

To: Senator Dennis Egan, Representative Cathy Muñoz, and Representative Beth Kerttula

From: Taku River Fact-Finding Task Force

Date: March 18, 2012

Attached is the Report of your Taku River Fact Finding Task Force. It is a consensus document approved at our final meeting on March 17, 2012.

We want to acknowledge the value of your plan to create a fact finding task force on this complex issue to build a solid base of understanding and relationships for future problem solving. We each learned a great deal, and each member worked cooperatively and productively. We also want to acknowledge the outstanding efforts of your staff -- Christopher Clark, Hannah McCarty, Jesse Kiehl, and Kevin Ritchie -- in assisting the task force. Finally, we want to thank each of the state departments who provided excellent and timely information and assistance in a very busy time of year, as well as federal officials and Canadian officials. And last, but not least, we wish to thank the members of the public who contributed ideas and information.

The TRFFTF unanimously agreed to assist the delegation in further work on this issue if you desire. If meetings are scheduled for another effort, October through November are best, but we will help as we can at any time.

In addition to the fact finding report, the TRFFTF developed the attached "gap" analysis to help in your decision-making.

Taku River Fact Finding Task Force (TRFFTF) "Gaps"

1. The TRFFTF found that there is a gap in baseline data on water quality (including a baseline for naturally occurring acid rock). There is also a gap in baseline data for fish, mammals (including seals) and other biological communities on the Taku River. The work needed to cover these gaps is presented in the Technical Report just done by DF&G. It is suggested the long term funding be provided to comprehensively monitor water ecosystem and quality as recommended in technical report. (Technical Report No. 12-01, Taku-Tulsequah River Mining Activity by Scannel Scientific, Inc. January 2012, Prepared for ADFG Division of Habitat)

- "Monitoring of water quality and biological communities is necessary to ensure that contamination that may result from mining activities is minimized and that there are no long term detrimental effects... An effective monitoring program must be designed for the operating life of the mine, including construction, mining, and close-out." (p. 53 - Technical Report No. 12-01)
- An environmental assessment "should include the cumulative effects of the Tulsequah Chief, new Polaris, and Big Bull mines on fish and wildlife habitats and water quality." (p. 51 - Technical Report No. 12-01)
- The report identifies a biological sampling program including water, streambeds, aquatic invertebrate communities (e.g., mayfly communities); fish communities, and fish tissue. "ADF&G has designed and conducted bio-monitoring at a number of mine sites," including the Greens Creek Mine, Pogo Mine, Fort Knox Mine, Illinois Creek Mine, and Red Dog Mine. (p. 53 - Technical Report No. 12-01)

2. There is a gap in "risk management" coordination between Alaska/U.S. and Canadian officials on trans boundary projects, like the Tulsequah Mine project. In the case of the Taku River, Canadian projects can deeply impact the U.S. portion of the Taku River. However, there are currently no funded state or international processes to coordinate such risk evaluations. Overall state agency coordination for mining projects is the responsibility of the DNR Office of Project Management and Permitting (OPMP). "Under AS 38.05.020(b)(9) The commissioner may lead and coordinate all matters relating to the state's review and authorization of resource development projects." According to DNR, "OPMP does not have dedicated funding for Canadian mine project coordination... However, OPMP remains engaged on Canadian mines that are associated with transboundary rivers, including the Tulsequah Chief Mine." (DNR presentation to Task Force, January 5, 2012) Without dedicated funding, coordination on Canadian projects can only exist at a low or informal level. The gap can be filled by funding such coordination, and the development of an acceptable level of risk through Alaska oversight and input on upriver projects.

3. There is a gap in spill response readiness on the Taku River. Consider, if recommended by the Coast Guard, the lead agency for spill response, a capital project to purchase equipment and materials to deal with river spills, and ask for a river exercise to be planned. (Taku Lodge offered to provide storage space)

4. There is a gap in a proactive review of commercial barging activities on the Taku River. One suggestion is a commercial barging registration process, similar to registration for commercial fishing boats, to promote experience and safety in commercial barging operations.

5. There is a gap in official notification and investigation of commercial groundings on the Taku River. It is suggested that the public be regularly informed that they should report groundings to the U.S. Coast Guard and that a protocol between the USCG and the ADFG Habitat Division be formally developed relating to the notification and investigation of groundings.

Juneau Legislative Delegation Taku River Fact-Finding Task Force Report

Final Version: 18 March 2012

Purpose

The Task Force will outline basic facts about the Taku River responding to the following goals developed by the Juneau Legislative Delegation:

Goals (Press Release issued by Juneau Legislative Delegation, September 19, 2011.)

1. Review biological health and status regarding Taku River fish stocks, habitat, and game resources. (See Page 7)
2. Investigate who is responsible (e.g., Alaska departments of Fish and Game, Natural Resources, Environmental Conservation, and the U.S. Coast Guard) for monitoring industrial vessel traffic on the river and determine if industrial vessel safety and spill response requirements are appropriately met. (See Page 11)
3. Assess current state and federal statutes and regulations and their effectiveness. (See Page 18)

Taku River Fact-Finding Task Force Members

		<u>Interest Represented</u>
Cherie Rudolph	(cherieken@aol.com)	Private Property Owner
Jim Erickson	(jim@alaskaglacierseafoods.com)	Commercial Fish Processor
John Katasse	(ckatasse@reachak.org)	Alaska Native
Len Peterson	(petersol@me.com)	Commercial Fishing
Michael Ward	(takulodge@yahoo.com)	Commercial Property Owner
Mike Peterson	(mp1@gci.net)	Sport Fishing
Paul Kissner	(jpkissner@gci.net)	Biologist
Richard Yamada	(rnyamada@gmail.com)	Charter or Fishing Guide

Task Force Meetings: The Task Force held five meetings to gather facts and information (January 5, 7, 13, 30, 31, and March 10 and 17, 2012). Kevin Ritchie facilitated the meetings. Presenters included: state and federal agencies, Chieftain Metals, Inc., and Canadian officials. At each meeting the public was invited to submit questions to the Task Force, which were read at the meeting, recorded, and made available to the agencies and the public. Many of the questions were incorporated into Task Force member questions or inquiries to agencies. Also, the members of the public provided information and documents that were distributed to the Task Force. For a full listing of meetings and information provided, see:

http://www.legis.state.ak.us/basis/get_hearing.asp?session=27&Chamb=B&Date1=01%2F05%2F2012&Date2=01%2F31%2F2012&Comty=msc&Root=&Sel=1&Button=Display.

Tulsequah Chief Mine

The Tulsequah Chief Mine is the only current known major industrial project at an advanced development stage on the Taku River or its tributaries in the United States or Canada. This project has been a major reason for a review of the status of protections for the Taku River.

Presentation and PowerPoint by Chieftain Metals, Inc., Keith Boyle, Chief Operating Officer, to the Task Force, January 7, 2012

Tulsequah Project is a 14,220 hectare property (35,138 acres) located 62 miles south of Atlin, BC, and 40 miles north-east of Juneau, Alaska. The project covers two previously producing mines, the Tulsequah Chief mine and the Big Bull mine. The Tulsequah resources contain zinc, copper, lead, gold, and silver. The nearest ice-free concentrate port is Skagway, Alaska.

Recent activities:

- September 2010 - Acquired initial \$60 million financing. Developing road access is a condition of financing. Total financing of \$350 million is anticipated.
- December 2010 - Completed IPO (initial public offering) (established as a company for the purpose of developing the Tulsequah Chief and Big Bull mines.) The Tulsequah mine is projected to process 2,000 tons/day underground operation.
- The company has finished construction of a \$5 million water treatment plant to treat water from the former owner's operations. Leaching of sulfides from the old operation was entering the Tulsequah River. A production stage water treatment system is intended to remove contaminants from the Tulsequah Chief Mine when it begins operation. There will be water testing above and below the mine monitored by the Canadian government.¹

The company determined that river barging of concentrate is "impracticable" for the following reasons:

1. The Taku River is not capable of handling the volume of barge traffic necessary to profitably operate the mine. (The required concentrate production to barge offsite: 148,600 tons per year, while the upper limit possible with a Hover Barge is 72,000 tons per year and 22,000 tons with a conventional barge operation.)
2. The river is an unreliable access due to wide flow variations at different times of the year. The company cited a large financial loss (\$750,000) when it tried to barge equipment up the Taku.
3. Financiers made completion of a road access a condition of financing. (Note: email from Keith Boyle to Christopher Clark, 3/16/12, "I wish to make one comment to the report. The financing is not conditional on a road. The project cannot be financed with a barging system that cannot deliver product to market. I trust that clarifies the point.")
4. Barging as a permanent transport system on the Taku is not economically, politically or environmentally acceptable.

¹ A video of the treatment plant is available on Chieftain Metals' webpage at <http://www.chieftainmetals.com/tulsequah-chief-acid-water-remediation.php>

NOTE: However, the company anticipates "15-20 round trip barge trips" to deliver road building vehicles and equipment. Some fuel will be transported in the vehicles. The company has "no intention to barge" after the road is completed, nor an intention to barge for future development of the Big Bull mine, for the reasons cited above. (Note: Chieftain Metals contracts with an experienced barging company.

Proposed Access Road

The proposed access road will be approximately 130 kilometers long (81 miles). The amendment of an existing permit (PK) is in process with the government of British Columbia and the Tlingit First Nations. The company hopes the road permit will be issued by June 2012. The road will be built from both ends. There will be liability insurance and bonds in place with the BC government, which may be triggered if the company fails to perform.

The 2012 goals for the project are:

- Complete Feasibility Study Update
- Balance of Project Financing
- Final Agreement with First Nations
- Permitting Amendments *** (See "Press Release" below)
- Environmental Assessment (Canadian), SUP (access permit), Mines Act permit
- Construction of Road – Summer 2012

The general project schedule is:

July 2012 - Dec 2013	Road Construction
June 2013 - Jan 2015	Mill, site, and underground construction and development
Jan 2015	Production

***Press Release by Chieftain Metals

Chieftain Metals Applies for Road Alignment Amendment

TORONTO, ONTARIO – February 2, 2012 - Chieftain Metals Inc. (TSX: "CFB") is pleased to announce that the company has submitted a project description to the British Columbia Environmental Assessment Office ("BCEAO") and the Canadian Environmental Assessment Agency ("CEAA") defining a proposed access road alignment amendment which initiates the formal review process. The Amendment Application will seek an alignment change to the currently approved 162 kilometre all-weather access road from the Tulsequah Chief Project to connect to the public road system near Atlin, British Columbia. Management expects the review of the Amendment Application to be concluded in Q2, 2012. Information on the Tulsequah Chief Project, including prior assessments and current approvals, is available on the BCEAO website at http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_project_home_72.html.

Keith Boyle, P.Eng., Chieftain's Chief Operating Officer, stated, "The alternate alignment to the currently permitted road route avoids the Nakina heritage trail and Blue Canyon, highly valued areas for heritage, traditional use and caribou, respectively, for the Taku River Tlingit First Nation. We are pleased to be finalizing the transportation solution for the project."

Status of other industrial projects within the Taku River drainage

According to James Cuell, Manager Major Projects, BC Ministry of Forests, Lands and Natural Resource Operations, the Tulsequah drainage is part of a "Special Management Zone" which has a "high bar for (protection of) salmon ecosystems." (See Land Use Map in Appendix) On the Canadian portion of the Taku, the mainstem will be protected, eliminating commercial forestry, mining and hydroelectric activities. There may be small hydro projects to generate electricity for small activities such as park related activities (e.g. tourism). The three potential mining projects in the Tulsequah drainage are the Tulsequah Chief, the Big Bull (Part of the Tulsequah Project owned by Chieftain Metals), and the New Polaris. The Canadian government testified that they have acquired all other mining permits and will not allow new ones under the Land Use Plan.

Cuell stated that the decision to develop a road for the Tulsequah Chief, rather than a barging plan, is a "business decision" by Chieftain Metals, not a requirement of the BC government.

Canarc Resource, the developer of the New Polaris writes on its webpage, "Small aircraft carrying personal and/or supplies can reach the site from Atlin or Juneau. Heavier mine equipment and supplies can be barged to the mine site via the Taku River."
(http://canarc.net/projects/new_polaris/)

Task Force Fact-Finding - Goal 1

Biological health and status regarding Taku River fish stocks, habitat, and game resources.

Taku River Background: (Excerpts from September 15, 2011 letter from Cora Campbell, Commissioner of ADFG to Senator Dennis Egan, Representative Beth Kerttula, and Representative Cathy Munoz)²

- Drains one of the largest almost roadless watersheds remaining along the Pacific coast.
- Highly productive fishery, including all five native Pacific salmon species and eulachon.
- Diversity of habitats for land and marine mammals, migratory waterfowl, shorebirds, and raptors.
- Majority of lands within U.S. Taku River drainage are U.S. Forest Service-managed, with some City & Borough of Juneau lands, State-selected lands, and private holdings (lodges and cabins).
- On the U.S. portion of the Taku River there are about 130 deeded lots and over 70 cabins. In addition, the Taku Lodge, a commercial development, is on the National Register of Historical Places and has operated since 1923.
- U.S. portion located within the Taku-Snettisham Roadless Area (277,498 hectares, or 685,712.5 acres) of the Tongass National Forest (USDA Forest Service 2003).
- Distances: (Information provided by Cherie Rudolph, TRFFTF Member)
 - Flat Pt. to Taku Lodge 10 miles
 - Taku Lodge to Border 15 miles
 - Border to Inklin Junction 45 miles
 - Flat Pt. to Bull Slough 30 miles
 - Bull landing to runway 12 miles
 - Upper Taku River - border to upper drainages such as Nakina, Shesley, Nahlin, Yeth, Sloco, Sutlahine, an Inklin Rivers 100 miles
- Changes in the River in the last fifty years: The Task Force received anecdotal information on the river that indicates significant changes over the last fifty years. One change presented is that the mouth of the river is much shallower. For example, testimony was presented by river users that large passenger ships used to be able to maneuver near the face of Taku Glacier. This is not possible now due to sedimentation. Also discussed anecdotally is the possible shortening of the season for using the Taku River for transportation. Neil Mackinnon, who used the river from the late 1950's to current, stated that the previous mining operation that closed in 1957 used long narrow powerful "stikine" river boats to pull ore barges. He felt that changing geomorphology of the river makes it more difficult to use now compared to 1957.

Economic Value of the Taku River: The McDowell Group report entitled "The Taku River Economy: An economic profile of the Taku River Area" estimates the total annual economic impact from all activities on the Taku River to be \$26.7 million (2004); commercial fishing

² This letter is hereafter referred to as September 15, 2011 letter from ADFG Commissioner.

generates \$6 million, sport fishing generates \$2 million, and commercial air activity generates \$18 million (\$13 million directly related to tourism). This value is expected to be considerably higher if the study is updated to 2012.

Taku River Salmon Productivity: Base on "mark-recapture" population estimates, ADF&G and Fisheries and Oceans Canada are meeting escapement goals for Chinook, Sockeye, and Coho Salmon in most years. (Paul Kissner interview with ADF&G - Ed Jones and Kevin Monagle)

Is the Taku River unique?

- "The Taku River has been identified as the largest salmon producing river system in Southeast Alaska." (Page v - Technical Report No. 12-01, Taku-Tulsequah River Mining Activity by Scannel Scientific, Inc. January 2012, Prepared for ADFG Division of Habitat)³
- The Taku River and the northern part of the Stikine River are "unique - the mix of species is not seen anywhere else." (Ed Jones, ADFG presentation to Task Force, January 5, 2012)
- "The Taku-Tulsequah Drainage is an important transboundary system that supports 21 fish species, including all 5 species of Pacific salmon." (Page v - Technical Report No. 12-01)
- "Jökulhlaup, refers to a flood resulting from the breaching of a glacier-dammed lake (*jökull* meaning "glacier," *hlaup* meaning "flood burst"). There are at least two locations in Southeast Alaska where these events are known to occur with regularity: the Tulsequah Glacier near Juneau and the Salmon Glacier near Hyder. The magnitude of these outburst floods is typically not sufficient to cause significant damage to property along the Tulsequah or Taku River. However, a local airstrip near the mine on the Tulsequah River is often inundated during these events. And deposits of debris and sediments result in changes to the river channels during and after the flood which can make both rivers dangerous to navigate. There are about 70 cabins located along the Taku River just west of the border, and some have experienced brief minor flooding during the larger jökulhlaups. Cabin owners prepare each summer for the anticipated outburst flood by plugging their boats, to prevent them from sinking, and moving all other loose items up and away from the river bank."
(<http://pajk.arh.noaa.gov/Articles/articles/jokulhlaups/Jokulhlaups.html>)

Taku River Water Quality:

Historical studies of water quality by the USGS (Neal, E.G., 2007, Hydrology and glacier-lake-outburst floods (1987–2004) and water quality (1998–2003) of the Taku River near Juneau, Alaska: U.S. Geological Survey Scientific Investigations Report 2007–XXXX, 28 p.) , and a study for Redfern (2007) presented by ADEC show significantly elevated levels of some metals appearing to be generated by leaching of sulfides from the former Tulsequah Chief and Big Bull mines on the Tulsequah River. Recently, Chieftain Metals spent \$5 million to install the first stage of a treatment facility to handle the old waste water. That facility is still being tested. Apparently, there is no treatment of the leachate from the Big Bull mine.

³ This report is hereafter referred to Technical Report No. 12-01. It is available online at http://www.adfg.alaska.gov/static/home/library/pdfs/habitat/12_01.pdf

"There is existing acid rock drainage (ARD) from early mining; the ARD emanates primarily from abandoned waste rock piles and exposed rock surfaces. The ARD and associated metals leach into the Tulsequah and potentially affect aquatic populations, including spawning and rearing anadromous fish." (Page v - Technical Report No. 12-01)

How does the Taku River data compare to Alaska Water Quality Standards (WQS)?

"The water quality data set for the Taku River is limited and the Department has not conducted a comprehensive review of the data in order to provide an in-depth comparison. A preliminary review of the data taken in the Taku River watershed above and below the Tulsequah Mine indicates that there have been concentrations of metals that exceed Alaska WQS for aluminum, copper, iron and zinc. Sample results taken downstream of the Tulsequah Mine exceed Alaska WQS for metals. Sample results from the locations upstream of mining activity also had elevated metal concentrations, and the Department does not have enough information at this time to determine if these metals are naturally occurring or are present from another source. For example, it is common for waters that flow through mineralized areas to naturally exceed Alaska WQS for metals." (Feb 10, 2012 - Letter from Allan S Nakanishi, P.E., Mining and Engineering Technical Service Section, division of Water, Department of Environmental Conservation.)

Does Alaska have an interest in monitoring the health of the Taku river system and water quality?

"Monitoring of water quality and biological communities is necessary to ensure that contamination that may result from mining activities is minimized and that there are no long term detrimental effects... An effective monitoring program must be designed for the operating life of the mine, including construction, mining, and close-out." (p. 53 - Technical Report No. 12-01)

An environmental assessment "should include the cumulative effects of the Tulsequah Chief, New Polaris, and Big Bull mines on fish and wildlife habitats and water quality." (p. 51 - Technical Report No. 12-01)

The report identifies a biological sampling program including water, streambeds, aquatic invertebrate communities (e.g., mayfly communities); fish communities, and fish tissue. "ADF&G has designed and conducted bio-monitoring at a number of mine sites," including the Greens Creek Mine, Pogo Mine, Fort Knox Mine, Illinois Creek Mine, and Red Dog Mine. (p. 53 - Technical Report No. 12-01)

Fish Rearing on the Taku:

(Ed Jones, ADFG presentation to Task Force, January 5, 2012) Key points of the presentation (Verbatim from slide):

JUVENILES

- Juvenile Chinook, coho, and sockeye salmon overwinter in the mainstem of the lower Taku River. (i.e., the confluence of the Inklin River)
- Juvenile Chinook overwinter exclusively in the mainstem, NOT side-channels.
- Large woody debris is important habitat for juvenile Chinook and coho salmon.

ADULTS

- Adult sockeye, pink, and chum salmon spawning occurs annually in the mainstem of the lower Taku River.
- As much as 22% of the coho salmon spawning occurs below the U.S./Canada border in tributaries.
- Bulk of eulachon spawns below the U.S./Canada border.

Potential impact considerations regarding industrial traffic on the Taku River:
(Presentations to Task Force by ADFG, January 5 and 30, 2012)

Overall, the severity of potential damage from commercial traffic on the Taku can be low to high depending on the time of year (related to cycles of the fish species), the level of the river (low flow increases the potential for groundings), and the size and specific activity of the commercial vessel. Also:

- Large commercial vessel traffic over time: Continuous passage up and down river of a very large craft or object may be problematic. Such activities can increase channelization which is "bad" for fish, because it reduces habitat and allows nutrients to wash away.
- Snag and debris removal for large commercial vessels: Snags, root wads, and debris in the river provide valuable habitat to fish and to birds. Woody debris, such as snags and log jams, build up both food and nutrients (such as insects) and provide refuge and habitat for fish. Such features are key in preserving the productivity of the river. In general, these features slow down the speed of the river, help gather nutrients, and offer habitat.

Task Force Fact-Finding - Goal 2

Who is responsible (e.g., Alaska departments of Fish and Game, Natural Resources, Environmental Conservation, and the U.S. Coast Guard) for monitoring industrial vessel traffic on the river and determine if industrial vessel safety and spill response requirements are appropriately met?

Alaska Department of Fish and Game - Division of Habitat (ADFG)

The ADFG Division of Habitat's specific statutory responsibilities are: (Division of Habitat webpage at <http://www.adfg.alaska.gov/index.cfm?adfg=habitatregulations.main>)

Note: In this section a very small portion of AS 16.05.871 is quoted. Quoting just "the natural flow or bed" could lead to inaccurate assumptions about the authority of ADF&G under this statute. If you want further information, please review each Act on the website above.

Fish Habitat Regulations

The [Anadromous Fish Act \(AS 16.05.871- .901\)](#) requires that an individual or government agency provide prior notification and obtain permit approval from ADF&G before altering or affecting "the natural flow or bed" of a specified waterbody, or fish stream. All activities within or across a specified anadromous waterbody require approval from Habitat, including construction; road crossings; gravel removal; mining; water withdrawals; the use of vehicles or equipment in the waterway; stream realignment or diversion; bank stabilization; blasting; and the placement, excavation, deposition, or removal of any material.

The location of specified anadromous waterbodies is contained in the "Catalog of Waters Important for the Spawning Rearing or Migration of Anadromous Fishes." [The Anadromous Waters Catalog](#) is updated annually, and adopted into regulation ([5 AAC 95.011](#)) after public review; it is the legal record of known anadromous fish streams in the state.

The [Fishway \(or Fish Passage Act AS 16.05.841\)](#), requires that an individual or government agency notify and obtain authorization from the Alaska Department of Fish and Game, Division of Habitat for activities within or across a stream used by fish if it is determined that such uses or activities could represent an impediment to the efficient passage of resident or anadromous fish.

The description and location of specified anadromous waterbodies is contained in the "*Catalog of Waters Important for the Spawning, Rearing, or Migration of Anadromous Fishes.*" Copies of the catalog may be viewed at any office of the ADF&G, Division of Habitat. The Taku River is listed in the catalog.

"Special Areas" refer to ADF&G's State Game Refuges, State Game Sanctuaries, and Critical Habitat Areas. These areas are designated by the Legislature when it passes a statute describing the legal boundaries of the area, the purpose of the area, and any other specific management considerations for that particular area. Each of the different types of special area has a different general purpose although all provide habitat protection. "Each of the Special Areas has individual statutes; many of the areas also have management plans that have been adopted into regulation to guide permitting."

Are there standards for designating "Critical Habitat Areas?" No, these are designated on a case by case basis by the Legislature. (Randy Bates, Jackie Timothy, ADFG Habitat Division, presentation to Task Force, January 5, 2012)

"Conventional barging" does not require an ADFG Fish Habitat Permit. Under AS 16.05.871, the trigger for a Fish Habitat Permit requires - "disturbance of the natural flow or the river bed." For example, a dock or operation of a four-wheeler on the stream bed would require a permit. Conventional barging does not require a Fish Habitat Permit largely because groundings are not planned, i.e., a barging operation does not plan to impact the river bed during normal operations. (Randy Bates, Jackie Timothy, ADFG Habitat Division, presentation to Task Force, January 5, 2012)

What level of groundings would trigger a permit requirement?

"... ADF&G addresses the issue of whether we have any authority to address regular groundings of vessels as they transit a water body like the Taku River. Under the AS 16.05.841-871 authorities, ADF&G has never required that boats, vessels, or barges obtain a Fish Habitat Permit. Operators of boats, vessels, and barges generally make every effort to avoid groundings. However, if ADF&G were aware of repeated groundings that changed the bed of a specified water body, ADF&G may require the activity to secure a Fish Habitat Permit for those specific activities." (Excerpt from September 15, 2011 letter from ADFG Commissioner)

Department of Natural Resources

"Conventional barging" does not require a Tidelands Permit from the Alaska Department of Natural Resources.

The Alaska Department of Natural Resources (ADNR) is responsible for managing state lands, including tide and submerged lands that transferred to the state at statehood. Structures placed on state lands, such as docks, mooring buoys, gabions, fill, etc., require authorization from ADNR's Land Office. Additionally, vessels anchored on state tide or submerged lands for more than 14 days at the same location require authorization from ADNR's Land Office. Generally, the authorizations issued for these activities are revocable with or without cause.

With the exception of anchoring or mooring on state lands, ADNR's Land Office does not have statutory jurisdiction to regulate conventional barging, where groundings do not occur. If groundings occur, ADNR's Land Office would coordinate with the ADF&G, US Coast Guard, and/or the US Army Corps of Engineers to address any significant adverse impacts to state lands.

"Submerged land" means land covered by tidal water between the line of mean low water and seaward to a distance of three geographical miles or further as may hereafter be properly claimed by the state (AS 38.05.965 (22)).

"Tideland" means land that is periodically covered by tidal water between the elevation of mean high water and mean low water (AS 38.05.965 (23)).

U.S. Coast Guard Responsibility (USCG) for regulating barging operations

(Written responses by the U.S. Coast Guard to questions from the Task Force)

Who is responsible for record keeping and oversight of "conventional" barging?

The USCG generally has authority to inspect, board, examine and search all vessels which operate in U.S. waters. The laws governing the inspection of U.S. registered vessels classify certain types of vessels as "subject to inspection"; for barges, certain types are subject to inspection while others are not. Determination is made based on the size of the barge, route of the barge, and cargo carried. The Coast Guard does maintain a record of all inspections, examinations, boarding's, etc., that it conducts on all vessels.

Are foreign or U.S. vessels traveling from the United States to Canada on the Taku, or from Canada to the United States, required to register with the Coast Guard, including disclosing cargo and staff, before off loading cargo, or before loading and proceeding up river?

No, not unless they are carrying certain dangerous cargoes or controlling another vessel carrying certain dangerous cargo, vessels 300 gross tons or less are exempt from submitting the Notice of Arrival. The requirements relating to Notice of Arrivals are contained in 33 CFR Subpart C. Specifically, this Subpart applies to United States and Foreign registered vessels bound for or departing from ports or places in the United States. 33 CFR 160.203 contains multiple exemptions from this reporting requirement.

What specific "casualties" must be reported to the USCG when a foreign-flagged vessel is operating U.S. waters?

All vessels, foreign and domestic registered, must report the following incidents which occur upon the navigable waters of the United States, its territories or possessions (46 CFR 4.05-1):

- An unintended grounding, or an unintended strike of (collision with) a bridge;
- An intended grounding, or an intended strike of a bridge, that creates a hazard to navigation, the environment, or the safety of a vessel, or that meets any of the below;
- An occurrence involving significant harm to the environment.

Can the USCG clarify under what conditions must unintentional groundings be reported?

Title 46, Code of Federal Regulations (CFR), Part 4 addresses the reporting of marine casualties to the USCG. This part applies to all vessels operating on the navigable waters of the United States; however, certain types of vessels have been exempted from compliance as they are required to report to other entities under other regulations. 46 CFR §4.05-1 lists those types of marine casualties which must be immediately reported to the USCG. Paragraph (a)(1) reads in part: "An unintentional grounding,..." as an incident which requires immediate notification.

There are no additional criteria attached to this requirement that must be met to meet the reporting threshold.

What is the legal definition of grounding?

As it relates to maritime issues, *Ground* is defined as the floor of a body of water, especially the sea. *Grounding* is defined as to place or cause to touch the ground. The act of grounding requires that the vessel hull actually make contact with the floor of the body of water.

Does a vessel caught up in or otherwise entangled in, brush, trees, etc., along a river bank constitute grounding?

No, the scenario described does not constitute a grounding which requires notification of the USCG unless the vessel hull was also touching the floor of the body of water. However, if a grounding causes damage to the state bottomland, the Coast Guard would not be responsible.

How many groundings have been reported to the U.S. Coast Guard on the Taku River?

The USCG maintains records of all reported marine casualties, including groundings, of which it is made aware, that occur within its jurisdiction. USCG records indicate that four groundings have been reported in the Taku River since 1993. The most recent groundings in the Taku Inlet and Taku River that the USCG received notification of occurred in 2007. Both of those involved Coast Guard inspected small passenger vessels.

Have any vessels involved with Redfern operations or Chieftain Metals been boarded or inspected by the USCG?

No.

Are there penalties for a non-U.S. registered vessel that does not report a grounding?

Yes, Title 46, United States Code §6103 makes an owner, charterer, managing operator, agent, master or individual in charge of a vessel failing to report a marine casualty (including grounding) as required liable to the United States Government for a civil penalty not to exceed \$35,000. This applies to both United States registered vessels anywhere as well as foreign registered vessels operating on the navigable waters of the United States.

Who would the public call to report a grounding and what specific information would be required?

The public can contact U.S. Coast Guard Sector Juneau at (907) 463-2980 to report incidents of marine pollution, marine casualties, etc. Additionally, the public can contact the Sector by VHF Channel 16. Coast Guard personnel have specific questions to ask depending on the type of situation. At a minimum, provide location, type of vessel, type of incident and number of persons on the vessel.

U.S. Coast Guard responsibility for regulating transport of fuel or dangerous substances

(Written responses by the U.S. Coast Guard to questions from the Task Force)

Does “Innocent Passage” mean that a foreign flagged vessel does not need to disclose cargo is passing from one foreign port to another?

Correct. The United Nations Convention on the Law of the Sea defines Innocent Passage as "...innocent so long as it is not prejudicial to the peace, good order or security of the coastal State. Such passage shall take place in conformity with this Convention and with other rules of international law." The Convention then lists multiple examples of when such passage may be prejudicial to the peace, good order or security of the coastal State.

If a barge has, say, 10,000 gallons of diesel onboard for delivery, does the Coast Guard require notification? Certain abatement/absorption equipment?

The answer is dependent upon whether the vessel is U.S. registered or Foreign Registered; whether or not the vessel will load or discharge in a U.S. port; type and size of vessel.

Are there certain container specification/restraints when passing through U.S. waters? Depends on what the cargo in the container is. Certain dangerous cargoes, hazardous materials, etc., must be packaged in accordance with 49 CFR Part 172 if the vessel will be calling at a United States port. If the vessel is not calling at a United States port, then the certain dangerous cargo or hazardous material must be packaged in accordance with the International Maritime Dangerous Goods Code (IMDG Code), plus whatever regulations the country of destination may require be followed.

If fuel is carried in storage tanks onboard foreign-flagged vessels, what requirements does the USCG maintain/regulate for such cargo?

If the fuel is contained in a portable tank that is not permanently affixed to the barge then it would be regulated under 49 CFR Part 172. For foreign shipments the International Maritime Dangerous Goods Code (IMDG Code) would cover the same requirements. This would cover things such as packaging, marking, training, emergency response, etc., pertaining to the transportation of any fuel or hazardous material. In this particular situation, the portable tank would be considered packaging. With that, the container must be of the correct material for the substance being transported and it must be of good serviceable condition and regularly inspected.

Oil Spill and Hazardous Waste Spills

U.S. Coast Guard:

Coast Guard spill contingency

- What is the lead agency for oil spill response? The U.S. Coast Guard is the onsite coordinator if an oil spill occurs on the U.S. side. (MSTC James Highfill currently fulfills this responsibility for the USCG). (email from USCG, MSTC James Highfill, January 31, 2012)
- Does the U.S. have a joint agreement on oil spill response? U.S. and Canada are currently partners on oil spill contingency plans. They jointly implement an oil spill exercise near Ketchikan at Dixon Entrance bi-annually. (Notes from Task Force meeting, topic of Oil Spill Contingency, January 30, 2012)
- Is there a spill contingency plan for the Taku? The USCG does not have a contingency plan that covers transboundary pollution response up the Taku or Stikine Rivers. USCG does have a plan in place that would cover any response actions in Southeast Alaska on

the U.S. side of the border. This plan is the Southeast Sub-Area Contingency Plan and has buy-in from not only the USCG but also other federal and state agencies. (email from USCG, MSTC James Highfill, January 31, 2012)

- How would we go about establishing a contingency plan for the boundary waters? The Task Force could make a recommendation to look into this. The USCG and the Canadian CG would then need to agree on response actions. But, the reason that we have those joint contingency plans for certain areas, such as Dixon Entrance, along the West Coast are due to the potential risk of a large oil spill that would be of regional if not national significance. (email from USCG, MSTC James Highfill, January 31, 2012)
- How close are the resources for fighting oil spills? The closest response resources for an oil spill in the Taku are in Juneau. Even if we were able to support staging equipment up river we would still need to rely on people come from Juneau to get on scene. There are both public and private organizations with oil spill cleanup capabilities in Juneau and Southeast. (Notes from Task Force meeting, topic of Oil Spill Contingency, January 30, 2012)
- What oil spill materials or equipment would commercial barges be required to carry? Barges would be required to carry small oil cleanup kits, largely for mopping up on board spills. (Presentation by the USCG to Task Force, January 5, 2012)
- How fast would an oil spill or hazardous waste spill travel on the Taku? "There was a question on travel times of a fuel spill at the border to Taku Point. The distance between the two was estimated at 20 miles. I used a 2.0 ft/sec (1.36 miles/hr) average river velocity. It would take 14.7 hrs for a fuel spill to travel 20 miles at that average speed." (Randy Host, USGS, Alaska Science Center)

Department of Environmental Conservation (DEC)

(Excerpts from September 15, 2011 letter from ADFG Commissioner)

- Oil spill contingency and fuel spill clean-up: subject to both State and Federal authorities. (18 AAC 75). Non-tank vessels carrying fuel are subject to a streamlined oil discharge prevention and contingency plan under 18 AAC 75.
- DEC has enforcement capability, as well as cost recovery authority for spills of fuel and other contaminants in Alaska. Any activity along the U.S. portion of the Taku River with substantial fuel or hazardous material transport would likely involve a regional spill clean-up cooperative such as the Southeast Alaska Petroleum Resource Organization (SEAPRO).

Environmental Protection Agency (EPA)

(Excerpts from September 15, 2011 letter from ADFG Commissioner)

Fuel storage on land and navigable waters is not subject to state Contingency Plans, and response under 18 AAC 75 could be subject to some EPA authorities.

- Spill Prevention, Control, and Countermeasure (SPCC) rule - requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires SPCC Plans.
- A joint spill response protocol was developed for U.S./Canadian border spill events. See [http://www.epa.gov/osweroe/1/content/canada border.html](http://www.epa.gov/osweroe/1/content/canada%20border.html) (site not operating, see instead: http://dec.alaska.gov/spar/perp/plans/scp_se/se_1-Introduction.pdf)
- EPA Vessel General Permit (VGP) applies to discharges incidental to the normal operation of all non-recreational, non-military vessels of 79 feet or greater in length which discharge in waters of the U.S. In addition, the ballast water discharge provisions also apply to any non-recreational vessel of less than 79 feet, or commercial fishing vessel of any size, discharging ballast water. The U.S. Coast Guard has partnered with EPA for environmental enforcement under this permit and other programs (some vessel air emissions).
- EPA-administered Ocean Dumping Act: Any dumping of materials, including dredged materials, into Federal marine waters of the U.S. not subject to Army Corps or state jurisdiction.

Task Force Fact-Finding - Goal 3

Assessment of current state and federal statutes and regulations and their effectiveness.

Federal Laws and Treaties

Boundary Water Treaty (1909) (International Joint Commission)

Pacific Salmon Treaty (1985) (Pacific Salmon Commission) (Gordy Williams, ADFG, John Field and Ken Thomas, U.S. Department of State, presentations to Task Force, January 30, 2012) (Excerpts from March 15, 2012 letter from Cora Campbell, Commissioner of ADFG to Kevin Ritchie)

- Both treaties create a potential or theoretical vehicle for U.S.-Canada agreements on environmental protection actions, but only the Boundary Waters Treaty has an established process for addressing environmental concerns. .
- In order for actions to be taken in either process, both the U.S. and Canada would have to separately agree.
- In general, neither Treaty would inhibit Alaska or the U.S. from regulating or otherwise protecting the Taku in an evenhanded manner that did not discriminate against Canadians.
- The Pacific Salmon Commission has a Transboundary Rivers Panel. It was established in 1999 to provide recommendations to the Commission for relevant salmon fisheries on the Taku, Stikine and Alsek Rivers. The Panel also provides a forum for exchange of information on issues involving the transboundary river fishery resources.
- According to the Pacific Salmon Commission website, "The fundamental role of the Pacific Salmon Commission is two-fold:
 1. first, to conserve the Pacific Salmon in order to achieve optimum production,
 2. second, to divide the harvests so that each country reaps the benefits of its investment in salmon management." (http://www.psc.org/about_role.htm)
- Attachment E of the Pacific Salmon Treaty provides a general commitment of both the U.S. and Canada to use "best efforts" to protect water quality, water quantity and safe passage of salmon resources.
- The Pacific Salmon Commission and the Panel processes do not currently have a regulatory structure to address habitat protection or other environmental issues. There are processes through the International Joint Commission under the Boundary Waters Treaty to address documented environmental issues.

□

<p>Effectiveness: Neither Treaty hinders reasonable State efforts to protect the Taku River. Both treaties provide forums for discussion of environmental concerns and the Boundary Waters Treaty has an established mechanism within which to raise specific issues.</p>
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Note:

33 CFR Part 329 Definition of Navigable Waters of the US (Sections 1-16)

This section of the Code of Federal Regulations defines navigable waters

Section 329.4 - General definition

"Navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity."

(Canada) Fisheries Act (R.S.C., 1985, c. F-14)

"35. (1) No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat."

Protection of Habitat: State Law and Regulations

Constitution of the State of Alaska

Section 8.1 - Statement of Policy.

It is the policy of the State to encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest.

Section 8.2 - General Authority.

The legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the State, including land and waters, for the maximum benefit of its people.

Effectiveness: The Alaska Constitution provides a strong policy base for resource management.

ADFG Habitat Permits

The Taku River is documented as anadromous fish habitat in the Anadromous Waters Catalog. ADF&G has the statutory responsibility for the proper protection of freshwater anadromous fish habitat and for providing free passage for anadromous and resident fish in fresh water bodies (AS 16.05.841-871).

Any person or government entity that desires to "use, divert, obstruct, pollute, or change the natural flow or bed" of a specified water body or requires the use of a "wheeled, tracked, or excavating equipment" in a specified water body is required to notify ADF&G. ADF&G will review the plans and specifications and determine whether the proposed project provides for the proper protection of fish and game.

Each proposed project is reviewed and the decision to issue, condition, or deny a Fish Habitat Permit is made on a case-by-case basis. Under AS 16.05.841-871

authorities, ADF&G has never required boats, vessels, or barges to obtain a Fish Habitat Permit. However, if ADF&G were aware of repeated groundings that changed the bed of a specified water body, it may require the operator(s) to secure a Fish Habitat Permit for those specified activities. (Excerpts from March 15, 2012 letter from Cora Campbell, Commissioner of ADFG to Kevin Ritchie)

Effectiveness: In the case of the Taku River, the ADFG Habitat Permit process would not proactively protect the fishery in the case of industrial barging unless the operator voluntarily decided to file a permit application. The Habitat Permit process could modify or stop the damaging activities on the Taku River after significant damage had been reported and documented. Reporting groundings on the Taku River, due to its isolation and poor communications ability, is generally considered problematic.

DEC Coordination with Army Corps of Engineers (COE)

Any dredging operations or in-water work at shoreline, including construction of docks, landings, or pilings on the U.S. side of the river, could involve COE permits. DEC reviews these permits for water quality impacts. Any dumping of materials, including dredged materials, into Federal marine waters of the U S not subject to Army Corps or state jurisdictions would be subject to the EPA-administered Ocean Dumping Act.

(September 15, 2011 letter from Cora Campbell, Commissioner of ADFG to Senator Dennis Egan, Representative Beth Kerttula, and Representative Cathy Munoz)

Effectiveness: The control of the impacts of in-river dredging or construction appears effective.

Spill Response: Federal, State, International

U.S. Coast Guard, ADEC, EPA, BC Province

Effectiveness: The U.S. Coast Guard leads a well coordinated joint response plan and team for oil spills. The USCG also coordinates with Canadian agencies for international spill response. The BC Province also has requirements for onsite spill response (that plan has not been received at the date of this writing). The Taku River has never been identified as a potential spill risk, so there is no specific response plan for the Taku. Mobilization of resources to fight a spill would be less effective in containing a spill due to the speed of the river and the transit time for resources

to be deployed from Juneau and other Southeast locations. Reporting spills on the Taku River, due to its isolation and poor communications ability, is generally considered problematic. The financial responsibility is unclear for mitigating the impacts of a spill or hazardous material release in Canada impacting the U.S.

Federal, State, International Water Quality

ADEC, DNR, EPA, BC Province

Effectiveness: The State of Alaska and BC water quality standards measure substantially the same pollutants with some standards more stringent for the U.S. and some for BC. No serious conflicts of standards have been reported. Closed Canadian mines (Tulsequah Chief and Big Bull) have been leaching higher than acceptable levels of some metals into the Tulsequah River for approximately half a century without a successful resolution. Chieftain Metals has recently completed a water treatment system that they expect to resolve the problem for the Tulsequah Chief Mine. ADFG has completed a study (Technical Report No. 12-01) recommending a comprehensive "bio-monitoring" program on both sides of the border to continuously monitor the health of fish and wildlife communities. It appears that the current statutes allow for appropriate water monitoring. Funding is required. The process and liability for transboundary enforcement of water quality standards is unclear.

State Agency Coordination

DNR, ADFG, ADEC

Effectiveness: Overall state agency coordination for mining projects is the responsibility of the DNR Office of Project Management and Permitting (OPMP). "Under AS 38.05.020(b)(9) The commissioner may lead and coordinate all matters relating to the state's review and authorization of resource development projects." According to DNR, "OPMP does not have dedicated funding for Canadian mine project coordination... However, OPMP remains engaged on Canadian mines that are associated with transboundary rivers, including the Tulsequah Chief Mine." (DNR presentation to Task Force, January 5, 2012) Without dedicated funding, coordination on Canadian projects can only exist at a low or informal level.

Appendices

On Line:

A complete appendices of information provided to the Task Force can be found on the state legislative website:

http://www.legis.state.ak.us/basis/get_hearing.asp?session=27&Chamb=B&Date1=01%2F05%2F2012&Date2=01%2F31%2F2012&Comty=msc&Root=&Sel=1&Button=Display

- Contact Information: Taku River Fact Finding Task Force Resource People

Maps:

- Atlin Taku Land Use Map 18: Zoning - Presented by James Cuell, Manager Major Projects, Ministry of Forests, Lands and Natural Resource, Province of British Columbia

Other:

- "Taku River Industrial Barging Impracticable" Len Peterson, February 2012

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