AM](#)

CATHERINE BURSCH related that in the early 1980s when she first started fishing in Prince William Sound, she toured the new hatchery. Hatcheries in Prince William Sound were originally started to mitigate the habitat differences that happened from the [1964] earthquake but ADF&G didn't stick to its policy, which was to get it going again and then back off. It became big business and now there are hatchery fish in 90 percent of the creeks of wild fish in Prince William Sound.

MS. BURSCH said it sounds easy to just put eggs in and "spin gold," but asked why the rest of the world hasn't benefitted from that. She knows seven people in their twenties who are starting their careers in commercial fisheries and they're going to Bristol Bay, not the Pacific Northwest. Nobody goes to a place that has hatcheries to be a commercial fisherman. It doesn't work. It has so many promises but in looking around the world it has never worked. This is not new technology; in Ireland they knew how to mix sperm and eggs in the 1700s. The habitat can't be destroyed and then the fish brought back by just mixing eggs and milt, it doesn't work. This isn't anything new on the slate. It is scary because it's taking a very well thought out hatchery system policy and opening it way up with the only excuse being "we don't have money anymore so we're just

going to let anyone run around and do this." The hatcheries are the death knell to the wild fish, and she is astounded at the lack of knowledge of what has happened in the past with hatcheries.

[11:03:52 AM](#)

TOM HARRIS stated he is a member of the Tongass Tribe where the Fog Woman story came from. He said the story explains a lot and can be found on YouTube by typing in "fog woman and Alaska traditional knowledge." Canadian scientists have documented it as being 14,000 years old.

MR. HARRIS stated that this is not hatcheries, it is in-stream incubation. He said the video shows evidence in the Great Lakes, Washington, Oregon, Idaho, California, and New Zealand of having successfully used this program. These are very small projects that in many cases cost less than \$100. The question that must be asked of the commercial fishing industry is an old question - feed it and it will grow, starve it and it will die. Our resources should not be expected to survive without help.

[11:05:36 AM](#)

BRIAN ASHTON related that Representative Tuck requested he dial in to answer questions related to his area of expertise, which is restoration of wild salmon. He said Mr. Rabung answered the questions well. Regarding testimony in opposition to the bill, he said that saying everything fits into hatcheries is highly inaccurate and that those testifiers have not read the bill. The restoration of wild stocks using these types of processes in the Northwest has been highly documented and effective. Last week an article talked about how sockeye salmon were restored in the Okanogan tributaries of the Columbia River watershed where there hasn't been salmon for over 50 years. The data is clear that this does work.

MR. ASHTON stated that regarding the process for getting a permit, ADF&G is not going to ignore if someone is not qualified to do this. The process requires that someone knows what they're doing and has done the work and received training. He said he suspects that the number of eggs allowed will relate to the applicant's capacity to do this so that no harm is done.

[11:07:33 AM](#)

REPRESENTATIVE VANCE recalled one testifier mentioning the segregating of the wild and the enhanced. She asked whether Mr. Ashton sees the need to add specific language or whether the department already uses its discretion in projects like this.

MR. ASHTON replied that the permit was written mostly with ADF&G input to reflect these issues of genetic integrity. Removing wild fish from the creek increases the survival of the gametes and then they are put right back into the creek. When the little fish swims and makes decisions as a fish it doesn't know it even left the creek. To differentiate that those eggs that were touched are different than wild stocks is something he challenges as a moot point because they are wild fish.

MR. RABUNG added that the person was talking about enhancement, for which there would be segregation because the intention of an enhancement project is to create harvestable surplus in addition to natural production; but this is rehabilitation of natural stocks so that's why it is intended to be right back where they came from. The most vulnerable state in a fish's lifecycle is from egg deposition until a fry. By collecting them, they are protected during that time when they are most vulnerable and where most mortality occurs because of drought, freezing, mudslides, or predation. Then they are put back [in the stream] and that is where the increase comes from. After that all things are equal. That is what this is designed to do and that is the difference. It is another important difference between enhancement and rehabilitation.

[11:10:25 AM](#)

JOSH VERHAGEN, Mayor, City of Nenana, testified in support of HB 162. He said this is not a new idea, is long overdue, and would help restore Alaska's ever declining wild salmon populations. Currently there is no policy or permit that allows for a proactive wild salmon restoration process other than escapement management and some research projects. What is being proposed in HB 162 doesn't currently exist - if a qualified experienced individual wishes to participate in wild restoration processes right now there is no legal process for them to do so. This doesn't mean that folks can go tamper with fish without any oversight, which is why it would have to be through a permitting process. If an individual cannot prove capability and competence, then no permit is given.

MR. VERHAGEN stated that the bill specifies wild salmon specifically because nothing is being done to modify them. This

is not a hatchery, or experimental, or enhancement, it is rehabilitation. All that is being done here is to increase their chance of survival by collecting eggs, using a moist air incubation process, reintroducing them right back to where they came from, and ensuring that the fertilization process is closer to 90 percent instead of 2 percent.

MR. VERHAGEN related that he grew up on the Tanana River and has watched fish populations dwindle and fish wheels and setnets go away. He said he likes this bill not only because of what it could do to help restore wild salmon populations but because it could potentially help with subsistence for tribal and nontribal members in the Nenana area. He has met with Mr. Ashton who is one of these qualified individuals and Mr. Ashton advocated for how this can also be used for educational purposes. He said he would like for students to see how this process works and he would like for this bill to become law.

[11:13:09 AM](#)

JESSICA WINNESTAFFER, Staff, Chickaloon Village Traditional Council, testified in support of HB 162. She noted she has worked for the Chickaloon Village Traditional Council since 2003. She started as a fisheries biologist and implemented moist air incubation on Moose Creek near Palmer. The council led an award-winning fish passage restoration project on Moose Creek, which was directed by traditional ecological knowledge from the elders. These elders also shared that traditionally Moose Creek had all five species of salmon and was a major source of sustenance for the tribe. Since the 1970s when ADF&G started counting fish in Moose Creek, there have not been all five species and they have been limited to only the lower three miles of Moose Creek. The council's fish passage restoration project bypassed manmade waterfalls at mile three on Moose Creek and allowed fish passage to the entire stream, which is 10-20 miles depending on which tributaries the fish go.

MS. WINNESTAFFER related that this successful fish passage restoration project was followed up with fish population rehabilitation. Chinook salmon were specifically targeted, and Mr. Ashton's moist air incubation system was used to collect chinook salmon from the mouth of Moose Creek and plant them in the upstream reaches at about mile eight. This was done through partnership with and permission from ADF&G and with ADF&G's oversight. This project was successful, utilized traditional knowledge, and was guided by the council's elders.

MS. WINNESTAFFER said the Chickaloon Village Traditional Council chose this system over ADF&G's major hatchery system because the council wanted to be in charge of this effort to restore fish passage and help reintroduce salmon to the upstream reaches. Also, it is low cost to buy and to operate and requires one less-than-full-time staff member for a few months. The juvenile salmon were planted in the eyed egg stage before they required nutritional supplement by a hatchery. This project was combined with curriculum at a tribal school and for other community groups and visitors.

MS. WINNESTAFFER stated that many Alaskan fish populations are under attack from past and present impacts by known and unknown threats, including development and climate changes. Alaskan fish need help to successfully survive and thrive for future generations. This bill will give an opportunity to aid in rehabilitation of natural, wild fish populations.

MS. WINNESTAFFER noted that the council's permit for chinook salmon was for 100,000 eggs, which was approximately 20 females and approximately 20 males for fertilizing the females. A limit of 500,000 chinook eggs would only take about 100 females for this project, which is a very small number and yet the benefit can be dramatic. She offered to give more information to people who have concerns about the process or are flat-out against it and stressed that this is not a hatchery system.

[11:19:06 AM](#)

REPRESENTATIVE ORTIZ asked whether the council's efforts have been concluded or are ongoing in terms of continuing to try to rehabilitate the traditional runs that were once in Moose Creek.

MS. WINNESTAFFER replied that the council did the project for five years, which was what ADF&G initially allowed and guided the council to do. The council has a small amount of funding to continue and would like to continue, but at this moment the council is waiting to see where the policies here go. Success has been measured. To identify if the juvenile eggs reared in the moist air system survived, the council collected ear bones, otoliths, for many years from carcasses that had naturally spawned and died in Moose Creek. The otoliths were sent to ADF&G's lab in Juneau to analyze. The moist air incubation system requires that the council thermally or in other ways mark the otoliths to identify them as being from its moist air incubation system. Two pairs of otoliths from the council's system have been found, so it is known that the eggs reared in

the council's moist air incubation system did successfully return to spawn and naturally die in Moose Creek.

[11:21:37 AM](#)

REPRESENTATIVE VANCE related that she read about the project on the internet and finds it fascinating. She inquired about the dollar amount associated with this five-year project that was completed.

MS. WINNESTAFFER responded that the council had one moist air incubation unit, which costs \$15,000-\$20,000 depending on how much technical support is received with it, and that one system was used for the five-year project. The council targeted chinook salmon and only did one species per moist air incubation unit as guided by the manufacturer. The brood stock was fished for and collected in late June and July; that generally took two staff members for two or three weeks in the field. The moist air incubation system was maintained until October, which required very limited checking each day. The staff time costs more than the unit, but over a period of five years it was probably in the range of \$5,000 per year for staff-time since it is very part-time once the eggs are in the incubator.

[11:23:55 AM](#)

PENELOPE HAAS, Kachemak Bay Conservation Society, testified in opposition to HB 162. She said the intent behind the bill is appreciated, but it is ill-conceived because it is long on fish propagation and short on assessment of impacts. This is a problem endemic to rehabilitation and enhancement efforts across Alaska because fish are produced but then the impacts are not looked at. For example, in the project discussed by the last testifier, it was [20] females and [20] males. In the commercial hatchery environment, a successful hatchery is going to have an 80 percent survival rate for those eggs and milt. What is being done there is prioritizing and selecting for those particular very narrow genetics and if this is done year after year it is going to significantly augment the diversity of the genetic stocks there. So, while it is starting with wild stocks, what is being done is narrowing the diversity of the stock, which is so important to the survival of those fish in that system.

MS. HAAS urged committee members, before voting, to look into the similarity to what is being proposed here and what is going on in Washington and Oregon and the failures there. Many listed

species of king salmon are in that area and rehabilitation efforts with similar methodology have been tried for over 10 years and it is failing. A big part of the reason is that the fish that are being selected end up competing with the diverse wild stocks because they are being selected for and it winds up with losing the whole stock. There needs to be clear concise language for what is going to happen with the habitat. Any rehabilitation effort needs to be coordinated with habitat efforts at the very minimum.

11:27:40 AM

LOUIE FLORA, Government Affairs Director, The Alaska Center, offered his organization's appreciation for looking at solutions for problem areas in Alaska's salmon returns. He suggested that HB 162 have more emphasis on habitat restoration. He said The Alaska Center shares the concerns expressed by others about the impacts of this and the potential for decreasing the genetic diversity of salmon stocks. Alaska's wild salmon populations already have many stressors impacting them, including increasing climate change, trawl by-catch, and other factors in the open ocean such as competition with international hatchery fish. This would be adding another potential threat to stock diversity and could have a negative impact down the line. He advised that thought needs to be given to the long term and the committee should hear from geneticists within ADF&G and the university.

11:29:48 AM

CHAIR TARR closed public testimony on HB 162 after ascertaining that no one else wished to testify.

11:30:22 AM

REPRESENTATIVE ORTIZ requested Mr. Rabung's opinion regarding the validity of the concerns expressed by those testifying in opposition to HB 162.

MR. RABUNG replied that the concerns are valid, which is why the department has come up with policies and guidance to guide this kind of work. Much of the concern about genetics is addressed with ADF&G's finfish policy - there is the minimum effective population number so there isn't too few; it's a mathematical calculation. The department requires a minimum number that must be used, and it's based on the species and the lifecycle. For pink salmon, a single year class, 400 individuals minimum would be needed to meet the minimum effective population. For chinook

salmon, which has five-year overlapping age classes, doing 40 fish a year for five years achieves that same mathematical combination. Chum salmon are 63 pairs per year.

MR. RABUNG specified that another part of that policy is to reduce the potential for domestication effects by not having more than one generation can go through a rehabilitation project. That is what defines a rehabilitation project, so the progeny from a project would not be spawned and their offspring put through it again. That would be prohibited by ADF&G's existing policy. That is how domestication effects, artificial selective pressures, start to take hold.

MR. RABUNG said he feels [the department] has the tools to address those concerns and they are valid concerns and that is one of the things that sets Alaska's program apart from the rest of the world. Regarding the concerns expressed about how it is being done down south, he would agree if things were being done in Alaska like they are done down south, and he would be testifying in opposition as well. That is not to say Alaska isn't trying to improve when there is new information.

MR. RABUNG said he believes [the department] has the tools in hand to make sure that these things have minimal, if any, negative impacts on natural productivity. Some of the commenters echoed what he has been saying - identify what the problem is. Part of the prerequisite in this bill is to identify what is causing the stock to be depressed and try to fix that and then try to rehabilitate by increasing the number of eggs that survive after spawning. Examples are the Buskin and Moose Creek projects. Perched culverts in the Buskin system that prevented coho from reaching spawning grounds were removed and the stream gravel was reconditioned. Moose Creek was reconditioned, and barriers were removed that had prevented fish from getting where they used to be. Then the work was done to bring back the fish. Those things are part and parcel of HB 162 as ADF&G sees it. Their comments are valid and are being addressed. There is no guarantee that if somebody applies for a project that ADF&G is going to permit it because if it doesn't meet the department's criteria to protect natural production the department is not going to be able to permit it.

[11:34:58 AM](#)

CHAIR TARR requested Mr. Rabung to send her the link to ADF&G's genetics policy.

MR. RABUNG agreed to do so.

11:35:13 AM

REPRESENTATIVE TUCK offered closing comments. He stated that HB 162 is basically maximizing natural returns of the natural species of that specific river, because it is known that chinooks are different between each river system. This does have the greatest impacts on wild salmon and the reason why it works is because it is small scale. It's small scale and dealing with a small window of opportunity for the success of those eggs to fertilize and move on. This is part of a total habitat rehabilitation program, it cannot work alone, it must have some sort of habitat rehabilitation along with it to ensure it succeeds.

REPRESENTATIVE TUCK stated that habitat rehabilitation can only be taken so far, nothing that can be done about the temperature of the waters and the temperatures are rising. A study done on chinook salmon looked at [temperatures between] 10.4 degrees Celsius, which is 50 degrees Fahrenheit, and 14 degrees Celsius, which is 57.2 degrees Fahrenheit. It was found that at 50 degrees Fahrenheit [during] moist air incubation salmon start deteriorating, and the success of those eggs dropped off until zero success at 57.2 degrees Fahrenheit. A study in 2010 took 30 females and spawned all of them the same day. The 122,256 eggs [were incubated] at 45 degrees [Fahrenheit], which is five degrees less than when they start deteriorating, and 113,700 eggs were successful, only a loss of 8,000. This is what this is about, it is using traditional knowledge that has been around for 14,000 years and applying it modernly so streams can be rehabilitated.

11:37:52 AM

CHAIR TARR stated that she is thinking about the fee, tightening up the qualified person language, and making it clearer about the habitat even though it seems inherent in the process. She asked whether Mr. Luhr's internship is ending soon.

MR. LUHR replied yes.

CHAIR TARR said she shared her thoughts on the bill so that Mr. Luhr would know about them in case Mr. Luhr's internship is over when the bill is next before the committee.

[HB 162 was held over.]

11:39:42 AM

ADJOURNMENT

There being no further business before the committee, the House Special Committee on Fisheries meeting was adjourned at 11:39 a.m.