

**ALASKA STATE LEGISLATURE
HOUSE SPECIAL COMMITTEE ON FISHERIES**

October 12, 2016
10:00 a.m.

MEMBERS PRESENT

Representative Louise Stutes, Chair (via teleconference)
Representative Jonathan Kreiss-Tomkins (via teleconference)
Representative Dan Ortiz
Representative Charisse Millett (via teleconference)

MEMBERS ABSENT

Representative Neal Foster
Representative Bob Herron
Representative Craig Johnson

OTHER LEGISLATORS PRESENT

Representative Cathy Munoz
Representative Sam Kito
Senator Dennis Egan

COMMITTEE CALENDAR

PRESENTATION(S): TRANSBOUNDARY ISSUES

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

BARBARA BLAKE, Special Assistant
Office of the Lieutenant Governor
Juneau, Alaska

POSITION STATEMENT: Presented transboundary issues, as an invited speaker.

RICHARD PETERSON, President
Central Council Tlingit & Haida Indian Tribes of Alaska
(CCTHITA)
Juneau, Alaska

POSITION STATEMENT: Presented transboundary issues, as an invited speaker.

FREDERICK OLSEN, JR., Tribal Vice President
Organized Village of Kasaan
Chair, United Tribal Transboundary Mining Work Group
Kasaan, Alaska

POSITION STATEMENT: Presented transboundary issues, as an invited speaker.

KIRSTEN SHELTON, Project Manager
McDowell Group
Juneau, Alaska

POSITION STATEMENT: Presented transboundary issues, as an invited speaker.

DAVID CHAMBERS, PhD
Professional Geophysicist
President, Center for Science in Public Participation
Bozeman, Montana

POSITION STATEMENT: Presented transboundary issues, as an invited speaker.

CHIP TREINEN, Vice President
Southeast Herring Conservation Alliance
United Fishermen of Alaska (UFA)
Fish Farm and Environmental Committee
Anchorage, Alaska

POSITION STATEMENT: Presented transboundary issues, as an invited speaker.

DANIEL SCHINDLER, PhD, Professor
School of Fisheries and Aquatic Sciences
University of Washington
Seattle, Washington

POSITION STATEMENT: Presented transboundary issues, as an invited speaker.

BEV SELLARS, Chief
Xat'sull First Nation
Chair
First Nations Women Advocating Responsible Mining (FNWARM)
Soda Creek, British Columbia
Canada

POSITION STATEMENT: Presented transboundary issues, as an invited speaker.

JACINDA MACK, Council Coordinator
Secwepemc Nation
Member

First Nations Women Advocating Responsible Mining (FNWARM)
Soda Creek, British Columbia
Canada

POSITION STATEMENT: Presented transboundary issues, as an invited speaker.

HEATHER HARDCASTLE, Director
Salmon Beyond Borders
Co-Owner, Taku River Reds
Douglas, Alaska

POSITION STATEMENT: Testified on transboundary issues.

JILL WEITZ, Campaign Manager
Salmon Beyond Borders
Douglas, Alaska

POSITION STATEMENT: Testified on transboundary issues.

GUY ARCHIBALD, Coordinator
Mining and Clean Water
Southeast Alaska Conservation Council (SEACC)
Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

JACKIE PERRY
Meyers Chuck, Alaska

POSITION STATEMENT: Testified on transboundary issues.

DORIS CELLARIUS, Affiliate
International Union for the Conservation of Nature
Prescott, Arizona

POSITION STATEMENT: Testified on transboundary issues.

DAVID PERRY, Commercial Fisherman
Meyers Chuck, Alaska

POSITION STATEMENT: Testified on transboundary issues.

ERIC FORRER
Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

CHRISTINE NIEMI
Douglas, Alaska

POSITION STATEMENT: Testified on transboundary issues.

LUKE BROCKMANN

Auke Bay, Alaska

POSITION STATEMENT: Testified on transboundary issues.

KATHRIN MCCARTHY

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

LARRY WEST, Naturalist

Boat Company

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

LAURA STATS

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

MEREDITH TRAINOR, Executive Director

Southeast Alaska Conservation Council (SEACC)

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

BRETT COLLINS

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

MELANIE BROWN, Member

Naknek Tribe

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

MARGO WARING

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

MARC WHEELER, Owner

Copa Coffee Café

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

ANN FULLER

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

CHRIS MILLER, Commercial Fisherman

Member, Juneau Douglas Alaska Department of Fish and Game
Regional Advisory Committee

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

EMILY FERRY, Deputy Director

Southeast Alaska Conservation Council (SEACC)

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

ELIAS FERRY, Elementary School Student

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

JON WARRENCHUCK, Senior Scientist

Oceana

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

JAMES SCHRAMEK, Hydrologist

Wrangell, Alaska

POSITION STATEMENT: Testified on transboundary issues.

JOEL JACKSON, Vice President

Organized Village of Kake

Kake, Alaska

POSITION STATEMENT: Testified on transboundary issues.

AARON ANGERMAN, Tribal Administrator

Wrangell Cooperative Association

Spokesman, Stikine Tribe

Wrangell, Alaska

POSITION STATEMENT: Testified on transboundary issues.

KEVIN MAIER

Juneau, Alaska

POSITION STATEMENT: Testified on transboundary issues.

SHAYNE GUTHRIE, Student

University of Alaska Southeast (UAS)

Metlakatla, Alaska

POSITION STATEMENT: Testified on transboundary issues.

BEN KIRKPATRICK, Habitat Biologist

Haines, Alaska

POSITION STATEMENT: Testified on transboundary issues.

ACTION NARRATIVE

10:00:00 AM

CHAIR LOUISE STUTES called the House Special Committee on Fisheries meeting to order at 10:00 a.m. Representatives Stutes (via teleconference), Millett (via teleconference), and Ortiz were present at the call to order. Representative Kreiss-Tomkins (via teleconference) arrived as the meeting was in progress. Also present were Representatives Munoz and Kito and Senator Egan.

PRESENTATION(S): Transboundary Issues

10:03:08 AM

CHAIR STUTES announced that the only order of business would be a presentation of transboundary issues followed by invited and public testimony.

10:04:28 AM

BARBARA BLAKE, Special Assistant, Office of the Lieutenant Governor, directed attention to the committee packet, and the statement of cooperation ["APPENDIX I to the Memorandum of Understanding and cooperation between the State of Alaska and the Province of British Columbia executed November 25, 2015 by the Honorable Bill Walker, Governor of Alaska and the Honorable Christy Clark, Premier of British Columbia Between The State of Alaska Departments of Environmental Conservation, Fish and Game and Natural Resources And The Province of British Columbia Ministries of Environment, and Energy and Mines"]. This statement of cooperation (SOC), she said, was developed over the last 18 months based on the feedback from the engagement of numerous entities including: stakeholders, tribal representatives, federal, and state officials. The SOC provides specific directives, which include: collection of baseline water quality data on transboundary waters and development of a joint monitoring program to help identify any future changes in water quality or ecosystem health; development of joint opportunities with British Columbia (BC), Canada, to facilitate the participation of all state, federal, and tribal entities in the permitting and environmental review process of transboundary projects; ensure that the state, federal, tribal and public entities have access to current information on the environmental performance of closed and operating mines, as well as other significant commercial developments, in transboundary regions; engage with British Columbia (B.C.) to address issues of

broader concern to include government oversight of the design and maintenance of tailing facilities. The signing of this document, she stressed, represents the beginning point for this ongoing, collaborative work. The Office of the Lieutenant Governor acknowledges the necessity to hold further meetings, such as today's hearing, to further the effort. To that end, regularly scheduled, monthly meetings are being held to address the provisions set forth in the agreement. She reported that Lieutenant Governor Byron Mallott has committed continued support of other efforts that are involved with the protection of Alaskan water quality, as related to the protection of the transboundary rivers, including initiatives that are area specific.

[10:08:21 AM](#)

RICHARD PETERSON, President, Central Council Tlingit & Haida Indian Tribes of Alaska (CCTHITA), said this issue relates on a personal level as many tribal members track their historic lineage to specific rivers and share a concern for the headwaters of the watersheds from which they sustain their customary and traditional ways of life. He said it is a collective concern, encompassing the existence of all Southeast Alaskan residents, indigenous and not, who depend on the water resources. The rivers provide an economic as well as spiritual sustenance. Currently the state is in an economic pinch and all of Southeast, and parts of the Gulf of Alaska, depends on being able to harvest the seafood spawned in the watersheds of this region. He acknowledged that tourism also provides jobs and a host of opportunities. The recent Mount Polley mine tailings breach, endured by the Canadian counterparts of Alaska's Natives, has tribal members terrified that it will happen here. Such an occurrence would preclude the Natives, and others, from sustaining their historic way of life, he stressed, and characterized the devastation the British Columbia (B.C.) mine breach created acquainting it to the detonation of an atomic bomb. The same company, using the same design for retention of tailings, is operating in Alaska's Southeast region. Any development that poses the risk of such a high level of destruction is not an activity that many can support, he opined, and offered that his stance is typically pro-development. However, the stakes are too high and a failure, on the scale of Mount Polley, would decimate the fishing industry and our way of life in Southeast, he stressed. The Central Council of the Tlingit and Haida Indian Tribes of Alaska (CCTHITA) has taken the lead for monitoring the river systems through funding provided by the Bureau of Indian Affairs (BIA). Concerns exist

due to the state not stepping up to the plate to obtain baseline monitoring, which is crucial information to be gathered. The central council has hired an environmental consulting firm and gathers data on a monthly basis from a number of watersheds. The state should assume the leadership of this endeavor, he suggested. The CCTHITA recently hosted a number of meetings to facilitate interactions between U.S. and Canadian tribal leaders in Ketchikan and Juneau. During the course of the meetings, CCTHITA lodged a request with the U.S. Environmental Protection Agency (EPA) to match the BIA funds, supporting the continuation of the baseline water analysis research. He cited the International Treaty to Protect the Salish Sea [Vancouver, BC, Canada, September 21, 2014] as a ground breaking example of what could be used as a model to protect Southeast. Mr. Peterson voiced the need for state to invoke actions including: taking an instrumental position in water quality monitoring; take measures for protecting endangered salmon runs; strengthen working relations between agencies; and acknowledge/champion the need to honor the Native's government rights. He shared an anecdote to illustrate the dismissive actions he recently encountered during meetings with industry officials regarding the condition of the Unuk River. He pointed out to them that the CCTHIA has identified a depletion of salmon stocks on the Unuk River, and considers the run to be in great danger. The officials appeared to be frustrated with the questions and concerns posed by the Alaskan tribal leaders. When questioned about a specific salmon run, the dismissive response was that the run is strong on the Canadian side; despite the Unuk being a shared watershed. "It's all the same water," he pointed out. The signing of the statement of cooperation (SOC) is a first step, he stressed, and expressed optimism for having the document refined and honed through continued input. He underscored the need for the tribal sovereign government to be recognized as a peer of other government entities, not as stakeholders. He recounted the various connections that the CCTHIA is cultivating with tribes of the immediate area, to strengthen relationships, as well as meetings in Washington, D.C., to unite with the First Nations Tribal Assembly. He expressed specific concern with the SOC stating that, economically, the B.C government has everything to gain and Alaska nothing. The negative economic impacts that would need to be shouldered by Alaska, in the event of a mining catastrophe, could be huge, as well as the socioeconomic costs to the future generations of Alaskans, he finished.

[10:20:22 AM](#)

REPRESENTATIVE MUNOZ inquired about the amount of funding being provided by the BIA, and whether it is being provided in the form of a multi-year commitment.

[10:20:28 AM](#)

MR. PETERSON responded that the BIA has made contributions on a year to year basis, not as a multi-year contract, and funding has been in the neighborhood of \$80,000 to \$100,000, annually. He offered to provide further details to the committee.

[10:21:43 AM](#)

FREDERICK OLSEN, JR., Tribal Vice President, Organized Village of Kasaan, Chair, United Tribal Transboundary Mining Work Group, commented on the current economy and stock market and how there is an illusion of the current lifestyle and standard of living. Companies are driven to do better and better every year, which is not sustainable, he opined. In reality, we live in a pristine, temperate rainforest, where the tribes have lived their way of life for thousands of years and never considered they owned the land, but rather co-exist in a way with the animals, while also acting as stewards. The Natives are now akin to the canaries that were once used in the coal mines, and stated as follows:

We are singing for our survival. Meanwhile as we're speaking, right this second, the Tulsequah Chief mine [British Columbia, Canada, at the confluence of the Taku and Tulsequah Rivers] continues to pollute the Taku River watershed.

MR. OLSEN continued that we live at a time of transition to either move toward the future and live in dome cities and eat pills for food, he predicted, or awake from the illusion and take a different approach. Figuring it out may not be easy, but neither was going to the moon and "people without cell phones went to the moon," he said. Approach matters, he offered. When President Ronald Reagan removed the solar panels from the White House it was a major event that was probably not covered by the news media; however, our world is much different now from that small action. Similar to approach, words matter, he continued. If something carries the moniker of a "tailings storage facility" it merits different attention and is treated differently than a lake of poison that's held back by sand. Mount Polley had a lake of poison held back by sand, which was supposed to last forever but failed in less than 20 years.

Equivalent retention engineering is what is being used/proposed at other Canadian mining facilities that are many times larger than Mount Polley. The frustration of being downstream from these large scale mines has brought the majority of Southeast Alaskan's to rally in opposition. However, the real fight is being waged across the border and it is important to unite with Canadian counterparts, who are also adverse to such development. Mr. Olsen said efforts to prop-up the failing oil industry is futile, opining that oil is old news and represents an industry in decline. He conjectured that patents for electric vehicles have been bought by controlling entities, which will only release the patents when their companies have benefited from the sale of the last cup of oil. The issue is not a Native issue, but rather a human health issue, requiring intervention and assistance from the state legislature. He posed rhetorically, "Is our way of life, our very lives, just a cost of doing business; is this what we've come to?" It's important to identify who it is that supports mining which uses these methods on this scale, he stressed and suggested that advocates are people bought and paid for by the industry, as well as outsiders to the region who would be unaffected by the consequences of a failure. Such people may only be in the area for the 50 year life of the mine, whereas the generational populace will continue to live with the outfall for hundreds of years. Nor do these supporters have constituents to which they must answer. He acknowledged that a popular illusion exists that mining jobs are the primary/only economy available in the area, which is not true. Further the illusion extends that being against a particular mine, for whatever reasons, acquaints to being against all mining. Again, he assured, this is not accurate and such accusations need to be dispelled. A 2012 Canadian statistic, indicates that for every \$1 million invested in the oil and gas development, 2 jobs are created, but for the same investment in clean energy 15 jobs are created. Recalling the Mount Polly disaster, he noted that it's unfathomable to consider not being able to harvest fish, but for the people of that area getting no fish is a reality that will continue into the foreseeable future. An independent panel, convened specifically to address the disaster, provided an official directive that business as usual should not be allowed to continue. However, within one year the Mount Polley mine has resumed full operations and the lake of poison may have breached a second time, due to a recent rain storm, he reported. He pleaded for the legislature to assist in obtaining an International Joint Commission (IJC) referral. The IJC acts as the governing body for the [International Boundary Waters Treaty Act, R.S., c. I-20, s. 1; January 11, 1909], agreed to and

signed by the U.S. and Canada to address this exact type of issue and ensure that the two federal governments would work together. The most familiar aspect of the named act (Act) is Article IV, dealing with harm, or potential harm, inflicted by one party on the other. Today's hearing is focused on potential harm, however, harm has already occurred with the Tulsequah Chief mine. Continuing, he said Article IX allows that, from time to time, these articles may require review. Alaska has never been a party of an IJC referral, he pointed out, and suggested that, given that it's hundred years-plus since the Act was signed, perhaps it's time for Alaska to be referred to, and receive oversight from, the commission. Although some might refer to this as federal overreach, he opined that such a view should be considered code for "the polluters or the people that are looking the other way because they have some interest in this mine." He suggested that federal under-reach is actually occurring and recalled the severe pollution that resulted in the river fire [Cuyahoga River, Cleveland, Ohio, 1969], despite the fact that rivers don't typically catch fire, and resulted in the passage of the [Clean Water Act]. We need the federal government to uphold its fiduciary trust responsibility to its tribes but also to attend to the very health of all its citizens. The statement of cooperation (SOC) is nice, he said, but stressed that this is an international situation. The SOC agreement is limited in scope, he cautioned, and offered the analogy of a community forming a neighborhood watch but understanding that there is still a need to have police.

[10:37:20 AM](#)

MR. OLSEN pointed out that a myth also exists that up-front financial assurances will provide a level of protection to assure a good end result, but no amount of money can reclaim a lost way of life. He queried whether the Last Frontier isn't something to protect, versus paving over. He beseeched the committee to figure out the transboundary mining issue stating:

There's two kinds of Alaskan's: there's Alas-kans, and there's Alas-kan'ts. And I believe ... that the majority of good people are Alas-kans, and we figure it out. We don't look for a way over ... [ph] over in Alaska and we can't do that. No, we're an Alas-kan, and we do it. ... [The transboundary issue is] not going away, it's going to get bigger and bigger and bigger. ... It's not when will a disaster happen, but rather how bad. ... For the Native people it is not about fish and eating calories, it's about this

fish, from this river, caught by these people, in this way, and prepared in a certain manner that has been done for centuries by our people. I would never sell you this [held up a jar of personally canned salmon], I might give this to you, but I would never sell this; this is our way of life.

10:39:38 AM

REPRESENTATIVE ORTIZ highlighted the recent rededication of the Tribal Long House, in Kasaan, as an exceptional, notable event for the community.

10:41:09 AM

KIRSTEN SHELTON, Project Manager, McDowell Group, reviewed a commissioned report, contained in the committee packet, titled "Economic Impact Analysis, Southeast Alaska Transboundary Watersheds, Executive Summary," dated October 2016, prepared for SalmonState, by the McDowell Group. The study encompassed the Taku, Stikine and Unuk River watersheds with a preliminary analysis of the Nass and Skeena Rivers, which, although not transboundary rivers, also impact Southeast Alaska. She offered the caveat that healthy eco-systems are more valuable than the economic impacts that can be ascribed to them, thus the study does not measure intrinsic values or non-user values, but is limited to the economic activities connected to jobs, labor, and indirect and induced impacts as money flows through the communities in the region. Additional challenges also came into play in formulating the report, such as crediting the appropriate watershed for spawning an untagged fish, or activities that tend to overlap all areas such as tourism, and other economically supported endeavors. Given these restrictions, she said the best available data was utilized to produce some insights into the significant economic impacts for the region.

10:43:18 AM

MS. SHELTON paraphrased from the a slide to present the bullet point review of the economic findings related to the Taku River watershed, which read as follows [original punctuation provided]:

Fishermen receive an annual average \$1.9 million in ex-vessel value for harvests of Taku River salmon.

An average \$4.2 million in first wholesale value of Taku River salmon is processed in Southeast annually.

Taku River Chinook and coho salmon are responsible for an average \$2.7 million in sport fishing-related expenditures.

Approximately \$80,000 worth of Taku River salmon is harvested annually in the personal use fishery.

Hunting expenditures total \$65,000 on average in annual spending for hunting in the watershed.

Visitor industry activity tied to the Taku River watershed generates an estimated \$16 million in visitor expenditures annually.

The City and Borough of Juneau receives an annual average of \$55,000 in tax revenue from private property in the watershed.

MS. SHELTON continued that the Taku River watershed contributes about \$33 million to the economy of Southeast, with a labor value of approximately \$13 million.

[10:44:12 AM](#)

MS. SHELTON paraphrased from the a slide to present the bullet point review of the economic findings related to the Stikine River watershed, which read as follows [original punctuation provided]:

Commercial fishermen are paid an annual average of \$2.1 million in ex-vessel value for Stikine River salmon.

Seafood processors generate an average \$3.5 million in first wholesale value annually processing and packaging Stikine River salmon.

An average \$4.2 million per year is expended on sport fishing for Stikine River Chinook and coho salmon.

An average \$100,000 worth of Stikine River salmon is harvested annually in the personal use fishery.

Hunters spend an annual average of \$200,000 hunting in the watershed.

Tours in the watershed and watershed-associated visitor industry activity in Wrangell generate an average \$1.2 million in expenditures by visitors to the Stikine River.

Private property in the watershed accounts for approximately \$15,000 in tax revenue each year to the City and Borough of Wrangell, Alaska.

MS. SHELTON stated that the Stikine River represents an economic footprint of roughly \$13 million, income from labor of nearly \$6 million, and that over 100 jobs are associated with the river. She pointed out that many more residents may earn a portion of their annual income based on work that can be attributed to the river.

[10:45:11 AM](#)

MS. SHELTON pointed out that the Unuk is unique to the other two watersheds, being more isolated, but certainly significant. She then paraphrased from the a slide to present the bullet point review of the economic findings related to the Unuk River watershed, which read as follows [original punctuation provided]:

Fishermen are paid an annual average \$460,000 in ex-vessel value for Unuk River salmon harvests.

An annual average \$890,000 in first wholesale value is attributable to Unuk River salmon.

Sport fishing for Unuk River Chinook and coho salmon generates \$880,000 in sport fishing-related expenditures annually.

Hunters spend an annual average of \$13,000 on hunting activity in the watershed.

The visitor industry generates an average annual \$6,300 in visitor expenditures associated with the watershed.

The Ketchikan Gateway Borough benefits annually from an average \$11,000 in property tax revenue from Unuk River watershed private properties.

MS. SHELTON summarized, stating that the Unuk River watershed contributes about \$2.5 million to the economy of Southeast.

[10:45:46 AM](#)

MS. SHELTON provided a slide to summarize the economic impact of the three systems combined, across all sectors, to state that the total average annual employment is 400, the total labor income is approximately \$20 million and the overall economic activity totals \$48 million. However, the value of the watersheds, she stressed, relies on the renewability of the resources. Managed appropriately, this economic value will continue in perpetuity. Thus, an extrapolation was made to project the value over 50 years and \$1.2 billion could be realized from the three watersheds combined. In response to Representative Ortiz, she said the full report is available at the McDowell Group website.

[10:49:00 AM](#)

DAVID CHAMBERS, PhD, Professional Geophysicist, President, Center for Science in Public Participation, said that mining activities pose a number of potential environmental impacts that vary from a de minimis scale through an entire spectrum that includes cumulative impacts on water quality. The ultimate impact is a tailings dam failure. He explained that he and a colleague have been studying historical data; information that government agencies have not routinely tracked or compiled. The scope of the report covers tailing dam failures from 1936 through the present, and he directed attention to the study handout, contained in the committee packet, titled "GAPS IN THE NEW (2016) CODE REGULATING TAILINGS DAMS IN BRITISH COLUMBIA." The intent of the undertaking has been twofold: to identify means to prevent future failures; and to provide compensation and mitigation measures for the losses incurred by any future failures. The first of two data analysis slides, contained in the handout, titled "Increasing Severity of TSF Failures Globally 1936-2015," provided a bar graph plotting the number of failures during that span of time, as well as to indicate the severity. The second slide, titled "Active TSF Failures (N=125) By Mode," provided a bar graph to illustrate the causes of the failures, as well as the severity. After a detailed analysis of

the data, he summarized the findings from each graph respectively, stating:

Although we're seeing the total number of accidents decrease, those two serious categories are still increasing at a relatively constant rate. ... With the exception of erosion and to some extent structural, it's all pretty much the same ... You really can't point your finger at any one failure mode, ... there are a number of them, [and] basically all of them are significant. What that says to us is that there's some more fundamental issue going on here with these failures. We can't just say, "Well, people don't know how to design them for earthquakes or erosion."

10:57:25 AM

DR. CHAMBERS referred to the seminal report on the Mount Polley tailings storage facility (TSF) breach, conducted and compiled by what has been deemed the expert committee. He opined that several profound findings have surfaced from the report. First, tailings dam fail at a rate approximately 10 times that of water supply reservoir dams. There is no technical reason for this to happen, as a dam is a dam regardless of what it is retaining, he said, and suggested the possibility of fundamental flaws in the engineering plans. The second finding is that safety, not economics, should be the primary consideration in tailings dam design and operation. It is apparent, he said, that economics clearly drives the design and operation of tailings dams, which is in contrast to the safety first approach used as the primary design and driving mechanism for the operation of water supply dams. "We just can't afford not to take this recommendation forward," he stressed, and said:

Basically, the way the system works is a company will say ... "I've got \$40 million to build a dam; you build the best dam you can build me for \$40 million." When the real question or approach should be: "We want to build a dam in this spot, what's it going to cost us to build a safe dam in this position." That, unfortunately is not the way it's done.

DR. CHAMBERS presented the report that he and his colleague published, earlier this year, titled "Root Causes of Tailings Dam Overtopping: The Economics of Risk & Consequence, Lindsay Newland Bowker & David M. Chambers," to present the major

conclusions. First, the number of catastrophic TSF failures is increasing at a constant rate, because more large TSFs are being built and operated by companies under financial stress, with economic drivers dictating production/expense level decisions. The increased failing rate parallels the increase in developments designed to extract from low grade ore bodies, requiring more and bigger tailings impoundments. The research found that, worldwide as of 2010, the failures have cost the public about \$600 million per year. It is important to note, he said, that there is no required funding mechanism, other than owner responsibility, in place to cover the cost of catastrophic failures; government requirements are non-existent, although the U.S. imposes restrictions on the operation of supertankers and pipelines. Thus, a precedent for requirement has been established, but has yet to be applied to mining operations.

[11:01:37 AM](#)

DR. CHAMBERS turned to the handout page titled, "The Cost of Catastrophic Tailings Dam Failures," which contains updates to include the failure at Mount Polley, as well as to update the dollars values to 2014 levels; values that equate to 2016 levels. He pointed out the \$543 million associated with Mount Polley, and stated that, thus far, there is no indication that businesses or First Nations have been compensated for the impacts they have experienced from the disaster. To illustrate the concerns held for Alaska, regarding the British Columbia (B.C.) developments, he provided a map titled, "Southeast Alaska Transboundary Watersheds with Large-Scale Mining Activities," keyed to indicate projects that are either proposed, undergoing environmental review, under development, or currently operational. The New Polaris Tulsequah Chief, Big Bull, and Brucejack are traditional, underground mines that have been operating in the watersheds and are extracting relatively high-grade ore. He described the other mines shown on the map as low grade copper mines, which require processing of large volumes of ore bodies. Further, he pointed out that copper mines inherently have acid drainage problems. Thus, these types of mines propose novel risks for the transboundary river areas and, given the historic performance of copper mines and the sheer size of the operations, it's extremely critical to require stringent management practices. He directed attention to a picture of the Red Chris TSF, taken this year, illustrating the scope of the facility and the dam area, to state that it was designed by the same engineers of the Mount Polley dam. It is designed to remain wet, with water on it, in perpetuity, because it's retaining acid generating material. The wet closure is

used to minimize the probability of acid drainage. However, the Mount Polley expert review panel clearly stated that no wet closures should be employed and alternatively advised the practice of perpetual treatment. If the Red Chris dam breaches, the water will flush all of the retained liquids out, just as happened at Mount Polley. A dry facility breach would result in a landslide, offering the possibility for recapturing the contents. Finishing, he stressed the need to have compensations in place to cover a catastrophic accident, as well as taking every advance measure to avoid a failure. There is no real compensation for the damage that will occur, but by having financial mitigation levels in place, the companies may be motivated to follow appropriate engineering practices. Alaska should also be requesting that B.C. follow best practices for these developments, which are still lacking despite the recent revisions of the B.C. codes, as demonstrated by the Red Chris closure.

[11:08:32 AM](#)

CHAIR STUTES said the prospect of what can happen is very disconcerting.

REPRESENTATIVE MUNOZ asked how the impacts of the Mount Polley breach are being managed by the Canadian government.

DR. CHAMBERS responded that the clean-up has attempted to remove a portion of the tailings. However, the damage to the local environment is extensive and, to his understanding, untreated water is being discharged into the watershed.

[11:10:03 AM](#)

CHAIR STUTES clarified that the \$543 million, reported as the clean-up costs at Mount Polley, does not take into consideration the economic factors of the area, and asked for an inclusive estimate.

DR. CHAMBERS responded that an inclusive estimate would range into the billions.

[11:11:32 AM](#)

REPRESENTATIVE ORTIZ noted that, under review, the wet storage design has been advised against, and yet the Red Chris and other proposed developments are utilizing that design without correction/intervention. He asked for clarity whether the wet

storage engineering results in a much higher rate of failure than others.

DR. CHAMBERS responded that the rate of failure may not be entirely due to the wet storage, as much as the lack of safety factors engineered into the design, which he stressed, should be mandated and insurable.

11:14:30 AM

CHIP TREINEN, Vice President, Southeast Herring Conservation Alliance, United Fishermen of Alaska (UFA), Fish Farm and Environmental Committee, paraphrased from a prepared statement, which read as follows [original punctuation provided]:

Currently I reside in Anchorage, but I began my fishing career as a deck hand on a crab boat nearly forty years ago out of Representative Stutes home town of Kodiak. Since that time, I've fished a variety of species, gear types and areas in Alaska from [Southeast (SE)] to Bristol Bay. I presently hold salmon seine permits in Kodiak and SE, a salmon drift permit for Bristol Bay and herring seine permits in multiple areas.

For those of you who are unfamiliar with the organization, UFA is an umbrella group that consists of 37 fishing organizations as well as individual members who fish in state and federal waters off of Alaska's coasts. Members participate in nearly all types of fisheries and operate in vessels that range from skiffs to factory trawlers. I've been on the Board of Directors of United Fishermen of Alaska (UFA) since the early nineties and presently chair UFA's Fish Farm and Environmental Committee whose responsibilities include water quality issues such as those related to mining development, operation and regulation. Eleven of UFA's member groups represent salmon fisheries in Southeast Alaska that are partly dependent on salmon habitat in the rivers of British Columbia. Many of the other groups at the UFA table also rely on SE salmon fisheries and have a stake in maintaining healthy habitat for salmon in transboundary watersheds. For example, crab boats and crews that tender Bristol Bay salmon in the early summer end up in SE for the peak harvests. Consequently, UFA has been long engaged in the effort

to minimize risk to salmon stocks from transboundary watershed mining development. UFA letters are included in the packet and can be referenced to note our position and request to elevate the issues to the Boundary Waters Treaty and to engage with Canada through the International Joint Commission (IJC).

First of all, thanks go out to Representative Stutes and the rest of the committee for holding this hearing and allowing the public to express their concerns about proposed mining developments across the border. It is gratifying to note that the Walker administration has prioritized the issue and that Lt. Gov. Mallott has engaged with officials in British Columbia to address the risks to Alaska. And, it is especially gratifying to see that that [U.S. Senator Lisa] Murkowski has been incredibly responsive to UFA's concerns on these Transboundary watershed mining issues and has gone directly to [U.S.] Secretary of State [John] Kerry several times now and that [U.S. Senator Dan] Sullivan and [U.S. Representative Don] Young have also signed on to a letter to Secretary of State Kerry urging him to take action on this issue through the IJC.

On a personal note, I was living in Kodiak and had a salmon seine operation in 1989 when the Exxon Valdez ran aground in Prince William Sound. During that summer, the Kodiak salmon fishery was cancelled. While some vessels worked on oil cleanup and others fished in un-oiled areas, there was a great deal of social and economic disruption that has taken years to overcome. The market impact reached through all of Alaska's salmon fisheries. Our salmon were viewed by consumers as oil-tainted just when many farmed salmon operations were coming online to fill the void. It took years and sustained marketing efforts by [the Alaska Seafood Marketing Institute (ASMI)] and others to overcome the setback and fallout from the oil spill. Then, when the legal dust cleared nearly twenty years later, the jury verdict was reduced to a tenth of the original amount--the immediate lesson being that the legal system can't be relied on to protect fishermen or mitigate damages. The underlying moral of the story is that an "ounce of prevention is worth a pound of cure". The utmost care needs to be applied when developing these transboundary mining

projects in order to minimize downstream--Alaska--risks.

Thank you again, Chairperson Stutes and the House Fisheries Committee, for holding this hearing and providing the opportunity to testify. I hope this testimony and that of others will encourage this committee, the rest of the legislature and the administration to support elevation of this issue to the State Department so that binding agreements can be made through the Boundary Waters Treaty and the IJC. I believe that this is the best way to promote due diligence on the part of mine developers, operators and regulators to assure the safest mine development and operation possible. UFA will continue to press for action that will protect fishermen, communities and the state from both catastrophic and cumulative effects of transboundary watershed development.

11:22:20 AM

DANIEL SCHINDLER, PhD, Professor, School of Fisheries and Aquatic Sciences, University of Washington, outlined his work on the science of Alaska's watersheds, utilizing data that has been collected since 1946. The goal is to understand how to best assess and quantify the workings, characteristics, and points for protection of salmon producing waters. The transboundary watersheds represent a vast and interconnected ecosystem for Southeast Alaska, ranging from the open Pacific Ocean to the estuaries, rivers and headlands. These waters connect the habitat as they flow from the mountains to the ocean, the fish connect the habitat as they return upstream, and people make the connection moving in both directions. The economic value of the Southeast Alaska fisheries is estimated at over a billion per year. Although the entire fishery is not at risk due to the transboundary mining, it's important to note that the investment required to realize the current economic return is less than one percent; a huge profit margin. Thus, the stakes are economically high, as well as high with regard to the intrinsic total worth of the ecosystems. He provided slides, available in the committee packet, of three samples from Bristol Bay to illustrate the important characteristics of the sockeye salmon returns and habitat relationships, which are at the fore in assessing risks to fisheries. Considerations include the hierarchy of the fish habitat, where the fish dwell during their life span, and how their need to return to the specific, various tributaries where they were spawned. It is important to include

considerations of the habitat, not only on a large and small scale for each of the rivers, but on a very fine scale as well, to encompass the long term impacts on the health of fish. The first slide provided a graph of the salmon returns to the Bristol Bay watersheds for the last 50 years. Per year returns are not necessary comparable, he explained because a poor run in one system is compensated for by increased runs in other, related systems. That is, he stressed, the returns wax and wane independently but the value of each system should not be diminished due to the variance of a given years contribution. The overall performance of each river is what creates a sustainable fishery. The Nushagak is one of the poorest studied watersheds, and yet supports one of the biggest Chinook salmon returns in the world. One of the outstanding questions revolves around being able to determine what tributaries or portions of the Nushagak system produce salmon. The salmon are caught primarily in the same estuary where they all begin their upstream journey, but mapping their final spawning point has presented a difficulty. The answer has been found in the otoliths. By removing this ear bone and using a laser to map its chemistry make-up and matching it to the chemistry of the water where the fish was spawned. The scientists can then create a map of the watershed to illustrate the salmon incubation areas, he said, and directed attention to the map, provided in the packet, titled, "Chinook Salmon Production in the Nushagak River." He pointed out the highlighted spawning areas of the salmon spanning a number of years. The river is a mosaic of ever shifting habitat for these salmon. In order to protect the abundant fisheries the entire watershed network requires protection, he stressed. As a final example, he directed attention to a tiny stream supporting coho and sockeye salmon. The coho remain in the stream for two years, prior to exiting for their maturing years in the ocean. While in the stream, their primary diet is dependent on availability of sockeye salmon eggs. He provided an image of Bear Creek, labeled "2008: PIT tag antenna arrays," to discuss the movement of coho smolt between the warm and cold water areas of the stream to feed and facilitate digestion. The movement covered miles each day and illustrates the importance of the habitat variations required for healthy development of the fish. Applying this consideration to the transboundary rivers it is necessary to keep in mind the variance in temperature required for the watershed to be productive. The image of Mount Polley provides an indelible image of the catastrophic effects that a mine can create. However, it's also important to keep in mind the death of the habitat and watershed by one thousand cuts. The infrastructure necessary to support a large scale, open pit

mine, prevents a river from being able to express the variances and options in the habitat necessary to support healthy fish stocks. He projected a picture of the Chena River, near Fairbanks, Alaska, [available in the packet] to point out how an unimpeded river carves serpentine throughout the landscape, thus creating habitat with the necessary variances for rearing salmon. The illustration shows a highway built across the serpentine area, altering the ability for the river to continue to migrate across the landscape, as well as impeding the ability for fish to access critical rearing areas. He pointed out that bridges or culverts may have been provided, but the salmon population will be effected. It's necessary to consider what is at stake, he underscored, and to ask what are the risks, including the cumulative effects of the necessary infrastructure to support the mines, and pointed out that tailings dams will be present forever. The Boundary Waters Treaty (Act, previously cited) was created as a mechanism for fair and credible assessment. British Columbia has a conflict of interest in participating in a risk assessment of these projects, he opined, and the treaty [via the International Joint Commission] should be invoked to avoid that conflict.

[11:35:29 AM](#)

BEV SELLARS, Chief, Xat'sull First Nation, Chair, First Nations Women Advocating Responsible Mining (FNWARM), said, as Chief of her community when Mount Polley breached, she found the British Columbia government to be very difficult to deal with in the aftermath, and especially difficult regarding topics of mining concerns. Premier Christy Clark, despite major objections from indigenous peoples and the general public, has pushed to open a number of new mines and expand others. The B.C. government has documented nearly 2,000 abandoned mines, many leaching chemicals into the environment, and yet they still support new developments. She called for B.C. to clean-up what exists prior to allowing any new developments or expansions. She reported having challenged mining executives to consider mining garbage dumps, prior to furthering development of pristine areas, and, to her surprise, they agreed. The Fraser River is home to her community but has been on the endangered list for many years due to the pulp mines and mineral mines being allowed to dump their waste into the river. Historically, the river was magical when the fishing season returned and the fish-camps were a social, cultural hub, she recalled. However, 30 years ago changes settled in and the salmon runs waned. When the community leaders reported the decline to the B.C. government they were informed it was a normal occurrence. As traditional fisherman

of the area, however, the elders knew it wasn't natural. She said she has refrained from eating Fraser River fish for 15 years, and any she has seen are infested with worms and aren't edible. The loss of the rivers fishing tradition is also a cultural loss for generations to come. Knowing that B.C. is allowing the development of transboundary river mines, causes her to have concern for Southeast Alaska. The traditional territory of her People is covered by mining claims, both large and small scale. Many salmon runs are already nonexistent having been completely wiped out. Following the Mount Polley disaster she said:

We had to chase down the government and mining company to demand what was going on. And it was a struggle and a hard fought battle ... to get a memorandum of understanding (MOU) with the B.C. government. Even with that [MOU], ... we still had to chase them down for information. And then they wanted us to sign a confidentiality agreement about Mount Polley. Before we signed the MOU they said, "Well, you have to sign a confidentiality agreement." And we said, "No ... the public has a right to know what's going on at Mount Polley." ... Our communities ... had to fight to even get water for the community of Likely. ... Originally water was supplied, after the breach, ... for only about a week, and then they said everything was fine, "Oh, the water is good, it's OK to drink." And yet it was a God awful color. ... Over the major objections of both indigenous communities, the Mount Polley mine has now fully reopened.

CHIEF SELLARS reported that the MOU the tribe signed with the province has proven to be meaningless. She recommended, based on her lifelong experience dealing with the B.C. government, that Alaska obtain a solidly written, country to country agreement, and strongly cautioned against putting trust in the provincial government of B.C. The International Joint Commission (IJC), would be the best route, she opined. Politicians need to think in terms of seven generations ahead, she suggested. The First Nations are continually accused of slowing the economy or preventing development of jobs, but as Natives we're fighting for everyone's grandchildren, including those of the people who are mining at the expense of the environment. There are two economies that are clashing, she pointed out and said:

One grows and walks on the land, and swims in the waters. This is the economy that has sustained generations in this land, and hopefully will continue to sustain all of our grandchildren. And the other economy; where the profit is the bottom line. ... That's a dangerous economy when there are no safe guards in place.

CHIEF SELLARS reported having attended a meeting, in Lima, Peru, with representatives of indigenous people from ten South American countries. A tribal chief of an indigenous tribe in Equator shared how his community had been offered a "ton of money" to allow a mine to be put a mine in and he told the mining company, "You eat your money soup, and we'll eat our banana soup, and we'll see who survives."

[11:44:28 AM](#)

JACINDA MACK, Council Coordinator, Secwepemc Nation, Member, First Nations Women Advocating Responsible Mining (FNWARM), opened with a quote from Lila Watson, an aboriginal Native of Australia, who said:

If you have come here to help me, you are wasting your time. But if you have come because your liberation is bound up with mine, then let us work together.

MS. MACK said that's why we're here, because our long term health and environment and way of life is dependent on healthy clean watersheds, healthy land, and healthy air. The way of life, and dependence on the land is a primary concern and commonality of the Southeast and British Columbia (B.C.) indigenous tribes and the public. The area impacted by the Mount Polley breach is the birthing waters of the areas salmon and one of the largest nurseries for the watershed. Within the watershed, the Fraser River comprises many tributaries and other systems. To say that "we're all downstream" couldn't be more applicable, she stressed, and praised the efforts shown by Southeast Alaskans to protect the transboundary rivers, which has provided a motivational interest among the tribes and residents of B.C. The rapid declines in the fisheries near her community are evident, and she reported having witnessed the fishery, once alive with thousands of salmon, decimated to virtually nothing. In her lifetime she has witnessed the demise of this once huge, healthy, viable, salmon, river. She translated her tribes name as People of the Water, and said that traditionally the root of every girls name was the Native word

for water to represent how women, like the water, are givers of life. That connection with the water is integral to their Native culture identity and responsibility to the land. She echoed Chief Sellars' call to protect the watershed for future generations. She underscored the effects of the aftermath of the Mount Polley breach, stating that the losses are being absorbed by the communities with enormous socio-economic and cultural impacts. Further, altercations have arisen due to the need for some Peoples to relocate, no longer to inhabit their historic, tribal locales due to the compromised environment.

MS. MACK expressed dissent regarding the inevitability of mining, and that there is nothing that can be done. Contrary to this commonly held idea, she said there is much that can be done to prevent a catastrophic disaster, such as Mount Polley. The connection that the transboundary rivers create between Southeast Alaska and B.C. provides an opportunity to unite around the responsibility for using every available tool to protect the environment. The International Joint Commission (IJC) is needed, she said, and agreed with the auditor general's written report calling for the provincial leadership of B.C. to be removed from its position of conflict as the mining industries self-appointed, self-monitoring agency. The province lacks laws requiring a disaster plan and financial assurances. Thus, the disaster at Mount Polley established a precedent, which is to implement an adaptive management and assume a "figure it out as we go" approach. Such an approach is not good enough, she stressed, and called for legally binding measures to hold B.C. and the mining companies accountable. Canadian mines around the world have been committing environmental crimes for many years, she proclaimed. Further, she pointed out that the indigenous tribes of B.C. inhabit an unenviable locale where they've had to deal with mining since the 1860's. British Columbia is essentially the mining capital of the world, and her community lives in the heart of that area, thus, the residents will be continuing to deal with the issues of what is essentially an on-going gold rush. Mount Polley continues to operate, using the same tailing facility that failed, while reparations have yet to be made to the effected communities. She finished, stressing that these actions indicate the need for international intervention.

[11:51:36 AM](#)

CHAIR STUTES commented that the issue warrants conversation, then announced a lunch recess until 12:45.

11:52:21 AM

The committee took a recess from 11:52 a.m. to 12:50 p.m.

12:50:28 PM

CHAIR LOUISE STUTES called the House Special Committee on Fisheries meeting back to order at 12:50 p.m. Representatives Stutes (via teleconference), Ortiz, and Kreiss-Tomkins (via teleconference) were present at the call to order. Also present were Representative Kito and Senator Egan.

12:51:49 PM

HEATHER HARDCASTLE, Director, Salmon Beyond Borders, Co-Owner, Taku River Reds, said, foremost to any other tasks, her personal, primary responsibility is to protect the salmon runs, thus, sustain her home and ensuring fish and opportunities for the generations to come. Salmon Beyond Borders is not attempting to stop development, stop mining, or be disingenuous toward another country, she assured, it's simply an effort to make sure that these rivers remain sustainable long into the future. As the downstream recipients of any outfall, Alaska doesn't stand to benefit from the developments and, thus, has no seat at the table to discuss the proposed projects and ensure that best operation practices are being followed. She said it is tiresome and demoralizing that, after three years of effort, little progress has been made to have these discussions, and yet the British Columbia (B.C.) mining projects are continuing to move along at an accelerated pace. The discussion today provides a ray of hope and carries the message that Alaskans must keep speaking out with one voice. It is not hyperbolic, or extreme, to ask that the U.S. government go to bat for Alaska. The Canadian government also needs to be engaged to create enforceable binding protections that extend to B.C. and Alaska. These are world class, globally significant watersheds, as well as our home. The state of cooperation (SOC) signed last week is one step in the process, but it is not the "end all be all," and such an impression should be suppressed. The SOC was signed by Lieutenant Governor Byron Mallott and the Honorable Bill Bennett, Minister of Energy and Mines and Responsible for Core Review. She paraphrased a recent quote from Mr. Bennett, which read as follows:

We've proven [by] this agreement, and all [the] work we've done over the last three years, that there's no need for the International Joint Commission. Neither

B.C. nor Alaska want, [nor] need, to get their respective federal governments involved in a situation they can manage themselves.

MS. HARDCASTLE reported having met with Mr. Bennet many times, and respectfully offered that his statement is "flat out inaccurate." Alaska is not at all giving the impression, or has the intent, for the SOC to be indicative that the issue is being handled by the state and B.C. The management of the transboundary rivers are an international issue and the only way to handle the situation jointly is via binding enforceable protections that will be formed through international agreements. The International Joint Commission (IJC) referral is the next best step, an action that Alaskans have been requested over the last three years, as well as testified to here today. She urged the committee to impose their power to listen to Alaskans and influence the administration to that end.

[12:58:46 PM](#)

JILL WEITZ, Campaign Manager, Salmon Beyond Borders, reported that transboundary river concerns have gained support and unified Southeast residents ranging from fishermen and tribal leaders to business owners and tour operators throughout the region. Over 12 municipalities and 15 of 19 federally recognized Native tribes have joined the effort. Additionally, Salmon Beyond Borders has received over 7,000 letters from Alaskan residents and public entities requesting the involvement of Alaska's Congressional Delegation and the federal government, in order to address the issue on an international level. She expressed appreciation for the recent accomplishments made by the Walker administration and the signing of the statement of cooperation (SOC); however, apprehensions exist due to the poor track record held by British Columbia (B.C.) [regarding mining oversight], which is well documented and easily researched. The transboundary river issue is an international problem and requires international solutions, she stressed, and maintained that the stakes are too high for Alaska to remain on the periphery and depend primarily on the SOC for protections.

[1:02:08 PM](#)

GUY ARCHIBALD, Coordinator, Mining and Clean Water, Southeast Alaska Conservation Council (SEACC), offered a comparative perspective on the Kerr-Sulphurets-Mitchell mine proposed on the Unuk River and the local Green's Creek mine operating in Hawk Inlet. The recent update on the Kerr-Sulphurets-Mitchell mine

proposal describes an operating level with an extraction rate of 400,000 tons of ore per day from several open pit mines on the same project. The Greens Creek mine averages about 2,400 tons a day. Prior to the expansion proposal, the Unuk River operation called for the treatment and release of 119,000 gallons of waste water per minute into the river. The waste water will be, in some constituents, over 100 times the aquatic life criteria. It basically calls for turning that section of the Unuk River into a large mixing zone. As the reports of catastrophic disasters to date indicate, these mines represent a significant threat. He reiterated the statement made by Dr. Shindler that the death of a watershed is caused by one thousand cuts. Systems are fairly resilient to an occasional large, disruptive impact, which is how the salmon runs have remained at high levels despite natural seismic and volcanic activities around the Pacific Rim. Nature's response to a phenomenal disaster is to rebound at a stronger level in preparation for the next occurrence. This is similar to the human body. When a person breaks a bone or tears a muscle, the healing response creates a stronger bone or larger muscle mass. The most damaging action to a watershed is a constant, insidious, low level stress causing continuous erosive effects. Again, it is not unlike the human body under continual stress. The nervous and digestive systems will eventually display the degradation. He said scientists cannot explain why certain regional salmon runs are currently declining or are in absentia. It's a good bet, he opined, that the reason is not one identifier but a combination of many things. Adding the stresses of these mines to these watersheds could be the straw that breaks the camel's back, he cautioned, and requested that the legislature pass a joint resolution to specifically request an International Joint Commission (IJC) referral be made by the U.S. Department of State. The Congressional Delegation has been clear in this ask, but the Executive Branch has been less so, and suggested that a clear message from the legislative body is in order. Finally, he said there are 273 transboundary waterways throughout the world and up to 40 percent of the world's population lives in a transboundary basin. Dozens of treaties, compacts, and agreements exist between nations, including indigenous nations. Thus, learning models exist and opportunities are available, for Alaska to draw upon and establish enforceable governmental standards.

[1:06:49 PM](#)

JACKIE PERRY described the semi-subsistence life style that she enjoys in Myer's Chuck, accessible via boat when weather

permits, about one hour from Thorne Bay and the nearest store. The healthy waters provide the seafood which is the main dietary staple of the area. She expressed concern for the continued health of the watersheds to allow her son and future generations to live a similar life style, and urged the legislature to take steps to engage the U.S. government in an effort to do all that is possible to protect the waters.

[1:08:46 PM](#)

DORIS CELLARIUS, Affiliate, International Union for the Conservation of Nature, recounted that she recently learned about the Canadian supported, mining operations, and how they pose a pollution threat to the waters and salmon of Southeast Alaska. She echoed the sentiments of the previous speakers who have urged the state to engage the U.S. Department of State and obtain a referral to the International Joint Commission (IJC) in order to obtain enforceable protections. The testimony is shocking, she said, to hear how the Native communities have lost their salmon, the collusion of the mining companies to not mitigate or clean up sites, and the lack of response by the Canadian government. It is apparent that Alaska must lead the way and get the IJC involved to create strong, acceptable standards. As a resident of Arizona, she said she enjoys eating healthy Alaska salmon products and cares about the people living along the rivers who depend on a subsistence life style.

[1:12:13 PM](#)

DAVID PERRY, Commercial Fisherman, described the the area of Meyer's Chuck where he lives. He said he fishes the salmon runs provided by the Unuk River to the south and the Stikine River to the north, with contributing salmon stocks from the Bradfield Canal. He said he depends on Alaska's elected officials to pursue and protect these watershed resources and work with the government of British Columbia (B.C.), via the U.S. Department of State, and ensure that these huge projects are engineered to perfection to avoid a catastrophic result. Meyer's Chuck has historically provided important fish products to the U.S. since it was founded and the future for that activity needs to be protected. He urged the committee to take hold of the situation and consider its magnitude.

[1:14:52 PM](#)

ERIC FORRER recalled his years working in Alaska as a commercial fisherman, which included working on the Exxon Valdez oil spill

[March 24, 1989] clean-up effort. He considers the fish and the rivers to be his spiritual home and said traditionally the King salmon is the symbol of life, as it connects the environment and nutrients of the deep oceans to the trees that live on the mountains. There is no species of plant or animal which does not benefit from the presence of the King and other salmon, he said. The genie in the bottle of the transboundary mines is the chemistry and physics of mining, he opined. Once the land is broken, no power, technology, or litany of corporate promises will be able to rectify the devastation. The question is not can it be done responsibly but whether the price of the inherent loss is worth the economics of the mines. As the downstream recipients of any negative fallout, and with British Columbia (B.C.) as the beneficiaries, the loss is not worth it to Alaska. An instructive case is that of the Faro open pit mine [Yukon Territory, Canada]. By using the corporate veil technique, the companies ensured that the clean-up of the mine rested entirely in the hands of the Canadian public, with initial costs expected to run into billions of dollars and follow-up costs estimated at about three million per year for 500 years, as reported by a Yukon news source. Transboundary mines often result in major losses to big development, or result in losses that are analogous with killing the goose that laid the golden egg, as can be witnessed in the loss of salmon based ecologies from Sacramento [California], to the Yukon. The Pacific Coast north from Sacramento once hosted runs of King salmon that ran in the millions, now reduced to a remnant few thousand. Further, the Yukon River may be a current illustration of transboundary river issues, considering the discovery of how minute amounts of heavy metals affect the survival rates of salmonids. The Faro's 40 year history of dumping heavy metal waste into the Yukon drainage makes the mine a suspect in the ongoing mystery of the decline of salmon productivity in the Yukon. He urged the committee to defend the ecology and culture of Alaska's rivers. On a human time scale, mining is for the moment and fisheries are forever, he emphasized.

[1:18:30 PM](#)

CHRISTINE NIEMI said Alaska has been her home since 1976, and described her extensive family and their dietary reliance on the availability of Alaska seafood. She noted the existence of an abandoned mine on the Taku River which has yet to have anyone step forward and take on the responsibility for correcting the polluting effluent that is leaching into the river. Additionally, Mount Polley has resumed operations despite their

unsafe practices. She reported that, when living in Spokane [Washington], restrictions were placed on the consumption of the natural inland sockeye runs. Although it was deemed harmless if consumed only once per month, it raises the question of why anyone would want to consume it at all. A mine in Butte Montana left a poison lake that is deadly to migrating birds. Historically, mining corporations enter an area, make money on the resource, eventually abandon the site, and leave the expense and effort of cleanup to the public. Alaska cannot afford to lose its fisheries. She stressed the need to have a binding, enforceable agreement between the U.S. government and the Canadian government and urged the legislature to pursue that goal.

[1:20:58 PM](#)

LUKE BROCKMANN recounted the role that salmon have played in all aspects of his life growing up in Southeast Alaska. Even today, as a young adult, everything in his life, he said, revolves around salmon and salmonids. "These mines scare me, and they scare me a lot," he said, and stated his hope of one day running a guided, sport fishing business on the Taku River or possibly commercially fishing the drainage. However, if the Tulsequah Chief, or the other proposed mines, go into effect and experience failures similar to Mount Polley, all fisheries on the river will come to a screeching halt. People rely on these rivers for food and support, he stressed, and Canada is putting these fishery resources at risk now and for future generations. He expressed that he does not take this issue lightly and urged the legislature to do whatever is possible to "make sure that our rivers do not go the way of the Fraser. Long live salmon," he finished.

[1:24:17 PM](#)

KATHRIN MCCARTHY reported having worked on various environmental issues in Southeast Alaska, since she moved here in 1965, and offered her first impressions of arriving and viewing the Mendenhall Glacier area. Since that time, the glaciers have visibly receded, which she acquaints with climate change issues, and might also effect the health of the salmon runs. Continuing to allow and accept the need for large scale, open pit, ore mines means there will continue to be huge tailing disposal sites. Viewing the video of the Mount Polley mine disaster, watching a sea of toxic waste gush into Canal Lake, and hearing the minister talking about mitigation and clean-up procedures was enraging, she said. There is no means to clean-up and

reverse the deadly effects of a spill on that magnitude, ever, she predicted. The Red Chris mine is being proposed by the same company that built Mount Polley, utilizing the same design. Alaska must use every resource to block the permitting and operation of these proposed transboundary mines, she finished.

[1:30:24 PM](#)

LARRY WEST, Naturalist, Boat Company, paraphrased from a prepared statement, which read as follows [original punctuation provided]:

Thank you for considering Alaskans' concerns regarding mines in the headwaters of transboundary rivers, their current impacts on downstream marine life, and the threats they present to subsistence for Alaska residents and to the health of our economy.

Only a few major rivers that originate across the border in British Columbia flow through the Coast Range into Southeast Alaska. They are the largest, most important freshwater systems in our region. Each carries all five species of salmon and provides habitat for the region's greatest diversity of flora and fauna.

Open-pit and underground mines already operate in the headwaters of the largest of these rivers, the Taku and the Stikine, and additional mines are envisioned or under development in others. Recent toxic waste escapements that resulted in catastrophic impacts to similar watersheds in southern British Columbia, and nearly 60 years of toxins still leaching from a closed mine in the Taku headwaters - a mine that developers are seeking to reopen - call particular attention to the dire need to create binding international law that ensures the short- and long-term health of Alaska's waters and riparian and marine habitats.

There are many examples of cooperative, binding international agreements that prevent the degradation of watersheds worldwide. One glaring exception is North America, and it's time for that to change. It must change or Southeast Alaska faces a significant threat not only to residential quality of life, but to the region's most important industries, fishing and tourism. The United States and Canadian federal

governments, the State of Alaska and the Province of British Columbia must secure enforceable environmental and financial protections for our transboundary rivers.

Thank you for representing us, your constituents, in this matter!

[1:33:45 PM](#)

LAURA STATS praised the important scientific information provided by the invited witnesses: [Dr.] Schindler's expertise on what is necessary for the growth of salmon in perpetuity; and [Dr.] Chamber's clear picture of the risk that mining companies pose through unsafe practices. The First Nation's speakers, [Chief] Sellars and Ms. Mack, shared their firsthand experience dealing with the mining companies and the public's inability to bring forward any litigation, she reminded, and stressed the importance for committee members to note these facts. The Southeast is at a critical point in time to save the salmon runs, she opined, and referred to specific points chronicled in the book [KING OF FISH: The Thousand-Year Run of Salmon by David R. Montgomery, Westview Press, 2003], expecting that each member has received and read the distributed copies. Finishing, she urged the committee to contact the U.S. Department of State to solicit national support, acknowledged the work taken up by Lieutenant Governor Mallott, expressed support for a referral to the International Joint Commission (IJC), and stressed the need to advocate strongly on behalf of preserving healthy salmon stocks in Southeast.

[1:38:48 PM](#)

MEREDITH TRAINOR, Executive Director, Southeast Alaska Conservation Council (SEACC), reported on her previous ten-year tenure working in British Columbia (B.C.) as a manager of a mineral reform campaign focused on slowing the expansion of mines situated on the Alaska-Canada border. She emphasized the points testified to by [Chief] Bev Sellars and Jacinda Mack, regarding the B.C. government's stance and the predisposition of Premier Christy Clark to continue the development and expansion of open pit, mega mines. In the spring of 2013, Premier Clark released a B.C. jobs plan that was focused on opening or expanding, 17 new or existing mines. Construction has since begun on 8 of those mines and 7 existing mines have received expansion approvals. She expressed appreciation for the work that has begun, including the first step of signing the

statement of cooperation (SOC) to bring attention to the impact of these mines on Southeast Alaskan communities. It is also necessary to reinforce that Alaska cannot expect B.C. to hold our interests in trust, to protect our waters, and defend our way of life. Now is the time to engage the federal government, she underscored, and said an International Joint Commission (IJC) referral is the best means for ensuring protections against the ramifications of the B.C. mines, and encouraged the committee to continue its work towards that outcome.

[1:42:26 PM](#)

BRETT COLLINS postulated on what he has learned from traveling and living in various areas of the world, including British Columbia, to wit: Looking after the environment is not the responsibility of one country, government, or community, but must be undertaken via uniting all concerned entities. Unfortunately, not everyone has the interests of the environment on their list of priorities. He opined that mining companies worldwide put forth a minimum of effort to meet environmental standards. History shows how companies typically find it more convenient to pay forgiveness fines, following an accident, versus implementing and practicing protective measures. Having worked in a mine in Australia, he reported two overbearing observations: mine officials view the environment as something to be abused; and concerns held by the indigenous tribes are to be ignored. Under the assumption of these attitudes, shortcuts are often taken resulting in accidents, which he predicted will continue to occur. He said:

I implore the committee here to help protect the environment, the rivers of fish, and, in extension, the economy ... More specifically, please put pressure on the Walker administration to create legally binding protections for the watershed, the rivers, and the salmon of British Columbia and Alaska. ... We need transnational laws to regulate these companies.

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MELANIE BROWN, Member, Naknek Tribe, identified herself as a commercial fisherman and an advocate for fish, which includes being an active affiliate of Salmon Beyond Borders. With food as a major motivational factor in her life, she described her good fortune for being able to harvest subsistence food from two miraculous locations: Bristol Bay, and Juneau. The available

bounty of salmon, and other wild food harvests, depends on a supportive environment. The food speaks for itself, she said, and represents a true, sharable wealth. She acknowledged that some people are motivated by a type of wealth that is not edible nor does it feed the soul; a motivational nourishment that she finds difficult to understand. She urged the committee to find a means to elevate the transboundary river concern to the federal and international level and to continue to strengthen the work that has been started under the statement of cooperation (SOC).

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MARGO WARING, urged the legislature to take the strongest possible steps to advocate action through the International Joint Commission (IJC), and insist on either no open pit mining or the application of the highest environmental standards for mining developments; certainly standards beyond anything that British Columbia (B.C.) has ever imposed. There are no promises or guarantees via financial bonding that could compensate Juneau, Southeast, Alaska, America, or the world, for the possible devastation that open pit mining and its imperilments can create. Southeast Alaska is all about its environment and the resources that the Tongass [National Forest] provides. She finished, stating:

We're counting on you to help us protect these values.
We really urge that you take that responsibility seriously in advocating for us.

[1:52:12 PM](#)

MARC WHEELER, Owner, Copa Coffee Café, noted that his café makes most things from scratch using ingredients raised in Alaska. He said it's important to his company to be able to market Alaskan products that use Alaskan salmon. For marketing to be successful, he stressed the importance for the salmon products to be perceived as pure and natural. Anything that threatens this perception represents a major economic threat, he underscored.

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ANN FULLER questioned the term "enforceable protections." She shared an anecdote regarding a visiting friend who, upon hearing Ms. Fuller's worries for the Tulsequah Chief mine, responded that in Pennsylvania the worry is for all of their waterways.

The concern revolves around a system which allows mining companies to operate and poison the rivers of the Earth. She shared an example with the committee of a mine owner in Virginia who has accumulated years of unpaid fines and yet continues to operate, polluting the water, and making a profit. She urged the state to be very serious about obtaining federal support and obtain the necessary assurances that Alaska's interests are protected.

[1:56:48 PM](#)

CHRIS MILLER, Commercial Fisherman, Member, Juneau Douglas Alaska Department of Fish and Game Regional Advisory Committee, paraphrased from a prepared statement, which read as follows [original punctuation provided]:

Once upon a time, there were salmon in the Thames, Seine and the many major inland arteries of mainland Europe. They are gone.

There were once salmon swimming in the Charles River near Boston, and the many tributaries along the Eastern Seaboard. They are gone.

The salmon on the West Coast, used to choke the mighty Columbia River and the many rivers and streams that line the Western edge of the North American Continent. They too are almost gone.

This is not a fairy tale, it is historical non-fiction; all of these places have one thing in common, human development in its myriad of forms. Laws protecting salmon and their natal streams go back to the Magna Carta, and have been overlooked and unenforced for just as long.

I have been to the Tulsequah Mine site and seen first-hand what 60-plus years of acid mine drainage leeching into a river looks like. I have spoken with Tlingit First Nations people, who remember as children playing in the streams and tributaries of the Tulsequah full of Coho salmon. They are now almost gone.

The Territory of Alaska was purchased in large part due to our wealth in salmon. Salmon were the resource that the populace of our territory coalesced around to vote to become a state. We have a robust and revered

constitution that gives us simple and steadfast guidance to protect our resources to the maximum benefit of our peoples now and in the future.

The Tulsequah Mine acid leeching and the Mount Polley Dam collapse are warning signs of a lack of oversight, regulation, and stewardship by the Canadian government and mining industry. It is paramount that we as a state hold the B.C. government to the highest possible standards to protect our interests, and theirs, in the rivers that flow across our shared border, that are protected under the Boundary Waters Treaty of 1910.

The Transboundary Rivers of the Taku, Stikine, and the Unuk are the last remaining undeveloped rivers on the West Coast of North America that sustain natural runs of all 5 species of Pacific Salmon. At present they are intact ecosystems that will continue to support salmon indefinitely. If we fail to recognize and accept the historical antecedents of salmon in Europe and the rest of the Continental United States, I fear salmon may become an allegory in a future fairy tale.

[1:59:47 PM](#)

EMILY FERRY, Deputy Director, Southeast Alaska Conservation Council (SEACC), encouraged the state to seek assistance from national and international communities in order to ensure that British Columbia (B.C.) assumes the appropriate responsibilities. Everyone shares the same concerns regarding transboundary mines, with the looming question of how the situation can best be addressed. The B.C. government is fully vested in the mining endeavors, she cautioned, precluding the ability to entrust them to protect Alaska's interests. National and international players are needed to bear witness and assist in holding B.C. responsible and maintain clean watersheds affecting Alaska. She pointed out that, although she is employed by SEACC, she considers her most important job to be as a mother, which is also one of the driving forces behind her interest in ensuring clean water and protecting fish stocks.

[2:01:13 PM](#)

ELIAS FERRY, Elementary School Student, said that, as an eight year old, when he grows up he would like to still be able to fish.

[2:01:56 PM](#)

JON WARRENCHUCK, Senior Scientist, Oceana, said Chinook salmon stocks up and down the western seaboard have been on the decline for 50 years and are in serious trouble. Adding increased development pressures to the mix, will only excerpt more pressure on this fragile species. Alaska maintains sustainable stocks, he said and pointed out that Canada doesn't elevate sustainable fishing to the same level, choosing instead to focus support on industrial endeavors, as evidenced by the number of salmon farms that populate the coastal areas of British Columbia (B.C.), as well as the clear cutting of the rainforest and mining developments. It is okay to ask for help, he said, and posited the engagement of international bodies through the U.S. Department of State. The statement of cooperation (SOC) is a good beginning, but more experienced entities should be approached for help as well, he finished.

[2:04:10 PM](#)

JAMES SCHRAMEK, Hydrologist, said he retired from his profession at the U.S. Forest Service, but was a participant in the British Columbia (B.C.) hydro dam project. Thus, he said, he has experience in transboundary issues, as well as an understanding of the scientific methods associated with developing allowable standards and risks. He urged the committee to obtain a firm grasp of the proposed projects, as an offset of the plethora of information that has been brought forward regarding what is at risk, and said, "We had assurances some time ago [that] Mount Polley was going to be a solid [dam]." Many of the scientific approaches contain envelopes of uncertainty and can be tenuous. Close scrutiny is necessary, he stressed, and expressed hope that the people whose values are at risk be given a voice not just at the onset but throughout the entire process. He cautioned that, as issues arise, it is necessary to have a means for adjustments in order to avert the disaster everyone is hoping will not happen.

[2:06:20 PM](#)

JOEL JACKSON, Vice President, Organized Village of Kake, said concern revolves around the known lack of safe mining practices demonstrated by the British Columbia (B.C.) government. Kake is basically a Native community where the way of life and livelihoods are dependent on salmon, and has been for for hundreds of years. Stating agreement with previous witnesses, he said seeing mines opened at the headwaters of important

salmon watersheds is incomprehensible. The salmon have been declining for years now and if anything happens to any of the watersheds there will be negative impacts on future harvests. He said he chooses to live in a smaller community where water represents life and the people depend on clean water to live. Engaging the international community will be necessary to forward this issue, he said, or it will all be a waste of time. There is no amount of compensation that would make up for losing the salmon.

[2:09:51 PM](#)

AARON ANGERMAN, Tribal Administrator, Wrangell Cooperative Association, Spokesman, Stikine Tribe, said the Stikine community, about 2,400 people, survive almost solely on both the habitat and the bounty of the Stikine River. Nearly 50 percent of Wrangell's adult workforce is tied to maritime or fishing industries. Tourism is the other dominant industry, with the Stikine River fishing opportunities as a main attraction. Commercial fishermen have identified the Red Chris mine as the biggest threat of all time. Given the make-up of the job market and the reliance on subsistence lifestyles, the community cannot afford a mining failure of any kind, whether minimal or on the level of Mount Polley. A complete tailings failure would be the biggest disaster that Wrangell has ever faced and no amount of funding would be able to mitigate the situation. To date, Wrangell has yet to be consulted by the Red Chris, or British Columbia (B.C.) mining officials, to share risk and benefit perspectives. Communications initiated from Wrangell to the B.C. government have been largely ignored, he reported. He urged that an International Joint Commission (IJC) referral be lodged, as the next logical step.

[2:12:42 PM](#)

KEVIN MAIER paraphrased from a prepared statement, which read as follows [original punctuation provided]:

I'm here as an Alaskan citizen, a sport fisherman, and a father to encourage you to do everything in your power to stop these mines on our Transboundary rivers. As Alaskans, we have nothing to gain and everything to lose.

Although I've been living in Juneau since 2004, I grew up on the Olympic Peninsula in Washington. Like many

of my generation from the Pacific Northwest, my salmon story is marked primarily by loss and sorrow.

Like a lot of kids from the Northwest of a certain age, I learned the virtue of patience sitting in the back of my grandparent's boat. As we motored around the Straits of Juan de Fuca watching stout trolling rods bounce to the bead of Abe and Al Flashers, I patiently hoped they might bend to something more than the banana weight and provide a little excitement. My two boys - who are now 5 and 9 - are (slowly) learning these same lessons as we spend days in the summer bobbing around in our little skiff hoping to fill the freezer.

The next year will be especially poignant for me, because when I was my older son's age my grandparents hung up their rods, sold their boat, and stopped fishing, a sad but necessary response to diminishing returns on their trolling efforts. As the stocks dwindled in the 1980s, the regulations got complicated, the fish too few, and my grandparents lost the heart to go. I lost the only anglers in my extended family.

Nobody can point to one single factor that led to the dramatic declines of salmon stocks in the Northwest; it is more a death by a thousand cuts than a single catastrophe. But experts all agree, fish need healthy water, intact habitat, and humans to pay attention to these simple needs.

At ten, all I knew was that we weren't going fishing anymore. I managed to find the sport again in college; and for the last twenty years, fishing has been integral to my life outside - and for the last several years, my income as well, as I work as a fly fishing guide here in the summer. I've never made up for the lost time of my youth, however, and I always pursue salmon with a sense of gratitude and above all caution.

I've spent most of my adult life doing my best to insure we leave enough water and habitat for the fish, pushing back against threats to both. As we can see in the extraordinarily expensive efforts to restore runs on the Columbia, it is easier to preserve habitat

and adopt a cautionary approach when we still have salmon returning to intact watersheds. The threats posed to salmon habitat by the Transboundary mines are serious, as we saw in the tailings disaster at the Mount Polley mine, and as you've heard here today.

[2:16:32 PM](#)

SHAYNE GUTHRIE, Student, University of Alaska Southeast (UAS) said fish comprises the majority of her student diet. The loss of fish would affect the Native's efforts for cultural renewal, as well as fishing industry related jobs. The impact would be significant, she opined, and stressed that there should be guarantees that future generations will also benefit from healthy fish runs. The ancestors of the current Metlakatla Natives made a historical choice to occupy the entire island. She pointed out that this was foresight on their part, to ensure that the benefits of the land would be intact for the many generations to come. It is now up to us to make a similar choice and protect the fish and land for the generations to come.

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CHAIR STUTES closed public testimony.

[2:19:41 PM](#)

REPRESENTATIVE ORTIZ noted that the consistent theme, expressed throughout the hearing, calls for the legislature to request that the U.S. government engage the Canadian government, via the International Joint Commission (IJC) process, in order to better protect Southeast interests and ensure protections that include Alaska's fishing industry, as well as cultural and traditional heritage concerns.

[2:21:04 PM](#)

SENATOR EGAN concurred with the comments made by Representative Ortiz. After 10 years of talking, he said, a starting point has been found through the statement of cooperation (SOC), thanks to the current administration.

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CHAIR STUTES agreed with the previous members comments, and underscored the governor's fish first policy, which includes the transboundary issues. She then re-opened public testimony.

[2:23:03 PM](#)

BEN KIRKPATRICK, Habitat Biologist, noted work he assisted with, during his tenure at the Alaska Department of Fish & Game (ADF&G), which included mining permit negotiations for the Tulsequah Chief, AJ, and Kensington operations. Despite the permitting of these mines, many of the same issues still exist. To make progress on the transboundary issues, he stressed, it is imperative to include government entities beyond the state and provincial levels. An International Joint Commission (IJC) referral, as has been suggested, is certainly in order, he said, and is the best means for stemming the reiteration of continued issues surrounding the proposed mines.

CHAIR STUTES thanked everyone for their participation.

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ADJOURNMENT

There being no further business before the committee, the House Special Committee on Fisheries meeting was adjourned at 2:25 p.m.