



Submission to: BC EAO and Coastal GasLink Pipeline

Picture: Upper Clore River courtesy of the Office of the Wet'suwet'en



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Submission Summary

1.0 Scope & Approach

1. The Office of the Wet'suwet'en (OW) presents this submission to British Columbia Environmental Assessment Agency (BC EAO). This submission is a component of the Wet'suwet'en response in respect of the proposed Coastal GasLink pipeline project within Wet'suwet'en territory.
2. The Wet'suwet'en are stewards of the land. They are here to protect their traditional territories and to ensure that future generations of Wet'suwet'en are able to live and benefit from all that their ancestral land provides. The Wet'suwet'en are not opposed to commercial and economic development on their traditional territories as long as the proper cultural protocol is followed and respect given. The Wet'suwet'en insist that every effort is made to ensure the protection of their traditional territories from environmental damage.
3. The purpose of this Wet'suwet'en submission is to provide a high level view and identification of Wet'suwet'en rights, title, practices, and values in the proposed energy project corridor, and also to identify potential impacts to these rights, title, practices, and values. The proposed corridor, including its resources, was traditionally occupied by Wet'suwet'en Clan and House members, who exercised land and stewardship rights, prerogatives, and responsibilities; these Wet'suwet'en traditions continue into the present.
4. 190 km of the proposed Coastal GasLink Project, from Honeagh Bin in Yextsowiten territory to Uyenii in Lho Kwah, lie within Wet'suwet'en Territory over which the Wet'suwet'en maintain Aboriginal Title and Rights. In relation to the Coastal GasLink project, Wet'suwet'en territory is overlaid from Kilometer Post (KP) 424 to KP 614.
5. The Wet'suwet'en are an Athabaskan culture related to inland Dene groups and speak a unique dialect, which they share with the Nat'oot'en or Babine people. The Wet'suwet'en are a matrilineal society organized into a number of exogamous clans. Within each clan are a number of kin based groups known as Yikhs, often referred to as House groups. Each House group is an autonomous collective that has jurisdiction over one or more defined geographical areas known as the House territory.
6. Within the context of Wet'suwet'en society, this ownership is considered to be a responsibility rather than a right. Hereditary Chiefs are entrusted with the stewardship of territories by virtue of the hereditary name they hold, and they are the caretakers of these territories for as long as they hold the name. It is the task of a head Chief to ensure the House territory is managed in a responsible manner, so that the territory will always produce enough game, fish, berries and medicines to support the subsistence, trade, and customary needs of house members. The House is a partnership between the people and the territory, which forms the primary unit of production supporting the subsistence, trade, and cultural needs of the Wet'suwet'en.
7. There is strong evidence in support of Wet'suwet'en title to the area through which the proposed pipelines would pass. Its strength is confirmed by *Delgamuukw/Gisdaywa v. The Queen (Delgamuukw)* court case. As the Supreme Court of Canada's decision in *Delgamuukw* made clear, Aboriginal title is based on and informed by the Aboriginal people's special attachment or relationship to the



land. The Wet'suwet'en's special relationship to the land, grounds and affirms our title. The Wet'suwet'en express their special relationship through how we organize ourselves on the land, through our governance system, our laws, feast, clans, houses, chiefs, our people's identification with the territory through our crests, Kungax, totem poles, and Baht'lats. Individually and together these expressions of our special relationship to the land are integral to our distinctive Wet'suwet'en culture, and our title includes exclusivity and incorporates present-day needs.

8. Our Aboriginal title provides us with the right to occupy and use the land exclusive of all others. It provides us with an exclusive right to decide whether and how land and resources will be occupied and used according to our cultural values and principles, exclusive not only of Coastal GasLink and its investors but also of the BC EAO. It provides us alone – exclusive of Coastal GasLink and its investors - with right to develop and benefit from the economic potential of our land and resources. Development and use that is irreconcilable with the nature of the Wet'suwet'en's special attachment to the land is precluded. Wet'suwet'en title is inalienable and cannot be transferred, sold or surrendered to anyone other than the Crown.
9. The Wet'suwet'en have never relinquished or surrendered Wet'suwet'en title and rights to the lands and resources within Wet'suwet'en territory and continue to occupy and use the lands and resources and to exercise, enjoy and depend on existing title and rights within our territory. We have an inherent right to govern ourselves and our territory according to our own laws, customs, and traditions. This was affirmed in the Supreme Court of Canada *Delgamuukw* decision.

2.0 Wet'suwet'en Fisheries Management

10. The Wet'suwet'en occupy the vast majority of the Bulkley watershed and the northwestern portion of the Nechako drainage. The Bulkley River is a major tributary to the Skeena River and flows into its left bank at Hazelton, BC, 285 km upstream of the mouth. Nechako River flows into the Fraser River at Prince George. These salmon watersheds are among the great salmon production areas of the North Pacific and along with freshwater fish, have sustained Wet'suwet'en since time immemorial.
11. The salmon fishery is and always has been a central focus of the Wet'suwet'en sustenance and trading economies. In the Nechako drainage – principally the Endako and Nadina rivers – sockeye and chinook were available for harvest. In the Bulkley drainage, chinook, sockeye, coho, pink and steelhead stocks were fished along with the anadromous eel, lamprey.
12. The large-scale utilization of the abundant and predictable salmon stocks formed the foundation of the economy. Arrangements for management of the fishery are deeply interconnected and woven into the fabric of Wet'suwet'en culture. These management tools allow for optimal utilization of the salmon resource that was the core of the economy. They enable the fishery system to adapt to the variability of natural situations and conditions.
13. These modes of management effectively facilitate allocation and regulation of the fishery, while encouraging habitat protection. In assessing the results of traditional fish management, it is a matter of record that Wet'suwet'en salmon fisheries left a fish resource that was diverse and healthy at the advent of the Fraser and Skeena commercial fisheries in the late 19th century. Wet'suwet'en Hereditary Chiefs have continuously utilized their system of governance management throughout history as was stated and recognized in *Delgamuukw*. The Crown and the



proponent will infringe upon that governance system by imposing and allowing the proposed pipeline.

14. Sockeye is the most desirable fish for the Wet'suwet'en owing to a fat content that facilitates smoke-drying. They are fished heavily until sockeye needs are met, which typically signal the beginning of berry picking and high country hunting. Major sockeye harvest and processing locations include Hagwilget Canyon, Moricetown Canyon, Morice Lake outlet, Nanika River outlet, Bulkley Falls, Maxan and Bulkley lake outlets, Nadina River, and at the outlet of Endako River downstream of Burns Lake. Following the disastrous Fraser Canyon slide in 1913, harvesting effort of the Endako and Nadina rivers sockeye was transferred to Bulkley sockeye stocks. Pre-contact sockeye catch abundance is speculative as to exact numbers; however, Wet'suwet'en oral histories clearly note that salmon were abundant and runs were annually reliable.
15. Early industrial development on the British Columbia coast saw the development of many new canneries, including in 1870 and 1877 the first commercial salmon canneries on the Fraser and Skeena rivers respectively. Thirty years later, as markets were developed and investors looked for a certain return on their capital, fourteen canneries supported by a fleet of 870 fishing boats were in operation on the Skeena. In 1907, the Skeena canned salmon pack totaled just over 159,000 cases of which two-thirds were sockeye; this required a catch of approximately 1.6 million.
16. From the Wet'suwet'en perspective, there are aboriginal rights grounded in the Canadian Constitution with government obligations to protect and maintain water, wildlife, and fish, and their habitats. The potentially serious adverse impacts and proposed infringements by the proponent and the federal government to Wet'suwet'en fish, their habitat, and associated water quality and quantity issues are cause for concern by the Wet'suwet'en people.

3.0 Wet'suwet'en Fish and Fish Habitat

17. Eleven Wet'suwet'en territories drain into the northwestern portion of the upper Fraser Basin, all via the Nechako River. These territories all support anadromous salmon or freshwater fish populations. Anadromous fish include chinook and sockeye salmon, while freshwater fish include white sturgeon, kokanee, burbot, lake trout, mountain whitefish, suckers, northern pikeminnow, dace, sculpin, lake trout, Dolly Varden, chub, and rainbow trout.
18. The Wet'suwet'en sockeye stocks in the upper Fraser watershed include Endako River sockeye and the four Nadina River sockeye subpopulations. Upper Fraser chinook are composed of the Endako River and Nadina River runs. All these salmon stocks have been greatly affected by a series of specific habitat alterations, mostly consisting of effects to water quality and to stream channels with impacts to holding, migrating, spawning, incubation, and rearing habitats. Endako River sockeye are rated at very high risk of extirpation, the Endako River sockeye stock is considered functionally extinct; however, it is suspected that in some years several pairs of sockeye from this population may spawn downstream of Shovel Creek in the Endako River.
19. Wet'suwet'en concerns due to diminished Fraser salmon abundance center on two major factors: 1) the 1913 rock slides in the Fraser Canyon that obstructed salmon migration for 32 years until the fishways were installed in 1945; and 2) the average 80% annual harvest rate since 1900 on Fraser Early Summer runs from intensive commercial coastal mixed-stock fisheries.



20. In 2006, the Nechako white sturgeon populations were officially designated as endangered under the Federal Species at Risk Act (SARA). Over the past century, white sturgeon populations have been reduced by over-fishing and construction of Kenney Dam in 1952, and the subsequent reduced annual flows by ~50%, reduced annual peak flows, and increased sediment supply from the 1961 Cheslatta River avulsion. The relative sturgeon abundance between 1812 and 1950 and the population decline resulting from European settlement and commercial overfishing is documented. A recovery planning process was initiated for Nechako white sturgeon by the province of British Columbia in September 2000. The recovery planning process outlines actions believed necessary to recover and protect Nechako white sturgeon.
21. Wet'suwet'en have significant concerns regarding the well-being of the sockeye and chinook stocks, and the freshwater resident fish and their habitats in the upper Fraser Basin, which would be further affected by pipeline construction or operational sedimentation and/or spring run-off.
22. The three current Wet'suwet'en sockeye stocks in the Bulkley watershed include Morice Lake sockeye with the Nanika River and Morice and Atna Lake subpopulations, the Bulkley Lake sockeye stocks with the Bulkley and Maxan subpopulations, and sockeye stream spawners in the Morice and Bulkley rivers and their tributaries. Wet'suwet'en Knowledge documents three sockeye stocks that are now extinct including the Toboggan Lake, the Owen Lake, and the Lamprey Lake rearing subpopulations. The Bulkley sockeye salmon stocks have been greatly affected by a series of habitat alterations, which mostly effect water quality and stream channels and have impacts to holding, migrating, spawning, incubation, and rearing habitats.
23. In addition, the abundance of Wet'suwet'en sockeye salmon has been significantly diminished by an average 60% harvest rate since 1880 on Skeena sockeye runs from intensive Alaskan and Canadian commercial coastal mixed-stock fisheries. This relatively high exploitation rate has had adverse effects on the Bulkley sockeye stocks in regard to abundance, rearing environments, and productivity.
24. Morice sockeye are the largest and most important sockeye stock in the Bulkley Basin. Morice-Nanika sockeye were a large part of the Wet'suwet'en food fishery for at least the last 6,000 years. Relatively large Wet'suwet'en fisheries targeting these sockeye were conducted at Tse Kya (Hagwilget Canyon), Kyah Wiget (Moricetown Canyon), and to a lesser extent, Tsee Gheniinlii (Morice Canyon), Bii Wenii C'eeek the (Morice-Owen confluence), Lhet Lii'nun Teezdlii (outlet of Morice Lake), and Neenekeec (Nanika River).
25. The abundance, productivity, and carrying capacity status of Morice sockeye are rated as poor. The current decline of Morice-Nanika sockeye due to high exploitation rates and low-productivity issues in Morice Lake has deeply impacted the Wet'suwet'en and their culture. The Morice-Nanika Sockeye Recovery Plan appears to be stalled due to a lack of strategic direction and commitment. Morice-Nanika sockeye are rated as threatened and will become endangered if limiting factors are not reversed.
26. The upper Bulkley sockeye stocks – Maxan and Bulkley – are in imminent threat of extirpation resulting from lack of escapement due to high exploitation rates in the coastal mixed-stock fishery and degraded habitat. These upper Bulkley sockeye stocks require a recovery plan. The Food Social and Ceremonial (FSC) fishing moratorium by Wet'suwet'en of the Morice-Nanika and upper Bulkley sockeye stock is a start in recovery; however, mixed-stock fisheries and habitat management



issues require management intervention by the federal and provincial agencies along with the Wet'suwet'en. The current abundance, productivity, and carrying capacity status of upper Copper sockeye is rated as stable.

27. Morice chinook spawning and rearing habitats are currently intact and the relatively productive stock is considered stable. Upper Bulkley River chinook abundance is thought to have been diminished by heavy exploitation rates in the coastal mixed-stock fishery, and to have been adversely affected by habitat modifications prior to the 1950s. The upper Bulkley chinook stocks are rated as threatened and require a recovery plan initiative. Wet'suwet'en have concerns regarding the diminished upper Bulkley coho abundance and the degraded state of their spawning and rearing habitat, rating them as of special concern. Morice coho abundance is depleted and sensitive to human activity and natural events. Morice coho are rated as of special concern and may require recovery planning.
28. There are no Wet'suwet'en concerns regarding pink salmon abundance levels or habitat issues. Morice steelhead abundance and productivity are considered stable. There are issues with steelhead abundance and their habitat in the upper Bulkley with their status currently considered uncertain, due to insufficient information.
29. Future key threats to the well-being of Endako, Nadina, Bulkley, and Morice salmon and their habitats include: proposed development such as the Coastal GasLink pipeline creating additional cumulative impacts; continuing lack of habitat management, particularly in the upper Bulkley drainage; mixed stock coastal and in-river fishing leading to over fishing the small, less productive populations; and changing river and ocean conditions that are linked to global climate change. These conditions could be expressed in poor freshwater and marine survival rates and increased incidence of disease in adult spawners.

4.0 Potential Environmental Impacts

30. Wet'suwet'en title is a right to the land itself, therefore any proposed pipeline development will impact Wet'suwet'en title. The most significant environmental effect of the project would be due to construction activity; the most significant risk is geohazards impacting the proposed pipelines. Creating access into a pristine environment of the Burnie/Clore region is unacceptable to the Tsayu and Laksamishu Clans.
31. In 2007, the Wet'suwet'en, in collaboration with BC, established the Morice Water Management Area (MWMA) as a component of the Morice Lands and Resource Management Plan (Morice LRMP). The Morice Water Management Area includes the upper part of Morice River drainage, as well as the Burnie and upper Clore systems. The Morice LRMP states, "The desired outcome is to ensure that the habitat and water quality supporting salmon and other fish is not negatively impacted."
32. The MWMA was created to secure to the integrity of Wet'suwet'en lands and water resources and represents a significant compromise by the Wet'suwet'en whose interests extend throughout their entire territory. The intent is to provide the maximum amount of security for sustaining water quality and quantity necessary for the health and wellbeing of the Wet'suwet'en, as well as the protection of the salmon and other fish in the area and the aquatic life on which they depend. Losses to habitat or hydrological integrity are expected to be addressed promptly through restoration activities.



33. The Wet'suwet'en are deeply concerned about the Coastal GasLink Project due to potential significant effects to Wet'suwet'en territory. Similar to the federal *Canadian Environmental Assessment Act*, BC has a statute (the *Environmental Assessment Act* or "BCEAA") that mandates environmental assessments of "reviewable projects", which include Coastal GasLink. The assessment leads to a report from the BC Environmental Assessment Office ("EAO") that is then delivered to the relevant ministers, who must either issue an environmental assessment certificate including with conditions, or refuse one, or require more assessment.
34. The BC EAO is required to take actions that promote sustainable development and thereby achieve a healthy environment and a healthy economy. The Wet'suwet'en view the BC EAO process as limiting due to: a mandate to receive information on Wet'suwet'en rights and title, but no mandate to address or resolve critical issues regarding rights and title.
35. Significant effects from disturbed habitat increases stress, disease, mortality, and impede growth, reproduction, survival, recruitment, and production. This is a serious concern, an infringement of title, and a breach of Wet'suwet'en law. One of the critical issues in this regard is the cultural imperative that sufficient resources be available at the House territory level. This is a central tenet of Wet'suwet'en governance or Inuk Nuat'en ("Our Own Law).
36. The Wet'suwet'en their Hereditary system of governance when looking at their 38 house territories, each House group is unique in dealing with their specific House territory, therefore, must be reviewed individually.
37. This does not fall within the regulatory process, and was never addressed by the Crown nor the Proponent. Identification and discussion of Wet'suwet'en governance structures per house territory that link the community to the territories is missing. Direction towards inclusion of *Delgamuukw/Gisdaywa* court recorded evidence of our uses and system of governance has been to no avail.
38. Overall, ML/ARD is a serious concern with adverse effects on aquatic resources and downstream biological communities. Once initiated, ML/ARD can persist for thousands of years, causing ecological damage and incurring technically challenging, multimillion-dollar cleanup costs.
39. The Application and its supporting documents do not provide critical geological and geochemical baseline and predictive data with clear interpretations and conclusions in regard to ML/ARD. This lack of data and the current inadequate status of meteorology, water quality, and surface and subsurface hydrology information need to be addressed. They are integral to the overall ML/ARD evaluation and risk assessment for this project.
40. Any ML/ARD generation by man-caused development in Wet'suwet'en territory is unacceptable. The Coastal GasLink Pipeline approach regarding understanding and management of ML/ARD is irresponsible. The Wet'suwet'en are deeply concerned about potential significant effects from ML/ARD to Wet'suwet'en territory and resources as it shows clear disregard for Wet'suwet'en values and impacts on their rights and interests.
41. It is noteworthy and significant that Coastal GasLink proposed route will go through areas in Wet'suwet'en territory already affected by acid rock drainage including at Owen Lake and Equity Mine site. These areas have been significantly impacted already and this would increase the risk of further impacts on the

Wet'suwet'en ability to exercise their aboriginal rights. These areas are significant Wet'suwet'en territories upon which the Wet'suwet'en have traditionally relied upon and continue to rely for their resources. The adverse impacts of the Equity Mine site on Wet'suwet'en resources has demonstrated to the Wet'suwet'en that when developments such as this occur, they are literally and figuratively left to deal with the fallout on their land.

42. The proposed pipeline would be vulnerable to terrain stability issues, surface water issues, and catastrophic events such as forest fires that could damage pipeline integrity or cause explosions due to pipe leakage. Slope stability, surface water issues, and catastrophic events pose significant threats to the proposed pipeline project throughout large portions of the 190 km corridor, which would overlie Wet'suwet'en territory.
43. Destructive landslides of various types are common in Wet'suwet'en territory and have the potential to deform the proposed pipeline and cause major ruptures. These include the slump earth flows on the Morice River Forest Service Road, which have been commonly occurring since the road was built in the late 1950s. Some of the latter slump earth flows are a result of subsurface glaciolacustrine material, which is similar to glaciolacustrine deposits west of Owen Creek through to Lamprey Creek. The lack of adequate information describing or characterizing how existing terrain and geohazards, including subsurface deposits, would potentially affect the proposed project is a serious deficiency regarding assessing and understanding potential adverse effects. It is understood that seismic events could potentially activate subsurface glaciolacustrine deposit movement, particularly if burial of the pipeline cut into and allowed seepage into the glaciolacustrine material.
44. The results of the Wet'suwet'en review of the Application indicates that CGL may have underestimated the impacts of streamflows, particularly the 100 year flood values on proposed project components such as the pipeline and roads. Wilford recorded 83 debris flood events over the last fifty years on eight of the alluvial fans south of Gosnell Creek. These flood events caused shifting stream channels and erosion and have posed considerable road maintenance challenges over the last fifteen years. These same alluvial fans would be crossed by the proposed pipeline. The Wet'suwet'en consider this type of planning for the proposed pipeline to be unacceptable.

5.0 Inadequacy of Coastal GasLink Application

45. The Coastal GasLink Project, Application is inadequate as to the amount of environmental detail and context presented and clearly does not describe potential significant effects on lands and resources. The Application does not reflect Wet'suwet'en values and the reality of our cultural landscape. Wet'suwet'en rights and interests and Wet'suwet'en Knowledge are important components to the Application, but have not been identified or discussed.
46. Recommendation by the Office of the Wet'suwet'en for the proponent to review and access the Delgamuukw/Gisdaywa transcripts and affidavits towards Wet'suwet'en Traditional Knowledge and Traditional Use were not followed. The Office of the Wet'suwet'en says that, rather than do an ATK study, it commissioned a Rights and Title analysis which is consistent with the Wet'suwet'en position before the Courts in *Delgamuukw v. The Queen*, *the Inter-American Commission on Human Rights* and in its efforts at treaty negotiations. The Wet'suwet'en are far beyond the Traditional Knowledge Study stage which they worked on prior to the Delgamuukw trial commenced in 1987.



47. It should be noted that, in assessing the Wet'suwet'en strength of claim in the course of the Pacific Trails Pipeline environmental assessment, the B.C. EAO arrived at a conclusion without making any findings or conclusions regarding the existence of Aboriginal title.
48. Do not confuse the duty owed prior to proof of title with the duty owed in the face of proven title. The Supreme Court of Canada has made it clear that with respect to the infringement of aboriginal title, "in most cases, it will be significantly deeper than mere consultation [and some cases] may even require the full consent of an aboriginal nation"¹The assumption that this process 'afforded' deep consultation is misleading in that the Courts have made it clear that the issues of each aboriginal nation need to be addressed and, the projects impacts is generalized over the whole pipeline and not specific impacts to the Wet'suwet'en
49. The Application and Working Group meetings were not straightforward or explicit, frequently uses terms such as: where practical, where feasible, when possible, as needed, and may be established. These terms do provide certainty to the Wet'suwet'en and are inappropriate language for a project description and environmental assessment process.
50. The Application as presented is immature and obviously needs much more detail developed in order to address Wet'suwet'en rights, including title, and interests. Despite two years of negotiation efforts between the Wet'suwet'en and Coastal GasLink Pipeline, Wet'suwet'en recommendation of the Alternate Route was unsuccessful. The Wet'suwet'en view this as a loss of cooperation by the proponent, which demonstrates a disregard for Aboriginal rights and title.
51. The Application does not address the current status of Wet'suwet'en land and resources resulting from 150 years of settler activity. Development has created various stressors, which have impacted aquatic and terrestrial ecosystems and adversely impacted water, fish, wildlife, plants and Wet'suwet'en cultural heritage. Given those impacts, the Application has not integrated or balanced neither sustainable development nor precautionary approach initiatives. Coastal GasLink has not integrated or balanced these legally established principles thus avoiding cumulative impacts to Wet'suwet'en land and resources, to the cultural institutions, and to the cultural well-being.
52. Wet'suwet'en rights and interests and Wet'suwet'en Knowledge are important components to the Application, but are missing. Discussion of traditional and current uses of lands, waters, and resources as well as the sites and features of the landscape associated with such uses is absent altogether. Identification and discussion of Wet'suwet'en governance structures that link the community to the territories is missing. Wet'suwet'en cultural heritage including archaeological sites is not described due to the lack of due diligence into reviewing the *Delgamuukw/Gisdaywa* transcripts and affidavits.
53. Cultural heritage resources, including traditional use and archaeological sites, are non-renewable and of high significance to the Wet'suwet'en. There have been extensive impacts to Wet'suwet'en cultural heritage and the threshold of cumulative loss has been exceeded. In the past, Wet'suwet'en have documented a wealth of knowledge concerning their cultural heritage, conducted training for resource

¹ Delgamuukw v. The Queen [SCC] par. 168



developers, and established land and resource planning management directions (objectives, measures, and targets) over the territory in order to protect, conserve, maintain, and manage these resources.

54. There has been no known consultation at general or specific levels by government or the proponent regarding Wet'suwet'en cultural heritage. The Application is deficient in not specifically describing Wet'suwet'en cultural heritage and potential adverse effects from construction and operation of the proposed project. The Wet'suwet'en note their cultural heritage facilitates exercising a variety of their rights. The proponent was directed by the Wet'suwet'en to utilize *Delgamuukw/Gisdaywa* transcripts and affidavits for Traditional Use and Traditional Knowledge.
55. Because provincial agencies and Coastal GasLink have not consulted with the Wet'suwet'en, areas considered of special concern and of high consequence are currently unknown to the proponent and therefore not presented with meaningful potential effects assessment. Consequently, effects to Wet'suwet'en rights and interests are not fully identified.
56. The aquatic baseline information and effects assessment, and habitat compensation plans are inadequate by not providing sufficient data to enable the Wet'suwet'en to determine technical and feasible aspects or the potential success of mitigation measures. The Application has not even come close to meeting these requirements within Wet'suwet'en territory.
57. There is a lack of easily understood information in regard to fish presence and abundance data, fish habitat quantity and quality data, riparian structure, condition and value related to stream crossings by the proposed pipeline, transmission lines, and roads. There is no known Fish Habitat Compensation Plan (FHCP). Due to this insufficient information, the Wet'suwet'en are limited in assessing and determining potential adverse effects.

The Supreme Court of Canada has stated the following, oft quoted, principle:

"Environmental impact assessment is, in its simplest form, a planning tool. It is now generally recognized as an integral component of sound decision-making." [Friends of the Oldman River Society v Canada (Minister of Transport), [1992] 1 SCR 3 at 71. Also see Bow Valley Naturalists Society v Canada (Minister of Canadian Heritage), [2001] 2 FC 461 at para 17]

58. As you review the environmental assessment that will form part of your report, you should consider arguments of insufficiency. There is nothing wrong with incorporating additional environmental information into project planning as it becomes available. A sound planning exercise should embrace and take advantage of all opportunities to do so.

Aboriginal Title: the Office of the Wet'suwet'en say that:

- a) The Wet'suwet'en Hereditary Chiefs were plaintiffs in *Delgamuukw*;
- b) What the Court said was that Aboriginal title confers upon its holder the exclusive right to decide land use, exclusive of provincial and federal governments and thus of third parties such as Coastal GasLink; who rely on permits from the federal or provincial governments;
- c) The uses to which the Canada may put Aboriginal title lands are thus infringements of the right and as such cannot proceed absent constitutional justification;



d). The Wet'suwet'en's case for Aboriginal title is strong and was not rejected by the Supreme Court of Canada in *Delgamuukw*.

59. Coastal GasLink has a lot to say about consultation. Treating Aboriginal title as it does shows a failure to appreciate the special purpose of consultation in the face of Aboriginal title. As the Supreme Court of Canada made clear in *Delgamuukw*, because Aboriginal title "encompasses within it a right to choose to what ends a piece of land can be put," the Crown has a duty, when contemplating a title infringing activity, to seek "the involvement of aboriginal peoples in decisions taken with respect to their lands."

60. Consultation in the face of Aboriginal title is directed at involving the people who have the prior and constitutional right to decide how the land is used in those Crown decisions with infringing effects. As the Court also made clear, it is not open to the Crown to treat an Aboriginal community's decisions about its lands as irrelevant and never, including when they are opposed to a project, of any force and effect.²

61. This is no known information regarding potential effects from construction and operation impacts on Food Social and Ceremonial (FSC) fishing and its values. FSC fishing values are considered priceless and any impacts to them are unacceptable. There is no known information regarding Wet'suwet'en commercial fisheries within the territory. Fraser River and Skeena River anadromous and freshwater fish stocks are for the most part characterized as fluctuating at diminished levels of abundance due to accumulated impacts affecting the stock, their habitats, and their ecosystems components.

62. Information presented regarding the aquatic setting and potential adverse effects from the project is either incomplete or missing. This severely hampers Wet'suwet'en efforts to assess and determine potential effects, and consequently, the nature and severity of these potential effects on aboriginal rights including title.

63. There is no known information presented in the Application regarding the current Wet'suwet'en harvest and use of traditional plants including trees, their barks, and roots. There are no known studies by the proponent characterizing the quantity of Wet'suwet'en plants of significance or of special concern, and where cumulative loss through previous development has impacted the House members and territories which would be intersected by the proposed project.

64. The proposed project will have direct effects on wildlife, wildlife habitat loss through clearing and fragmentation, indirect habitat loss through sensory disturbance, changes in wildlife movement and access, and changes from increased mortality.

65. The Coastal GasLink Application assessment of the environmental effects of the proposed project is limited in regard to direct and indirect effects, reversible and irreversible effects, and cumulative effects. Highly valued Wet'suwet'en lands, resources, and cultural elements, which are integral to cultural continuation have

² *Delgamuukw*, para. 168.

been stressed to varying degrees from previous Euro-Canadian settlement and development activities.

66. Because the baseline information is inadequate and serves as the foundation of the Application impact assessment, impacts are clearly not known, and mitigation measures are unknown and uncertain at the best. Further unknowns include residual effects and their significance, as well as cumulative environmental effects. In summary, the environmental and socio-cultural-economic assessments are weak and inadequate and unacceptable to the Wet'suwet'en and limit their ability to assess potential adverse effects to their aboriginal rights.

6.0 Traditional Land and Resource Use

67. Wet'suwet'en territories sustained home places and resources for Wet'suwet'en House group members for approximately the last 10,000 years, with traditional use features or memories covering the landscape. Subsistence activities were tightly interwoven with the social structure, the local landscapes, and the broader regional environment. Detailed knowledge and understanding of the environment, the characteristic of each resource, and the seasonal variation in abundance and availability were necessary to the chiefs and House members for making decisions about what, where, and when different resources were to be harvested.

68. The Wet'suwet'en traditionally followed general patterns of seasonal movement based on the harvesting of various species such as animals, fish, berries, and plants. The nature and unique features of Wet'suwet'en use and occupation of their territories is captured by what many refer to as the seasonal round. The Wet'suwet'en would live on House territories with their extended family to hunt and trap animals, as well as gather berries during the autumn, winter and spring months.

69. The calendar of harvesting activities among the Wet'suwet'en follows the changing round of the seasons and the cycles of birth and growth on the land and waterways. During certain seasons, we would move to different locations for weeks or months at a time to harvest resources needed for survival during the winter. Any impediment to these activities is seen as an infringement to Wet'suwet'en culture.

70. The feast/baht'lat is central to Wet'suwet'en society and government. As acknowledged in *Delgamuukw*, the feast has a ceremonial purpose but is also used for making important decisions. Today, chiefly titles are passed on in the feast. Importantly, the feast confirms the relationship between each House and its territory and confirms the boundaries of each territory. The feast operates as a forum in which Wet'suwet'en law is both enacted and upheld. It is through the feast that the various houses and clans interact at an official level. Territories are important to the feast, as the host clan gathers goods and food for the feast from its territories.

71. Each chief is responsible for the lands and resources within his or her territory. The institutions of the Wet'suwet'en – namely, clans, houses, and chiefly titles – are integrally related to the feast system and to the laws of the Wet'suwet'en. They determine how Wet'suwet'en territory is owned and used, and they provide the structure of Wet'suwet'en government. Each chief must manage, conserve, and harvest the resources on his or her territory.

72. In addition to impacts to Wet'suwet'en fisheries, there would be adverse effects to terrestrial resources from the construction and operation of the Coastal GasLink project. Currently, the Wet'suwet'en can hunt and trap animals all year



round. However, the majority of hunting and trapping takes place from April to December. Some Wet'suwet'en have a personal preference to avoid hunting in the spring when animals are born. The main animals the Wet'suwet'en hunt and trap as a food source are moose, deer, and bear. The smaller game the Wet'suwet'en also hunt and trap as a source of food or fur include marmots, beaver, snowshoe hares, muskrats, squirrel, marten, weasel, lynx, groundhogs, and blue grouse.

73. A diverse array of plant species is used by the Wet'suwet'en for food, for medicine, and for technological purposes. Plant foods include green vegetables, fruits and berries, inner bark–cambium, roots and rhizomes, mushrooms, and a few beverages. Medicines are derived from plant leaves or foliage, roots, and inner barks from a variety of species. Materials used to maintain the culture include fibrous plants, wood, and dyes and pigments. Wet'suwet'en used about sixty plants for food most of which are commonly harvested in forest or woodland settings. Currently, some plants are intensively harvested, processed, and sold into North American and offshore markets.
74. Impacts to Wet'suwet'en traditional land and resource use would be significant from the proposed pipeline. Also important are impacts to the Wet'suwet'en people and their cultural heritage that would be significantly affected by the proposed pipeline construction and operation.
75. Wet'suwet'en territories continue to be at the center of Wet'suwet'en life and culture. The territories remain somewhat healthy, though they have suffered a century of abuse. Fish form the basis of Wet'suwet'en sustenance and culture. Wet'suwet'en title and the integrally associated system of governance rely upon the relationship between the house group and the house territory. Healthy territories and healthy waterways are integral to feasting, and feasting is integral to the Wet'suwet'en's identity and distinctive culture.
76. In the context of the proposed Coastal GasLink Pipeline Project, it is important to consider the cumulative effects on the territories to date. It is the Wet'suwet'en position that the additional impacts posed by the pipelines project would irreversibly and seriously damage territories and a people that have already been made vulnerable by development in the form of mines, forestry, pipelines, railways, highways and other roads, agriculture, and the privatization of lands. The BC EAO need to consider this project in light of the current state of Wet'suwet'en territories and of the Wet'suwet'en people.
77. The territories that could be directly and indirectly impacted by the proposed pipeline are integral to Wet'suwet'en identity, governance, traditional practices of hunting and gathering, and the passing on of traditional knowledge to future generations. Any impact to these vital aspects of Wet'suwet'en culture is an impact to Wet'suwet'en title.
78. Coastal GasLink activities would undoubtedly impact all Wet'suwet'en but especially, hunters, trappers, fishers, and plant gatherers. In Wet'suwet'en, the word for the land is Yintakh. Yintakh incorporates not only the physical environment, animals, plants, water, geography, but the human world as well. Yintakh understands all parts of the territories as interconnected and related to a greater whole. If the physical territories are harmed, then the Wet'suwet'en social world is harmed as well.
79. Our people have been killed by epidemic and disease. Our language has been taken from us, cultural practices have been made criminal, and our children have been sent to residential schools. We have been and continue to be the target of



racism and physical, sexual, and emotional abuse. Though recent years have seen successes in some land claims and rights negotiation, non-natives and the government are still reluctant to address longstanding inequalities resulting from these violent histories. It is the Wet'suwet'en position that the current consideration of the Coastal GasLink Project be made in light of these cumulative social and cultural impacts.

80. If Coastal GasLink is granted rights in Wet'suwet'en territory, such as the right to enter onto and acquire land, and the right to construct a pipeline, this will be a clear infringement of Wet'suwet'en title and other rights on unceded lands, which will cause harm to the rightful owners of each specific territory.

7.0 Conclusion

81. The Wet'suwet'en have never relinquished or surrendered Wet'suwet'en title and rights to the lands and resources within Wet'suwet'en territory and continue to occupy and use the lands and resources and to exercise existing title and rights within the territory. We have an inherent right to govern ourselves and our territory according to our own laws, customs, and traditions. This was affirmed in the Supreme Court of Canada *Delgamuukw* decision.

82. In regard to the proposed Coastal GasLink pipeline project, the Office of the Wet'suwet'en, on behalf of potentially affected communities and members, has carefully assessed the proponent's regulatory Application. The assessment results indicate that major key components related to the Application are in deep conflict with core Wet'suwet'en laws and values.

83. Neither the Province of British Columbia nor its agencies, such as the BC EAO, nor the proponent Coastal GasLink, have disclosed information with any depth of understanding regarding potential direct and indirect impacts on the aboriginal title and rights to the Wet'suwet'en. The Wet'suwet'en, who have constitutionally protected rights, have determined that the proposed Coastal GasLink project will have further significant environmental effects and cumulative impacts that include: loss and deterioration on lands and resources, unlawful infringement of our rights, and deterioration of our health and community well-being.

84. Recommendations by the Office of the Office of the Wet'suwet'en were not adhered to, such as utilizing *Delgamuukw/Gisdaywa* Court transcripts and Affidavits; Alternate routing through the McDonnell Lake area that would avoid major cultural values to the Wet'suwet'en. Considering the magnitude of cumulative environmental effects on Wet'suwet'en and the lack of recovery plans or strategies to address those effects, as well, the lack of Crown-Wet'suwet'en title, rights, and interests reconciliation, the Wet'suwet'en and the Office of the Wet'suwet'en protests and rejects the Coastal GasLink Application.

85. The Province of British Columbia nor its agencies, such as the BC EAO, nor the proponent can suggest to trust them and their technology to somehow protect our aboriginal rights and title.

86. With respect, that is what the Wet'suwet'en have been told since the first white settler fenced the lands where the late Johnny David's father lived in the late 1800's. This is what was promised by Equity Silver when they opened the mine overlooking Goosly Lake which is a critical area for the Wet'suwet'en. This is what has happened since the Supreme Court of Canada urged the Wet'suwet'en to negotiate a resolution of their title with the Crown in 1997. The promises have



continued but the devastation of our lands and resources have continued without any long lasting protection and agreement with the Crown.

87. It is the Wet'suwet'en position that both the Coastal GasLink Project and its BC EAO process pose serious and irreversible infringements to Wet'suwet'en title and rights. In accordance with Wet'suwet'en law and authority, the thirteen Wet'suwet'en Hereditary Chiefs assert our Wet'suwet'en title to our entire territory, including the area through which the proposed pipeline would pass.

88. The Wet'suwet'en Chiefs are:

Chief Kloum'Khun (Alphonse Gagnon)

Chief Smogelgem (Gloria George)

Chief Nedabees (Warner William)

Chief Samooh (Herb Naziel)

Chief Hagwilnegh (Ron Mitchell)

Chief Wah'Tah'Kwets (Frank Patrick)

Chief Wah'Tah'keght (Henry Alfred)

Chief Nam'oks (John Ridsdale)

Chief Wigitamschol (Dan Michell)

Chief Kweese (alternate Bill Naziel – Mutt)

Chief Madeek (Jeff Brown)

Chief Gisday'wa (Dr. Alfred Joseph)

Chief Woos (alternate Darlene Glaim – Gyolo'ght)



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1.0 Scope & Approach

1.1 Introduction

89. The Office of the Wet'suwet'en (OW) presents this submission to the British Columbia Environmental Assessment Office (BC EAO). This submission is a component of the Wet'suwet'en response in respect of the proposed Coastal GasLink project within Wet'suwet'en territory.
90. The Wet'suwet'en are stewards of the land. They are here to protect their traditional territories and to ensure that future generations of Wet'suwet'en are able to live and benefit from all that their ancestral land provides. The Wet'suwet'en are not opposed to commercial and economic development on their traditional territories as long as the proper cultural protocol is followed and respect given. The Wet'suwet'en insist that every effort is made to ensure the protection of their traditional territories from environmental damage.
91. The Wet'suwet'en have faced much adversity since the arrival of the first Euro-Canadian settlers. Despite helping the Euro-Canadian settlers establish railways, farms, rural and urban centers, the Wet'suwet'en have been continually forced off of their traditional territories. Canadian institutions such as organized religion, residential schools and industry have also taken their toll. However, the Wet'suwet'en continue to pursue their seasonal round activities through accessing the resources provided by the land.
92. Although the Wet'suwet'en continue to practice their rich culture, they are increasingly being forced away from their territories on which their culture depends. They are involuntarily forced to abandon access to their once abundant resources that have sustained them since time immemorial. The forced abandonment is the result of continual development of agriculture, forestry, mining, roadways, rural and urban expansion and now pipeline proposals. The forced abandonment associated with these types of development are seen in the contamination caused by: herbicides; chemical dust suppression on unpaved roads; contamination from mining various mineral deposits; the destruction of animal habitats through clear cuts as well as rural and urban development; and the contamination of water and soil from oil spills.
93. This submission looks at the proposed Coastal GasLink Pipeline project through a holistic perspective derived from the Wet'suwet'en world view of *Yintahk*, whereby everything is connected to the land. What affects one area will affect all others. This approach has been taken in this submission because it allows the Wet'suwet'en to fully express themselves in accordance to their own culture.
94. The proposed Coastal GasLink Project would involve the construction of an approximately 650 km 48 inch (1,219 mm) diameter natural gas transmission pipeline from an area near the community of Groundbirch (approximately 40 km west of Dawson Creek, BC) to the proposed LNG Canada export facility in the District of Kitimat, BC). The proposed pipeline, would cross through 190 km of Wet'suwet'en territory. In addition, proposed associated infrastructure includes, but is not limited to pump stations, transmission lines, access roads, staging areas, and campsites.



95. The provincial government of British Columbia has stated it will rely upon the consultation efforts of the proponent and the BC EAO process, to the extent possible, to assist in meeting the duty to consult. This effectively means the Wet'suwet'en is presented with the call to make a decision regarding the proposed project, as well as ensuring that any decisions are respected by the Crown and the proponent. It is unclear how the BC EAO and Crown consultation processes overlap, what types of consultation components and their specifics have been delegated to the proponent and to the BC EAO, and how these are meaningful to the constitutionally mandated Crown–Wet'suwet'en consultation process.
96. With respect to Wet'suwet'en title specifically, a Provincial decision for the exploitation and use of our title lands for the benefit of Coastal GasLink's proposed pipeline is itself an infringement of our title related property rights under Canada's constitution and international human rights law.
97. The Wet'suwet'en consider that a decision British Columbia makes regarding the proposed pipeline mandates the reconciliation of pre-existing Aboriginal sovereignty with assumed Crown sovereignty and imposes a duty of honourable consultation and accommodation on the Crown. As a result, the Crown must complete its consultation with Office of the Wet'suwet'en in a way that fulfills the duty, before making a decision on the project.
98. The British Columbia Environmental Assessment Office (BC EAO), has a statute (the *Environmental Assessment Act* or "BCEAA") that mandates environmental assessments of "reviewable projects" is conducting an environment assessment of the project. For the assessment, environmental effect can be defined as:
- "Environmental effect" means, in respect of a project;
- a) any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the *Species at Risk Act*,
 - b) any effect of any change referred to in paragraph a) on
 - (i) health and socio-economic conditions;
 - (ii) physical and cultural heritage;
 - (iii) the current use of lands and resources for traditional purposes by Aboriginal persons;
 - (iv) any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or
 - c) any change to the project that may be caused by the environment, whether any such change or effect occurs within or outside Canada.

1.2 Wet'suwet'en Interest

99. 190 km of the proposed Coastal GasLink Project, from Honeagh Bin in Yextsowiten territory to Uyenii in Lho Kwah, lie within Wet'suwet'en Territory over which the Wet'suwet'en maintain Aboriginal Title and Rights. In relation to the



Coastal GasLink project, Wet'suwet'en territory is overlaid from Kilometer Post (KP) 424 to KP 614.

100. The Office of the Wet'suwet'en has registered in the BC EAO process in order to implement a component of Wet'suwet'en Governance, specifically to express or clarify:

- ❑ the constitutionally mandated Crown–Wet'suwet'en consultation process;
- ❑ the Crown–Wet'suwet'en consultation process as may be appropriate during the BC EAO process such as potential impacts or indirect effects of the proposed project to Wet'suwet'en rights and interests; and
- ❑ Crown–Wet'suwet'en consultation, as may be appropriate, regarding issues related to the Coastal GasLink project that fall outside the scope of the BC EAO and other regulatory processes for the Project.

101. With these objectives in mind, the Office of the Wet'suwet'en presents this submission centered around potential direct and indirect impacts of the proposed project on Wet'suwet'en interests. The Wet'suwet'en are concerned about any potential effects on Wet'suwet'en lands and resources, including cumulative effects on Wet'suwet'en Rights and Title and potential impacts to Wet'suwet'en cultural heritage, Wet'suwet'en socio-cultural structure including governance, and Wet'suwet'en fish, wildlife, vegetation, and territorial values.

1.2.1 Purpose

102. The purpose of this Wet'suwet'en submission is to provide a high level view and identification of Wet'suwet'en rights, title, practices, and values in the proposed energy project corridor, and also to identify potential impacts to these rights, title, practices, and values. The proposed corridor, including its resources, was traditionally occupied by Wet'suwet'en Clan and House members, who exercised land and stewardship rights, prerogatives, and responsibilities; these Wet'suwet'en traditions continue into the present.

103. This submission evaluates the proposed pipeline corridor, overlying ecosystems, and cultural practices in order to determine preliminary potential impacts to Wet'suwet'en traditional and current uses, harvesting activities, economic development, cultural values, and cultural connections to our lands, including Wet'suwet'en Knowledge. This submission does not constitute a traditional use study.

1.2.2 Approach

104. Wet'suwet'en territory includes the majority of the Bulkley River drainage and the northwestern headwaters of the Fraser Basin. Prior to assertion of sovereignty by the British Crown over our territory, the Wet'suwet'en exclusively used and occupied the Bulkley and northwestern Fraser watersheds and we continue to assert and exercise exclusivity. The proposed pipeline will cross Wet'suwet'en territory as shown in Figure 1



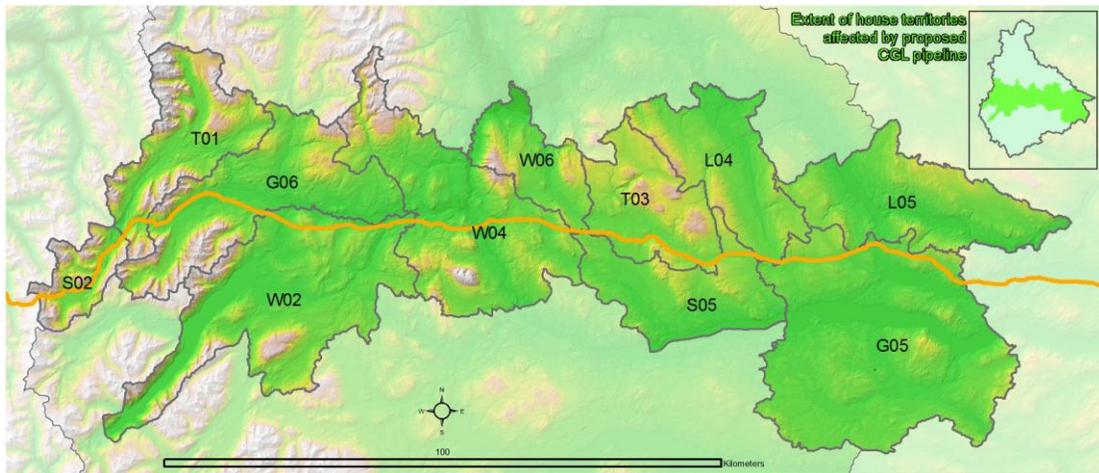


Figure 1. Wet'suwet'en Territory in relation to the proposed pipeline.

105. We continue today to occupy and use the lands and resources within our territory and affirm our constitutional but ignored right to exclusivity. The rich resources contained therein have sustained a vibrant and wealthy Wet'suwet'en society and an elaborate trading economy. We have continued to govern ourselves and the lands and resources in accordance with our cultural practices, customs, traditions, values, and teachings.

106. Through good faith negotiations with the Crown, we the Wet'suwet'en intend to reconcile our pre-existing title, rights, and interests with the assertion of Crown sovereignty. A necessary corollary of this is interim engagement in meaningful consultation with the aim of addressing Wet'suwet'en interests and concerns.

1.3 Wet'suwet'en Territories Crossed by Proposed Pipeline

107. The proposed Coastal GasLink pipeline enters Wet'suwet'en at Gilseyhyu (Big Frog) territory at KM 424. The territory is managed by the House Group called the Yexsowwiten (Thin House) and the territory is called Honeagh Bin (coded as G05) and is shown in Figure 2. Starting at Neetaa Bel (unnamed peak on government maps), the boundary runs south along the height of land and crosses Tchesinkut Creek about ¼ mile upstream from the confluence at Ceste K'et (Tchesinkut Lake), and continues southeast along the height of land east of Peace Lake to Niitaagh Bin (Francois Lake), the boundary continues southeast, crosses the lake to the height of land southeast of Alligator Point, here it runs southwest to the height of land south of Biit Ndeet (Binta Lake), and Wapoose Lake.

108. The boundary then runs northwest and southwest along the height of land to Dayeez cha Dze (Dayeezcha Mountain), and continues west along the height of land to Weleeghs'aay (unnamed hill on government maps), then runs west for approximately 3 miles, then runs north along the height of land west of Talgheez Bin (Tatalrose Lake), then northeast along the height of land west of Talgheez kwe (unnamed creek on government maps), to Niitaagh Bin (Francois Lake), the boundary then crosses Niitaagh Bin (Francois Lake), passing through an unnamed island to the north shore, then runs north along the height of land south of Nes Tsee Dizdlee Kwe (Allin Creek), and crosses the creek about 3.5 miles upstream from the confluence of Nes Tsee Dizdlee Kwe (Allin Creek), and Beech Creek and runs southeast and northeast along the height of land south of Tasdleegh Tl'enlii (Maxxan Creek) to Namox Bedzel (unnamed mountain on government maps), here the

boundary continues east along the height of land to Uyenii (unnamed hill on government maps), and continues east along the height of land north of Ceste K'et (Tchesinkut Lake) back to Neetaa Bel (unnamed peak on government maps).

Other lakes not mentioned were Dek'aayzii Bin (Takysie Lake); Westman Lake; Moss Lake; Snowflake Lake; Spencha Lake; Murdock Lake; Sedge Lake; Dze Ke'Neekuz Bin (Bickle Lake); Tatalaska Lake; Clatlatiently Lake; Octopus Lake; Mollice Lake; Anders Lake; Shaeffer Lake; Mulvaney Lake; Lower Allin Creek; Evans Creek; Ceste K'et Tl'enlii (Tchesinkut Creek); Baker Creek; Honeagh Kwe (Uncha Creek); Dek'aayzii Kwe (Takysie Creek); and numerous marshes and swamplands throughout.



Figure 2. Honeagh Bin Territory and the proposed pipeline route.

The proposed Coastal GasLink pipeline next enters Wet'suwet'en Laksilyu (Small Frog) territory. The territory is managed by the House Group called the Ginehklaiyex (House of Many Eyes), and the territory is called Tselh K'iz Bin (coded as L05) and is shown in Figure 3. The waterways within this territory are as follows: Tselh K'iz Bin (Burns Lake); the southeastern half of Taatl'at Bin (Decker Lake); Co-op Lake; C'eyes Taan Bin (Guyishton Lake); Talts'ay Kwe (Decker Creek) forming the northwestern boundary of L05; Stearnes Creek; Ts'an Kwe (Tintagel Creek); Wen'xeenii Coo Kwe (Sheraton Creek, aka Poison Creek); Xee Dles Kwe (lower Shovel Creek) forming the northeastern boundary of L05; Gyindek Coo Kwah (Endako River) forming the southeastern boundary of L05; Eagle Creek; Gerow Creek forming the southwestern boundary of L05; other features not mentioned were Ceste K'et Tl'enlii (Tchesinkut Creek); Tsel K'ez Kwe (Sauls Creek) and numerous marshes and swamplands throughout.



Figure 3. Tselh K'iz Bin Territory and the proposed pipeline route.

109. As the proposed Coastal GasLink pipeline corridor moves westward, it would go through Wet'suwet'en Laksilyu (Small Frog Clan's) territory called Tadlegh (coded as L04) and shown in Figure 4. The territory is managed by the House Group Ginehklaiyex (House of Many Eyes). GyeH Ta Duh'k (China Nose Mountain) is the only government named mountain in this territory and is located in the northwestern corner of L04. Other unnamed mountains are; Lepyaa Bedzel, Cenexw Dzel Ts'aay, Tsee Leegh Wedezkaan, unnamed mountain peak is C'eyiis K'ez. The waterways within this territory include Tadlegh Bin (Maxan Lake); Tset Teezdlii Bin (Bulkley Lake), Wiggins Lake, and Dloogh Tell Bin (unnamed lake on Government Map); upper and lower Tadlegh Kwe (Maxan Creek); Xeex Ben Kwe (Crow Creek); lower Caas Toogh He'kedeggus (Foxy Creek); Xeex Ben Kwe (Crew creek), and numerous marshes and swamplands throughout.

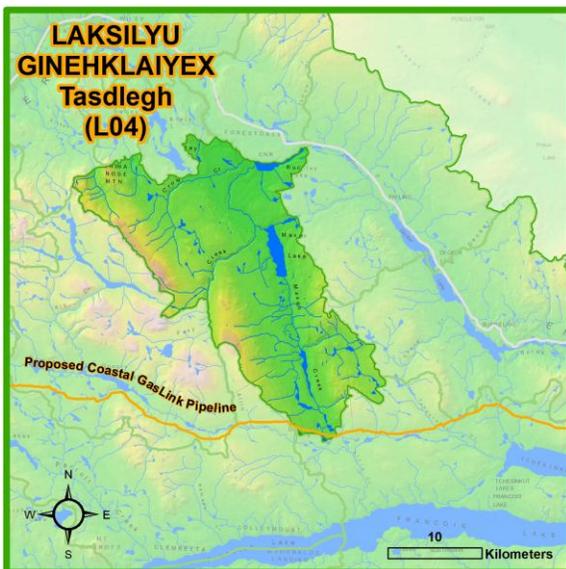


Figure 4. Tadlegh Territory and the proposed pipeline route.

110. The proposed pipeline corridor then briefly enters a territory belong to the Wet'suwet'en Laksamishu (Fireweed Clan's) territory. The territory is managed by the House Group called Tsaiyex (Sun House) and the territory is called Misdzi Kwah (coded as S05) and shown in Figure 5. Mount Parrot (southwestern border) is the only mountain with a common name in this territory; other government unnamed mountain is Lepyaa Bedzel, and mountain peaks of Tsee Ggexw C'en, and Tsee Delk'en. The waterways that are in this territory are Niitaagh Bin (Francois Lake), to the south; Dek'aay Teezdlii Bin (Lower Parrot Lake) to the northwest; Mesdzii Kwe (Parrot Creek) to the west; Tseeyl Ts'anlii (Poplar Creek); Dek'aay Yeez Kwe (Ramsay Creek); Parkland Creek; Dzilgii Kwe (Henkel Creek) to the east; Biil K'ee Kwe (unnamed creek on Government Map); and the headwaters of Nes Tsee Dizdlee Kwe (Allin Creek) to the northeast; and numerous marshes and swamplands throughout.

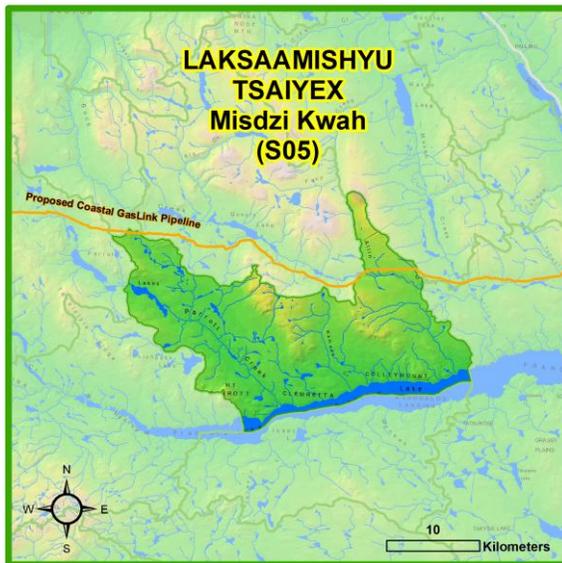


Figure 5. Misdzi Kwah Territory and the proposed pipeline route.

111. The pipeline would next enter the Wet'suwet'en Tsayu (Beaver Clan's) territory called Talhdzi Wiyez Bin (coded as T03). The territory is managed by the House Group called Tsa K'ex Yex (Beaver Lodge House) and is shown in Figure 6. The waterways that are within this territory are Nelhdzi Tezdli Bin (Goosley Lake); Aaleex Bin (Sam Lake); Tsee Zuul Ceek Bin (Lu Lake); Tloogh Teel Bin (unnamed Lake on government map); Gixseyu Bin (unnamed Lake on government map) upper and lower Noe'lh Dzee Kwe (Buck Creek); Klo Creek, the headwaters of Caas Toogh He'kedeggus (Foxy Creek); Nes Tsee Dizdlee Kwe (Allin Creek); mountains and mountain peaks are as follows: C'enexw Dzel Ts'aay; C'etseexw Dzel Ts'aay; Nee'dex; Peaks: C'eyiis K'ez; Leetsleyes; Tsee Delk'en, and numerous marshes and wetland complexes.

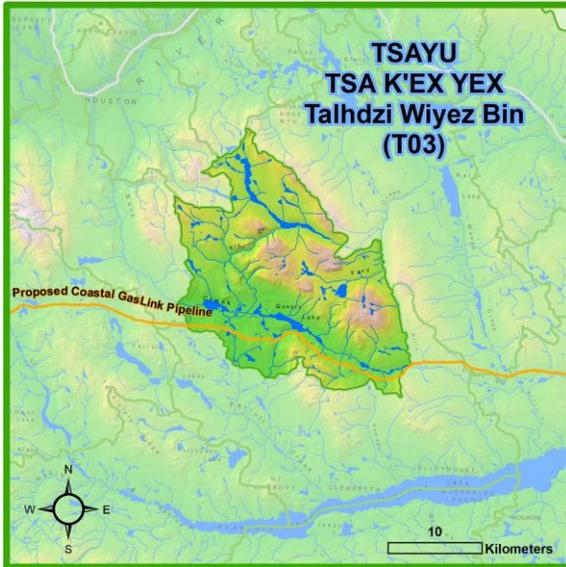


Figure 6. Talhdzi Wiyez Bin Territory and the proposed pipeline route.

112. As the proposed pipeline corridor continues westward to the north of Taky's Klenlee (Upper Parrot Lake), it would briefly skirt along the inside of the southeastern edge of the territory belonging to another Wet'suwet'en Gitdumden (Bear Clan's) territory. The territory is managed by the House Group called Anaskaski (Where it Lies Blocking the Trail) and called Ts'in K'oz'ay (coded as W06) and shown in Figure 7. Dsu'hl te'hl (Mount Morice) is the only mountain in this territory. It is located at the southeastern area of W06. The main waterways that are within W06 are Dzixgii Bin (Silverthorne Lake); Dzixgii Kwe (Silverthorne Creek); Noe'lh Dzee Kwe (Buck Creek); (Gwey D'uhk dzan lu) (Peacock Creek); Bob Creek; and numerous marshes and swamplands throughout.

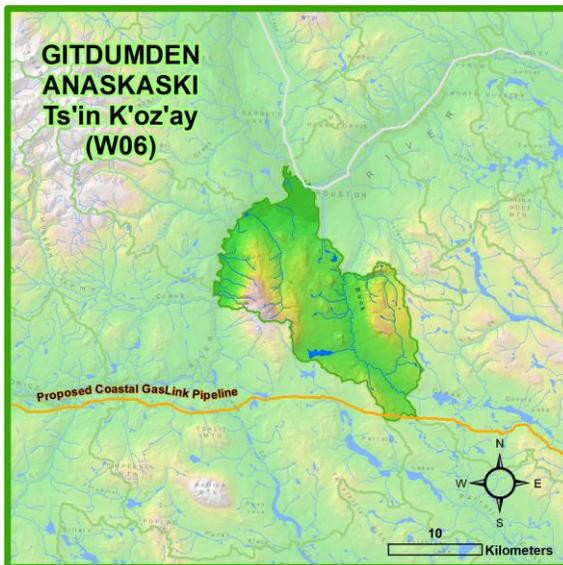


Figure 7. Ts'in K'oz'ay Territory and the proposed pipeline route.

113. The proposed Coastal GasLink pipeline corridor would then come into contact with the southern bank of the Morice River, where it encounters another

Wet'suwet'en Gitdumden (Bear Clan's) territory to the north of Pimpernel Mountain. The territory is managed by the Wet'suwet'en House Group called Keexwinits (House in the Middle of Many) and is called Bi Wini (coded as W04) and shown in Figure 8. The mountains, which represent the territory boundaries of Bi Wini, are two unnamed mountain peaks to the east and west of the headwaters of C'eltay Toostan Kwe (Houston Tommy Creek) form the northern boundary of the territory; Dsu'hl Te'hl (Mount Morice) and the north end of the Takaizyis Ridge the eastern boundary; and Tse Ka'hl Wa Deen (Poplar Mountain) and Tse K'hag wa'le'h (Pimpernel Mountain) lie to the southwest.

114. The entire features of Nadeenah (Nadina Mountain); Tsalit dsu'hl (Tsalit Mountain); Neetsil K'han'hu (Owen Hill); Silloep Hill; and Winninyik Hill – are found within the territory. The main waterways in Bi Wini are Biiwenii Bin (Owen Lake); Taky's Klenlee (Upper Parrot Lake); Neuch Lake; Emil Lake; Goo'hht To uhk Bin (George Lake); Tanitzuzl Bin (Klate Lake); Tsalitpn Lake; Wedzen Kwa (Morice River); Biiwenii Kwe (Owen Creek); C'eltay Toostan Kwe (Houston Tommy Creek); Musdzee Kwe (upper Parrot Creek); Riddeck Creek; T'azdlil Kwe (Peter Alec Creek); Tanitzuzl (Klate Creek); Tseelet Ts'anlii (Puport Creek); and C'ee Welii Ts'anlii (Fenton Creek).

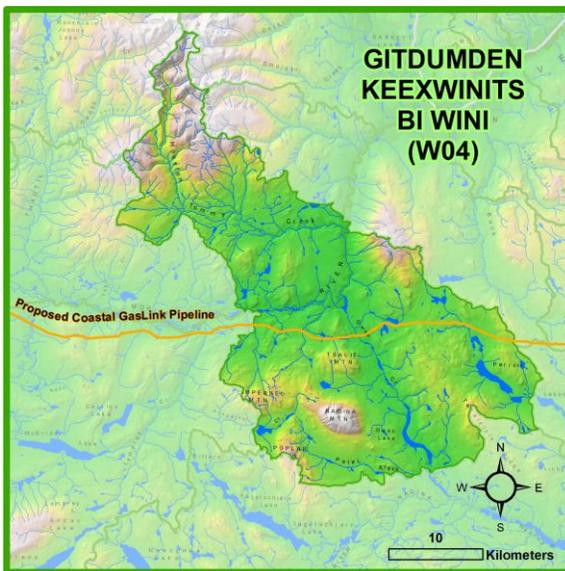


Figure 8. Bi Wini Territory and the proposed pipeline route.

115. As proposed, the Coastal GasLink pipeline would cross the Wedzen Kwah (Morice River) at the large bend of the river near the present day bridge crossing on the Morice West FSR. As it crosses, it would enter the territory belonging to the Gitdumden (Bear Clan's) House Group called Cas Yex (Grizzly House). The territory is called Lhudis Bin (coded as W02) and shown in Figure 9. The mountains delineating the territory boundaries of Lhudis Bin are the Morice Range to the northwest of Wedzen Bin (Morice Lake); Hanging Glacier Mountain and Teezdlii Dzel (Nanika Mountain); Ob Peak, Snowcap Peak, Tenelghel (Redslide Peak) along the southeastern shoreline of Wedzen Bin (Morice Lake); and Hondek (Smoke Mountain) and Tse K'hag wa'le'h (Pimpernel Mountain) far to the east of Wedzen Bin (Morice Lake). The entire feature of Mun Sk'y (Tableland Mountain) is in the southeastern portion of W02.

116. The main waterways within Lhudis Bin are the entire Wedzen Bin (Morice Lake) excluding C'eneelee Bin (Atna Bay); Lhootdzes Bin (McBride Lake); Luh'Neh'g (Collins Lake); Tandet (Stepp Lake–Anzac Lake); Gye-ghe-be G'uz (Bill Nye Lake); Dez WeNii (Lamprey Lake); Phipps Lake; the southern shoreline of the Wedzen Kwah (Morice River); approximately the lower two-thirds of Neenekeec (Nanika River); Tandet Kwe (Stepp Creek); Hlootsus Tez Dlee (McBride Creek); Ze'gel'h Kwe (Lamprey Creek); Nado Creek; Cedric Creek; Delgii Yeez Wenii Ts'anlee (Pimpernel Creek); and numerous marshes and wetland complexes.

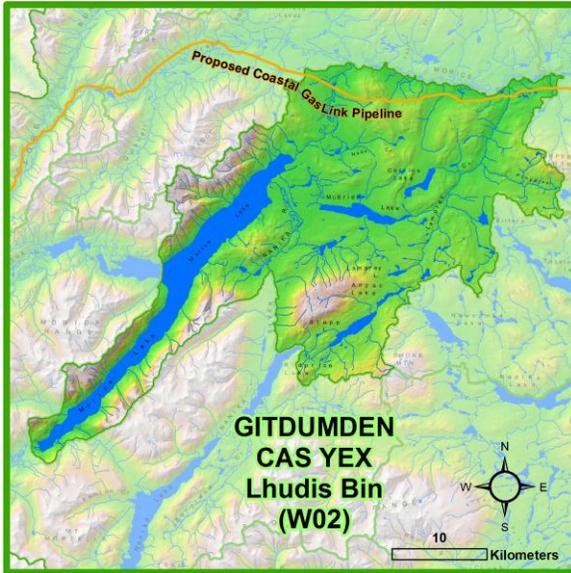


Figure 9. Lhudis Bin Territory and the proposed pipeline route.

117. The proposed Coastal GasLink pipeline would then move westward into the Wet'suwet'en territory belonging to the Gilseyhyu (Big Frog Clan's) House Group called Yextsowilkas (Dark House). The Territory is called Talbits Kwah (coded as G06) and shown in Figure 10. The boundaries of Talbits Kwah, similar to other Wet'suwet'en territories, are bounded by heights of land and tributaries. The mountains that make up the main boundaries are Wo' Betl'eet (Herd Dome) and Loo Niits'agh (Corona Peak) along the southwest portion of the territory; and Teezdlii Dzel (Nanika Mountain) and Leez Be' (Mount Loring) along the southwest portion of G06.

118. The main waterways within the territory are Talbits Kwe (Gosnell Creek), which flows northeast into the Wedzen Kwah (Morice River); parts of the Wedzen Kwah (Morice River); T'ees Teelyez Ts'anlii (lower Shea Creek) as it flows into the Gosnell Watershed; Holland Lakes flowing into T'ees Teelyez Ts'anlii (lower Shea Creek); Te't'aay Kwah (Lower Thautil River) which flows into the Wedzen Kwah (Morice River), at the same place as Talbits Kwah (Gosnell Creek); Hagman Creek which flows into Te't'aay Kwah (Thautil River); Nee'ets'eldzes Bin (Chisholm Lake) with Tagit Creek flowing into Chisholm Lake from the north, and flowing out of Chisholm Lake southward into the Morice River; and numerous small marshes and swamplands throughout.

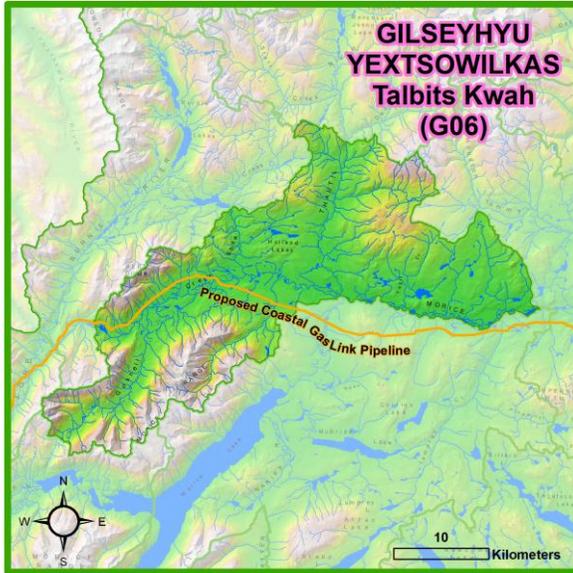


Figure 10. Talbits Kwah Territory and the proposed pipeline route.

119. The proposed Coastal GasLink Pipeline would continue towards the western mountain ridge south of Ts'ekee (Pillar Peak) near the confluence of the Loox Kwa (Clare River) and Taldzi Wiyez T'sonlii (Burnie River). This territory belongs to the Tsayu (Beaver Clan's) House Group, Djakanyax (Beaver Lodge House), and is called Talhdzi Wiyez Bin (coded as T01). Talhdzi Wiyez Bin is shown in Figure 11. Talhdzi Wiyez Bin is predominantly bounded by mountain ridges, narrow passes, and general heights of land. The mountains that make up the main boundaries of Talhdzi Wiyez Bin are Leez Be' (mountain range includes Corona Peak); the Tseezel Kaiy Duk (Howson Range) to the northwest; Ts'ekee (Pillar Peak) to the southwest; Wo' Bet'leet (Herd Dome) to the southeast; and two smaller mountains with no western name to the north and south of Taky Tesglee Bin (Tom George Lakes).
120. The waterways within this territory are C'elenii Bin (upper Burnie Lake) and Tseel K'ez Ceek (lower Burnie Lake) to the north in the mountain range of Dee'el Kwa Tl'aat Dzel (Telkwa Range), as well as the Taldzi Wiyez T'sonlii (Burnie River); Talhdzi Wiyez Bin (Shea Lake) and T'ees Teelyez Ts'anlii (Shea Creek) that flows out and southeast towards the Gosnell Creek; Tom George Lakes in the northeastern section; and numerous wetlands.

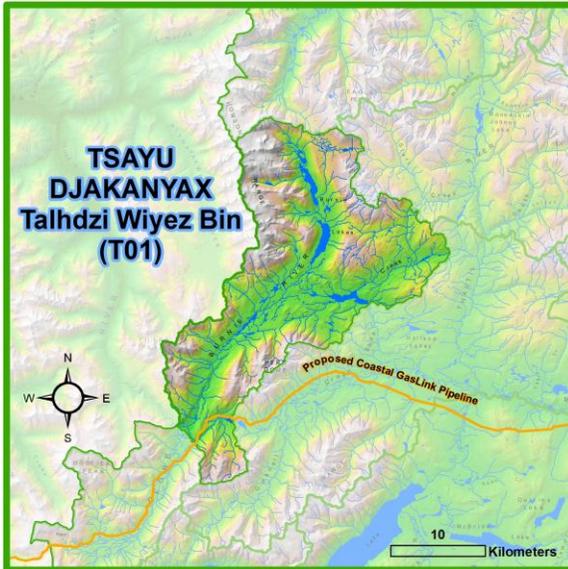


Figure 11. Talhzi Wiyez Bin Territory and the proposed pipeline route.

121. Before leaving Wet’suwet’en Territory at KP 1078, the proposed Coastal GasLink Pipeline would reach the western mountain ridge south of Ts’ekee (Pillar Peak) at the confluence of the Loox Kwa (Clare River) and Taldzi Wiyez T’sonlii (Burnie River), which is the dividing line between Tsayu and Laksamishu territories. The territory with the western mountain ridge south of Pillar Peak is managed by the House Group called Tsaiyex (Fireweed) and is called Lho Kwah (Coded as S02) as shown in Figure 12. The boundaries of Lho Kwah, shown in Figure 12, like all other Wet’suwet’en territories, are marked by heights of land and tributaries. The mountains that make up the main boundaries are Ts’ekee (Pillar Peak) and Leez Be’ (mountain range includes Corona Peak, and Pat Peak); Corona Peak along the southwest portion of the territory; and Dogs Ear Peak and Pass Peak which make up the boundary along the southwest portion of S02; and contains numerous small marshes and swamplands throughout.

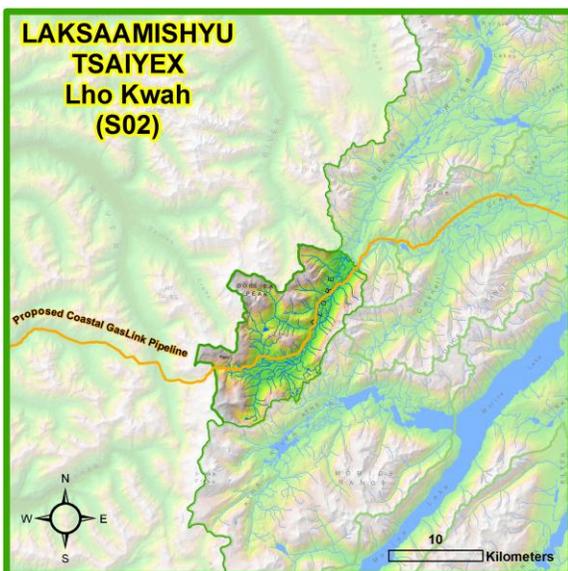


Figure 12. Lho Kwah Territory and the proposed pipeline route.

1.4 Wet'suwet'en Context

122. The Wet'suwet'en are an Athabaskan culture related to inland Dene groups and speak a unique dialect, which they share with the Nat'oot'en or Babine people. The Wet'suwet'en are a matrilineal society organized into a number of exogamous clans. Within each clan are a number of kin based groups known as Yikhs, often referred to as House groups. Each House group is an autonomous collective that has jurisdiction over one or more defined geographical areas known as the House territory.
123. Within the context of Wet'suwet'en society, this ownership is considered to be a responsibility rather than a right. Hereditary Chiefs are entrusted with the stewardship of territories by virtue of the hereditary name they hold, and they are the caretakers of these territories for as long as they hold the name. It is the task of a head Chief to ensure the House territory is managed in a responsible manner, so that the territory will always produce enough game, fish, berries and medicines to support the subsistence, trade, and customary needs of house members. The House is a partnership between the people and the territory, which forms the primary unit of production supporting the subsistence, trade, and cultural needs of the Wet'suwet'en.
124. The rights and responsibilities of Chiefs to manage and harvest resources within the House territory on behalf of their House members continue to be validated in the feast or baht'lat, the central governance institution of the Wet'suwet'en. The resources from the territories are brought into the feast hall and distributed to witnesses by the host clan to validate their ownership of the territories and show respect for their guests.

1.5 Yintahk – Everything is Connected to the Land

125. The Wet'suwet'en do not merely live on the land, they are part of the land, they belong to it and they return to it. The Wet'suwet'en do not simply hunt, fish, and trap on their territories; rather, the Wet'suwet'en are stewards of the lands who actively engage in the management and preservation of their lands. Management of the lands is based on the intimate knowledge gained through personal experience as well as through the collective knowledge contained in the oral histories from generations past.
126. The Wet'suwet'en have a culturally specific term known as "yintahk". Yintahk means "everything is connected to the land". They do not see themselves as entities separate from nature or their territories; just as they own the land, they are owned by the land. Daly (1987) characterizes the relationship as a "conceptual gift exchange" whereby the land sustains the Wet'suwet'en, and when a Wet'suwet'en member passes, the ashes and dust are returned to the land to refresh its history and productivity.
127. The world view embodied in the term yintahk is used as a guiding principle in the daily lives of the Wet'suwet'en. Yintahk is based on the reciprocal stewardship of the land and all the life and spiritual energies it contains. As a culture that relies on the resources gathered from the territories, the principles of yintahk serve to instill a world view that strives to avoid the damaging forms of territorial resource exploitation. Obviously, damage to the territorial resources not only harms the land, it is counterproductive to the social, cultural, economic and physical wellbeing of each and every Wet'suwet'en member, and will be viewed as an infringement to Wet'suwet'en title, rights and culture.



1.6 Wet'suwet'en Title

128. Wet'suwet'en authority on the land base has played an essential role in maintaining the strength of cultural identity among the Nation. Despite generations of assimilation efforts, the Wet'suwet'en have maintained a strong traditional hereditary governance structure integrated with the land and its' resources. The Wet'suwet'en have attempted to reconcile their authority with the Crown for 150 years to no avail. It is paramount that Wet'suwet'en authority, decision-making powers and responsibilities on the territory are understood in the context of the processes dealing with Coastal GasLink's proposed project.
129. There is strong evidence in support of Wet'suwet'en title to the area through which the proposed pipelines would pass. Its strength is confirmed by *Delgamuukw/Gisdaywa v. the Queen (Delgamuukw)* court case. The proposed pipeline would pass through the Wet'suwet'en House territories of Yextsowiten, Ginehklaiyex, Tsaiyex (Misdzi Kwah), Tsa K'ex Yex, Anaskaski, Keexwinitis, Cas Yex, Yextsowilkas, Djakanyex, and Tsaiyex (Lho Kwah) in and to which the Wet'suwet'en maintain Aboriginal Title. These geographical areas were under the authority and belonged to the ancestors of the Wet'suwet'en prior to contact. This was demonstrated by the oral assertions of ownership made to present day chiefs and elders by deceased members of the Houses and by other elders with knowledge. These were proved through the filing of, cross examination on, and testimonial affidavits of every individual territory in the land claim area of the Wet'suwet'en, as well as the oral testimony of chiefs at *Delgamuukw/Gisdaywa* trial.
130. As the Supreme Court of Canada's decision in *Delgamuukw* made clear, Aboriginal title is based on and informed by the Aboriginal people's special attachment or relationship to the land. The Wet'suwet'en's special relationship to the land grounds and affirms our title. The Wet'suwet'en express their special relationship through how we organize ourselves on the land, through our governance system, our laws, feast, clans, houses, chiefs, our people's identification with the territory through our crests, Kungax, totem poles, and Baht'lats. Individually and together these expressions of our special relationship to the land are integral to our distinctive Wet'suwet'en culture, and our title includes exclusivity and incorporates present-day needs.
131. Wet'suwet'en house groups rely on the resources from their territory not only for sustenance, these resources are necessary to participant in the baht'lats (Wet'suwet'en Parliament) and are essential for repatriation. Each house group has hereditary titles with stewardship responsibilities for individual house territories. House members are groomed for hereditary titles both in the realm of the Baht'lats and on the territory.
132. Our Aboriginal title provides us with the right to occupy and use the land exclusive of all others. It provides us with an exclusive right to decide whether and how land and resources will be occupied and used according to our cultural values and principles, exclusive not only of Coastal GasLink and its investors but also of the BC EAO. It provides us alone – exclusive of Coastal GasLink and its investors - with right to develop and benefit from the economic potential of our land and resources. Development and use that is irreconcilable with the nature of the Wet'suwet'en's special attachment to the land is precluded. Wet'suwet'en title is inalienable and cannot be transferred, sold or surrendered to anyone other than the Crown.
133. Wet'suwet'en title provides us with exclusive rights, including management, in regard to fish and fisheries management activities. The Wet'suwet'en have continually organized their livelihood around the seasonal return of the salmon. Not



just to harvest for food, social, ceremonial and/or trade purposes, but also in regard to the conservation, protection, management of the fisheries, and the enhancement of the fisheries resources and associated habitat(s), that are within our traditional territories as we have done so for thousands of years through our governance structure.

134. Wet'suwet'en title provides exclusive rights not only to our fisheries but also to the streams, lakes, the water, to the ecosystems on which they must rely on for their existence within our traditional territory. The content of Wet'suwet'en title contains an inherent limit in that lands so held cannot be used in a manner that is irreconcilable with the nature of the Wet'suwet'en attachment to those lands. This inherent limit arises because the relationship of the Wet'suwet'en community with its land should not be prevented from continuing into the future. Wet'suwet'en occupancy is referenced to the activities that have taken place on the land and the uses to which the land has been put by the Wet'suwet'en.

135. The Crown has had knowledge of the Wet'suwet'en strong *prima facie* Aboriginal title, rights, and interests in the territory since at least the constitutionalization of Aboriginal rights by subsection 35(1) of the *Constitution Act, 1982*. In 1984, 35 Gitksan and 13 Wet'suwet'en Hereditary Chiefs instituted proceedings against the Province of British Columbia. Both individually and on behalf of their respective Houses, they claimed ownership (un-extinguished Aboriginal title) and resulting jurisdiction (entitlement to govern by Aboriginal laws) over separate portions of territory totaling 58,000 square kilometers. This litigation is commonly known as *Delgamuukw*.

136. When looking at the statement of law, one must remember what was given as evidence in *Delgamuukw*; the Wet'suwet'en Factum states:

The Wet'suwet'en people, like their ancestors before them, harvest the resources on their territories. Their harvesting is based on a management system and rules of conservation. The head chief has the authority to make decisions about allocation, preservation, access and use of their sources of the territory. There was controlled burning to stimulate berry growth. Hunting and trapping activity was rotated from valley to valley or among mountain ridges depending on the time of year and the scarcity of the animals.

137. Also given in evidence was the map drawn in 1910 by the Wet'suwet'en chiefs and given to John McDougall, Special Representative of the Department of Indian Affairs. The 1910 map showed the area of the Wet'suwet'en territories and their hunting places and trails (Wet'suwet'en Chiefs 1910). This matches with the territory claimed by the Wet'suwet'en in *Delgamuukw*. No evidence was called by the Crown or elicited in the evidence to prove that any other aboriginal group had aboriginal rights in the territory. The House territories were also described by Jenness (1943) when he conducted his research into socio-cultural aspects of the Wet'suwet'en.

138. The Land subject to the Aboriginal rights and Aboriginal Title of the Wet'suwet'en are contained within the external boundary of Map 5 of *Delgamuukw*, and was proved by four types of evidence. There was also a wealth of documentary evidence supporting the Wet'suwet'en assertions of ownership. The four types of evidence were:

- First, places and topographic features in the House territories are identified by Wet'suwet'en names. The names and topographic features were recorded in 35 Wet'suwet'en territorial affidavits;



- Second, the territory and fishing sites of the appellants and their ancestors are shown by the activity and presence of chiefs and their House members on the land. Emma Michell, Chief Liiloos of the Wet'suwet'en House of Namox said:

"We travelled throughout the territory, went to different places during trapping season. Sometimes we'd spend the winter in the Kilwoneetz country, also the Telkwa River area, and sometimes at Sam Goosley Lake, which is my mother's territory."

- Third, the oral histories record habitation of territories, boundaries, and place names throughout the territories and are noted in various court transcripts and exhibits;
- Fourth, over 50 chiefs testified that they know from oral statements their ancestors own this land. The evidence of oral declaration of ownership was given through affidavits. The chiefs' ancestors expressed these assertions of ownership in the 1800's and the early part of this century.

139. The authority of the House over the territory is spoken of and portrayed at feasts/ baht'lats. The description of territory and naming of places during a succession feast establishes that the territory is subject to the ownership rights of the appellants. At a feast, the new head chief and other chiefs of the House tell where the territory is located and name some of the prominent geographical features on the land. These declarations are made publicly and are witnessed by the guests from the other clans, who acknowledge and validate the territory to which the succeeding chief is entitled.

140. On April 20, 2013, Hereditary Chief Namox of the Tsayu Clan and House of Tsa K'en Yex ("Rafters on Beaver House") hosted a Bah'lats (aka Potlatch) in the Moricetown Feast Hall and enacted Inuk Nu'at'en (Wet'suwet'en laws) that, "no pipelines are allowed on Wet'suwet'en Tsayu territory." This enacted law occurred with the *witnessing* and full support of fellow House Chiefs, Wing Chiefs, and Wet'suwet'en members, and as such, now prevails as the law across our 22,000 square kilometers of Wet'suwet'en traditional territories. Thus, the fact that you continue to issue permits for pipeline related activities on our territories, for which we retain sovereign jurisdiction over, completely disregarding our Inuk Nu'at'en, is deeply insulting and disrespectful to our Wet'suwet'en Chiefs and members, and constitutes an infringement of our title and rights.

141. While understanding of the connection, and relationship of the Wet'suwet'en to the land and water evidenced within the *Delgamuukw* transcripts, one must also remember what is stated within the Constitution Act of Canada. Section 35(1) of the Constitution Act, 1982 recognizes, affirms, and protects existing aboriginal and treaty rights of the Aboriginal peoples of Canada. The Supreme Court of Canada held that Section 35 requires the reconciliation of pre-existing Aboriginal title and rights with asserted Crown sovereignty through good faith negotiations. A necessary component of this reconciliation process is to consult and accommodate Wet'suwet'en title, rights, and interests in order to protect them prior to final reconciliation. The Wet'suwet'en Nation maintains Aboriginal rights, including title, over their entire territory and its resources and it seeks the Crown and industry to respect, recognize and accommodate those rights, including the recognition of their traditional system of governance.



142. The Wet'suwet'en have never relinquished or surrendered Wet'suwet'en title and rights to the lands and resources within Wet'suwet'en territory and continue to occupy and use the lands and resources and to exercise, enjoy and depend on existing title and rights within our territory. We have an inherent right to govern ourselves and our territory according to our own laws, customs, and traditions. This was affirmed in the Supreme Court of Canada *Delgamuukw* decision.
143. Traditionally, the Wet'suwet'en have inhabited the whole of Wet'suwet'en Territory, congregating in the summer at Kya-Wiget (modern day Moricetown) and later Tsekya (Hagwilget) for the salmon run and for organizing Feasts. Both summer villages are located up-river of the confluence of the Skeena and Bulkley Rivers. In *Delgamuukw*, there was evidence lead at trial regarding sites covering Wet'suwet'en Territory where Houses, Clans, and families lived during most of the year.
144. The first written evidence available with respect to the Wet'suwet'en at the time of contact with Europeans is through the journals of the first Europeans. The first known European to come into contact with the Wet'suwet'en was Hudson's Bay Trader William Brown in the early 1820s, following the establishment of Fort Kilmaurs on Babine Lake in 1822.
145. Dr. Arthur Ray, an expert historical geographer with a special expertise in the Hudson's Bay Company and their records, testified at the *Delgamuukw* trial that the evidence of Brown is the best available written evidence respecting pre-contact Wet'suwet'en life. Brown's Journal refers to "The New Caledonia Carriers", including the Wet'suwet'en and to the centrality of conceptions of territorial possession among them. Writing in 1823, Brown (1823) noted that among the people there were recognized ranked Chiefs who "have certain tracts of country, which they claim an exclusive right to and will not allow any other person to hunt upon them." Specific reference is made to the Wet'suwet'en in Brown's (1826) report, wherein he records:
- They reckon twenty chiefs of different gradations and 67 married men whom they denominate respectable, as being heads of families and possessors of lands. The following is a list of the chiefs...as they are placed at their feasts.
146. Dr. Ray makes specific reference to Brown's phrases "heads of families and possessors of lands" and "men of property":
- "Well, again it goes back to the problem Brown is having, is that these possessors of lands who are regulating access to the lands, and I must say when I read these for the first time I was quite struck by this. I looked at Bay records for what was Northern Quebec, northern Ontario, all through the west, and this is the first instance where I ran across Bay traders talking like this about men of property and possessors of lands, which struck me straight away that they are dealing with a very different system here than they were used to dealing with, and I re-iterate, my point is one of the reasons why he spent so much time talking about it, is an unusual situation for them to run into."
147. Of major importance, the observations of the Hudson's Bay traders discussed above, clearly indicated that access to resources was regulated by a land tenure system in which tracts of land were managed by "men of property", the lineage (House) heads. These men also controlled access to trails that traversed their House's territory (Ray 1987).



148. Evidence with respect to the distinctive culture and institutions of the Wet'suwet'en pre-contact was also presented in *Delgamuukw* through the reports of Daniel Harmon, who explored the area to the east and south-east of Wet'suwet'en Territory 15 years before Brown. In 1811 and 1812 Harmon spent time with the Stuart Lake Carrier neighbours of the Wet'suwet'en and there he came into contact with Babine Carriers attending Feasts at Stuart Lake (Harmon 1957).
149. While significant differences existed and continue to exist between the Wet'suwet'en, the Babine, and the Stuart Lake Carrier, the expert evidence in *Delgamuukw* accepted that the historical description of the social structure of the neighbouring "Carrier" peoples could be applied generally to the contemporaneous Wet'suwet'en social and political structure. Harmon's records provide the first recorded description of the social and political culture of a traditional North-West Carrier village between 1810 and 1812. Writing of the place of territory within that social and political structure, Harmon (1957) notes that:
- "the people of every village have a certain extent of country, which they consider their own, and in which they may hunt and fish; but they may not transcend these bounds, without purchasing the privilege of those who claim the land. Mountains and rivers serve them as boundaries, and they are not often broken over."
150. Harmon's records also provide a detailed description of a North-West Carrier feast in 1811 and the witnessing of traditional territories taking place at those feasts. Harmon's description of the Feast and, in particular, the use of meat taken from a specific territory to identify the territory and its "owner", continues in present day Wet'suwet'en feasts, as testified to by the Wet'suwet'en witnesses.
151. Similarly, the Hudson's Bay materials describe feasts to settle disputes between the Wet'suwet'en and the neighbouring peoples are also mirrored in present day feasts. Ray (1987) directly addresses the social-political structure revealed through the evidence of the early traders. With respect to the affect of the fur trade on Wet'suwet'en society he concluded it was very unlikely the "elaborate social-political territorial feasting system" observed by the early traders could have evolved in response to the fur trade.
152. The Wet'suwet'en House groups followed continuous, regular, and exclusive use of their territories and resources, moving to temporary summer fishing villages in the spring and returning in the fall. Each Clan had a set of specific territories they would travel to once salmon fishing was completed. J. Lambert in the *Delgamuukw*-BC Court of Appeal ruling noted: Wet'suwet'en possession and use of the Territory has manifested itself through the harvesting of the diverse natural resources of the Territory including fish, game, berries, timber, plant and mineral resources.
153. There was considerable evidence in *Delgamuukw* of Wet'suwet'en land use for harvesting, processing and storage of berries, timber and other resources for sustenance, trading and ceremonial purposes.
154. In *Delgamuukw*, there was evidence from both lay and expert witnesses as to the applicability of the Wet'suwet'en laws of trespass. These laws were referred to at the time of first contact and their primary significance may be inferred from the nine different forms of trespass under Wet'suwet'en law as reported by Mills (1987).
155. The above highlights the longstanding Wet'suwet'en dependence on and management of land, fish, wildlife and plants, and their habitats, particularly in the areas potentially impacted by the Coastal GasLink project. The evidence presented

in the *Delgamuukw* trial demonstrates that the Wet'suwet'en maintain aboriginal title, rights, and interests over these lands.

156. Aboriginal title provides the exclusive use of the land, by aboriginal people for a broad range of purposes. Aboriginal title is perhaps best described as an all encompassing interest, which is not limited to pre-colonial uses of the land. As Mainville's (2001) concise analysis of the *Delgamuukw* judgment clearly states:

"Although Aboriginal title flows from the use and occupation of the land for traditional Aboriginal activities, once this title has been established, the concerned Aboriginal Peoples may use the land, on an exclusive basis for all kinds of purposes, including commercial purposes unrelated to Aboriginal practices. Aboriginal title also extends to the natural resources on or in the land"

157. Aboriginal title becomes a critically important concept to recognize. It is an important concept because it finally allows Wet'suwet'en people to move away from the dominant colonialist paradigm that defines aboriginality as 'all things pre-contact'. The concept recognizes that voluntary changes have occurred since contact, as well as recognizes that involuntary irreconcilable damage has occurred to First Nation people throughout the colonialist era in Canada.

158. Asch (1997) notes aboriginal title provides aboriginal peoples with the much needed "opportunity to develop their lands in ways that meet the contemporary needs of their communities. It is an approach that supports self-sufficiency and growth of those communities and the preservation of Aboriginal communities".

159. But how does this understanding of aboriginal title relate to the proposed Coastal GasLink project? It is significant to the Coastal GasLink project because the *Delgamuukw* decision and the Canadian constitutional law on aboriginal title set forth there requires the government of Canada to recognize the special fiduciary relationship between the Crown and aboriginal peoples. According to *Delgamuukw*, the fiduciary relationship between the Crown and aboriginal peoples may, in potentially infringing circumstances, be satisfied by the involvement of aboriginal peoples in the decisions with respect to their lands. The Court ruling also forces the government of Canada to acknowledge that there is always a duty of consultation and, in most cases, the duty will be significantly deeper than mere consultation.

160. The Wet'suwet'en chiefs and elders see the bigger picture. The Wet'suwet'en, in their response to Coastal GasLink are working together to build a stronger community. They are working on capacity building in the current and future generations because "Our young people have to be aware of their past, so that they can be prepared to be part of our future" Ggilaset – Vi Gellenback.

1.7 Wet'suwet'en – Crown Relationship

161. Wet'suwet'en possess an acute awareness of our past and take pride in our culture today. Since the time of Euro-Canadian contact in the area, through the transition period to the present, it is clear to see the social disruption and marginalization that Wet'suwet'en people and culture have experienced.

162. This is also a time when Wet'suwet'en culture and heritage remain under serious threat. Places with important ancestral and traditional connections have been changed, disturbed, and in some cases destroyed. Wet'suwet'en concerns about the land are inextricably linked to the complex social structures and customs characterizing the cultural fabric and governance structures; these are not easily communicated to the non-Native community.



163. The Wet'suwet'en are challenged by the need to communicate traditional ecological knowledge in a manner considered valid by management professionals and readily incorporated into land use, economic, and resource development planning and implementation processes. Differing interpretations of landscape features and values, as well as many critical habitats used and valued by the Wet'suwet'en for the collection of plant, fish, bird, and animal resources for sustenance and ceremonial uses, have been adversely affected by resource development activities. One of the critical issues in this regard is the cultural imperative that sufficient resources be available at the House territory level. This is a central tenet of Wet'suwet'en governance or Inuk Nuat'en ("Our Own Law).
164. The modern history of Wet'suwet'en territory has been and continues to be shaped by the BC Government's belief in the right to access and develop Wet'suwet'en land and resources: water storage for hydroelectric power, minerals, salmon, and timber. In the last five decades, the scope and pace of development within Wet'suwet'en territory has increased dramatically. Wet'suwet'en are not opposed to development, but desire that their decision making based on cultural values and principles are respected and that net positive gains, centered on sustainable cultural, social, economic, and environmental benefits, accrue to themselves and their territory.
165. Like other indigenous cultures, Wet'suwet'en have unparalleled knowledge about their local environment, how it functions, and its characteristic ecological relationships. This Wet'suwet'en Knowledge arising from ancestral use and occupancy is passed down through the generations. As such, Wet'suwet'en Knowledge (WK) is embedded in and integral to Wet'suwet'en culture and everyday activities, essentially acting as the links in the cultural chain. Consequently, it is often difficult to delineate the significance of Wet'suwet'en Knowledge because it is woven into conversations as opposed to explicit facts. This Wet'suwet'en Knowledge needs to be recognized as an important part of the proposed Coastal GasLink BC EAO process.

2.0 Wet'suwet'en Fisheries Management

166. The Wet'suwet'en occupy the vast majority of the Bulkley watershed and the northwestern portion of the Nechako drainage. The Bulkley River is a major tributary to the Skeena River and flows into its left bank at Hazelton, BC, 285 km upstream of the mouth. Nechako River flows into the Fraser River at Prince George. These salmon watersheds are among the great salmon production areas of the North Pacific and along with freshwater fish, have sustained Wet'suwet'en since time immemorial.
167. The salmon fishery is and always has been a central focus of the Wet'suwet'en sustenance and trading economies. In the Nechako drainage – principally the Endako and Nadina rivers – sockeye and chinook were available for harvest. In the Bulkley drainage, chinook, sockeye, coho, pink and steelhead stocks were fished along with the anadromous eel, lamprey.



168. Wet'suwet'en laws governing the fish resource generally, and fishing specifically, are based on values from a conceptual reality founded on thousands of years of interacting with social, subsistence, and local environment dynamics. The majority of relevant fishing regulations were self-enforcing since they were founded on accepted community values shared by all its members. These practices are in jeopardy due to the infringements by the proposed Coastal GasLink Pipeline. The following chapters expand in depth on the past and current state of the Wet'suwet'en fishery, emphasizing the centrality of fish to Wet'suwet'en title and rights and the consequent infringements to these title and rights by the proposed project and its BC EAO process. The focus of this submission is on the threat of the pipeline to our waterways, as the risks to our fish form the most substantial infringements to Wet'suwet'en title and rights.

2.1 Salmon Fishery Management

169. The large-scale utilization of the abundant and predictable salmon stocks formed the foundation of the economy. Arrangements for management of the fishery are deeply interconnected and woven into the fabric of Wet'suwet'en culture. Hereditary chiefs exercise authority for management and decision-making. Principal management tools as noted by Morrell (1985) include:

- Ownership of specific sites, access allocation;
- Harvest of surplus to conservation needs on a stock-by-stock basis;
- Control of harvest techniques and timing that allowed selectively of species and non-retention when desired;
- Harvesting limitations imposed by processing capacity.

170. These management tools allow for optimal utilization of the salmon resource that was the core of the economy. They enable the fishery system to adapt to the variability of natural situations and conditions. These modes of management effectively facilitate allocation and regulation of the fishery, while encouraging habitat protection. In assessing the results of traditional fish management, it is a matter of record that Wet'suwet'en salmon fisheries left a fish resource that was diverse and healthy at the advent and incursion of the Fraser and Skeena commercial fisheries in the late 19th century. Wet'suwet'en Hereditary Chiefs have continuously utilized their system of governance management throughout history as was stated and recognized in *Delgamuukw*. The Crown and the proponent will infringe upon that governance system by imposing and allowing the proposed pipeline.

171. Fundamental conservation elements are practiced; waste is forbidden. Processing capacity was and is limited by smokehouse infrastructure, particularly the amount of space available on the lower poles, where fish were hung in the first stages of the drying process, and by the number of fish that could be dressed in the available time. When the daily processing limit is reached, fishing gear is removed from the water allowing salmon to proceed upstream. The predominant use of live-capture gear enable Wet'suwet'en fishers to selectively harvest desired species, with the remainder released unharmed (Morrell 1985).

172. Fishing sites are considered the property of the House, with particular sites being more or less delegated to individual chiefs or sub-chiefs within the House. The chiefs typically decide who would be fishing at specific sites and at which time. However, several Houses from various clans might share in the harvest distribution from productive weir and trap sites at villages, which are strategically located to access the fishery. It was and is the responsibility of the chiefs to oversee the



processing and distribution of the fish, so that all members of the House receive sufficient amounts, even if they cannot provide for themselves directly because of age, disability, or other circumstances.

2.2 Harvest and Processing

173. The abundant and predictable salmon runs provide the opportunity for the people to harvest and preserve a high quality staple food in a few months of intensive effort. Salmon are typically harvested and processed close to their spawning grounds. In June, the majority of House groups congregate in their seasonal fishing villages to prepare fishing gear, smokehouses, and firewood and generally get ready for the salmon fishery.

174. The first salmon, the chinook or spring, usually reaching the area in early to mid-June, mark the start of the fishery. This is the occasion for celebration and thanksgiving with the First Salmon Ceremony, in which the salmon are ritually prepared to ensure and herald an abundant harvest. At the majority of Wet'suwet'en fishing sites, springs are readily caught in season, as the strong river currents during the snow melt season concentrate them at particular points.

175. The sockeye runs follow the spring salmon. Sockeye is the most desirable fish for the Wet'suwet'en owing to a fat content that facilitates smoke-drying. They are fished heavily until sockeye needs are met, which typically signal the beginning of berry picking and high country hunting. Major sockeye harvest and processing locations include Hagwilget Canyon, Moricetown Canyon, Morice Lake outlet, Nanika River outlet, Bulkley Falls, Maxxan and Bulkley lake outlets, Nadina River, and at the outlet of Endako River downstream of Burns Lake.

176. Following the disastrous Fraser Canyon slide in 1913, harvesting effort of the Endako and Nadina rivers sockeye was transferred to Bulkley sockeye stocks. Pre-contact sockeye catch abundance is speculative as to exact numbers; however, Wet'suwet'en oral histories clearly note that salmon were abundant and runs were annually reliable.



Figure 13. Typical smokehouse with sockeye strips drying.

177. Coho and steelhead migrate into the Bulkley Watershed in early to mid-August and are harvested but to a lesser degree. The main coho fishery occurs later in the many smaller, though important, tributary streams on the territories. In the past coho were especially useful to the people who did not go to the mainstem, but stayed out at their villages or camps on the remote territories. Due to their widely dispersed nature throughout the watershed, coho are often harvested and processed in headwater locations.
178. Similarly, lake and stream fish such as rainbow trout, steelhead, Dolly Varden char, bull trout, lake trout, burbot, and whitefish are also fished and processed in their respective habitats. Salmon are eaten fresh during the summer, but the major fishing effort is focused on salmon for use during the rest of the year. The salmon are split and hard-dried over slow, smoky fires in smokehouses, then stored in bark-lined excavated storage pits and covered over with the excavated dirt. These pits, often called cache pits, were usually located in drier (sandy or gravelly) soil types close to the village, winter camps, or other home places.
179. At Bulkley and Morice river canyon or rock outcrop locations, salmon are concentrated by strong currents. Large woven baskets and/or lashed wooden strip traps were made with ingenuity, some incorporating delivery chutes that moved the trapped fish to a waiting fisher, who transferred the fish to the shore. Trap sizes varied, with larger ones being lowered and raised with stout poles and operated by a strong and frisky crew. The various traps and dip net gear used depended on site location conditions, fish quantities needed, and the number of people available to fish the gear and provide processing capacity. Numerous cache pits around the canyons are testimony to the traditional use of the Wet'suwet'en for sustenance needs.
180. On the Bulkley, Morice, Nanika, Nadina, and Endako river mainstems, and on many of their tributaries, salmon were traditionally caught with weirs inset with a variety of large woven cylindrical or barrel basket traps. Undoubtedly the most productive and ingenious of fishing gear, these weirs were built either right across smaller streams, or on the mainstems, out on an angle to guide the migrating fish into mid-stream or shore-side traps. The wide variety of weirs and contiguous traps were matched with the species, environment, placement, and building materials available.
181. Smaller tributaries often were fished with weir placements just upstream of the confluence with the mainstem, while larger tributaries had weirs strategically positioned close to lake outlets. These two types of sites are hydrologically suited for weirs because they are relatively protected from high-water events or floods following intense rainstorms. Gear types suited to single fish harvest included

specialized dip nets with a closable mouth and spears. Spears were utilized in shallow, clear tributary streams where fish were readily visible.



Figure 14. Wet'suwet'en fishing a hlamgan trap in Hagwilget Canyon.

2.3 Post-Contact Fisheries Context

182. Wet'suwet'en Clans and House groups managed the coho, sockeye, chinook salmon and steelhead fisheries of their territories up to the mid 1870s. At this point, Euro-Canadians established coastal industrial fisheries at the mouths of the Fraser and Skeena rivers and initiated a period of transition.
183. Early industrial development on the British Columbia coast saw the development of many new canneries, including in 1870 and 1877 the first commercial salmon canneries on the Fraser and Skeena rivers respectively. Thirty years later, as markets were developed and investors looked for a certain return on their capital, fourteen canneries supported by a fleet of 870 fishing boats were in operation on the Skeena. In 1907, the Skeena canned salmon pack totaled just over 159,000 cases of which two-thirds were sockeye; this required a catch of approximately 1.6 million.
184. By 1901, 49 canneries operating in the Fraser area produced a combined pack of 990,252 cases (48 pounds each) of canned salmon. The average annual catch on the Fraser for the 16-year period from 1898 to 1913 was 9.49 million sockeye. This period was characterized by steady growth in both the number and size of the canneries, competition for sockeye, and the move to begin canning other species besides sockeye. The number of sockeye that did not return to spawn in Wet'suwet'en territory is huge.
185. At the turn of the century, a campaign was initiated by cannery operators, who wanted a larger share of the fish and a guarantee of harvesters and plant workers. Both these conditions were accomplished by prohibiting the use of weirs by aboriginal fishers. Legislation was accordingly crafted prohibiting weir use by aboriginal fishers, and the sale of fresh and processed fish throughout northern BC.
186. The Federal Department of Fisheries and Oceans (DFO) administrators directed pressure against native fishers, Wet'suwet'en fishing management patterns, and traditional harvesting techniques that principally relied on weirs and traps, but included dipnets, ice fishing set nets, and spears. Pushed to abandon their traditional gear and means of production, which over millennia had sustained a diverse and healthy fishery, traditional fisheries found it difficult to continue as in the past.
187. According to Wet'suwet'en Knowledge, dispersed fisheries operating on the Bulkley mainstem included nine camps between Boulder Creek and Moricetown Canyon and eleven camps upstream of the canyon to the Telkwa River confluence (Wet'suwet'en Fisheries 2003). These dispersed fisheries that mainly target coho and steelhead are often positioned at tributary mouths to easily exploit the fish resource. Dispersed fisheries away from the Bulkley mainstem include the fisheries at the outlets of Toboggan and lower Reisetser lakes (Rabnett et al. 2001).
188. Wet'suwet'en salmon fisheries and processing operated on the upper Endako in Laksilyu territory up until roughly 1913, and then from the late 1940s to 1971, when conservation concerns precluded fishing. Upper Endako salmon and freshwater fishing sites are located at Tseel K'ez Ceek—the outlet of Decker Lake, and between Xee Dles Kwe (Shovel Creek) and Tseel K'ez Teezdlii—the outlet of Burns Lake, particularly at the Tseel K'ez TI'aat and Nde Teezdlii village sites.
189. Wet'suwet'en salmon fisheries continue into the present at Sde Keen Teezdlii and Keel Weniits TI'oogh K'et on Laksilyu territory in the upper Zymoetz (Copper) drainage. Sde Keen Teezdlii is located on the north shore of McDonell Lake at the outlet, and Keel Weniits TI'oogh K'et is located at Six Mile Flat close to the outlet of

Dennis Lake. The upper Copper fisheries have been operating on a continuous basis due to the relatively stable sockeye stock abundance.

190. Salmon fisheries operating on the Nadina River in Gilseyhyu territory terminated in 1913 following the Fraser Canyon slides. The fishery resumed in the late 1940s and continued at a sustained level into the mid-1970s when the spawning channel was constructed by DFO. The spawning channel has changed the diversity of sockeye stocks and altered the location of spawning sockeye.
191. In 1946, the International Pacific Salmon Fisheries Commission completed the first fishways to ease fish passage obstructed by the 1913 and 1914 slides in the Fraser Canyon. These fishways were highly successful in allowing easy migration for the Wet'suwet'en sockeye and chinook stocks in the upper Endako and Nadina rivers.
192. Over time, a shift occurred from many, dispersed subsistence fisheries, which were locally managed closer to the spawning grounds, to a coastal, industrial, mixed-stock fishery with highly efficient, non-selective capture methods. The pressure to relocate Wet'suwet'en salmon fisheries to the Bulkley mainstem had many effects. There was considerable impact to Wet'suwet'en fishers in their encounters with another culture, both socially and politically.
193. The Wet'suwet'en salmon fisheries at Hagwilget Canyon and Moricetown Canyon were some of the largest aboriginal fisheries on the Skeena system, and rank alongside the large fisheries located at Kisgegas and Wud'at on the lower and upper Babine River respectively. In Moricetown Canyon and below the canyon, Wet'suwet'en fished twenty-two known trap and gaff sites as shown in Figures 70 and 71. In 1929 at Moricetown Canyon, DFO blasted several "steps" into the main falls at winter low water. During 1950 to 1951, DFO constructed concrete vertical-slot fishways on both banks to provide fish passage around the falls. This 'habitat improvement' interfered with the food fishery, but did not destroy it.
194. The Wet'suwet'en fished twelve sites on the Bulkley River left bank at Hagwilget (Gitksan Wet'suwet'en Tribal Council 1987). During the winter of 1958-59, DFO blasted the rocks in Hagwilget Canyon that served to concentrate fish close to the canyons walls. None of the twelve Wet'suwet'en fishing sites were used again. The fishery was destroyed. DFO demonstrated bias against the Wet'suwet'en fishery because they were largely ignorant about Wet'suwet'en fisheries and their significance to the culture. Relative to its history, the Hagwilget Canyon fishery currently functions on a very small scale. The only documented benefit to the Hagwilget rock removal was that a new population of pink salmon was established in the Bulkley system upstream of Moricetown Falls.
195. From the late 1950s, the Moricetown Canyon fishery fulfilled the food, societal, and ceremonial (FSC) needs of the Wet'suwet'en. However, since 2001, sockeye escapements in the Morice and upper Bulkley systems have been so low as to preclude Wet'suwet'en sockeye fishing. This voluntary conservation measure by Wet'suwet'en has imposed further hardship on community members. This is a testimony to Federal mis-management of the salmon stocks within Wet'suwet'en territories.
196. This shift from indigenous Wet'suwet'en to Federal control and management had adverse impacts on Wet'suwet'en culture, communities, and sustenance economics. In general, government fisheries policies in the upper Skeena and Fraser watersheds during the period between 1880 and 1980 resulted in a legacy of over-fished stocks, conflict, and marginalization of aboriginal people. The effects of these



policies can be clearly seen in the present, with the diminished abundance of Endako, Nadina, Bulkley, and Morice sockeye stocks limiting food fishing. Currently, Wet'suwet'en salmon that are harvested for food, societal, and ceremonial use (FSC), as well as part of the ESSR fishery, are harvested with dipnets as shown in Figure 72.

197. Since 2001, the Wet'suwet'en have not directed a food fishery on the Morice–Nanika sockeye stocks. The Native Brotherhood of BC, in conjunction with the United Fisherman and Allied Workers Union, north coast gillnet groups, fish processing companies, as well as the Gitxsan have semi-annually supplied the Wet'suwet'en with around 8,000 sockeye on a sporadic basis.
198. Over the last 120 years, federal management has transformed the community based, stock specific salmon fishery to a highly centralized, mixed-stock fishery that is relatively indiscriminate on impacts on species, runs and stocks. Besides the impacts from the industrial fisheries, salmon and freshwater fish habitat across the territory has been degraded by relatively massive industrial development.
199. From the Wet'suwet'en perspective, there are aboriginal rights grounded in the Canadian Constitution with government obligations to protect and maintain water, wildlife, and fish and their habitats. The potentially serious adverse impacts and proposed infringements by the proponent and the federal government to Wet'suwet'en fish, their habitat, and associated water quality issues are cause for concern to the Wet'suwet'en people.

3.0 Wet'suwet'en Fish and Fish Habitat

3.1 Fraser Watershed

200. Eleven Wet'suwet'en territories drain into the northwestern portion of the upper Fraser Basin, all via the Nechako River. These territories all support anadromous salmon or freshwater fish populations. Anadromous fish include chinook and sockeye salmon, while freshwater fish include white sturgeon, kokanee, burbot, lake trout, mountain whitefish, suckers, northern pikeminnow, dace, sculpin, lake trout, Dolly Varden, chub, and rainbow trout.
201. Three territories in the Fraser drainage would be crossed by the proposed Coastal GasLink pipeline: Honeagh Bin, Misdzi Kwah, and Bi Wini. The proposed pipeline will bisect Honeagh Bin territory, Misdzi Kwah and Bi Wini territory in the headwaters which drains into Francois Lake. Direct effects from clearing activities and pipeline construction will impact most Wet'suwet'en fish resources in the upper Fraser drainage, including those currently impacted by the Nechako Reservoir. This is due to the interconnectedness of the aquatic ecosystem at multiple scales and the nature of the fish communities.

Table 1. Wet'suwet'en Territories, Fish, and Development in the Fraser Watershed

Wet'suwet'en Territories in Fraser Watershed							
Clan	Territory	Salmon Present	Development Concerns ¹	Potential Pipeline Effects ²	Biophysical Concerns ³	Sensitive Watershed Features ⁴	Cultural Considerations ⁵
Tsayu	Tat'l'at Bin	✓	✓	✓	✓	✓	✓
Laksilyu	Tselh K'i'z Bin	✓	✓	✓	✓	✓	✓
Gihlseyhyu	Honeagh Bin	✓	✓	✓	✓	✓	✓
	Netanli		✓	✓	✓	✓	✓
	Tac'its'olh'en	✓	✓	✓	✓	✓	✓
	Yin Bi Wini	✓	✓	✓	✓	✓	✓
	Tsc'ulh Tesdliz Bin	✓	✓	✓	✓	✓	✓
	Wesel Bin		✓	✓	✓	✓	✓
Laksaamishyu	Misdzi Kwah	✓	✓	✓	✓	✓	✓
	Tsehl Tse K'i'z	✓	✓	✓	✓	✓	✓
Gitumdem	Bi Wini		✓	✓	✓	✓	✓

1. Development concerns include forestry, agriculture, linear, mining, hydro, & cumulative.
2. Potential pipeline effects include clearing and construction, effecting land and resources
3. Biophysical concerns include terrestrial, aquatic, hydrology, and resistance to change.
4. Sensitive watershed features include sensitive biological, physical, and unique features.
5. Cultural considerations include culturally significant heritage, wildlife and fisheries features.

202. The Wet'suwet'en sockeye stocks in the upper Fraser watershed include Endako River sockeye and the four Nadina River sockeye subpopulations. Upper Fraser chinook are composed of the Endako River and Nadina River runs. All these salmon stocks have been greatly affected by a series of specific habitat alterations, mostly consisting of effects to water quality and to stream channels with impacts to holding, migrating, spawning, incubation, and rearing habitats, which are summarized below.

203. Wet'suwet'en concerns due to diminished salmon abundance include two major factors: 1) the 1913 rock slides in the Fraser Canyon that obstructed salmon migration for 32 years until the fishways were installed in 1945 (Andrew and Geen 1960); and 2) the average 80% annual harvest rate since 1900 on Fraser Early Summer runs from intensive commercial coastal mixed-stock fisheries, as noted by Ricker (1987).

204. Wet'suwet'en have significant concerns regarding the well-being of the sockeye and chinook stocks, and the freshwater resident fish and their habitats in the upper Fraser Basin, which would be further affected by pipeline construction.

3.1.1 Wendzil Keen Kwe Watershed

205. Wendzil Keen Kwe watershed is known in English as the upper Endako River watershed. Upper Endako watershed is defined as extending from the Bulkley watershed downstream to the Shovel Creek drainage including all tributary drainages. This upper portion is Tsayu territory–Taatla't Bin (Decker Lake), while the lower portion is Laksilyu territory–Tselh K'i'z Bin (Burns Lake).

206. Anadromous fish comprise sockeye and chinook salmon, which migrate in from the Pacific Ocean via the Fraser, Nechako, Nautley, Stellako, and the Endako rivers. Freshwater fish residing in the upper Endako stream and lake habitats include burbot, rainbow trout, kokanee, mountain whitefish, lake chub, leopard dace, longnose dace, northern pike minnow, longnose sucker, redbside shiner, and prickly sculpin. The highest densities of resident fish in the Endako system from the Shovel Creek confluence upstream are redbside shiner and northern pike minnow.



3.1.1.1 Endako River Sockeye

207. Wet'suwet'en Knowledge records four sockeye spawning subpopulations in the upper Endako system: at the outlet of Decker lake (as shown in Figure 8), the outlet of Burns Lake, in the lower reach of Shovel Creek, and in the mainstem for 3.5 km downstream of Shovel Creek. Currently, the Endako River sockeye stock is considered functionally extinct; however, it is suspected that in some years several pairs of sockeye from this population may spawn downstream of Shovel Creek in the Endako River. Endako River sockeye juveniles rear downstream in Fraser Lake, which is one of the top three juvenile sockeye nursery lakes in the Fraser system.



Figure 15. Endako River at the outlet of Decker Lake showing the proximity of the rail and highway corridor.

208. The age of maturity of Endako sockeye salmon is four years, so the populations are divided into four lines of descent. Both in the past and in the present there have been and are large differences in abundance among these four self-reproducing lines or annual spawner returns. This means one dominant year of abundance over their four year cycle, one sub-dominant return, and two off-cycle returns. For instance, 1991 and 2011 would be years of dominant abundance.

209. The last spawning of Endako River sockeye was recorded in 1991; this observation is in spite of annual spawner presence surveys. There are no known recorded spawner numbers prior to 1921, and it appears 1934 was the dominant cycle year. In 1946, following completion of the Fraser canyon fishways, the escapement increased and evened out until the late 1950s. Since then, spawner abundance fluctuated at low levels into the mid-1980s, when the stock appears to have diminished entirely as shown in Figure 16.

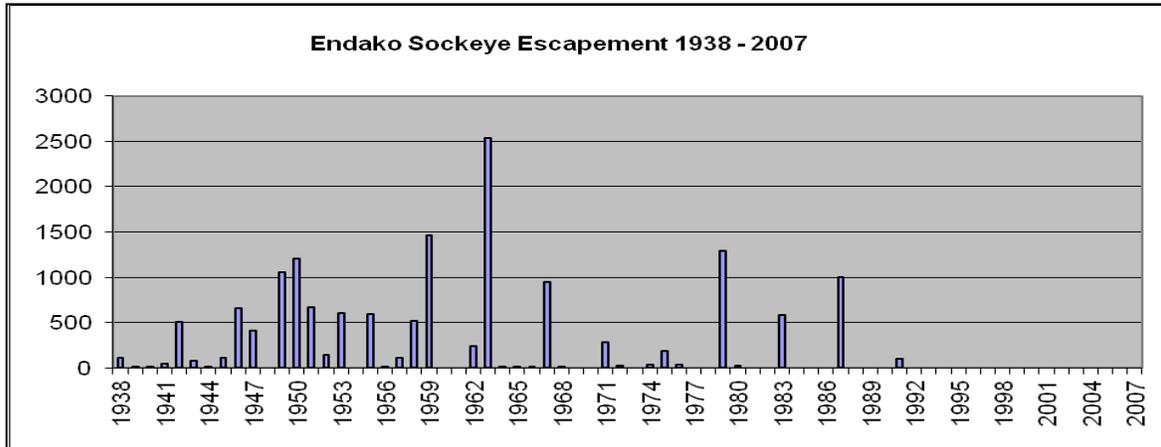


Figure 16. Endako River sockeye escapement 1938 to 2008.

210. Endako River sockeye are rated at very high risk of extirpation. The main reason why sockeye are not spawning in the upper Endako is thought to be habitat modifications, return migration obstructions, fisheries mis-management, particularly with excessive harvest rates, and an overall declining return for all Fraser sockeye stocks, reflecting low productivity and survival rates since the early 1990s. In recent years, record high temperatures in the Fraser River during spawning migrations of Endako River sockeye have been associated with high mortality events, which raise further concerns about the long-term viability of the Endako River sockeye.

3.1.1.2 Endako River Chinook

211. Wet’suwet’en Knowledge records four chinook spawning locations in the upper Endako system: at the outlet of Decker Lake (as shown in Figure 16), the outlet of Burns Lake, in the lower reach of Shovel Creek downstream of the canyon at 0.75 km, and in the mainstem for 3.5 km downstream of Shovel Creek. Currently, Endako River chinook spawning occurs principally in the mainstem for 0.4 km downstream of Shovel Creek, occasionally at the outlet of Burns Lake, and at select groundwater receiving locations in the Endako mainstem, particularly between Savory and Shovel creeks. These summer-run chinook often arrive early, and then hold with peak spawning typically occurring in the first and second weeks of September. Juvenile chinook rearing occurs throughout the mainstem and its tributaries with higher densities downstream of Shovel Creek.

212. Escapement records are few until the early 1960s, when an average of 40 chinook were recorded into the mid 1980s. Average annual escapements increased from the mid 1980s to 1990, likely reflecting the reduced marine exploitation resulting from the Pacific Salmon Treaty. From 1984 to 2010, the average annual return has been 195 chinook, with a trend of slightly diminishing chinook abundance as shown in Figure 17. The outlook for upper Endako chinook is uncertain. Similar to Endako sockeye habitat, chinook habitat is severely degraded with lethargic stream flows and lack of gravel recruitment. The current status of Endako River chinook is rated at a high risk of extirpation.

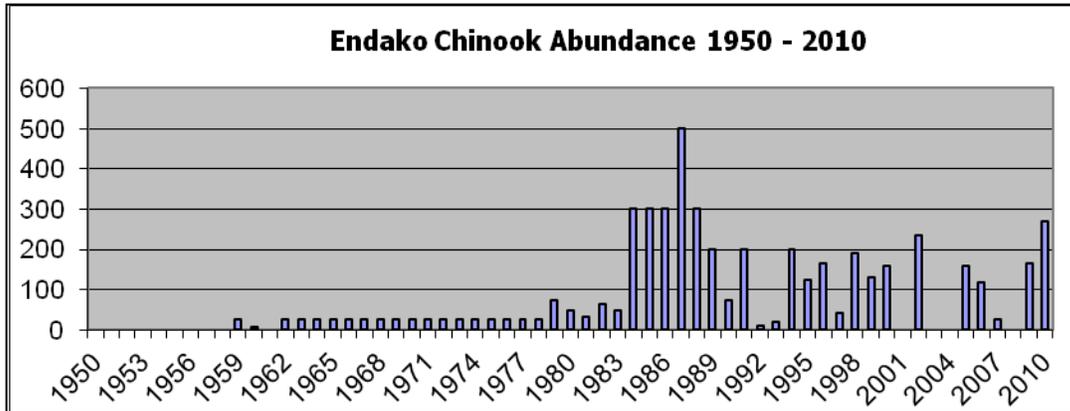


Figure 17. Endako River chinook abundance from 1950 to 2010.

3.1.1.3 Endako River Sturgeon

213. Wet’suwet’en Knowledge, archival records (BC Government Records), and anecdotal history notes white sturgeon presence in the Endako River and Burns Lake, and Francois Lake, Ootsa, and Eutsuk Lakes up until the 1960s. A survivor from before the time of the dinosaurs and a species relatively unchanged for 175 million years, white sturgeon, the largest and longest-lived freshwater fish in North America has in the last 50 years come to the brink of extinction. In 2006, the Nechako white sturgeon populations were officially designated as endangered under the Federal Species at Risk Act (SARA). The British Columbia Conservation Data Centre (BC CDC) ranks Nechako white sturgeon as red listed (S1).
214. The species’ most distinguishing features include a mainly cartilaginous skeleton, a long scale-less body covered with rows of large bony plates (called scutes) on the back and sides, a shark-like tail, and four barbels between the mouth and an elongated snout. Fish of up to 6m in length and over 100 years of age have been reported in the Nechako River.
215. Nechako sturgeon move into shallower areas briefly to feed in spring and summer, adults are typically found in deep near-shore areas of major rivers, adjacent to heavy and turbulent flows with sandy or fine gravel bottom. In winter, sturgeon prefers calmer areas. Generally, juveniles prefer lower reaches of tributaries, wetlands and side channels.
216. Over the past century, white sturgeon populations have been reduced by over-fishing and construction of Kenney Dam in 1952, and the subsequent reduced annual flows by ~50%, reduced annual peak flows, and increased sediment supply from the 1961 Cheslatta River avulsion (Kellerhals et al. 1979, Rood and Neill 1987). Cadden (2000) documented the relative sturgeon abundance between 1812 and 1950 and the population decline resulting from European settlement and commercial overfishing.
217. Korman and Walters (2001) clearly identified the sturgeon population is undergoing a recruitment failure, which began in the mid 1960s about a decade following the closure of Kenney dam. RL & L (2000) found sturgeon are now primarily found in the Nechako River between Vanderhoof and the Stuart River confluence and are occasionally found as far upstream as Fraser Lake. The status of Francois Lake sturgeon is unknown.

218. A recovery planning process was initiated for Nechako white sturgeon by the province of British Columbia in September 2000. The recovery planning process is to ensure technical soundness and meaningful participation of the public. The recovery plan outlines reasonable actions believed necessary to recover and protect Nechako white sturgeon and was presented by Golder (2004) on behalf of provincial and federal agencies, First Nations, industry, and the public.

219. The second approach to sturgeon recovery is outlined in the Nechako White Sturgeon Habitat Management Plan developed by NWSRI (2008). This plan combines active investigation of habitat requirements with a continually increasing scale of habitat rehabilitation, habitat enhancement, and habitat creation projects. These plan components could work towards the conservation of Nechako white sturgeon through natural in-river recruitment.

3.1.1.4 Upper Endako River Fish Habitat

220. The upper Endako drainage is characterized by a snowmelt-dominated hydrologic regime. Decker and Burns lakes form a headwater chain of lakes. Decker Lake is an oblong shape approximately 12.5 km in length with a simple shoreline, no islands, and a single basin with a maximum depth of 16 m. Burns Lake is long and narrow, roughly 19.5 km in length, with a complex shoreline, several islands, and two basins with a maximum depth of 40 m. Water retention time in Burns Lake is 0.76 years or about nine months. Besides these relatively long lineal lakes, there are numerous small lakes along stream courses that provide hydrologic storage and stability, with the effect of slightly delaying and attenuating peak flows.

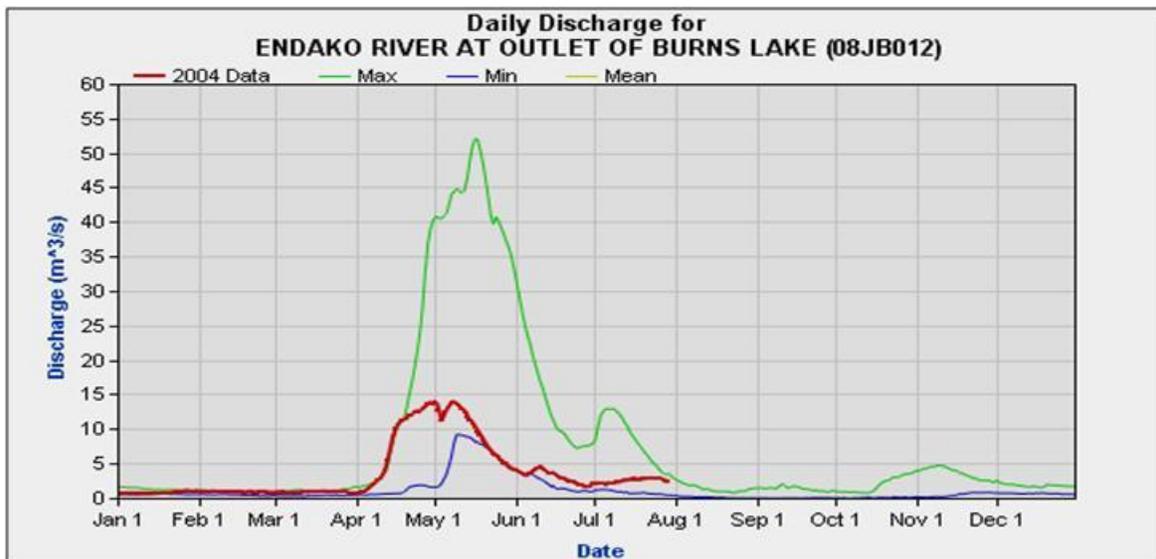


Figure 18. Endako River discharge at the outlet of Burns Lake.

221. Endako River downstream of Burns Lake to Shovel Creek is low gradient with tortuous meanders, and portions of the stream banks are heavily fortified. Low flows and beaver dams impede salmon migration. As shown in Figure 18, low flows – 1 m³/s or less – are typical from August 1 to April 1, with average velocities near zero. During this time period, shovel Creek usually provides 75% of the Endako River flow. Water temperatures are usually well below lethal temperatures for spawning salmonids. There is high concern regarding the demand for licensed water withdrawal for agricultural summer irrigation as well as all-season demand from industrial users.

222. There are concerns regarding the water quality of Endako River and Decker and Burns lakes, mostly centered on eutrophication that include:
- Water quality may decrease as a result of land use in the watershed including the Village sewage system, individual septic tanks, and adverse run-off from agricultural, forestry, commercial, and residential developments;
 - Beaver populations in the upper Endako watershed are relatively high with impoundments modifying riparian zones and increasing water temperatures overall;
 - *Elodea Canadensis* has been identified as the most widespread aquatic weed covering a large portion of lake littoral zones;
 - Types and distribution of fish species are changing, with a decrease in cold water fish and an increase in coarse fish.
223. The predominant land use is forestry, with the land base allocated to various tenure holders and two lumber mills located in the watershed. Currently, mountain pine beetle activity is driving an aggressive program of salvage logging with an accelerated rate of cut. Recent studies note that forest cover exerts a strong control on snowmelt; however, the relative short and long-term hydrologic impacts from salvage logging depend on a number of different factors, which are site and watershed specific (Schnorbus 2011).
224. The majority of the upper Endako is fragmented due to an extensive network of forest access roads. Agriculture activity consists primarily of ranching and hay production limited to the lower elevations. Urban and built-up areas include Palling, Decker Lake, and Burns Lake, all of which are located in the valley bottom. Major linear development includes the Highway 16 corridor, the CN Rail corridor, the BC Hydro 500 kV corridor, and the PNG natural gas pipeline corridor. Wet'suwet'en have a high level of concern with regard to the major transportation routes, due to the right-of-ways and crossings through the Endako floodplain, the impacts at many crossings, and encroachments and channelization on the river banks.
225. Wet'suwet'en have varying levels of concern as to forest development. Forestry development has impacted a high percentage of the watershed with hydrological effects at both the stand and basin levels. The forest road network has adverse effects on surface and subsurface hydrology, on wildlife abundance and well-being, and on forest ecosystem functioning, none of which have been evaluated and consequently are not well understood. Similar adverse effects are also apparent with the four major linear development corridors. There is an overall high level of concern of agriculture development as a result of impacted riparian conditions, water withdrawals, and the extent of valley-bottom agriculture in upper Endako watershed.
226. Past and present land and resource use concerns, centered on the above noted effects, risk key Wet'suwet'en environmental and cultural values, and are rated as undesirable cumulative effects. Fast-paced watershed change, driven by anthropogenic development, is threatening the sustainability of freshwater resources in the upper Endako watershed. Developments within Endako watershed interact in a manner that is additive and synergistic over space and time.
227. Such cumulative environmental effects are the result of actions that are in some cases individually minor, but collectively significant when added to other past, present, and reasonably foreseeable future actions. Importantly, both the magnitude of salmon and freshwater fish habitat loss, and the differential loss of specific habitat types have evolutionary implications for upper Endako fish. Less genetic and phenotypic diversity at the population level will compromise the ability of these fish,

particularly the sockeye and chinook salmon, to weather large-scale environmental fluctuations such as climate change, now and in the future.

228. From the Wet'suwet'en perspective, there are aboriginal rights grounded in the Canadian Constitution with government obligations to protect and provide water, wildlife, and fish and their habitats. Negative impacts and stress from development in the upper Endako have impacts on Wet'suwet'en environmental and cultural well-being and have eroded the ability to exercise aboriginal rights. The question arises whether or not, and to what degree, these rights are acknowledged and protected by the BC and Canada governments.

229. It is apparent that past and present land management approaches has failed in the upper Endako watershed. Development in the foreseeable future needs to avoid any further degradation, not merely soften through the mitigation of significant adverse effects, and not place the upper Endako ecosystem and our culture at further risk and in an ultimately irreversible situation.

3.1.2 Neetl'anlii Ts'anlii Watershed

230. Neetl'anlii Ts'anlii watershed is known in English as Nadina River watershed. Since time immemorial, Wet'suwet'en have lived on the Tac'its'olh'en and Yin Bi Wini territories, at a multitude of homeplaces along the rivers and lakes, utilizing the rich and reliable sockeye and chinook runs, as well as the robust populations of fur bearers and ungulates. Wet'suwet'en presence is reflected in the three Indian Reserves, as well as at the village sites located at Poplar Lake, Nadina Lake, Nadina River, Newcombe Lake, Bittern Lake, Duel Lake, Twinkle Lake, and Pack (Park) Lake. There are many Wet'suwet'en grave sites at these village sites and outlying camps. The Gilseyhyu territories, Tac'its'olh'en and Yin Bi Wini, are currently used for fishing, hunting, and gathering, as well as for economic development to support sustenance and cultural activities.

231. The reason why Nadina salmon are discussed in this submission is due to the significance Wet'suwet'en place on their health and abundance and on any potential impacts from the proposed Coastal GasLink pipeline.

232. The Nadina River fish community assemblage consists of nine salmonid species including sockeye, chinook, kokanee, rainbow trout, bull trout, Dolly Varden, lake trout, mountain whitefish, lake fish, lake chub, peamouth chub, longnose dace, northern pikeminnow, longnose suckers, largescale suckers, redbelly shiners, as well as burbot and prickly sculpin. Rainbow trout are the most common and widespread fish in the watershed and exhibit both stream and lake life histories (SKR 2004). Bull trout have been observed only once in the mid Nadina River, this was reported by Fielden (1995). Lake trout are known to reside in Poplar and Hill Tout lakes. Bustard (1998) estimates that the Nadina system provides rearing for 31% of the rainbow trout parr that move into Francois Lake.

3.1.2.1 Nadina River Sockeye

233. Five sockeye subpopulations spawn in the Nadina drainage: Glacier Creek spawners, Tagetochlain Lake and Creek spawners, Early and Late Nadina River spawners, and Nadina channel spawners. The two distinct Nadina River sockeye stocks are distinguished by run timing with the arrival of Early Nadina stock in the latter half of August. Nadina sockeye juveniles rear in Francois Lake, but it is suspected that Nadina Lake is occasionally utilized as a rearing nursery for Glacier Creek sockeye spawners. All Nadina sockeye subpopulations are categorized as Early Summer (ES) Fraser sockeye runs.



234. All Nadina sockeye subpopulations are on a four year return cycle; however, for the Late Nadina River sockeye stock, dominance shifted from one line to another (Ricker 1997) in the mid-1970s following the establishment of the spawning channel. Historical records suggest the Late Nadina sockeye run was on the same cycle as the Early Nadina run until 1909 (Andrew 1970).
235. In 1947, the International Pacific Fisheries Salmon Commission (IPFSC) interviewed an old Wet'suwet'en who had lived on the Nadina River all his life:
- “He recalled that the river was formerly full of salmon – all sockeye – and that they spawned in greatest concentrations in two areas. One area was at the outlet of Nadina Lake and the other about 8 miles above Francois Lake, but smaller numbers of fish also spawned over the full length of the river. When fish failed to return in significant numbers during the period 1913 to 1945, local Indians migrated to the Skeena River [Moricetown] each year for their winter’s supply of salmon”. (Andrews 1970)
236. It is now well known that the disappearance of Nadina sockeye in 1913 was caused by rock slides from CN Railway construction at Hell’s Gate in the Fraser Canyon. The slides blocked salmon migration. Nadina sockeye salmon were almost destroyed by the slide, and the annual number of fish escaping to spawn was so small that production remained at very low levels until 1949 (Andrew 1970). IPFSC completed construction of the fishways in 1946 that allowed salmon easy passage through the Canyon.
237. Roos (1964) evaluated and summarized early Hudson’s Bay Company (HBC)–Fort Fraser Post archival records from the 1822 to 1911 period. His findings indicate there is little doubt the Early Nadina sockeye dominant year run was of substantial size.
238. The largest escapements during the 1913 to 1945 period were about 245 sockeye in 1945. Since that time, Nadina sockeye have greatly increased in abundance; for instance, for the twenty-one years between 1949 and 1969, annual Early Nadina spawners averaged 5,482 sockeye and Late Nadina spawners 6,722 sockeye, ranging from 9 to 29,994 fish. Early and Late Nadina sockeye abundance is shown below in Figure 19 and 20 respectively.
239. In 1973, the International Pacific Salmon Fisheries Commission constructed an artificial spawning channel, which since 1986 has been operated by Department of Fisheries and Oceans (DFO). The purpose of the spawning channel was to augment Nadina sockeye abundance and increase juvenile sockeye rearing in the underutilized Francois Lake.



Figure 19. Nadina spawning channel



Figure 20. Spawning Channel counting weir

240. The Nadina spawning channel is located about 0.5 km downstream from Nadina Lake outlet. Entrance by sockeye to the spawning channel is facilitated by a diversion weir across Nadina River that guides fish into the spawning channel. Grant et al. (2011) note that the diversion weir restricts the Early Nadina sockeye from ascending the Nadina Falls, holding in Nadina Lake, and then descending downstream to their spawning grounds. This behaviour of holding in the lake and dropping back down to spawn is an evolutionary adaption to the relatively warm Nadina River temperatures.

241. This unique behaviour is no more; however, there is a limited number of sockeye from the Late run that do spawn in the river adjacent to and downstream of the channel. Given the changes in behaviour and inter-spawning that likely now occur between the first and second run Nadina River populations after channel construction, and due to spatial overlap of their spawning locations, these original populations are possibly lost and replaced by a new single population, the Nadina channel sockeye.

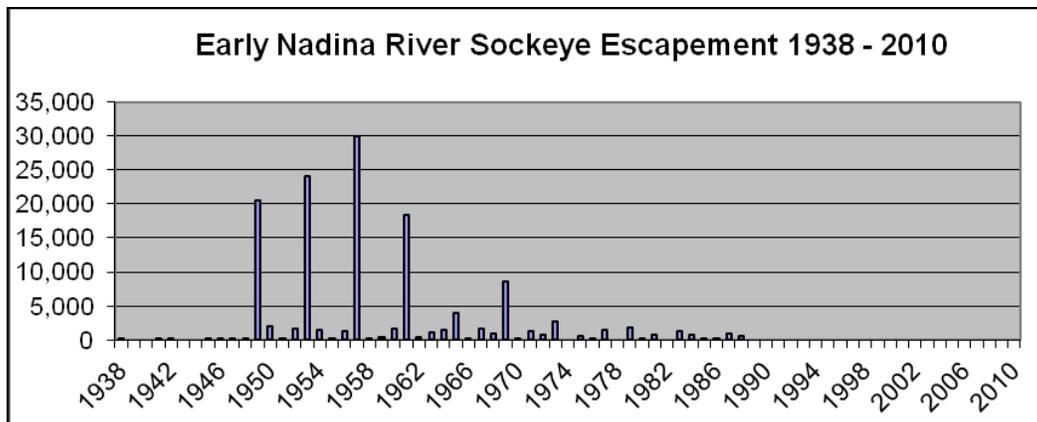


Figure 21. Early Nadina River sockeye escapement from 1938 to 2010

242. It is important to note there have been no fry to smolt studies conducted and the only known evaluation of the channel is based solely on escapements. There has always been a problem getting sockeye into the Nadina channel to spawn, and it has only been fully loaded a couple of times in its history.

243. Grant et al. (2011) reports that DFO has tentative plans for the near future to conduct research into opening the top of the channel during early migration, in order to see if the Early sockeye run, or parts of it, will revert to their past behaviour of migrating up to Nadina Lake and holding before dropping back down.

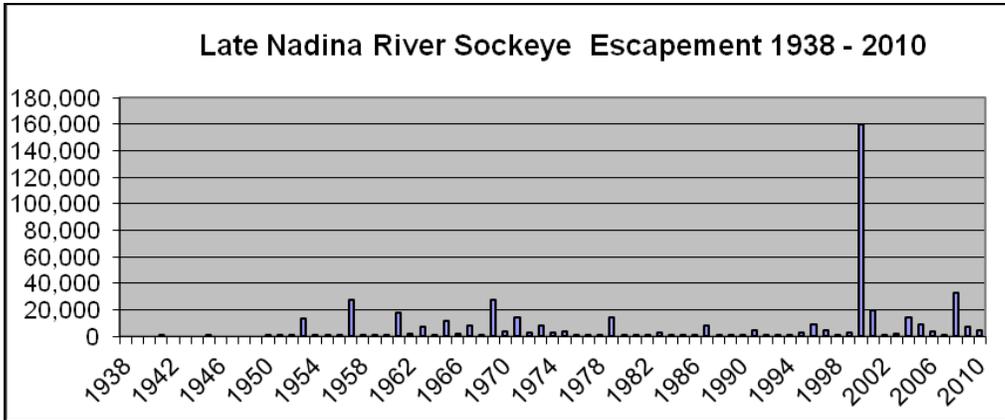


Figure 22. Late Nadina River sockeye escapement from 1938 to 2010

244. Sockeye escapements have been recorded for the original Nadina River spawning sites; however, Figure 21 shows there is no spawning record of the Early Nadina run since 1988. The spawning escapement for the Nadina spawning channel is shown in Figure 22.

245. Since the mid-1970s, spawner success has remained high in the river (~93%) and channel (90%), with the exception of 2008 when the channel had only 1% spawner success (Grant et al. 2011). Similar to other Early Summer Fraser sockeye runs and the Early Stuart sockeye runs, Nadina sockeye have exhibited systematic declines in productivity since the mid-1960s. Productivity has been particularly low in recent years – from the 1997 to 2005 brood years – with six of these years close to or below replacement (Grant et al. 2011).

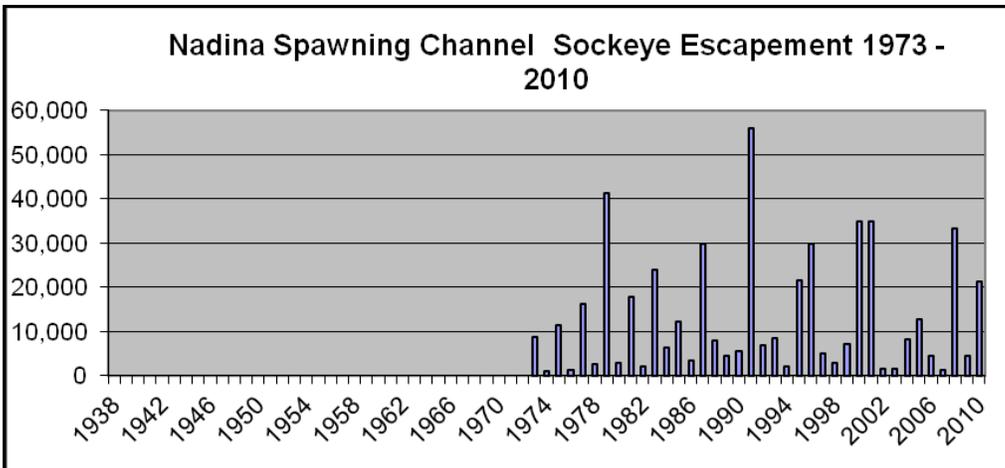


Figure 23. Nadina River sockeye channel escapement from 1973 to 2010

246. Similar to other Fraser sockeye populations with freshwater survival data, Nadina sockeye early freshwater survival decreased consistently from 1973 to the mid-1990's, and has subsequently increased. Sockeye spawning in Tagetochlain and Glacier creeks has been assessed inconsistently since the 1950s, and productivity, escapement, and trends in abundance are essentially unknown. SKR (2001) reports sockeye spawning in Glacier Creek and several of its tributaries.

3.1.2.2 Nadina River Chinook

247. Wet'suwet'en Knowledge records chinook spawning in Nadina River for 9 km downstream of Nadina Lake and upstream and downstream of the Peter Aleck Creek confluence. There are no escapement enumeration surveys conducted by DFO; however, staff record chinook presence/absence at the spawning channel weir. Chinook juveniles rear throughout Nadina mainstem from the falls downstream to Francois Lake, but it is unknown if they are residents for one or two years or a mix of these. Currently the Nadina River chinook are considered a remnant population and are rated at high risk of extirpation, this infringement of access has never been addressed by the Crown with the Wet'suwet'en.



Figure 24. Prime chinook spawning habitat downstream of Nadina River sockeye channel.

3.1.2.3 Nadina Watershed Fish Habitat

248. Nadina watershed drains the lowlands southwest of Nadina Mountain and the northeastern portion of the Sibola Range. Nadina River, a sixth order stream, is headed by Newcombe and Nadina lakes, which provides a moderating influence to upper Nadina River resulting in stable, relatively clear water flow conditions. Peter Aleck Creek and Tagetochlain Creek, which drains the relatively large Tagetochlain Lake (Poplar Lake), are the two major tributaries.

249. Watershed elevations range from 1,947 m at Sibola Peak to 715 m at Francois Lake, with Nadina Lake at 945 m; the total drainage area is 1,050 km². The hydrology is controlled by snowmelt with peak discharges from the Nadina River and the major tributaries typically occurring in May and June due to snowmelt, then decrease until late September, when fall rains and early snowmelt increase stream flows until the end of October, as shown in Figure 25. Stream flows decline in late November and December when precipitation falls as snow, with minimum discharges recorded in January through March, prior to snowmelt.

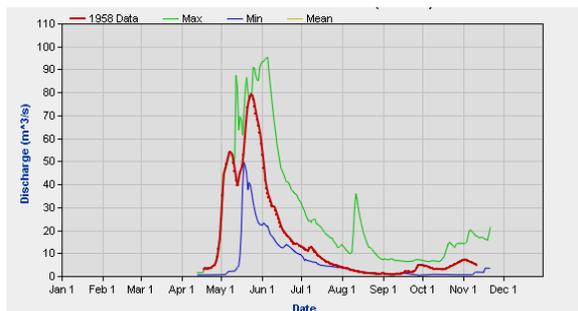


Figure 25. Daily discharge from Nadina River at Francois Lake (08JB006)

250. A series of cascades and chutes located immediately downstream of Nadina Lake restricts upstream fish movement during certain flow conditions, as shown in Figure 23. From these falls (known as Nadina Falls), the Nadina River flows 50 km to the east end of Francois Lake, of which it is the largest tributary.



Figure 26. View upstream on Nadina Falls

251. Temperature data for Nadina River is limited; however, during 1994 and 1996, temperatures were recorded between early June and early October by DFO (Anderson et al. 1997). Their results showed a maximum temperature of 21.7 °C in late June with moderated temperatures through to October. Nadina River temperatures are in a range below lethal thresholds, but well above what is suitable for spawning and rearing salmonids and could pose problems in hot, dry years for pre-spawning, holding salmon. This is likely what occurred in 1978, 1987, and 1995 when *Ichthyophthirius multifiliis* (ICH) caused substantial pre-spawn mortality in Nadina channel sockeye.

252. Forestry activities are the main development in the Nadina Watershed, which has been extensively logged and roaded over the last 70 years. From 1950 to 1966, the lower 30 km of Nadina River were used during the spring freshet for log driving, and in years of low water, salmon production was severely reduced by the consequential silting, scouring, bank erosion, and bark deposition. Small temporary sawmills operated at Nadina Lake and other locations within the watershed and a larger sawmill operated a year-round operation on Poplar Lake until the early 1970s. SKR (1998) notes 366 cut blocks had been logged up to 1998.

253. Impacts to fish habitat due to forest development are primarily the following: impacts to riparian areas on temperature sensitive streams, sediment generated from stream bank stability and erosion, and a lack of fish passage at various road crossings. There is concern regarding high summer temperatures impacting salmonids in Nadina River. The temperature stratification of Newcombe and Nadina lakes readily warms the lake waters, and consequently, Nadina mainstem is often warmer than suitable for holding, spawning, and rearing salmonids. Cold water tributaries draining into Nadina River, other than Poplar and Shelford creeks that drain lake-headed systems, have been shown to provide cooling temperatures; however, streamside harvesting warms these tributary streams. Currently, these streams are being managed as temperature sensitive with retention of 30 m forested buffers.

254. An aquatic and riparian habitat assessment conducted on the lower Nadina watershed indicated that logged blocks are in contact with 364 km of the streams (21%) draining into Nadina River (SKR and Oikos 1999). However, in most riparian

areas, deciduous regrowth was already providing shade and conifers were established.

255. Nadina River channel and banks are relatively stable, even where the channel is not confined; this is largely due to the low amount of bedload (Weiland 1995).



Figure 27. Clearcut block at Bii Wenii (Hill Tout Lake).

Due to concerns with the excellent quality of spawning and rearing in the Nadina River, the Nadina LRUP (1993) established windfirm buffers along the river corridor to maintain high water quality, to ensure large wood debris inputs, and to limit bank erosion and sediment inputs. These conditions were furthered with the Morice LRMP, which directs maintenance of the ecological structure and function with a 500 m buffer beyond the 100 year floodplain.

256. Currently, impacts to fish habitat in the Nadina are relatively low to moderate. Wet'suwet'en have concerns regarding the extent and rate of logging, the number of stream lengths impacted including riparian conditions, and the extensive forestry roads and number of stream crossings.

257. Impacts from the rock slides at Hell's Gate in the Fraser Canyon that blocked salmon migration are very high. Impacts to ensuring fish abundance due to the 80% coastal fishery exploitation rate effects are very high. Due to construction of the spawning channel, the Early Nadina sockeye stock is possibly extinct. These effects are cumulative and have limited and eroded Wet'suwet'en opportunities to exercise their aboriginal rights to fish, any further cumulative effects are infringing on Wet'suwet'en rights.

258. The largest impact to key Wet'suwet'en values from forestry activities in Nadina watershed has been the massive loss of or impacts to cultural heritage resources that include:

- trails, cache pits, house pits, camps, cabins, barns, corrals, hunting areas, fishing areas, gathering areas, and archaeology sites;
- ability of the Wet'suwet'en to provide for social, ceremonial, and sustenance needs of their communities by destroying cultural infrastructure; and
- disintegrating the chains of Wet'suwet'en Knowledge that are passed down from generation to generation and are an integral component of Wet'suwet'en culture.

259. Overall, the state of salmon stocks in the Nadina watershed are rated at high risk to further development, including potential impacts to downstream habitats used for migration to and from the Pacific Ocean. What is left of the Nadina sockeye and chinook stocks, which are very highly valued by the Wet'suwet'en, cannot be

compromised by pipelines. Any pipeline development will be an infringement to Wet'suwet'en governance, access, and protection measures.

3.1.3 Misdzi Kwah Watershed

260. Misdzi Kwah watershed is known in English as Parrott Creek watershed. Wet'suwet'en people have lived on the Gitdumden-Bi Wini territory in the upper portion of the watershed, and on the Gilseyhyu-Tac'its'olh'en and Laksaamishyu-Misdzi Kwah territories in the lower portion of the drainage for many thousands of years. From the headwaters at Keen Caagh Ben downstream to Nii Teh Ben (Francois Lake), Wet'suwet'en's had homeplaces along Parrott Creek, Poplar Creek, and the more than two dozen lakes.
261. Parrott Creek originates on the upper, southern slopes of Mount Morice and flows approximately 41 km into the north shore of Francois Lake. The three Parrott Lakes located midway through the drainage provide excellent fishing. The major tributary is Poplar Creek, which drains wetland complexes, lakes, and Tseelh K'ez (Tsichgass Lake). Major trails accessed Buck Creek, Francois Lake, Owen Lake, and Owen Flats at Morice River. Major winter villages were located at Xeet Yex (Parrott Creek inlet on upper Parrott Lake) and at Tsichgass Lake. The majority of the main trails are now subsumed by forestry access roads.
262. There are no known anadromous fish stocks using the Parrott system. From a fisheries perspective, Parrott watershed is separated into the lower and upper Parrott, due to a 4 m waterfall located 2.4 km downstream of lower Parrott Lake. The falls is a barrier to upstream fish migration from Francois Lake to Parrott Lakes.
263. Lower Parrott Creek supports spawning and rearing for rainbow trout, reddsides, mountain whitefish, burbot, longnose dace, prickly sculpin, and longnose sucker. Bustard (1998) estimates the lower Parrott system contributes to roughly 13% of rainbow trout parr that move into Francois Lake. Parrott Creek upstream of the falls, including the Parrott Lake chain, supports lake trout and rainbow trout, which are popular with Wet'suwet'en and local anglers.



Figure 28. Typical kindling tree on esker Trail east of upper Parrott Lake.

264. Forestry is the main development activity in the watershed with an extensive road network and cut blocks throughout, except in the Swiss Fire area, where most of the timber was burnt, as shown in Figure 29. The condition of fish habitat is generally good due to the low gradient mainstem, the apparently stable stream banks, and the large number of wetlands in the watershed. In the lower reach close to Clemretta, several agricultural areas are cleared to the edge of Parrott Creek. In early June, 1983, the Swiss Fire burned the Parrott Creek headwaters with impacts to riparian zones that have since regenerated.

265. Wet'suwet'en concerns regarding Parrott watershed are similar to concerns with the Nadina watershed, particularly regarding the extensive forestry road network and the number of stream crossings, and the massive loss of or impacts to cultural heritage resources. These concerns continue to impact Wet'suwet'en values and cultural foundations. Access by ATV, and other modes of transportation into remote locations have dire consequences to Wet'suwet'en cultural activities, and is seen as infringements to these practices.

266. Coastal GasLink pipeline is proposed to cross through the Parrott headwaters for roughly 3 km from KP 278 to KP 281.

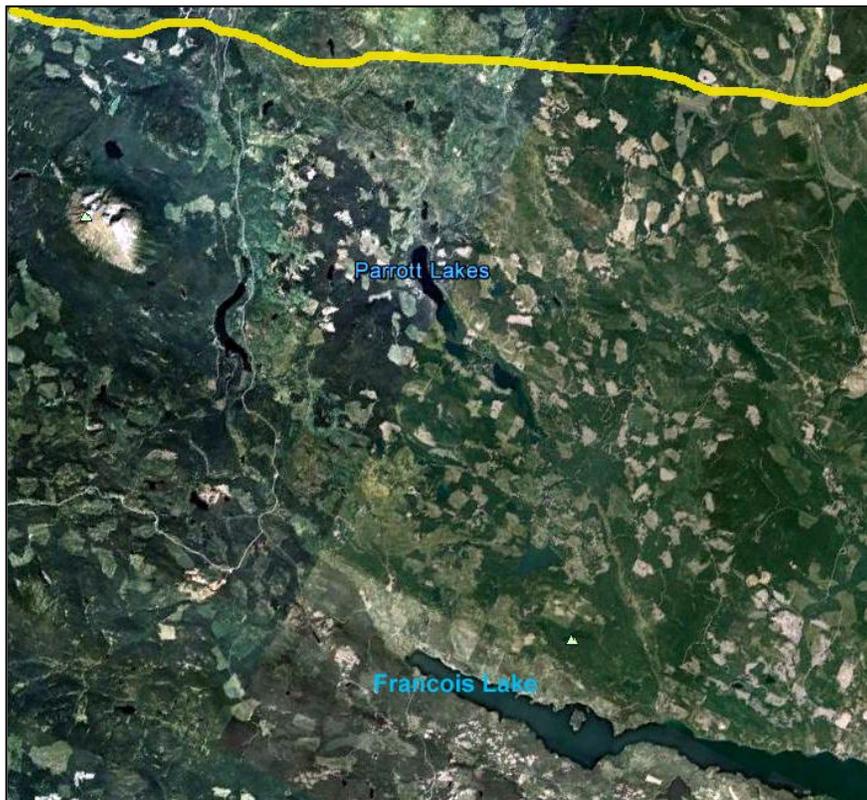


Figure 29. Parrot watershed showing the extent of forest development and the proposed Coastal GasLink pipeline route in yellow crossing through the headwaters.

3.1.4 Fraser River Salmon Status

267. The status of Endako and Nadina sockeye and chinook stocks is rated as poor with likely extirpation of Endako sockeye and the Early Nadina sockeye stocks. Nadina abundance and productivity are below biological and conservation status benchmarks and require management intervention by Canada DFO and the

Wet'suwet'en. The upper Endako sockeye and chinook are particularly at very high risk due to the degraded aquatic ecosystem. It is important to note that in some cases, such as the Glacier and Tagetochlain sockeye subpopulations, the status is unknown.

268. Cumulative impacts that have led to this high risk status rating include specific habitat impacts from poor land and resource use practices, the commercial coastal fishery that has heavily exploited the upper Fraser salmon stocks, and accumulated habitat impacts, which have resulted in modified aquatic ecosystem functioning.

269. Future key threats to the well-being of upper Fraser salmon and their habitats include:

- Mixed stock coastal fishing leading to over fishing small, less productive populations;
- Changing river and ocean conditions that are linked to global climate change, which is apparently expressed in poor freshwater and marine survival rates and increased incidence of disease in adult spawners;
- Proposed development such as the Coastal GasLink pipeline creating additional cumulative impacts; and
- Negative effects of the artificial Nadina spawning habitat.

3.2 Skeena Watershed

270. Twenty six Wet'suwet'en territories drain into the southeastern portion of Skeena watershed as shown in Table 2. All these territories support salmon runs, except for the two territories upstream of the impassable Clore Canyon on the Zymoetz (Copper) system.

271. All the territories support freshwater fish communities. Anadromous fish presence includes chinook, pink, coho, and sockeye salmon, and steelhead, an occasional chum stray, river lamprey, and pacific lamprey. Freshwater fish presence includes kokanee, bull trout, burbot, lake trout, mountain whitefish, suckers, northern pikeminnow, dace, sculpin, lake trout, Dolly Varden, chub, and rainbow trout.

272. Six territories in the Bulkley drainage and two territories in the Zymoetz (Copper) drainage would be crossed by the proposed Coastal GasLink pipeline. The proposed pipeline will bisect territories draining into the Morice and Bulkley systems. Effects from pipeline clearing and construction will impact these systems. Pipeline construction would affect Wet'suwet'en fish resources throughout the Skeena drainage due to the interconnectedness of the aquatic ecosystem.

Table 2. Wet'suwet'en Territories, Fish, and Development in the Skeena Watershed

Wet'suwet'en Territories in Skeena Watershed							
Clan	Territory	Salmon Present	Development Concerns ¹	Potential Pipeline Effects ²	Biophysical Concerns ³	Sensitive Watershed Features ⁴	Cultural Considerations ⁵
Laksilyu	Ut'akhgít	✓	✓	✓	✓	✓	✓
	Cel Wínits	✓	✓	✓	✓	✓	✓
	De'ilkwah	✓	✓	✓	✓	✓	✓
	Cos'let Bin	✓	✓	✓	✓	✓	✓
	Ilh K'il Bin	✓	✓	✓	✓	✓	✓
	Nelgi Cek	✓	✓	✓	✓	✓	✓



	Tasdlegh	✓	✓	✓	✓	✓	✓
	Nelgi'lat	✓	✓	✓	✓	✓	✓
Gihlsehyu	K'az Kwah	✓	✓	✓	✓	✓	✓
	Gguzih Keyikh		✓	✓	✓	✓	✓
	Talbits Kwah	✓	✓	✓	✓	✓	✓
	C'iniggit Nenikekh	✓	✓	✓	✓	✓	✓
Tsayu	Dets'ingeh	✓	✓	✓	✓	✓	✓
	Tahldzi Wiyez Bin	✓	✓	✓	✓	✓	✓
	Nelhdzi Tezdli Bin	✓	✓	✓	✓	✓	✓
Laksaamishyu	Cas Nghen	✓	✓	✓	✓	✓	✓
	Ggusgi Be Wini	✓	✓	✓	✓	✓	✓
	C'idi To Stan	✓	✓	✓	✓	✓	✓
Gitumdem	Khelh Tats'ilih Bin	✓	✓	✓	✓	✓	✓
	C'inilh K'it	✓	✓	✓	✓	✓	✓
	C'iggiz	✓	✓	✓	✓	✓	✓
	Bikh C'idilyiz Ts'anli	✓	✓	✓	✓	✓	✓
	Ts'in K'oz'ay	✓	✓	✓	✓	✓	✓
	Bi Wini	✓	✓	✓	✓	✓	✓
	Lhudis Bin	✓	✓	✓	✓	✓	✓

1. Development concerns include forestry, agriculture, linear, mining, hydro, & cumulative.
2. Potential pipeline effects include construction, clearing effecting land and resources.
3. Biophysical concerns include terrestrial, aquatic, hydrology, and resistance to change.
4. Sensitive watershed features include sensitive biological, physical, and unique features.
5. Cultural considerations include culturally significant heritage, wildlife and fisheries features.

3.2.1 Wedzen Kwah Watershed

273. The three current Wet'suwet'en sockeye stocks in the Bulkley watershed include Morice Lake sockeye with the Nanika River and Morice and Atna Lake subpopulations, the Bulkley Lake sockeye stocks with the Bulkley and Maxan subpopulations, and sockeye stream spawners in the Morice and Bulkley rivers and their tributaries. Wet'suwet'en Knowledge documents three sockeye stocks that are now extinct including Toboggan Lake, Owen Lake, and Lamprey Lake rearing subpopulations. All sockeye salmon stocks have been greatly affected by a series of habitat alterations which mostly effect water quality and stream channels and have impacts to holding, migrating, spawning, incubation, and rearing habitats.

274. In addition, the abundance of Wet'suwet'en sockeye salmon has been significantly diminished by an average 60% harvest rate since 1880 on Skeena sockeye runs from intensive Alaskan and Canadian commercial coastal mixed-stock fisheries (Gottesfeld and Rabnett 2008). This relatively high exploitation rate had adverse effects on the Bulkley sockeye stocks in regard to abundance, rearing environment, and productivity.

275. Morice sockeye are the largest and most important sockeye stock in the Bulkley Basin. Morice-Nanika sockeye were a large part of the Wet'suwet'en food fishery for at least the last 6,000 years. Relatively large Wet'suwet'en fisheries targeting these sockeye were conducted at Tse Kya (Hagwilget Canyon), Kyah Wiget (Moricetown Canyon), and to a lesser extent, Tsee Gheniinlii (Morice Canyon), Bii Wenii C'eeek the (Morice-Owen confluence), Lhet Lii'nun Teezdlii (outlet of Morice Lake), as shown in Figure 30, and Neenekeec (Nanika River).





Figure 30. Fishing site at Lhet Lii'nun Teezdlii, village located at the outlet of Morice Lake.

276. The Morice–Nanika sockeye were a large part of the aboriginal food fishery. Moricetown Canyon was the site of the major Wet'suwet'en food fishery until 1824, when a large rockslide in Hagwilget Canyon shifted the fishery location there (Brown 1826). Both canyons had strong food fishery operations until the rock removal in Hagwilget Canyon in 1959 effectively eliminated that location. The most productive fishing was conducted by various basket traps and dipnets, but other harvest methods produced as well, such as the stone trap shown in Figure 31. The basket traps and dipnets were banned in 1935 (Palmer 1964) and gaffing was promoted. Gaffing was then introduced as the legal fishing method and used primarily up until the mid-1990s.

277. Since 2001, the Wet'suwet'en have not directed a food fishery on the Morice–Nanika sockeye stocks. The Native Brotherhood of BC, in conjunction with the United Fisherman and Allied Workers Union, north coast gillnet groups, fish processing companies, as well as the Gitksan, have supplied the Wet'suwet'en with 8,000 to 10,000 sockeye sporadically since 2001.

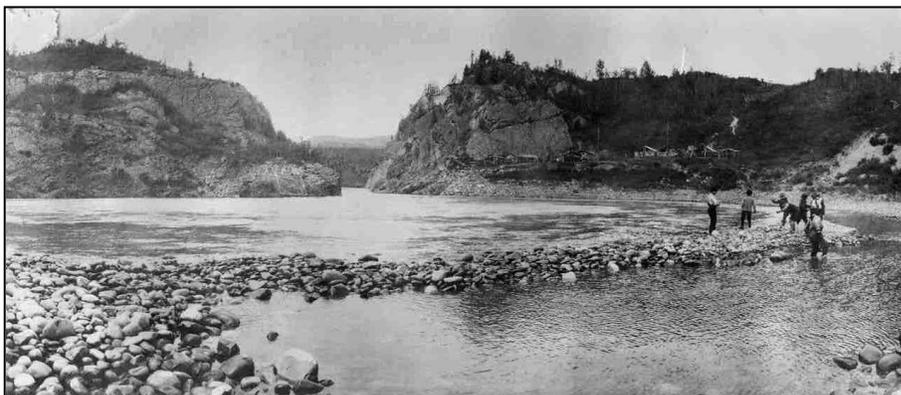


Figure31. Wet'suwet'en stone trap at Hagwilget Canyon ca. 1890.

278. With this cooperation, Wet'suwet'en reducing harvest rates on the Nanika sockeye stock at the terminal fishery (river) level in a way that is more difficult to achieve in the mixed stock fishery. Morice–Nanika sockeye are critically important for food, social, and ceremonial (FSC) needs, and stock restoration is a high priority to the Wet'suwet'en, as it is the last significant anadromous sockeye salmon population remaining on their traditional territory.

3.2.1.1 Morice Sockeye

279. The Morice sockeye stock is composed of two sub-components: Nanika River spawners and Morice Lake and Atna Lake beach spawners. Morice sockeye spawn and rear in the Gitdumden–Lhudis Bin territory or the Gilseyhyu–C'iniggit Nenikekh territory. Morice sockeye are commonly termed Morice–Nanika sockeye as the majority spawn in Nanika River and rear in Morice Lake. Bustard and Schell (2002) suggest that Morice Lake beach spawning sockeye might comprise a significant component of the Morice sockeye run during some years. This is now backed up by the Moricetown Canyon mark–recapture program that shows 35% of the total sockeye spawn in locations other than Nanika. Many of these are thought to be Morice and Atna lakes beach spawners (Finnegan 2006).

280. Historically, sockeye returning to the Morice Watershed numbered on the order of 50,000 to 70,000 fish and comprised as much as 10% of the total Skeena River escapement (Brett 1952). In 1954, the population collapsed and in the following twenty-year period, 1955–1975, an annual average of 4,000 sockeye returned to the watershed (DFO 1984). Average annual returns in the 1980s were 2,500 fish, while the annual average returns in the 1990s were 21,500 fish. This robust increase in the 1990s fell off in 2000. Returns to the Nanika appear to be decreasing; since 2000, escapements have ranged between 3,000 to 10,000 sockeye with an annual mean of slightly more than 5,000 sockeye as shown in Figure 32.

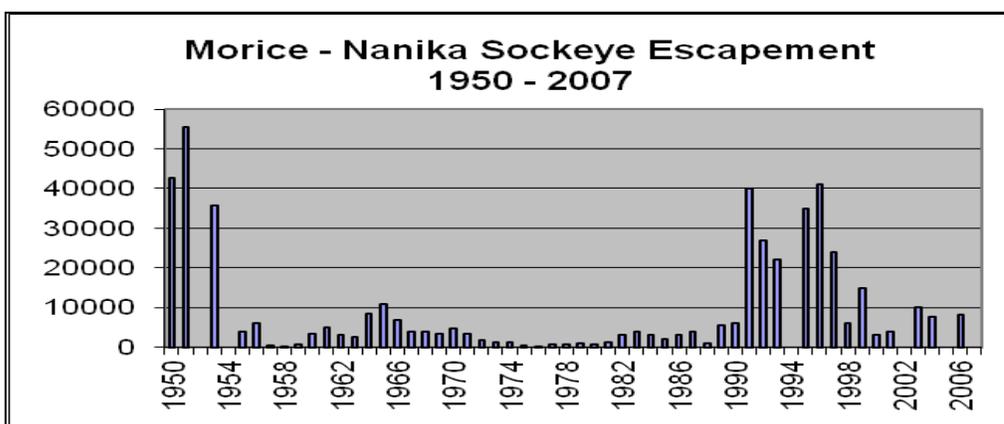


Figure 32. Morice – Nanika sockeye escapement 1950 to 2007.

281. Since the mid-1950s, Morice–Nanika sockeye abundance has mostly fluctuated at levels below historical escapements with low fry densities in relation to Morice Lake juvenile sockeye rearing capacity. Constraints to sockeye production stem from the high exploitation rates in the Alaskan, Canadian, and First Nation fisheries and low production from the ultra-oligotrophic Morice Lake. The Morice Lake sockeye stock’s spawning and rearing habitat is in its natural condition; it has not been impacted by development activities.

282. Morice–Nanika sockeye usually reach the mouth of the Skeena in late-June to mid-July with a peak in the first week of July (Cox-Rogers 2000). The main sockeye run usually hold and school in Morice Lake before ascending the Nanika River to the 3 km reach downstream of Nanika Falls where the principal spawning grounds are located (Robertson et al. 1979). Secondary Nanika River spawning grounds are scattered downstream to Glacier Creek. Shepherd (1979) noted that Nanika River

sockeye peak spawning occurs during the third week of September. Shepherd (1979) presents age data from 1965 to 1975 for Nanika River sockeye that indicates the majority of spawners were five and six year old (90%), both having spent two years (86%) in freshwater. In all study years, egg retentions were low in Nanika sockeye spawners (Shepherd 1979).



Figure 33. View across Morice Lake to sockeye beach spawning near Delta Creek.

283. Morice Lake sockeye spawners, which are thought to be composed exclusively of beach spawners, utilize scattered beach spawning grounds at the south end of the lake such as shown in Figure 33. The main beach spawning occurs for 3 km north of Cabin Creek (Vernon 1951, Bustard and Schell 2002).

284. Studies of sockeye spawners, which appeared to be exclusively beach spawners in Atna Lake during 1980, indicated estimates of approximately 400 sockeye spawners based on carcass recovery (Envirocon 1984b). Most of these spawned in the northeast section, as opposed to DFO observation in 1961 where most spawning appeared to be in the northwest section. Envirocon (1984b) noted that the age distribution of Atna Lake sockeye differed from Nanika and other non-Morice Skeena stocks. The dominant group (58%) were 5₃'s, (two years in freshwater and 3 years in the ocean). The primary difference is with the subdominant group (4₂'s) representing approximately 29% of the run that had spent one year and three years in freshwater and the ocean respectively.

285. Nanika River sockeye spawning grounds are the only ones in the Morice system that have had consistent escapement estimates since the 1950s. Accurate beach spawning counts along Morice and Atna Lake shorelines are difficult due to turbidity and depth. Bustard and Schell (2002) suggest that Morice Lake beach spawning sockeye might comprise a significant component of the Morice sockeye run during some years. This is now backed up by the Moricetown Canyon mark-recapture program that shows 35% of the total sockeye spawn in locations other than Nanika. Many of these are thought to be Morice and Atna lakes beach spawners as shown in Figure 34 by Finnegan (2006).

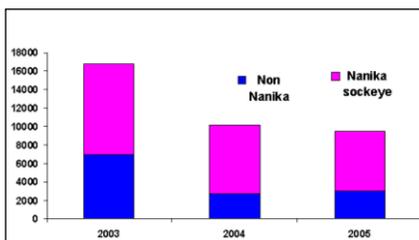


Figure 34: Sockeye composition upstream of Moricetown.

286. Finnegan (2006) reports recent sockeye abundance estimates have been generated from the mark-recapture program that is located at Moricetown Canyon. Beach seining at Idiot Rock below the canyon and by dipnet at the fishway allows T-bar anchor tagging, which are stratified by weekly periods utilizing numbered tags as shown in Figure 35. Recapture is at the fishway and tag recovery on the various spawning grounds. The aggregate escapement is determined from the Nanika River visual and swim surveys, and population estimation. The marked to unmarked ratio is determined in the upper Bulkley, on the Nanika River spawning grounds, and in Morice and Atna Lake to account for lake spawners (Finnegan 2006).



Figure 35. Seine tagging below the canyon. Figure 36. Recapturing sockeye at the fishway.

287. Following emergence, sockeye fry emigrate from spawning beds into Morice Lake from late-May to late-July, usually prior to or coincident with peak annual flows (Shepherd 1979). Morice Lake serves as the freshwater rearing lake for sockeye spawned in the Nanika River, Morice Lake, and possibly an unknown amount from Atna Lake. Morice Lake sockeye juvenile studies were conducted primarily in the 1960s, 1970s, and early 1980s and reported on by Palmer (1986b) Crouter and Palmer (1965), Shepherd (1979) and Envirocon (1984a, 1984b) respectively. Shortreed et al. (1998, 2001) and Shortreed and Hume (2004) report on more recent sockeye juvenile sampling conducted in 1993 and 2002. Lake rearing habitat capacity and fry production relationships are presented in Cox-Rogers et al. (2004). In Morice Lake, the understanding of juvenile sockeye rearing and smolt production dynamics, such as age and growth, distribution and abundance, movement timing, and predation is still evolving.

288. Due to the low nutrient input into Morice Lake, phytoplankton and zooplankton biomass levels are low, resulting in very slow growth rates for sockeye fry (Costella et al. 1982). In contrast with other Skeena sockeye stocks, which spend one year in freshwater, over 85% of Nanika River sockeye spend two years in Morice Lake, and 90% return as four- (2.2) and five- (2.3) year-olds (Shepherd 1979). Age-0 fall fry are the smallest in any sockeye nursery lake in BC; the large percentage of two-year-old smolts in Morice Lake is also indicative of its low productivity (Shortreed et al. 1998). Sockeye smolts migrate out of Morice Lake from late April to August with a peak migration in May (Shepherd 1979, Smith and Berezay 1983).

289. Since the early 1950s, a major theme of fisheries biologists involved in researching Morice sockeye has been identifying the factors limiting sockeye production. Over the last sixty years, enhancement efforts have focused on easing

fish passage, increasing fry recruitment, understanding the trophic status of Morice Lake, and correlates among these factors. Currently, major factors limiting juvenile sockeye production are thought to be the lack of escapement and the relatively low intrinsic primary and secondary productivity of Morice Lake.

290. Morice sockeye salmon returning as adults from the sea to spawn and die provide a very important nutrient link between the marine and freshwater environment. These salmon accumulate over 90% of their biomass during the marine phase of their life cycle (Groot and Margolis 1991). Considerable research has highlighted the important role of anadromous salmon in importing marine-derived nutrients (MDN) to freshwater and riparian ecosystems. These subsidies support diverse food webs and increase the growth and survival of juvenile salmon during their freshwater residency (Scheuerell et al. 2005).



Figure 37. View upstream on upper Nanika River.

291. Recent research and reviews (Quinn 2005, Reimchen et al. 2003, Wilson and Halupka 1995) reveal that entire ecosystems benefit in direct and indirect ways from decomposing salmon. Wilson and Halupka (1995) term salmon a keystone species in recognition of salmon's special role enriching otherwise nutrient-poor systems. Different sockeye life history stages likely play different roles in the various habitats they occupy throughout their life cycle. The intrinsic importance of salmon to ecosystem functioning prompts concern for adequate escapement from an ecological perspective. The abundance of returning Morice sockeye spawners is critical to maintenance of fish populations rearing in streams and lakes. It follows that salmon are important components of numerous freshwater and marine food webs throughout their life history.

292. Decreased availability of salmon carcass material can significantly reduce the nutrient influx to natal streams and over time, diminish productivity. The resulting decrease in juvenile fish size can reduce overwinter and marine survival, reduce the number of returning adults, and further reduce stream and lake productivity (Bilby et al. 1996). Runs of adult Morice sockeye may continue to decline, returning fewer nutrients to already nutrient deficient streams and lakes, particularly if combined with overfishing of a now less productive stock. Thus a negative feedback loop from nutrient-food chain impacts can be very significant to lake and stream rearing species. Understanding marine derived nutrient loss helps to explain the continuing decline of Morice-Nanika sockeye. It is clear that sockeye escapement needs to increase to enable primary and secondary production in Morice Lake.

293. The abundance, productivity, and carrying capacity status of Morice sockeye are rated as poor. The current decline of Morice–Nanika sockeye due to high exploitation rates and low-productivity issues in Morice Lake has deeply impacted the Wet’suwet’en and their culture. The Wet’suwet’en FSC fishing moratorium of this stock is proof of their governance system, and any alteration or destruction to the fish and fish habitat is an infringement of Wet’suwet’en title and integrally associated traditional governance.

3.2.1.2 Upper Bulkley Sockeye

294. Sockeye salmon used to spawn in Maxan Creek and most likely in Bulkley and Maxan lakes, which lie in Laksilyu–Tasdlegh territory. Both lakes at one time supported good populations of sockeye. Recorded escapements ranged between 50 and 600 until 1978. The stock or stocks then appear to have collapsed and records in the 1980s show few or no fish returning as shown in Figure 39. In 2001, several sockeye were spotted at the coho counting weir in Houston that may have been heading upstream to Bulkley Lake. Recent observations by Finnegan (pers comm, 2011) indicate sockeye spawning in the Bulkley mainstem downstream of McQuarrie Creek.

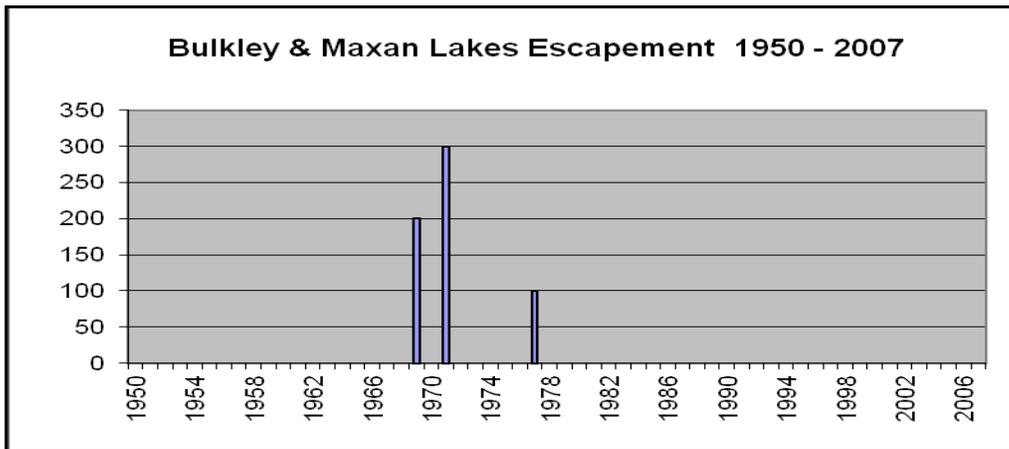


Figure 38. Bulkley and Maxan lakes sockeye escapement 1950 to 2007.

295. The Upper Bulkley River runs from Bulkley Lake downstream for 57 km across the subdued, rolling Nechako Plateau before joining the Morice River. The valley bottom is characterized by relatively intensive land use in the way of highway and rail corridors, and agricultural and rural residential development. Impacts to salmon habitat include loss of riparian areas, confinement of the river channel between the valley wall and the rail and highway corridors, loss of floodplain connectivity, degraded water quality and quantity from cattle feed lots, water withdrawals, and

adverse effects from mineral and forest development activities.



Figure 39. View across Bulkley Falls.

296. Fish access issues involve the Bulkley Falls (shown in Figure 39) which at low flows can impede upstream fish passage, and occasional beaver dams, as well as infrequent avulsions. Maxan Creek does not have sufficient flow to allow sockeye passage in some summers. Joseph (pers comm, 2001) noted this was reportedly the case in 2001, a relatively wet year.

297. The two principal reasons why sockeye are not spawning in the upper Bulkley are 1). lack of escapement due to high exploitation rates in the coastal mixed-stock fishery and 2). degraded habitat. Upper Bulkley sockeye are at high risk of extirpation and require a recovery plan.

3.2.1.3 Upper Zymoetz Sockeye

298. Sockeye salmon spawn in the upper Zymoetz (Copper) River and rear in the headwaters lake chain, which lies in Laksilyu–Cel Winitis territory. The were two significant Wet’suwet’en communities, Sde Keen Teezdlii, located on the north shore of McDonnell Lake at the outlet, was on the grease trail from Kyah Wiget to Tsee Hodiin’aa Biit (Jonas Flats), and beyond to Lhet Lii’nun Teezdlii on Morice Lake (Naziel 1997). Keel Weniits Tl’oogh K’et is located at Six Mile Flat close to the outlet of Dennis Lake.

299. Homeplaces or historic cabin sites and campsites, gravesites, and spiritual areas are situated from east of Aldrich Lake generally along the Copper River and lakeshores to west of Serb Creek. The Copper-Serb confluence trading village was a hub with Coast Tsimshian, Kitselas, and Gitxsan people coming to trade with the Wet’suwet’en. One extended Wet’suwet’en family from Moricetown continues to harvest their fish in the upper Copper.



Figure 40. View west across McDonnell Lake.

300. Sockeye escapement records for the Zymoetz River indicate moderate fluctuations of abundance in the last sixty years as shown in Figure 41. Average annual escapement in the 1950s was 2,550 sockeye, ranging from 5,000 to 750 fish. The 1960s and 1970s annual average escapements were under 1,500 fish, while the 1980s average annual escapement was 1,860 fish. The 1990s escapement data is incomplete; however, the 1990 to 1994 average annual escapement was 3,650 sockeye, with a high of 7,500 in 1993 (DFO 1991b, DFO 2008). A decade of surveys from 2000 to 2010 averaged 2,687 spawners ranging from 221 to 7,930 sockeye.

301. Sockeye enter the Zymoetz River in July, spawning primarily during the months of August and September in the upper watershed. Critical spawning areas are in the Zymoetz River mainstem from Serb Creek to McDonnell Lake, and the reaches upstream of McDonnell Lake to Aldrich Lake. Upstream of McDonnell Lake, the meandering low gradient reaches, as well as the lakes themselves, are stable with

moderated flow and temperature regimes and this area supports the majority of the spawning. Several inlet streams to McDonnell, Dennis and Aldrich Lakes, particularly lower Silvern Creek, are reported to be also used for spawning (DFO 1991b). The upper Copper sockeye stock utilizes three headwater co-joined rearing lakes: McDonnell, Aldrich and Dennis lakes. Cox-Rogers (2010) notes that the optimum escapement for the upper Copper sockeye nursery lakes is McDonnell–3,600, Dennis–550, and Aldrich–1,100 sockeye for a system total of 5,250 sockeye.

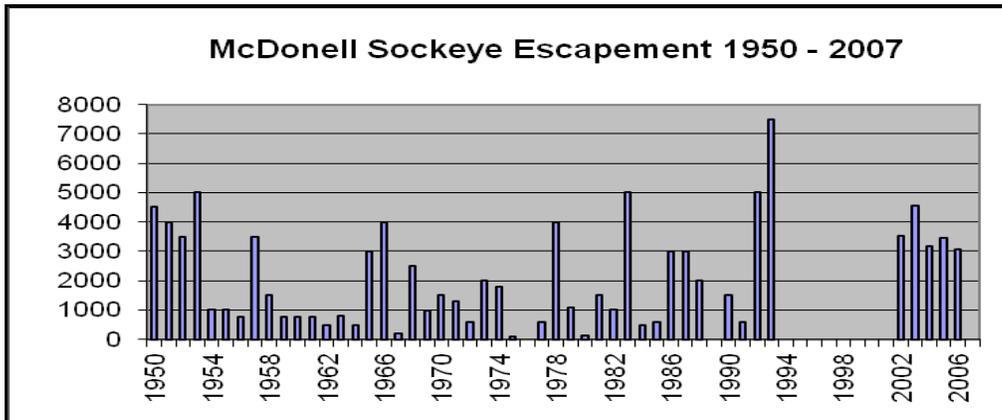


Figure 41. Upper Copper sockeye escapement 1950 to 2007.

302. The Laksilyu have concerns regarding the extent and rate of logging, specifically the riparian conditions related to temperature sensitive streams and sediment production. The current abundance, productivity, and carrying capacity status of upper Copper sockeye is rated as stable.

3.2.1.4 Morice Chinook

303. Morice River chinook salmon are an important salmon stock in Wet’suwet’en territories, contributing approximately 30% of the total Skeena system chinook escapements in the 1990s. In the recent past, this stock has constituted as much as 40% of the total Skeena River chinook escapement (DFO 1984). In the late 1950s, an estimated escapement of 15,000 Morice River chinook spawners was recorded. From 1960 through to the mid 1980s, an average of 5,500 spawners returned, after which chinook spawner escapement increased. Between the mid-1980s and 2001, Morice River chinook spawners increased to the historic levels of the late 1950s returns (~15,000). From 2002 to 2005, average annual escapement decreased to 7,325 from a range of 4,800 to 10,000 chinook.

304. Adult chinook salmon begin their migration into the Morice River system about mid-July and spawn from August to October; peak spawning was observed by Shepherd (1979) to be mid-September, with die-off by mid-October. Approximately 80% of Morice chinook spawning occurs principally in the upper 2 km of the Morice River downstream of the lake outlet.

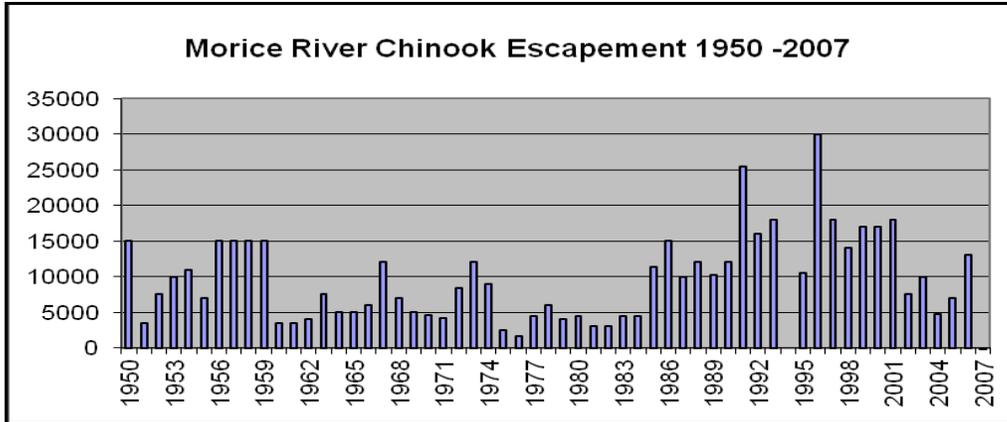


Figure 42. Morice River chinook escapement 1950 to 2007.

305. Most of the riverbed at this site is characterized by a series of large gravel dunes oriented perpendicularly to the direction of flow as shown by Figure 43. These dunes are constructed by chinook during redd excavation. This is a very unique feature, and culturally significant to the Wet’suwet’en.

306. The Wet’suwet’en believe that there is a connection between our ancestors and the salmon that ensure community well-being and health. Wet’suwet’en laws regulating human behaviour toward the salmon strengthen the moral fibre and the whole social order of the society. Any change to the behaviour of the Chinook stock due to industrial activity, including Coastal GasLink’s project, will be an infringement to the Wet’suwet’en title and the integrally associated rights of management and governance. Scattered minor spawning also occurs downstream to Lamprey Creek and in the Nanika River, downstream of the falls.



Figure 43. Chinook Island and spawning dunes at Morice River.

307. Morice chinook mostly spend less than one year in freshwater and return mainly as four or five-year-olds (85% in 1973 and 1974). In comparison with other Skeena chinook stocks, Shepherd (1979) notes the Morice River produces more six-

year-olds than other systems in the Skeena (12% average versus 3% average) and fewer two and three-year-olds (3% versus 17%).

308. Chinook fry migrate or are displaced downstream upon emergence between mid-April and early-July, though typically peak emergence is in late-May to early-June. Downstream movement of the one-year-old smolts occurs between mid-April and mid-August, though it appears to peak in early June. Survey results from Smith and Berezay (1983) indicates that chinook fry overwinter throughout most of the Morice River mainstem. However, Reach 2 located between Thautil River and Owen Creek, with abundant side channels and log debris is considered the most productive rearing area.

309. Morice River chinook spawning and rearing habitat is currently intact; however, proposed construction from the proposed Coastal GasLink pipeline to occur in Reach 2, this very productive chinook rearing habitat would be severely affected.

3.2.1.5 Bulkley Chinook

310. The 57 km long Bulkley upstream of the Morice River confluence is termed the upper Bulkley. The upper Bulkley River is an important migration route for two chinook stocks: the spring run that passes through to the upper Bulkley above the Bulkley Falls and a summer run to the Bulkley River, both above and below the Morice confluence. Run timing at the Moricetown Canyon fishways appears to be split between the spring and summer runs at about July 30th (Peacock et al. 1997). The upper Bulkley early run is genetically distinct and of a smaller size than the typically more abundant and later runs. The status of the early Bulkley run is unknown.

311. Estimates of upper Bulkley River summer Chinook escapements have been recorded continuously since 1945. Escapement was comparatively low from the mid-1960s through to 1988; since then there has been a substantial recovery. There were record high escapements in 2000 and 2001 of 2,560 and 5,600 respectively. Counts since then showed 1,100 in 2002, 1,280 in 2003, 620 in 2005, and 770 Chinook in 2006. There are no counts in 2004 and from 2007 to the present as shown in Figure 45. Chinook spawn in the mainstem, Buck Creek, Byman Creek, Richfield Creek, Maxan Creek, and Foxy Creek, with the latter four creeks being subject to seasonal fluctuations in water levels and flows.

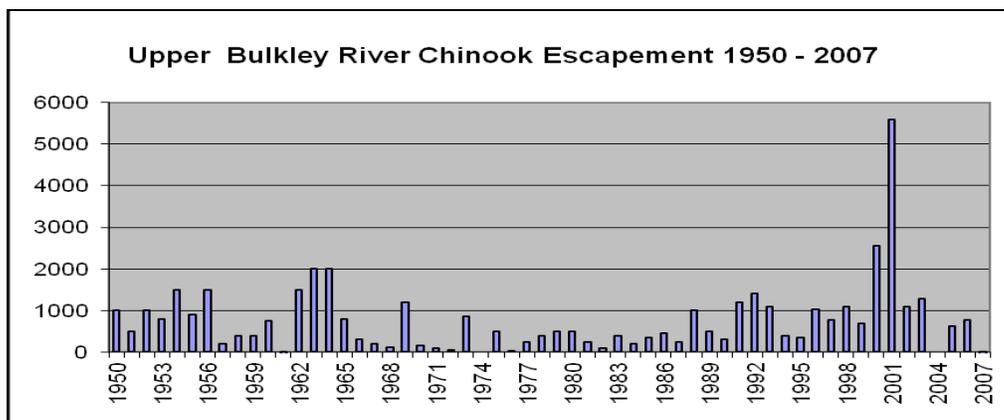


Figure 44. Upper Bulkley River chinook escapement 1950 to 2007.

312. Buck Creek supports a small chinook population ranging from 12-100 spawners recorded since 1970 on a discontinuous basis. Spawning is scattered throughout the mainstem as far upstream as the falls at the top end of the second canyon (Reach 8, ~36 km). The series of cascades in Reach 3 at 7.3 km is impassable in some years due to water conditions. Byman Creek has historical references to chinook spawning, and juveniles have been recorded in Reach 1 up to the highway crossing (DFO 1991e). Current escapement status is unknown.
313. Richfield Creek historically supported moderate numbers of chinook spawners, ranging from 0-100 in the lowest reach close to the Bulkley confluence (Hancock et al. 1983). There is no recorded escapement since 1964, and current escapement status is unknown. Maxan Creek and its major tributary, Foxy Creek, have both supported chinook spawners historically (Dyson 1949, Stokes 1956). There is one escapement record since 1950: 50 chinook in 1988. The preferred spawning location in Maxan Creek appears to be the boulder/gravel patches between the outlet of Maxan Lake and Foxy Creek confluence. In recent years, Maxan Creek has been subject to beaver activity, seasonal low flows, and drying.
314. Between 1987 and 2002, considerable quantities of chinook smolts, and to a lesser extent fry, were out-planted into the upper Bulkley mainstem, principally between McQuarrie and Richfield Creeks (O'Neill 2003). The upper Bulkley enhanced chinook stock serves as a coded wire tag indicator stock (Peacock et al. 1997).
315. There are serious issues with upper Bulkley chinook habitat, which is regarded overall as the most degraded salmon habitat in Skeena watershed. The valley bottom has been impacted by a century of agricultural and rural residential development, and also by the highway and rail corridors that pass through the floodplain. Impacts to salmon habitat include loss of riparian areas, confinement of the river channel between the valley wall and the rail and highway corridors, loss of floodplain connectivity, degraded water quality and quantity from cattle feed lots, water withdrawals, and adverse effects from forest development activities. Some of these impacts can be clearly seen in Figure 45.



Figure 45. Upper Bulkley River floodplain bisected by CN Rail, Highway 16, and diminished riparian zones.

316. Upper Bulkley River chinook abundance is thought to have been diminished by heavy exploitation rates in the coastal mixed-stock fishery, and to have been adversely affected by habitat modifications prior to the 1950s. Wet'suwet'en have serious concerns regarding the diminished chinook abundance and the state of the

spawning and rearing habitat. Sedimentation from clearing and construction in the upper Maxan drainage (KP 233 to KP 236) from the proposed pipeline would cause significant large-scale impacts to the chinook stock and its habitat. It would be a serious infringement to the Wet'suwet'en cultural resource. The abundance and productivity status of upper Bulkley chinook is rated as threatened and requires that a stock recovery plan be implemented.

3.2.1.6 Upper Bulkley Coho

317. Coho salmon are the most widely dispersed salmon species in the upper Bulkley drainage. Coho behavior and the variability in their life histories, particularly in the freshwater period prior to smolting, are not well known in the upper Bulkley watershed.

318. From 1949 to 1970, coho spawner escapement was recorded in thirteen out of twenty-one years in the upper Bulkley mainstem. The dominant limiting factor appeared to be the low water levels. Historical escapement estimates for the upper Bulkley coho aggregate, including Maxan and Buck, ranged as high as 7,500 in the 1950s, though the annual average was 2,850 coho for the 1950s and 1960s. These visual escapement estimates are almost certainly underestimates of real abundance. No adult coho have been recorded in Maxan Creek since 1972, and juvenile sampling efforts from 1987–90 did not record coho presence (Pendray 1990).

319. The upper Bulkley coho aggregate is made up of populations that spawn and rear in the mainstem channels, and in Buck, Aitken, McQuarrie, Byman, Richfield, Ailport, and Maxan creeks. Overall, the upper Bulkley sub-basin coho aggregate showed a serious decline from the mid-1960s to 1998, with an apparent increase beginning in 1998. Holtby et al. (1999) conservatively estimated the wild coho escapements to the upper Bulkley, and evaluated a decrease in returns of 11% per year from 1970 to 1998. Since 1998, escapements have increased through to 2005, with average annual returns of 1,358 coho with a range of 317 to 2,508.

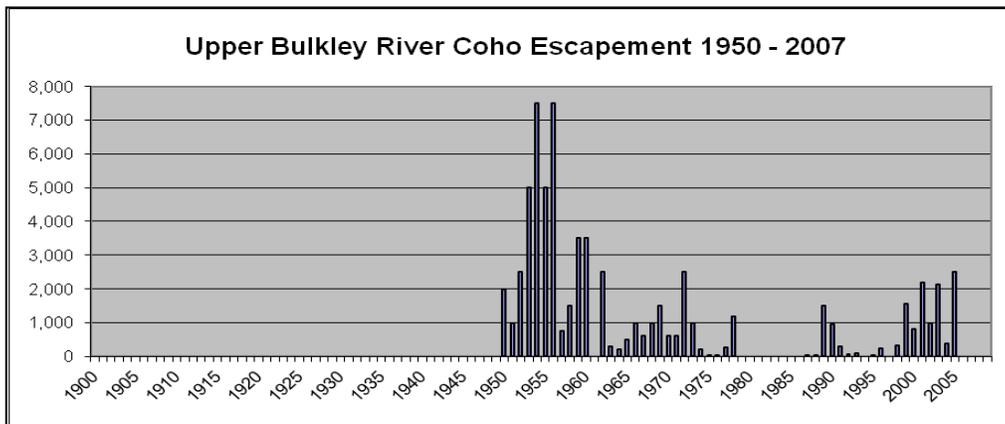


Figure 46. Upper Bulkley coho escapement 1950 to 2007.

320. During the past few decades, the distribution of adult and juvenile coho has been mostly limited to the portion of the Bulkley River downstream of Bulkley Falls. This is most likely due to low flows in late summer/fall and to a lesser extent, winter streamflows. Pendray (1990) notes that in years of relatively high summer streamflows, upper Bulkley tributaries appeared to be heavily utilized by juvenile coho, with rearing densities much higher than in the mainstem. Pendray (1990)

reports that the best coho juvenile densities found in the mainstem were at the riprap sites, which provided artificial cover.

321. Since 1989, an annual average of 30,000 coho fry and smolts have been out-planted in the upper Bulkley mainstem (McQuarrie to Richfield Creeks) from upper Bulkley stock raised at Toboggan Hatchery (O'Neill 2003). Holtby et al. (1999) notes that it would be interesting to know if the synchrony of enhancement, which began with the 1989 smolt release and the rapid decline in wild abundance thereafter, was just a coincidence, and if so, what was the probable cause of the decline.
322. A counting weir on the upper Bulkley River located at Houston has been operated annually since 1989, except for 1991. The primary function of the fence operation has been to capture brood-stock for hatchery production. Holtby et al. (1999) report that the total escapement in 1998 was 317, of which 139 coho were the progeny of wild spawners, a number that was slightly greater than the brood year escapement.
323. The proportion of hatchery coho in the escapement has been an issue of concern. In most years since enhanced coho began returning, over 60% of the escapement has consisted of the hatchery stock. Donas (2001a) reports that between 1997 and 2001, the average proportion of hatchery coho counted at the fence was 71%. Another point of concern has been that the coho pool up below the fence and are reluctant to pass upstream through the fence. This has necessitated seining operations to move fish above the weir (Ewasiuk 1998, Glass 1999, Glass 2000, Donas 2001a). It is uncertain if the coho falling back downstream spawn elsewhere or regroup for later upstream movement.



Figure 47. Upper Bulkley off-channel coho rearing habitat.

324. Studies concerning the assessment of overwintering habitat and distribution of juvenile coho in the upper Bulkley drainage were conducted by Saimoto and Jessop (1997) and Donas and Saimoto (1999, 2001). Saimoto and Jessop reported on fish presence and densities at fifteen sample sites and found no juvenile coho above the McQuarrie Creek confluence. Overall coho densities in the mainstem were relatively low; however, these surveys were conducted in years of very low adult coho returns. Typically, there are modest to high numbers of juvenile coho in the Bulkley mainstem or off-channel habitats from the Morice confluence upstream to Topley and in lower Buck Creek.

325. Coho fry emergence extends from April to July with an estimated 15–27% average egg to fry survival rate. Saimoto and Jessop (1997) suggest that, based on the relatively early spawning time and suspected times of emergence, coho eggs and alevins are in the gravel for periods of six to seven months in the upper Bulkley drainage. Juveniles are widely distributed in accessible, slow stream waters and in various side and back channels as shown in Figure 44. Many of the small tributaries flowing into the Bulkley River serve as auxiliary juvenile coho habitat as migrants move downstream and into these tributaries.
326. Wet'suwet'en have concerns regarding the depressed coho abundance and the degraded state of coho spawning and rearing habitat. Upper Bulkley coho abundance and habitat are rated as threatened. Wet'suwet'en cultural practices and harvesting areas are threatened by the proposed pipeline project; this is seen as a very serious threat to our way of life, our cultural, and spiritual connection to the lands and waters. Any imposition by government and industry that would impede or make it impossible to pursue our traditional practices and use of our resources is a direct and potentially significant infringement to Wet'suwet'en title.

3.2.1.7 Morice Coho

327. Coho enter the Morice system in mid-August through to mid-September, generally holding in the mainstem and in Morice Lake, and then, depending on water flow conditions, move with fall freshets into the tributaries to spawn. In years of below average stream flows, most coho spawners (85%) have been observed in the prime spawning grounds downstream of the lake outlet, with scattered spawning along Reach 2 side channels (Envirocon 1980). In these low flow years, often the only tributary streams with adequate flow for coho access and spawning are Gosnell Creek, the Thautil River, and Houston Tommy Creek.
328. In years with higher flows, other tributaries used for spawning include Owen Creek, McBride Creek, and Nanika River. Documented spawning areas occur in all tributary streams of the Morice River (Shepherd 1979); however, this is likely to depend on adequate adult escapement and fall freshets coinciding with the late October and November spawning period.
329. Since 1950, the relative contribution of coho from the Morice River system to Skeena coho escapement as a whole is approximately 6% (Bustard and Schell 2002). In reviewing the escapement data, a declining trend from the 1950s to the present is apparent in Morice system coho populations (DFO 2008). The decline is in absolute numbers as well as relative to the overall Skeena escapement. The highest ten-year period of abundance in escapement numbers, the 1950s, shows an annual average escapement of 10,700 fish. In the 1970s, the average annual escapement was approximately 4,300 fish, with the annual escapement diminishing to 518 fish in the 1980s, and it remained low in the 1990s with an average annual escapement of 672 fish. Since 1999, the aggregate coho escapement has steadily increased through to 2005, except for Gosnell coho, which have remained relatively depressed.
330. Coho fry emergence extends from April to July. Juveniles are widely distributed throughout the Morice mainstem, as well as in most of the tributaries and lakes in the system during years of suitable recruitment. Rearing in these streams occurs for one to two years. Habitat preferences are well defined and include side channels, side pools, ponds and sloughs with instream cover providing an important key habitat component (Shepherd 1979, Envirocon 1980). Overwintering coho prefer side channels, which makes them susceptible to reduced winter flows and cold temperatures that may result in dewatering and freezing of their winter habitat. This

is a major constraint for coho smolt production in the Morice River, where significant mortalities have been documented (Bustard 1983a).

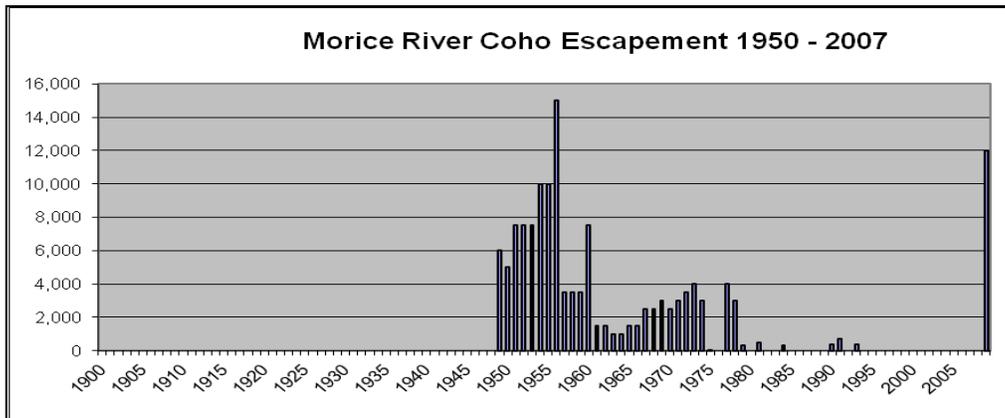


Figure 48. Morice River coho escapement 1950 to 2007.

331. Morice coho habitat is mostly stable with light impacts to migration, holding, and spawning habitat from forestry, agriculture, urbanization, and transportation land use, but the limiting factor to coho production is the lack of escapements due to the coastal commercial fisheries. Coho abundance is rated as depleted and may require a recovery plan.



Figure 49. Gosnell Creek coho spawning habitat, mountain pine beetle kill, and logging blocks.

3.2.1.8 Morice Pink

332. Pink are the smallest salmon at maturity and possess a single age at maturity; they are exclusively two years old at spawning time. This means that odd-year and even-year stocks are genetically separate as corroborated by Beacham et al. (1988). In general, the odd and even-year lineages of pink salmon are more different genetically than stream populations over large areas (Heard 1991). Morice even-year pink salmon have a moderately developed dominance, though abundance can vary exceptionally on an inter-annual basis.

333. The pink salmon life history is distinguished by an emphasis on marine habitat, only entering freshwater for spawning, egg incubation, and alevin development into fry. Overall, they have a relatively short life cycle with rapid growth. The critical periods up to adult survival include egg to fry, juvenile emigration, estuarine spring and summer feeding, ocean feeding, adult return migration, and escapement through the mixed stock fishery. There are too many

unknown and complex factors, as well as a lack of information, for Morice pink salmon to partition survival in the marine, estuarine, and freshwater realms.

334. The Morice pink salmon run is significant among the larger pink producing systems in the Skeena watershed. The odd-year pink run to the Morice River has been expanding since construction of the Moricetown Canyon fishway in 1951 and was further augmented with the removal of key rocks by blasting at Hagwilget Canyon in 1959. Pink salmon were first seen in the lower Morice River in 1953 and had reached Owen Creek by 1961 and Gosnell Creek by 1975 (Shepherd 1979). By the mid-1980s, this steady expansion of range saw pink spawners colonizing the Nanika River spawning grounds as shown in Figure 50 and 51.

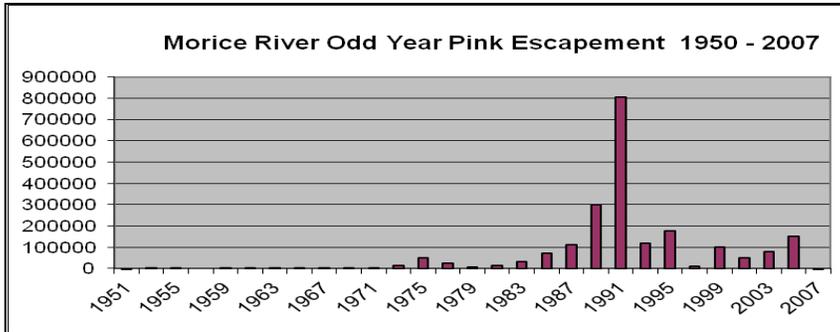


Figure 50. Morice River odd year pink escapement 1950 to 2007.

335. Adult pink salmon usually migrate upstream into the Morice system in late August to early September. Pink spawning is reported to take place through September (DFO 1991b), with over 90% of the escapement spawning in Reach 2 side channels, particularly between lamprey and Thautil.

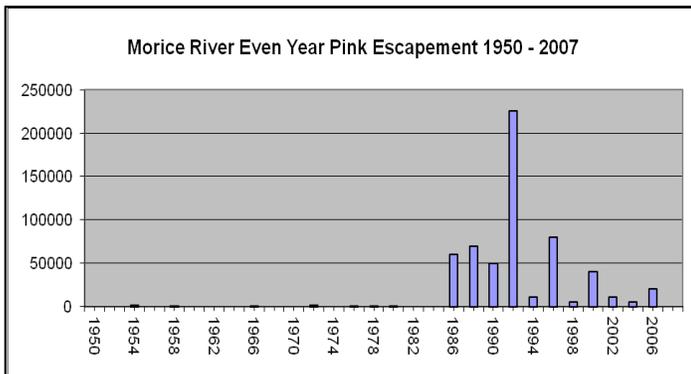


Figure 51. Morice River even- year pink escapement 1950 to 2007.

Small numbers of spawners have also been observed at Gosnell Creek, Nanika River, and in the mainstem downstream of the lake.

336. Winter observations of pink redds in heavily utilized side channels indicate that dewatering of redds, and probable losses of eggs and alevins with reduced flows, occurs more often at these sites than in the deeper main channel spawning areas. Upon emergence from gravels, pink fry migrate directly to the ocean, returning to spawn as two-year-old fish.

337. Currently, there are no Wet’suwet’en concerns regarding levels of pink salmon abundance or habitat issues. Pinks are not the preferred salmon species for

Wet'suwet'en; however, future concerns do center on significant effects to pink migration and spawning habitat from the proposed pipeline.

3.2.1.9 Bulkley Chum

338. Various documents note chum food fish catches at Hagwilget and Moricetown Canyons. Harding and Buxton (1971) note 8 years of chum catches and less than 100 fish during the 1960s. Hagwilget food fish records note 50 chums caught in 1932, 101 chums caught in 1933, and 21 chums caught in 1937 (DFO 1960). The Department of Fisheries of Canada (1964), reports that a small number of chum utilize the lower Morice River, though little is known regarding their distribution.

339. Kussat and Peterson (1972) note that the chum escapement had never been enumerated, but observations indicate that the population numbers only a few hundred fish. Anecdotal Wet'suwet'en observations indicate persistent chum spawning in sidechannels approximately 0.6 km upstream from the Bulkley confluence. Shepherd (1979) notes that he did not observe chum salmon in the Morice system. At the Moricetown Canyon, no chum were observed in 1992 to 1995, and only three in 2001.

3.2.1.10 Morice Steelhead

340. Wet'suwet'en harvest steelhead in the Morice mainstem and major tributaries in the summer, fall, and winter for food fish. Winter steelhead catches through the ice are preferred as they are considered enjoyable fresh fish. Major Wet'suwet'en steelhead fisheries conducted in the Morice system are located at Tsee Gheniinlii (Morice Canyon), Bii Wenii C'eeek the (Morice–Owen confluence), Lhet Lii'nun Teezdlii (outlet of Morice Lake) and Neenekeec (Nanika River).

341. In recent years, the Bulkley-Morice likely accounts for 30% to 40% of the total escapement of Skeena steelhead, based on population estimates for the Bulkley River, genetic markers, and data from the Tyee Test Fishery (Beacham et al. 2000, Mitchell 2001). The significant summer-run of the Morice system moves into the river in mid-August and continues into the autumn (Whately et al. 1978). Overwintering appears to occur throughout the mainstem, particularly downstream of Gosnell Creek, with evidence that steelhead also utilize Morice Lake (Lough 1981, Envirocon 1984b). With the exception of Gosnell Creek, tributaries do not support overwintering steelhead due to insufficient discharge (Envirocon 1980, Tetreau 1999).



Figure 52. Steelhead holding and spawning habitat at the Thautil-Gosnell-Morice confluence.

342. Steelhead spawning coincides with an increase in Morice River snowmelt flows and an increase in stream temperatures typically in late-May to early June. Results from Envirocon (1980) sampling surveys indicate widespread spawning distribution through the mainstem and tributaries. According to DFO stream survey maps, critical spawning habitat is in the upper Morice River and scattered downstream pockets to the Thautil confluence, as well as the lower reach of Gosnell Creek (DFO 1991b). Key spawning tributaries are Shea Creek, Owen Creek, upper Thautil River, and upper Lamprey Creek (Bustard and Schell 2002). Repeat spawners among Morice River steelhead comprise 6.6% of the total returns, with females outnumbering male repeat spawners by a ratio of 2:1 (Whately et al. 1978).
343. Steelhead fry emergence in the Morice mainstem occurs primarily between mid-August and mid-September, while emergence in some tributaries may occur as early as late-July, due to earlier spawning and warm water temperatures. Tredger (1981-87), Bustard (1992 and 1993), and Beere (1993) describe juvenile steelhead fry and parr distribution, densities, and size estimates from a network of index sites. Most Morice steelhead remain in freshwater for three (24%) or four (70%) winters prior to smolting, which is a longer freshwater residency time than in the six other summer-run steelhead rivers studied in the Skeena system (Whately 1978). Rearing occurs throughout the mainstem and tributaries, though Thautil River and Owen, Lamprey, and Gosnell Creeks account for most of the steelhead fry (85%) and parr (75%) sample catch (Envirocon 1984b).

3.2.1.11 Bulkley Steelhead

344. As in the Morice system, steelhead were and are fished in the Bulkley mainstem and major tributaries in the summer and fall, and augmented winter food fish. Winter steelhead catches through the ice with set nets and gaffs are preferred as they are considered enjoyable fresh fish. Major Wet'suwet'en steelhead fisheries conducted in the Bulkley system were located at Hagwilget Canyon, Moricetown Canyon, in the Bulkley mainstem from Hagwilget to Morice River confluence, and upstream into Maxan Lake with some particularly productive sites located at Decen Neeniinaa (1st Highway 16 crossing of the upper Bulkley), Dzenk'et Hoz'aay (Bulkley-Buck Creek confluence), Needz Kwe (2nd Highway 16 crossing of the upper Bulkley), and Neetay (Howson Creek-Telkwa confluence).
345. In the Bulkley River upstream of the Morice confluence, steelhead spawners are present in the mainstem, in Buck, McQuarrie, Byman, Richfield, and Ailport Creeks, and possibly in Johnny David and Robert Hatch Creeks (Tredger 1982, DFO 1991e, Mitchell 1997). Tredger (1982) conducted a reconnaissance level assessment in the Bulkley upstream of the Morice that focused on outlining the standing crop of steelhead juveniles and estimated carrying capacity. Tredger expressed difficulty in getting any confident estimates of steelhead juvenile populations due to problems in differentiating steelhead from resident rainbow populations, particularly near headwater lakes. Tredger made rough estimates of basin-wide smolt outputs and adult escapements based on the standing crops of fry, which in turn were based on the output of carrying capacity from minnow trapping data; his data suggested 92,100 fry, 4,100-11,800 smolts, and between 155 and 1,260 adults.
346. Steelhead spawn on the Bulkley mainstem between the Telkwa River and the Morice River near Hubert (DFO 1991e). Bustard and Limnotek's (1998) three years of sampling for steelhead juveniles in Hubert Creek indicated that the abundance and distribution are highly variable from year to year due to habitat conditions and presumably the number of fry recruiting upstream from the Bulkley River.

3.2.1.12 Bulkley–Morice Lamprey

347. Pacific lamprey are present in the Skeena mainstem upstream from Lakelse River with presence noted in the Lakelse, Kitsumkalum, Kispiox, Babine, and Bulkley watersheds. Within Bulkley system, lamprey are present throughout and especially in the Morice and upper Bulkley systems. Lamprey are anadromous and typically migrate upstream in mid to late July and spend a full year in the system prior to spawning the next summer. Spawning usually occurs in large to small streams, including side channels at the top end of riffles, where they construct noticeable redds and lay their eggs. Lamprey ammocoetes lie buried in the substrate for up to six years before transforming to an eyed, parasitic form eel that travels downstream to the ocean to form a voracious parasitic life.

348. As adults in the marine environment, lampreys are parasitic and feed on pelagic fish such as herring and salmon, as well as bottom fish. In turn, lamprey are prey for sharks, sea lions, and other relatively larger marine life. After spending one to three years in near-shore marine areas, lampreys cease feeding and migrate upstream into their natal freshwater habitat.



Figure 53. Pre-spawning lamprey.

349. Lamprey are an important food fish for the Wet'suwet'en, who harvest them in the Bulkley mainstem, primarily at Hagwilget and Moricetown canyons with dipnets, and also on a variety of tributaries where traps are primarily used. Lamprey fisheries on these tributaries were conducted at Owen, Lamprey, Houston Tommy, and Gosnell creeks and Thautil River in the Morice system, and in Byman, Richfield, and Ailport creeks in the upper Bulkley system.

350. Lampreys are typically smoke dried, and then fully dried, frozen, canned, salted, or pickled. There are no absolute numbers regarding lamprey abundance, but Wet'suwet'en observations over the last two decades indicate moderate to high diminished returns, which has increased fishing effort and impacted sustenance regimes.

351. Lampreys are sensitive to environmental change in regards to water quality. Wet'suwet'en management in their territories is to ensure this species survival remains intact for FSC purposes, any adverse change to this Wet'suwet'en mandate is an infringement to Wet'suwet'en title and governance.

3.2.1.13 Bulkley Morice Resident Fish

352. Six resident fish species are predominant in Wet'suwet'en diets and these include lake trout, rainbow trout, Dolly Varden, bull trout, kokanee, and whitefish. Lake trout is a cold-water fish, usually frequenting deep lakes distributed in the upper Bulkley and Morice tributaries. Lake trout locations recorded within the Bulkley

system include Bulkley River, Atna Lake, Maxan Lake, McBride Lake, Morice Lake, Nanika Lake, and Owen Lake.

353. Lake trout are the top aquatic predator in most lakes where they are found (Martin and Oliver 1980). Lake trout may prey on kokanee and whitefish while in deep water, and aquatic insects and shore dwelling minnows while in shallow water. Usually, maturity occurs at age eleven with mature adults leaving lake waters to return in-river to spawn.
354. Lake trout are capable of reaching ages in excess of fifty years and achieving weights over 20 kg. Most lake trout populations in Wet'suwet'en territory have significantly reduced abundance due to road access and high angler effort. Due primarily to their large size and palatable flesh, they are prized by many anglers and are vulnerable to overexploitation; there are currently conservation concerns in McBride, Owen, and Maxan lakes.
355. Rainbow trout are the most widely distributed and common fish living in both lakes and streams in Wet'suwet'en territories, and are a mainstay of Wet'suwet'en fish catch. Dolly Varden are widely distributed in the upper cold water reaches of mountain streams in the Morice drainage territories. Bull Trout are blue listed by the BC CDC as a species of concern due to loss of habitat.
356. Bull trout are common in the Morice watershed, and in many locations provide winter-long fresh fish catches to the Wet'suwet'en. Their distribution patterns indicate they are sensitive to water temperatures, preferring cold natal streams. Bull trout spawn in small to large tributary streams, and adults over-winter in larger rivers. Bull trout are a long-lived repeat spawning fish that can exceed twenty years of age and 10 kg in weight. Bull trout are a popular sport fish and are frequently harvested by sport anglers as by-catch during recreational fisheries targeted on summer-run steelhead, chinook, sockeye, and coho. As adults, they are an aggressive fish and vulnerable to over harvest by anglers. As territories in the western portion of the Morice drainage become more road accessible, Wet'suwet'en have noted diminished abundance of bull trout populations.



Figure 54. Redslide Creek–Nanika River confluence is a preferred bull trout spawning area.

357. Kokanee are a landlocked form of sockeye salmon that are an important fish resource to the Wet'suwet'en at upper and lower Burnie Lakes, Goosly Lake in the Buck system, Shea Lake, and Morice Lake. Similar to lake trout and bull trout in Wet'suwet'en territories, kokanee are highly prized by anglers, as the deep red flesh is considered by many to be the tastiest and finest eating fish in the Bulkley and Morice watersheds. Wet'suwet'en primarily use traps to catch kokanee; however, current harvest is typically by lake trolling.
358. Mountain whitefish, most commonly called whitefish, are widely distributed across the territory in streams and lakes and are an important food to Wet'suwet'en.

In the Morice watershed, whitefish were and are harvested at various sites in the Bi Wenii (Owen), Ze'gel'h Kwa (Lamprey), Te't'aay Kwa (Thautil), Talbiits Kwa (Gosnell), Hlootsus Tez Dlee (McBride), Neenekeec (Nanika), and C'enenlee (Atna) systems. In the upper Bulkley drainage, whitefish were and are harvested at sites including the Neexdzii Kwe (mainstem), Dzenk'et Hoz'aay (Buck), Alk'at (Sunset Lake), Deetts'eneegh (Elwin Lake), and the Tasdleeagh (Maxan) systems.

359. As a matter of right and responsibility, Wet'suwet'en have a commitment to preserve the integrity, stability, and beauty of the biotic community for their members, and the general public at large. These values are in place for the health and ecosystem function in Wet'suwet'en Yintahk.

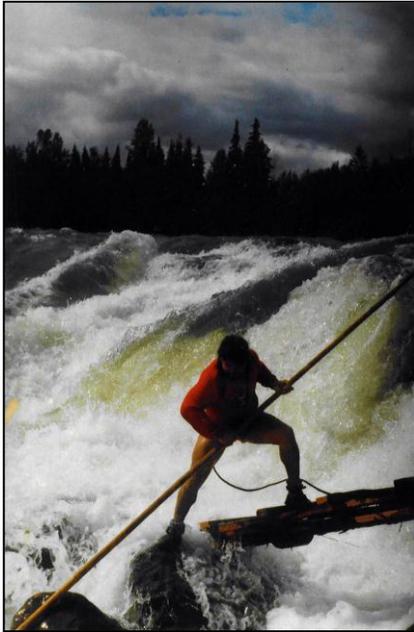


Figure 55. Wet'suwet'en fisher at Moricetown Canyon.

3.2.3 Wedzen Kwah Watershed Salmon Status

360. The abundance, productivity, and carrying capacity status of Morice sockeye are rated as poor. The current decline of Morice-Nanika sockeye due to high exploitation rates and low-productivity issues in Morice Lake has deeply impacted the Wet'suwet'en and their culture. The Morice-Nanika Sockeye Recovery Plan appears to be stalled due to a lack of strategic direction and commitment. Morice-Nanika sockeye are rated as threatened and will become endangered if limiting factors are not reversed.

361. The upper Bulkley sockeye stocks – Maxan and Bulkley – are in imminent threat of extirpation resulting from lack of escapement due to high exploitation rates in the coastal mixed-stock fishery and degraded habitat. These upper Bulkley sockeye stocks require a recovery plan. The FSC fishing moratorium by Wet'suwet'en of the Morice-Nanika and upper Bulkley sockeye stock is a start in recovery; however, mixed-stock fisheries and habitat management issues require management intervention by the federal and provincial agencies along with the Wet'suwet'en. The current abundance, productivity, and carrying capacity status of upper Copper sockeye is rated as stable.

362. Morice chinook spawning and rearing habitats are currently intact and the relatively productive stock is considered stable. Upper Bulkley River chinook abundance is thought to have been diminished by heavy exploitation rates in the coastal mixed-stock fishery, and to have been adversely affected by habitat modifications prior to the 1950s. The upper Bulkley chinook stocks are rated as threatened and require a recovery plan initiative.
363. Wet'suwet'en have concerns regarding the diminished upper Bulkley coho abundance and the degraded state of their spawning and rearing habitat, rating them as of special concern. Morice coho abundance is depleted and sensitive to human activity and natural events. Morice coho are rated as of special concern and may require recovery planning.
364. There are no Wet'suwet'en concerns regarding pink salmon abundance levels or habitat issues. Morice steelhead abundance and productivity are considered stable. There are issues with steelhead abundance and their habitat in the upper Bulkley with their status currently considered uncertain due to insufficient information.
365. Future key threats to the well-being of Bulkley and Morice salmon and their habitats include:
- Proposed development such as the Coastal GasLink pipeline creating additional cumulative impacts;
 - Continuing lack of habitat management, particularly in the upper Bulkley drainage;
 - Mixed stock coastal and in-river fishing leading to over fishing the small, less productive populations;
 - Changing river and ocean conditions that are linked to global climate change, which could be expressed in poor freshwater and marine survival rates and increased incidence of disease in adult spawners.

4.0 Potential Environmental Impacts

366. Wet'suwet'en title is a right to the land itself, therefore any proposed pipeline development will impact Wet'suwet'en title. Section 4 of this submission considers and summarizes major potential impacts to the environment and potential impacts of the environment to the proposed project.
367. The most significant environmental effect of the project would be due to clearing and construction activity; the geohazards impacting the proposed pipeline.



Figure 56. West Virginia gas pipeline explosion. Courtesy of www.csmonitor.com

4.1 Morice Water Management Area

368. Wet'suwet'en water quality in the Morice watershed is integral to Wet'suwet'en livelihood and the spiritual connection they have with the area. Wet'suwet'en governance is based on the ability to retain a traditional livelihood from the health of the territories and a dynamic spiritual connection to these waters. This governance system is at the core of Wet'suwet'en title and rights.

369. In 2007, the Wet'suwet'en, in collaboration with BC, established the Morice Water Management Area (MWMA) as a component of the Morice Lands and Resource Management Plan (Morice LRMP). The Morice Water Management Area includes the upper part of Morice River, Reach 2, and the Morice drainage upstream, as well as the Burnie and upper Clore systems as shown in Figure 57.

370. The Morice LRMP states, "The desired outcome is to ensure that the habitat and water quality supporting salmon and other fish is not negatively impacted." Beyond this, the goals intended for the Morice Water Management Area include:

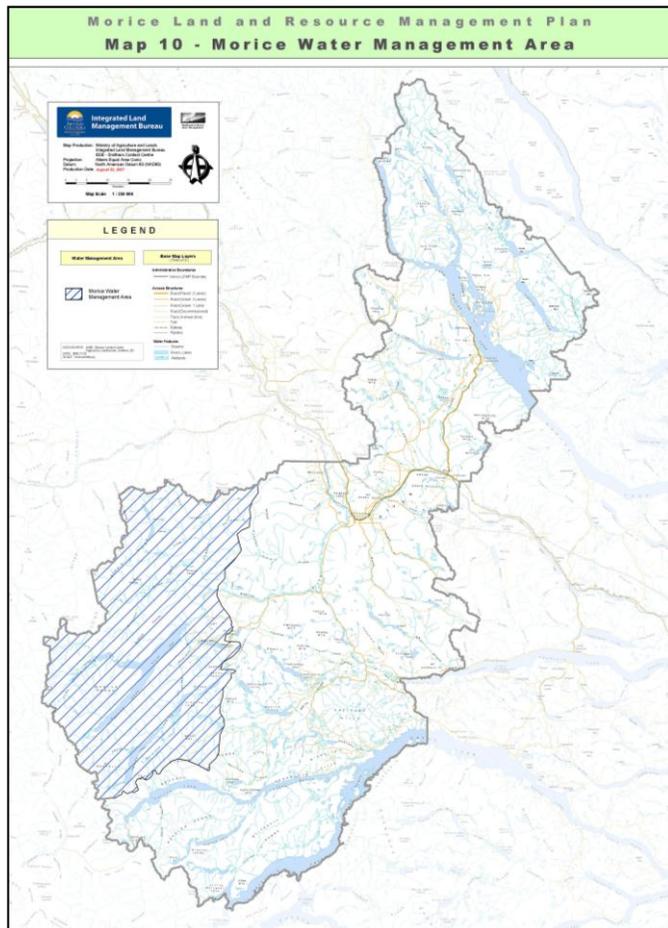


Figure 57. Morice Water Management Area shown within the hatching.

- Water quality and quantity suitable to sustain the health and wellbeing of the Wet'suwet'en; the intent being the protection of water quality, hydrologic integrity, and salmon habitat;
- Water quality that supports aquatic life at reference state;
- Sustainable water use practices;
- Integrated land and water resource planning that utilizes the Wet'suwet'en Territorial Stewardship Plan.

371. The Morice WMA was created to secure to the integrity of Wet'suwet'en lands and water resources and represents a significant compromise by the Wet'suwet'en whose interests extend throughout their entire territory. The intent is to provide the maximum amount of security for sustaining water quality and quantity necessary for the health and wellbeing of the Wet'suwet'en, as well as the protection of the salmon and other fish in the area and the aquatic life on which they depend. Losses to habitat or hydrological integrity are expected to be addressed promptly through restoration activities.

372. The Morice WMA makes clear what the Wet'suwet'en want in terms of aquatic and terrestrial resource planning and management. The Morice WMA overlies six Wet'suwet'en House territories and overlaps other land use zones, including four Protected Areas, many Area Specific Resource Management Zones, and some areas under General Management Direction. The management of these other areas in conjunction with the MWMA is expected to enhance water quality and fish habitat protection. The proposed project will bisect the Morice Water Management Area. In effect, the proposed project erodes Wet'suwet'en land resource management planning initiatives and impinges on the right to protect and maintain the integrity of their territory.



Figure 58. proposed pipeline crossing at Talbits Kwa tributary.

4.2 Environmental Effect Summary

373. The Wet'suwet'en are deeply concerned about the Coastal GasLink Project due to potential significant effects to Wet'suwet'en territory, and governance. The BC EAO is required to take actions that promote sustainable development and

thereby achieve a healthy environment and a healthy economy. This will help ensure the project is considered in a careful and precautionary manner and ensure the CGL project does not cause significant adverse social, environmental, and economic effects.

374. There is a wide variety of literature on the impacts of pipeline construction and use. Pipeline projects can have significant short and long-term impacts on the environment. The proposed pipeline construction and operation can significantly affect the atmosphere and air quality, soils, terrain, and surface and subsurface water hydrology, quantity, and quality; vegetation, wildlife and their habitats, and anadromous and freshwater fish and their habitats. These potential effects are shown summarized in Table 3.

Table 3. Environmental Impacts of Pipelines (adapted from Van Hinte et al, 2007).

Soils	-Loss of soil capability -Soil compaction, pulverization, rutting, and reduced percolation rate -Erosion and increased sediment load -Decreased terrain stability -Direct topsoil and subsoil loss
Surface and Subsurface Water	-Changes in groundwater recharge and discharge rates and flow obstruction -Decreased water quality and quantity -Contamination from solid, industrial, liquid wastes
Air Quality	-Increased emission resulting from burning of slash and debris, construction and operation of pump stations, and vehicle use -Increased dust from construction and maintenance vehicles
Noise	Negative effects on nearby wildlife and birds, Wet'suwet'en, and other users
Vegetation	-Direct loss and alteration of vegetation -Changes to physical site conditions because of introduction of nonnative and invasive species -Disturbance of rare plants and traditional collecting sites
Wildlife	-Direct habitat loss, alteration, or fragmentation leading to species loss -Disturbances to feeding, nesting, denning, or breeding patterns. -Alteration of seasonal and daily movements of wildlife. -Increased mortality because of greater human access to wildlife areas
Fish and Habitat	-Direct species loss resulting from increased sedimentation, turbidity, flow disruption, trenching, or dredging in watercourses -Indirect species loss resulting from increased water use and access to fishing areas

375. The Wet'suwet'en view the BC EAO process as limiting due to:

- A mandate to receive information on Wet'suwet'en rights and title, but no mandate to address or resolve critical issues regarding rights and title;
- The BC EAO delegating consultation to the proponent, who obtain agreements that meet the proponent's needs and interests, and not necessarily Wet'suwet'en's.
- The lack of fact-checking or due diligence within the BC EAO.



4.3 Acid Rock Drainage – Water Quality

376. The Coastal GasLink Application indicates that construction of the pipeline and associated infrastructure will result in the excavation of bedrock, some of which may be potentially acid generating (PAG). This will contribute to acid rock drainage (ARD) and/or metal leaching contamination into the receiving environment and will require management. In relation to other portions of the proposed pipeline, the Clore crossing is upstream of high value salmon habitats, which currently possess pristine water quality attributes.



Figure 59. Proposed Clore crossing through Burnie–Clore pristine area.

377. The lack of level ground is particularly significant at the Clore River crossing. The only level or semi-level ground adjacent to the Clore is constrained by floodplain (as shown below in Figure 59 and 60), by the wetland complex, by the limited amount of high value grizzly bear, black bear, and moose habitat, and yet further by the rare Whitebark pine stands.

378. The Application notes in regard to ML/ARD that Coastal GasLink is committed to applying the ML/ARD principles however, these and other BC government policy documents note that baseline geological and geochemical characteristics should be collected in the initial stages of project development.

379. Another significant unknown is groundwater conductivity and flow during and construction. Effective drainage management requires a comprehensive understanding of area hydrology.

380. It is unknown how the Clore River pipeline crossing and construction equipment crossing are configured in detail. It is unknown if drainage management structures are to be constructed given the relatively small area and tight geographical constraints. Due to the vagueness of the information presented in the Application, the Wet'suwet'en cannot determine potential adverse effects regarding construction and associated infrastructure.

381. Overall, ML/ARD is a serious concern with adverse effects on aquatic resources and downstream biological communities. Once initiated, ML/ARD can persist for thousands of years, causing ecological damage and incurring technically challenging, multimillion-dollar cleanup costs typically paid by the taxpayer, as has

been the case in numerous abandoned mines northwest BC. ML/ARD is a major public and regulatory agency issue.

382. The Application and its supporting documents do not provide critical geological and geochemical baseline and predictive data with clear interpretations and conclusions in regard to ML/ARD. This includes the lack of data and the current inadequate status of meteorology, water quality, and surface and subsurface hydrology information. They are integral to the overall ML/ARD evaluation and risk assessment for this project.

383. Any ML/ARD generation by man-caused development in Wet'suwet'en territory is unacceptable. The Coastal GasLink Pipeline approach regarding understanding and management of ML/ARD is irresponsible. The Wet'suwet'en are deeply concerned about potential significant effects from ML/ARD to Wet'suwet'en territory and resources as it shows clear disregard for Wet'suwet'en values and impacts on their rights and interests.

384. Significant effects from clearing and construction on the freshwater ecology are a serious concern. Disturbed habitat of the above, increases stress, disease, mortality, and impedes growth, reproduction, survival, recruitment, and production. This is a serious concern, an infringement of title, and a breach of Wet'suwet'en law.

4.4 Environment Effects on the Proposed Pipeline

385. The proposed pipeline would be vulnerable to terrain stability issues, surface water issues, and catastrophic events such as forest fires that could damage pipeline integrity or cause explosions due to pipe leakage. Slope stability, surface water issues, and catastrophic events pose significant threats to the proposed pipeline project throughout large portions of the 190 km corridor, which would overlie Wet'suwet'en territory.

386. Terrain stability issues include a variety of potential slope failures types, avalanches, destabilized fans, avulsions, and seismic events, all of which are known to occur on varying temporal and spatial scales. Schwab (2011) notes the complexity of the geology and geomorphology of the area, and that destructive landslides are common as shown in Figure 59. The northwest trending rugged topography poses serious challenges for pipeline development.

387. Destructive landslides of various types are common in Wet'suwet'en territory and have the potential to deform the proposed pipeline and cause major ruptures. These include the slump earth flows on the Morice River Forest Service Road, which have been commonly occurring since the road was built in the late 1950s. Some of the latter slump earth flows are a result of subsurface glaciolacustrine material, which is similar to glaciolacustrine deposits west of Owen Creek through to Lamprey Creek. The lack of adequate information describing or characterizing how existing terrain and geohazards, including subsurface deposits, would potentially affect the proposed project is a serious deficiency regarding assessing and understanding potential adverse effects. It is understood that seismic events could potentially activate subsurface glaciolacustrine deposit movement, particularly if burial of the pipeline cut into and allowed seepage into the glaciolacustrine material. There was no information presented in the Application of potential geohazards and effects on proposed roads.





Figure 60 shows left bank erosion on the Burnie River (foreground), floodplain, and the lack of flat ground to accommodate construction at Burnie–Clare confluence.

388. The Talhdzi Wiyez Bin, Lho Kwah, and Talbits Kwa territories, located in the Burnie River area have steep and unstable terrain, upslope and downslope of the proposed pipeline corridor. These territories receive more precipitation due to coastal and elevation gradients. In 2011, Wet’suwet’en field crews recorded significant hillslope erosion from channel changes on both the Burnie and Clore rivers as well as discrete terrace scarps. The Talhdzi Wiyez Bin, Lho Kwah, and Talbits Kwa territories were instrumental staging areas for access to Haisla coastal areas both in pre-historical warfare, as noted by Rita George, and in historical trade relationships with Haisla people, as spoken to by Warner Williams. Walter Joseph Sr. spoke of avalanches in reference to the deep snow packs in the coastal-interior transitional zone.

389. The results of the Wet’suwet’en review of the Application indicate the Application may have underestimated the impacts of streamflows, particularly the 100 year flood values on proposed project components such as the pipeline and roads. Wilford (2003) describes various stability issues in the Terrace through Houston area. Wilford recorded 83 debris flood events over the last fifty years on eight of the alluvial fans on the south side of Gosnell Creek. These flood events caused shifting stream channels and erosion and have posed considerable road maintenance challenges over the last fifteen years. These same alluvial fans would be crossed by the proposed pipeline. The Wet’suwet’en consider this type of planning for the proposed pipeline to be unacceptable.

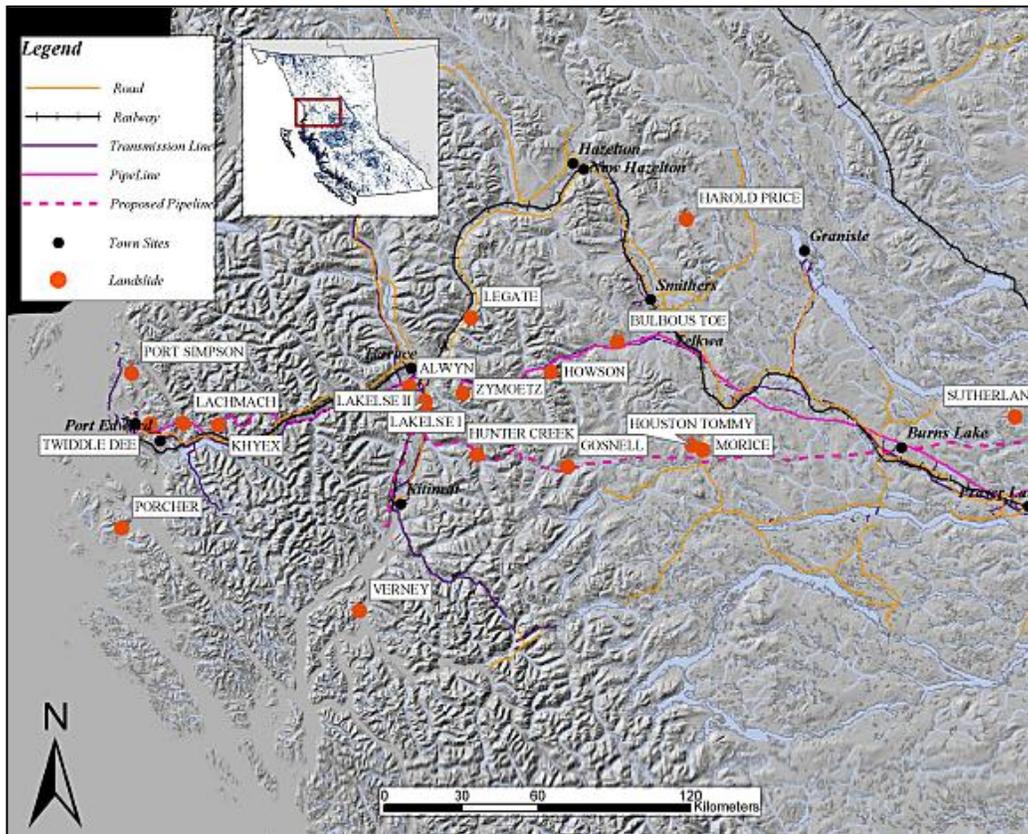


Figure 61. Map shows landslides and linear infrastructure such as roads, existing and proposed pipelines, and CN Rail in west central BC. Adapted from Geertsma et al. 2009.

390. The lack of appropriate detailed terrain and terrain stability mapping and clearly presented text hindered the ability of the Wet’suwet’en to assess and determine potential adverse effects from geohazards on the proposed project.

5.0 Inadequacy of Coastal GasLink Application

5.1 General Inadequacies

391. The Coastal GasLink Project, Application is inadequate as to the amount of environmental detail and context presented and it clearly does not describe potential significant effects on lands and resources, and thus, avoids identifying infringements to Wet’suwet’en rights, including title. It does not reflect Wet’suwet’en values and the reality of our cultural landscape. Wet’suwet’en rights and interests and Wet’suwet’en Knowledge from Delgamuukw/Gisdaywa court case are important components to the Application, but have not been incorporated.

392. The strength of the Application lies in the project description. The Application sections dealing with baseline information, impact assessment, and mitigation are inadequate. These sections have been developed in a conceptual manner without the detailed baseline studies to support the effects analysis, or left with the

understanding that further information will be available after detailed or engineering studies are completed.

393. The information presented as broad policy or management statements without the necessary technical detail to address specific concerns. There is a great deal of reliance by the Coastal GasLink project on this manner in support of their application; however, Wet'suwet'en view this approach as inadequate.
394. Cost estimates of environmental and socio-cultural-economic impacts from the construction and operation of the proposed pipeline are insufficient or absent.
395. The Application and Working Group meetings were not straightforward or explicit, frequently using terms such as: where practical, where feasible, is considered, as necessary, and may be established. These terms do not provide certainty to the Wet'suwet'en and are inappropriate language for a project description and environmental assessment process.
396. The Application as presented is immature and obviously needs much more detail developed in order to address Wet'suwet'en rights, including title, and interests.
397. The Application does not address the current status of Wet'suwet'en land and resources that is a result of 150 years of settler activity. Development has created various stressors, which have impacted aquatic and terrestrial ecosystems and adversely impacted water, fish, wildlife, plants and Wet'suwet'en cultural heritage. Given those impacts, the Application offers neither sustainable development nor precautionary approach initiatives. Coastal GasLink has not integrated or balanced these legally established principles thus avoiding cumulative impacts to Wet'suwet'en land and resources, to the cultural institutions, and to the cultural well-being.

5.2 Specific Inadequacies

398. The following specific inadequacies are not intended to be a major technical review, but rather to illustrate the incomplete and deficient nature of the Application, which is a direct result of delegating crown consultation obligations to the proponent. Major projects that have the potential to jeopardize the health and well-being of the Wet'suwet'en, as well as rendering their rights to be hollow, requires a diligent regulatory process.

5.2.1 Rights and Interests

399. Wet'suwet'en rights and interests and Wet'suwet'en Knowledge are important components to the Application. Identification and discussion of Wet'suwet'en governance structures that link the community to the territories is missing. Wet'suwet'en cultural heritage including archaeological sites is not described.
400. Because Provincial agencies and Coastal GasLink have not consulted with the Wet'suwet'en, areas considered of special concern and of high consequence are currently unknown to the proponent. Consequently, effects to Wet'suwet'en rights and interests are not identified.
401. The Crown has had knowledge of the Wet'suwet'en strong prima facie Aboriginal title, rights, and interests in the territory since at least the constitutionalization of Aboriginal rights by subsection 35(1) of the Constitution Act, 1982. In 1984, 35 Gitksan and 13 Wet'suwet'en Hereditary Chiefs instituted proceedings against the Province of British Columbia in litigation commonly known



as *Delgamuukw*. Both individually and on behalf of their respective Houses, they claimed ownership (un-extinguished Aboriginal title) and resulting jurisdiction (entitlement to govern by Aboriginal laws) over separate portions of territory totaling 58,000 square kilometers.

402. The BC EAO environmental assessment process is not structured or implemented in a manner which leads to adequate consultation or appropriate accommodation. There are many reasons for this including, but not limited to, the following: internal Crown policy limitations on information and study requirements that do not result in comprehensive information about Wet'suwet'en title and rights being gathered; lack of mandates or willingness to discuss elements of appropriate accommodation, including accommodation of the economic component of Aboriginal title; a legally insufficient process and policy for determining the scope of required consultation; and lack of structures and opportunities for meaningful and respectful Wet'suwet'en participation.

403. Hypothetical examples of mitigation are simplistic and do not regard important factors such as public disruption, human health and safety, and environmental impacts. The Wet'suwet'en require that effects on humans and the environment be provided in the Application in order for the BC EAO to make balanced decisions.

5.2.2 Consultation

404. In regards to consultation, the Wet'suwet'en were not consulted by BC regarding pipeline and access corridors through Tazdli Wiyez Bin (Burnie Lakes) Protected Area. Currently, the Wet'suwet'en have been excluded from discussion between DFO and Coastal GasLink concerning HADD's and from the BC Government, which is discussing a myriad of environmental and socio-economic components. This is unacceptable to the Wet'suwet'en, who have rights and interests within their territory.

5.2.3 Baseline Information

405. Competent and thorough baselines studies are important for documenting reference conditions, conducting effects assessment, monitoring Valued Environmental Components (VECs), evaluating risk, and conducting cumulative effects assessment. The inadequate baseline information collected for the Application is a major gap, as baselines serve as foundation for the effects assessment, any proposed mitigation thereof, and any proposed monitoring activities.

406. Within Wet'suwet'en territory, all the VECs have weak baseline information. A baseline study/data collection acts as a descriptive cross-sectional survey that provides quantitative information on the current status of a particular situation. It aims at quantifying the distribution of certain variables in a study area at any given time. It involves the systematic collection and presentation of data in order to give a clear picture of a particular situation and to answer the following queries: what? where? when? why? how?

407. A baseline could cover either a sample or the whole of a population or habitat, but in order to be functional, it must provide an understanding of the situation, or population, etc. Baseline studies serve as a reference point or benchmark for later comparisons of impact or effect studies, or monitoring programs to assess changes in ecosystems, habitats, or populations. Adequate baseline studies and their results are necessary for understanding and applying solutions to current and future problems. Shifting baselines describe the way significant changes to a system are



measured against previous baselines, which themselves may represent significant changes from the original state of the system.

408. Adequate baseline information is essential for informed decision making and understanding ecological values that form the foundation of aboriginal use, rights and title. This is particularly important in regard to the Coastal GasLink project, due to the high risk associated with construction and operation of the proposed pipeline. At a minimum, the CGL baseline studies should be able to determine the status and current viable condition of a VEC. Viability is defined as the ability to continue to work and function over time within the identified spatial boundary and adjacent area. In the case of species depletion, impacts on aquatic resources would be basically unknown if baseline information did not delineate or monitor fish species population abundance, the quantity and quality of fish habitat, and basic ecosystem components.
409. For the Wet'suwet'en, there is not enough baseline information to conduct a thorough effects assessment, therefore the Wet'suwet'en cannot make a positive decision towards the project. The Crown cannot make a decision lacking good baseline information, and cannot determine infringements to the Wet'suwet'en without data to provide conclusive effects.

5.2.4 Aquatic Setting & Effects Assessment

410. The Fish Act requires the Application to clearly and completely describe the aquatic setting including the current state of the environment within the study area. The Application has not even come close to meeting these requirements within Wet'suwet'en territory. The lack of sufficient data minimizes the level of understanding of the ecological state of our territory. Lack of sufficient data in the application minimizes the value and importance of these ecosystems to the Wet'suwet'en, and the lack of information results in a misrepresentation of Wet'suwet'en territory, which our governance system is integrated with. Hence, a true understanding of the potential infringement to Wet'suwet'en rights and Title cannot be clearly realized. Thus a decision that is not fully informed will be brought to question.
411. Wetlands are culturally and ecologically important to the Wet'suwet'en. Wet'suwet'en are in accordance with Canada's policy on Wetland conservation, including the goal of No Net Loss. There is a general lack of information regarding classification, mapping, and ground truthing wetlands, as well as a lack of site specific information noting wetland function. For example, does the wetland provide critical habitat for species at risk, or species of cultural significance, or of special concern to the Wet'suwet'en. The lack of adequate baseline information, in this instance for wetlands in Wet'suwet'en territory precludes assessment and determination of potential adverse effects and encroachment of Wet'suwet'en rights and interests.
412. There is a lack of easily understood information in regard to fish presence and abundance data, fish habitat quantity and quality data, riparian structure, condition and value related to stream crossings by the proposed pipeline, transmission lines, and roads. There is no known Fish Habitat Compensation Plan (FHCP). Due to this insufficient information, the Wet'suwet'en are limited in assessing and determining potential adverse effects.
413. There is no known baseline information in the Application characterizing present reference conditions downstream of potential pathways resulting from accidents of malfunctions. There are no known baseline characteristics, analysis, and



effects assessment on the impacts to freshwater and anadromous fish (individual fish or at the population level), their habitats. This is no known information regarding potential effects from construction and operation impacts on Food Social and Ceremonial (FSC) fishing and its values. FSC fishing values are considered priceless and any impacts to them are unacceptable. There is no known information regarding Wet'suwet'en commercial fisheries within the territory.

414. Fish, fish habitat, and aquatic information are presented in Section 3 of this submission. Fraser River and Skeena River anadromous and freshwater fish stocks are for the most part characterized as fluctuating at diminished levels of abundance due to accumulated impacts affecting the stock, their habitats, and their ecosystems components. The Application is incomplete and does not present information adequately illustrating the fish stocks, their habitats, and their ecosystems in order to determine potential adverse effects and how these would could, and to what degree, impact Wet'suwet'en rights, and the exercising of those rights.
415. In summary, information presented regarding the aquatic setting and potential adverse effects from the project is either incomplete or missing. Extirpated or Threatened stocks are not listed. This severely hampers Wet'suwet'en efforts to assess and determine potential effects, and consequently, the nature and severity of these potential effects on aboriginal rights including title.

5.2.5 Terrestrial Effects Assessment

416. The Application does not specify the total forest land base and timber volume affected by the proposed project apparently due to the project design and detailed study not being complete. There is incomplete information regarding potential effects from an oil spill on tree and plant survival, and their future growth and productivity. There is no hypothetical spill scenario presented for forest communities and forest soils. Therefore, the Application presents incomplete or missing potential effects.
417. There is no known information in the Application in regard to potential effects from the project on Wet'suwet'en cultural significant areas or on old growth forest ecosystems that are of significance to the Wet'suwet'en. There is no known information presented in the Application regarding the current Wet'suwet'en harvest and use of traditional plants including trees, their barks, and roots.
418. The *Species at Risk Act* (SARA) currently lists the Western Toad as a Special Concern and the Telkwa Caribou population as Threatened. SARA requires the identification of any adverse impacts on listed species or their critical habitat. The Application provides general habitat estimates for Western Toad; however, the assessment and determination of key habitats is missing. The Telkwa Caribou population is as blue-listed by BC. Telkwa Caribou habitat continues to be eroded by forestry activities. The proposed pipeline will bisect an important caribou migration route connecting the Telkwa Range to the southern Bulkley and Tahtsa Ranges, where local population abundance is diminished. The Wet'suwet'en note the protection and recovery of Telkwa Caribou and their habitat will be effected by the proposed project.
419. Wet'suwet'en have special relationships with wildlife in the territory. Wildlife include moose, caribou, mountain goat, deer, grizzly bear, black bear, wolf, wolverine, cougar, groundhog, marmot, beaver, snowshoe hare, muskrat, squirrel, marten, weasel, lynx, fisher and the suite of birds utilizing mountain, lowland, riparian, and aquatic habitats. Grizzly bear, wolf, caribou, fisher, moose, and mountain goat populations are all diminished with some continuing to decline.



Population declines are generally due to an increase in access, loss of critical habitat, and predation, primarily by humans through the area proposed to be bisected by the pipeline corridor. The project will have direct habitat loss through clearing and fragmentation, indirect habitat loss through sensory disturbance, changes in wildlife movement and access, and changes from increased mortality.

420. It is anticipated that wildlife will be attracted to the pipeline corridor and a change in local conditions due to the increase in temperature of the ground adjacent to the pipeline. There is no known information as to how much and where local change is expected and the Wet'suwet'en are limited to assessing and determining potential adverse effects, which would likely see an increase in predation and illegal hunting.
421. In regard to wildlife within Wet'suwet'en territory, there is no information that discusses recovery and rehabilitation of wildlife per Wet'suwet'en House territory. The Wet'suwet'en are limited in assessing potential effects to these culturally significant resources.
422. The Wet'suwet'en disagree with the proponents effects assessment and note there will be significant adverse effect to local wildlife populations from the project. The adverse effects will affect Wet'suwet'en rights and interest.
423. There is high potential for the project to act cumulatively due to residual loss, fragmentation, or degradation to breeding and rearing habitat of wildlife, including birds; however, that information is not presented. Consequently, the Wet'suwet'en cannot assess and determine potential effects from project construction and operation and affect rights and interests.
424. There is no know information of the sand and gravel borrow pit quantities required. These details are proposed to be revealed once future detailed engineering and construction planning is complete. The Wet'suwet'en cannot assess potential effects from these borrow pits and materials and consequently determine impacts to their interests.
425. There is no known information presented regarding current Wet'suwet'en hunting and trapping activity. There is no known information in the Application in regard to the disruption or adverse impacts to Wet'suwet'en hunting and trapping activities during the construction and operation phases and what the nature and severity these effects will entail. Without information regarding potential effects to specific wildlife populations and hunting and trapping areas the impacts on Wet'suwet'en rights and title cannot be fully realized.
426. As noted in Section 6 of this submission, a diverse suite of plants were traditionally and are currently used by the Wet'suwet'en for food, for medicine, and for technological purposes. These plant foods include green vegetables, fruits and berries, foliage, inner bark-cambium, roots and rhizomes. There are no known studies by the proponent characterizing the quantity of Wet'suwet'en plants of significance or of special concern, and where cumulative loss through previous development has impacted House territories and members, which would be intersected by the proposed project. Potential impacts to this broad suite of plants from the construction, operation, and accidents are not adequately described in the Application. The Wet'suwet'en are concerned with the loss of plant resources.
427. Cultural heritage resources, including traditional use and archaeological sites, are non-renewable and of high significance to the Wet'suwet'en. There have been extensive impacts to Wet'suwet'en cultural heritage and the threshold of cumulative loss has been exceeded. In the past, Wet'suwet'en have documented a wealth of



data and knowledge concerning their cultural heritage (examples are shown in Figures 73, 74 and 77), conducted training for resource developers, and established land and resource planning management directions (objectives, measures, and targets) over the territory in order to protect, conserve, maintain, and manage these resources. There has been no known consultation at general or specific levels by government or the proponent regarding Wet'suwet'en cultural heritage. The Application is deficient in not specifically describing Wet'suwet'en cultural heritage and potential adverse effects from construction and operation of the proposed project. The Wet'suwet'en note that their cultural heritage facilitates exercising a variety of their rights, including title.

428. In summary, there is a lack of information in the Application regarding potential adverse effects to the terrestrial setting as noted above from the proposed project. There are adverse effects that would affect and erode Wet'suwet'en rights to harvest and gather, and as well, to exercise these rights.

5.2.6 Impact Assessment, Mitigation, & Residual Effects

429. The Coastal GasLink Application assessment of the environmental effects of the proposed project is very limited in regard to direct and indirect effects, reversible and irreversible effects, and cumulative effects notwithstanding a particular emphasis on biophysical and socio-cultural-economic elements. Highly valued Wet'suwet'en lands, resources, and cultural elements, which are integral to cultural continuation have been stressed to varying degrees from previous Euro-Canadian settlement and development activities.

430. As noted above, the baseline information is presented at a relatively high level with major components missing altogether, is inadequate and inaccurate, and consequently the impact assessment suffers due to limited information.

431. Because the baseline information is inadequate and serves as the foundation of the Application impact assessment, impacts are clearly not known and uncertain at the best. Further unknowns include residual effects and their significance, as well as cumulative environmental effects. In summary, the environmental and socio-cultural-economic assessments are weak and inadequate and unacceptable to the Wet'suwet'en. Given the inadequate baseline information and in turn, the weak effects assessment of the VECs, it is not surprising that the CGL Application states that environmental effects, if any, can all be mitigated and rates them not significant. As well, the Application gives the same rating to any potential effects of the environment on the pipeline.

6.0 Traditional Land and Resource Use

432. Wet'suwet'en territories sustained home places and resources for Wet'suwet'en House group members for approximately the last 10,000 years, with traditional use features or memories covering the landscape. Subsistence activities were tightly interwoven with the social structure, the local landscapes, and the broader regional environment. Detailed knowledge and understanding of the environment, the characteristic of each resource, and the seasonal variation in abundance and availability were necessary to the chiefs and House members for making decisions about what, where, and when different resources were to be harvested.



433. Over time, Wet'suwet'en ancestors developed systems of access, tenure, and resource management. A strong and adaptive semi-nomadic economy, pre-occupied with food gathering, was based around the summer salmon food fishery, with dispersal into smaller family groups during the rest of the year to fish, hunt, and gather on the House territories. These two modes of subsistence, the summer salmon fishery along with seasonal dispersal, delineated the culture. Intercultural relations were extensive, resulting in the forging of ties and alliances; these promoted trade occurrences and privileges, allowed technology and transfer thereof, facilitated cultural enrichment, and enhanced economic stability.
434. Trading was pervasive, with the major villages as trail hubs and an extensive trail network that connected the coastal areas with the Pacific slope, and homeplaces with resource gathering areas. The general cultural infrastructure was underpinned by this trail transportation framework, which linked together villages, homeplaces, and fishing, hunting, spiritual, and resource gathering locales. This transportation network is important in the present as well, as it connects the Wet'suwet'en to ancient traditional heritage sites and features as shown in Appendix Figure 78. Trails and associated cultural heritage features are considered culturally significant because knowledge of them brings awareness of and pride in our cultural connection to place. This has long been our home and livelihood.

6.1 Wet'suwet'en Seasonal Round

435. The Wet'suwet'en traditionally follow general patterns of seasonal movement based on the harvesting of various species, for example, animals, fish, berries, and plants. The activities during the Wet'suwet'en annual cycle include "the appropriation of salmon, fur-bearing animals, game, and botanical products as well as the import, by gift and barter, of obsidian, shell, copper and other industrial products" (Daly 1987). The nature and unique features of Wet'suwet'en use and occupation of their territories is captured by what many refer to as the seasonal round. The Wet'suwet'en do live on House territories with their extended family to hunt and trap animals, as well as gather berries during the autumn, winter and spring months: any impediment to these activities is seen as an infringement to Wet'suwet'en rights and title.
436. The calendar of harvesting activities among the Wet'suwet'en follow the changing round of the seasons and the cycles of birth and growth on the land and waterways. During certain seasons, we would move to different locations for weeks or months at a time to harvest resources needed for survival during the winter.
437. Traditionally, the Wet'suwet'en occupied Kya Wiget during the summer salmon run for two months. The Wet'suwet'en pattern was to have their settled and largest village sites at fishing spots so people could harvest, process, and store large amounts of salmon. People would also feast: sharing the resources from their territories, validating titles and territories, and exchanging information about various resources in differing territories.
438. Before the salmon stopped running in the fall, Wet'suwet'en left the summer village to hunt animals and harvest berries. Typically hunting would be focused on large animals residing in the subalpine or alpine, with an emphasis on caribou, mountain goat, and marmot. At the same time, and frequently from the same camps, berries would be picked and processed. For the Wet'suwet'en, berries were the most important plant food, and picking and processing were a large-scale intensive effort. The Wet'suwet'en would then disperse to a number of small settlements in their territories during the winter.



439. From their winter Houses, they fished through the ice and in the spring they often moved to take advantage of excellent trout, lake char, and whitefish harvesting locations to secure adequate fresh and dried fish and roe. Winter hunting focused on available animals, which included rabbit, porcupine, moose, caribou, deer, and bear. Trapping targeted lynx, fox, marten, and beaver.
440. In June and July, they would return to their summer fishing villages. All the people from all the Wet'suwet'en territories gathered at these summer villages to catch the salmon and dry them for the winter.

6.2 Integrity of the (Baht' lat) Feast Hall

441. The feast/baht'lat is central to Wet'suwet'en society and government. As acknowledged in Delgamuukw, the feast has a ceremonial purpose but is also used for making important decisions. Today, chiefly titles are passed on in the feast. Importantly, the feast confirms the relationship between each House and its territory and confirms the boundaries of each territory. The feast operates as a forum in which Wet'suwet'en law is both enacted and upheld. It is through the feast that the various houses and clans interact at an official level. Territories are important to the feast, as the host clan gathers goods and food for the feast from its territories.
442. Each chief is responsible for the lands and resources within his or her territory. The institutions of the Wet'suwet'en – namely, clans, houses, and chiefly titles – are integrally related to the feast system and to the laws of the Wet'suwet'en. They determine how Wet'suwet'en territory is owned and used, and they provide the structure of Wet'suwet'en government. Each chief must manage, conserve, and harvest the resources on his or her territory.
443. In the Hagwilneghl et al. vs. Canadian Forest Products litigation regarding land and resource use at Redtop, Madame Justice Dillon in *Canfor v. Sam* said:
- Today, the head chiefs both give permission for people to use the territory and oversee how people use it. They direct people to the areas in their territories that they know can sustain a harvest, allowing other areas to lie fallow. They direct how many animals can be taken. To do this, they must know the territory well, be aware of the conditions of the animals, and know who is on the territory (Dillon 2011).



Figure 62. Wet'suwet'en youth education feast at Moricetown Multiplex.

6.3 Territorial Resource Use

444. In addition to impacts to Wet'suwet'en title from impacts to the Wet'suwet'en fishery, there would be significant effects to terrestrial resources from the construction and operation of the Coastal GasLink project. This section summarizes the past and current uses of Wet'suwet'en territory by Wet'suwet'en members in order to consider the impacts from the proposed pipeline. The territories directly and indirectly impacted by the pipeline are integral to Wet'suwet'en identity, governance, traditional practices of hunting and gathering, and the passing on of traditional knowledge to future generations. Any impact to these vital aspects of Wet'suwet'en culture is an impact to Wet'suwet'en title.

445. The Wet'suwet'en have utilized the resources in, along, and near the pipeline corridor in the past for hunting, fishing, and harvesting plants including berries, shoots inner bark, and roots, and continue to do so today. They used these resources as a source of food for their survival, for medicinal purposes, to enable and maintain the feast system, and for technological purposes. Most of the resources were not only used for one specific use but had many different purposes. An important feature of territory and resource use is the passing on of Wet'suwet'en Knowledge to younger generations; this is shown in Figure 63 and Figures 73-74. In the past, these animals, plants and berries were the only resources that the Wet'suwet'en had in order to survive. One of the participants in the Delgamuukw case, Wah Tah K'eght (Henry Alfred) reaffirmed the Wet'suwet'en use of the territory: "That's all we do is trapping, that's how we survive."

446. They depended solely on these resources before the development of the Bulkley Valley. "I still go out and do trapping" said Chief Woos, Roy Morris (Chief Woos made this statement before his recent passing). Although the territory of the Wet'suwet'en stock, their habitat, and their ecosystem en has been developed, and there are many other ways to obtain food and medicine, the Wet'suwet'en continue to use the resources taken off their territories. The collection of these resources and the relationship with the land is at the core of Wet'suwet'en life and livelihood.



Figure 63. Wet'suwet'en Elder instructing youth on proper butchering technique.

6.3.1 Hunting and Trapping

447. Currently, the Wet'suwet'en hunt and trap animals all year round, for instance, moose and deer. However, the majority of hunting and trapping takes place from April to December. Some Wet'suwet'en have a personal preference to

avoid hunting in the spring when animals are born. The main animals the Wet'suwet'en hunt and trap as a food source are moose, deer, and bear. The smaller game the Wet'suwet'en also hunt and trap as a source of food or fur include marmots, beaver, snowshoe hares, muskrats, squirrel, marten, weasel, lynx, groundhogs, and blue grouse.



Figure 64. Typical winter moose harvest.

448. In the past, mountain goat, and caribou were often hunted. However, mountain goats are relatively diminished, and herds in the area need conservation measures. Similarly, caribou are seldom found in this area for various reasons, for example, the development near Hudson Bay Mountain, the flooding of the upper Nechako by Alcan, forestry activities, and general fragmentation of their habitats. Most fur bearing animals such as bear, lynx, mink, muskrat, beaver, marten, snowshoe hare, ermine, and fox are seasonally hunted while the animals have a soft, thick, new coat, prized in the fur trade.

449. Beaver are usually hunted from winter to spring and bear from spring to autumn. The proposed pipeline will have the greatest impact on the Wet'suwet'en's ability to hunt and trap from spring to autumn. For hunting certain animals, the pipeline would impact the Wet'suwet'en all year round.

6.3.1.1 Animals Used for the Feast System

450. The Feast system is a significant part of Wet'suwet'en culture, tradition and governance. Dunehn-Lucy Gagnon, commented on the cultural significance of the feast system: "I live and breathe for the feast; it's who I am as a person". Feasts are a time when the Wet'suwet'en share resources gathered from the territories. Animals are important for the feast system because of the sense of reciprocity and sharing that the Wet'suwet'en have: "It's not always expectation of payment, it's just culture, respect for each other" (Dziggot-Ron Austin).

451. The main animals and fish prepared by the Wet'suwet'en and distributed throughout the feast hall are moose, bear, beaver, deer, and salmon, oolichan, clams, and seaweed. The food distributed to the guests at the beginning of the feast is usually cooked, baked, smoked, or made into soup. The food to be taken home is usually dried or canned and distributed throughout the feast hall. Feasts are generally planned a year in advance to gather and prepare all the resources from the territories.

452. Currently, food and other goods come from the territories, as well as from various stores. Since the development of the towns of Smithers, Houston, Burns Lake, and outlying rural areas, the amount of territorial food handed out at feasts is decreasing. The Wet'suwet'en do not have as much access to the territories relative to the past. Agriculture and forestry have depleted many resources from the territories, and further, there are private property and trespassing issues that conflict with Wet'suwet'en use of the land.
453. However, the resources in the territories are still widely used by the Wet'suwet'en where it is available to them: "It's still common to see wildlife being served at feasts" (Dziggot-Ron Austin). Before the introduction of the monetary system, animal hides were used as payment, which was done at a payback feast: "Payment isn't readily expected; to pay in our tradition would be done at a feast... it's a cultural consciousness" (Dziggot-Ron Austin). The hides were made from various animals such as moose and deer, bear, goat, beaver, mink, marten, squirrel, weasel, and muskrats. Preparing the animal hides the traditional way is difficult and time consuming work.
454. Hides are prepared and given out at the Feast or made into moccasins, vests, gloves, coats, or other pieces of clothing. Even today, animal hides are still considered an item of prestige for the Wet'suwet'en. Since development of towns, the number of hides in the feast hall has diminished. However, there are many Wet'suwet'en who still prepare traditional food and animal hides for the feast hall.
455. The proposed pipeline poses serious and irreversible risks to the Wet'suwet'en ability to provide goods in the feast hall. This threat is especially significant for the House territories of Djakanyex, Yextsowilkas, Cas Yex, Keexwinits, Anaskaski, Tsa K'ex Yex, and Ginehlaiyex. The proposed pipeline corridor would increase habitat fragmentation and increase access for non-Wet'suwet'en hunters. The Chiefs' authority is dependent on the ability to gather goods from House territories. This impact to animals and fish used in the feast system is an infringement to Wet'suwet'en title.

6.3.2 Plants

456. A diverse array of plant species is used by the Wet'suwet'en for food, for medicine, and for technological purposes. Plant foods include green vegetables, fruits and berries, inner bark-cambium, roots and rhizomes, and a few beverages. Medicines are derived from plant leaves or foliage, roots, and inner barks of a variety of species. Materials used to maintain the culture include fibrous plants, bark (shown in Figure 79), wood, sap, and dyes and pigments. Wet'suwet'en plants used for foods total about sixty species, most of which are commonly harvested in forest or woodland settings. Currently, some plants are intensively harvested, processed, and sold into North American and offshore markets.

6.3.2.1 Berries

457. Berries are the most important Wet'suwet'en nutritional and cultural plant food. Every year, Wet'suwet'en gather berries in the territories as a source of food and well-being. The scale of the berry harvest was relatively massive in the past, and currently is still large by any measure. The Wet'suwet'en cultural landscape today is a legacy of berry ground management, wherein rotational burning techniques were practiced in order to ensure abundant harvests. Trusler (2002) provides a comprehensive description and understanding of Wet'suwet'en landscape burning and berry land management.

458. The late Chief Wah Tah Kwets–Pat Namox in 1994 spoke to Wet’suwet’en berry land management:

“He (the Chief) knows the territory. When it is right time he burns the berry patches so the berries are fat and plump. If he didn’t do that the berries would become old and overgrown and there would be berries but they would just be small. But he knows when to burn so that it cleans up just the berry patch and doesn’t spread to the trees”.

459. The most common berries harvested are: huckleberries, soapberries, cranberries, raspberries, saskatoon berries, high-bush blueberries, gooseberries, salmonberries, juniper berries, and thimbleberries. In the past, most of the berries were dried to preserve them for the winter months. Currently, the berries are canned, dried, or frozen to be stored for later use. Today, the Wet’suwet’en generally harvest berries from the territories during late summer into autumn.

460. The Wet’suwet’en gather soapberries from June to September. Cranberries, huckleberries, and blueberries are gathered from July to late September depending on the weather and the particular landscape position of the berry patch. In the past, the Wet’suwet’en would move from their seasonal camps or villages onto their territories for weeks or months at a time to harvest and dry berries for the winter months and spring months ahead, as well as for upcoming feasts. Today, berries are still gathered from the territories and continue to be an important everyday and feast hall resource. The proposed pipelines project will impact the Wet’suwet’en’s ability to access berries for their food, as well as for the feast.



Figure 65. Cranberries ripe for picking.

6.3.2.1 Berries used for medicinal purposes

461. The most common berries used as medicine are soapberries, cranberries, snowberries (grouseberry), black twinberries (bear berry), juniper berries, and rosehips from the prickly rose. Soapberries are used to treat ulcers and arthritis. Bear berry is used for external inflictions. Cranberries are used as a tonic. Juniper berries are utilized as a diuretic. All these berries are a source of nutrition and used for different purposes by the Wet’suwet’en. These berries will be impacted by the pipeline route.

6.3.2.2 Berries used in the Feast system

462. Many Wet’suwet’en comment that the berries they harvest are used “for the balhats purposes and special visitors... we’re thinking of other people, that’s our respectful way to do things” (Gallughun–Rita George). Berries are gathered to share

with others. In the past, the Wet'suwet'en would leave their village for weeks to gather berries on the territories in order to gather enough for survival. Woos-Roy Morris noted in the feast system, the "soapberries and huckleberries are the most important thing."

463. Currently, most preserved berries are frozen, canned or dried, which can be a relatively time consuming process. Because of the effort and time required to harvest and process berries, huckleberries are considered a "prestigious" item in the feast hall (Dzigot-Ron Austin). Currently, the Wet'suwet'en continue to gather berries on the territories.

6.3.3.1 Medicinal Plants

464. Medicinal plants are generally used as decoctions or infusions for internal and external uses, mashed as poultices and wound dressings, or eaten. Many medicines are derived from bark and inner bark and called *dicin yu* (wood medicine). Roots and rhizomes are often used as poultices for arthritis and rheumatism. Some plants are used for spiritual cleansing, general well-being and luck, such as *konye* (Indian hellebore) shown in Figure 64. Gottesfeld (1991) interviewed some twenty-odd Wet'suwet'en Elders and documents medicinal plants and their uses.



Figure 66. Wet'suwet'en harvesting *konye*.

465. The Wet'suwet'en generally gather plants for medicinal purposes according to the season and the part of the plant needed. Roots utilized medicinally are often harvested in the late fall. The ideal time to gather inner bark is from April to May when the sap is running. Many Wet'suwet'en continue to prepare medicine from various plants for their sicknesses or injuries. Devil's Club is gathered within the area impacted by the pipelines and is used with other herbs as tea to cure chest cold and ease arthritic pain.

6.4 Potential Significant Socio-Cultural Impacts

466. Impacts to Wet'suwet'en traditional land and resource use would be significant from the proposed pipeline. In previous sections, we have summarized potential significant effects to the Wet'suwet'en territories and their resources including fish and their aquatic habitats, wildlife and their habitats, and plants and their uses. Also important are impacts to the Wet'suwet'en people and their cultural heritage that would be significantly affected by the proposed pipeline construction and operation.

467. Chief Knedebeas, Warner William, of the Cilhts'ekhyu Clan's Yikh Tsawilhggis, (Dark House) was interviewed at Talbits Kwa. We were accompanied by Russell Tiljoe, who was with us by right of Bi kyi ya ggi at'en. Russell's wife Elsie Tiljoe is a

member of Yikh Tsawilhggis. The interview mostly took place as we traversed the territory of Talbits Kwa. Many stories were shared of how the 'Unis'oten people used this land. The most significant point that Knedebeas made regarding Talbits Kwa was that it was not a full-time home territory. Rather it was a place that was used specifically for hunting and trapping during the winter months. It was also a place where the 'Unis'oten people accessed the Kitimat area for trade with the coastal people.

468. Mervin Glaim recalled trapping along Lamprey Creek with his uncle David Alec who is Gitdumden and owned the registered trapline at the time. David Alec was a WWII veteran and an accomplished sniper. After returning from the war David seemed very affected by the traumas of his war experience and turned to spending a lot of time on his trapline. Mervin still has the trapline and uses it.
469. Gallughun (Rita George) explained how she recalled traveling through the landscape during certain times of the year. She and her late-husband Andy George Sr. spent a lot of time living with their children in their cabin at Owen Lake. She explained that a large rock on the north side of and overlooking the Morice River was where they used to gather berries during the spring months.
470. Gisdaywa (Alfred Joseph), the Head Chief of the Gitdumden Clan's Kiyikh Winiits House, worked as a researcher for the Delgamuukw court case and for the Wet'suwet'en Traditional Use Study 1995-1997. During a Multi-Clan field trip in Talbits Kwa, Gisdaywa mentioned to the research team the village, Lhet Lii'nun Teezdlii, with long houses located at the outlet of Morice Lake.
471. Walter Joseph Sr. of the Laksamishu Clan's Sa Yikh, Sun House, recalled using the Morice River as a travel corridor from Telkwa and Moose Skin Johnny Lakes to access Bi Wini. Walter traveled to Bi Wini to trap with his father who was a member of Kiyikh Winiits.
472. Wing-Chief Wigitimschol, Dan Michell, is from the Tsayu Clan's, Tsa Yikh House. Dan has a trapping cabin on the eastern shore of Goosley Lake and spent most of his lifetime trapping and hunting the area. Dan hunted and trapped in his territory many times with the late Ximsim, Alfred Mitchell and his brother Billy Mitchell. He has also taken his children and nephews out to Nelhdzi Tezdli Bin countless times. In the recent past, Wet'suwet'en culture camp programs took children of all ages out to the Wet'suwet'en territories. These camps were also held on the southern shoreline of Nelhdzi Tezdli Bin.
473. Daly (2005) mentions the continuous seasonal rounds that Wigitimschol's mother, Emma Michell, made from the distant Talhdzi Wiyez Bin to Nelhdzi Tezdli Bin before returning to Moricetown Canyon for the salmon harvest.
474. Russell Tiljoe recalled trapping times with his late father Alec Tiljoe. His wife recalled a time when the late Ximsim, Alfred Mitchell, was working at a mill and word got to him that Alec Tiljoe was out in his trapline at Nelhdzi Tezdli Bin and hadn't returned yet. Alfred immediately stopped working, got into his vehicle and drove up to the present first crossing of Buck Creek, where the road ended. He walked non-stop to Nelhdzi Tezdli Bin where he found Alec Tiljoe severely ill and unable to look after himself. Ximsim nursed him back to health and assisted him back to Houston and his family.
475. The former Chief Namox, Bill Holland, spent much of his long life exploring and enjoying the resources of Nelhdzi Tezdli Bin. He traveled out to this territory with his children, grandchildren, and extended family countless times.



476. Wet'suwet'en oral histories also provide evidence for potential impacts of the pipeline to slope stability. Alec Dennis of the Tsayu Clan stated that the snowpack in the Burnie River watershed is higher than any other territory. He recalled traveling in the winter to the territory with his mother Emily Dennis and his whole family and later with his brother to the place where they had a cabin on the northwestern shores of Shea Lake. He described walking to the place where the cabin was supposed to be and seeing a slight mound on the surface of the snowpack that was barely visible. They would begin arduous digging into the snow with their snowshoes until the roof of the cabin appeared. They would continue with more digging until they accessed the front doorway. Before they considered starting the woodstove additional snow would have to be removed from the roof around the stovepipe.
477. Mutt; Wing Chief of Tsa Yikh, Billy Naziel of the Tsayu Clan traveled to Talhdzi Wiyez Bin many times over the past decades. He and his late brother, the former Mutt, Amos Naziel traveled to this area with groups of Wet'suwet'en children for summer culture camps. A cabin was constructed in this remote area on the north shore of Shea Lake to encourage more prolonged stays in the region. Warner Naziel, son of the late Amos Naziel, traveled to this territory in January 2000 with his friend Eric Muller to search for a separate winter access trail. Prior to heading out permission was granted from Wing Chief Mutt to access this area during the winter. The trip into the remote area was grueling. With fresh snow on the ground, the snow pack was extremely high and they had to take turns breaking trail in at least 2-1/2 feet of powder with appropriately large, wide snowshoes. When they reached the distant cabin at 1:30 am, it was completely covered with about 9–11 feet of compact and powdered snow. As in Alec Dennis's account, they had to dig their way down to the porch and main doorway before entering the buried cabin, following which they had to dig out the stove pipe on the steep rooftop before starting the wood stove.
478. Wet'suwet'en elder Walter Joseph Sr. discussed walking out to the area of Burnie River and the Clore River when he was 12 years old. He talked about crossing giant slides and encountering unstable slopes in the area of Burnie River and the Clore River. He says, "Tough Country ... oh my ... big mountains ... big slides ... we had to go through ... 7 o'clock in the morning ... big slide."
479. Walter talked about Burnie River and Clore River areas and says, "You're close to the coast here, eh? The snow is about 10-12 feet deep." Walter says it is so deep that you have to crawl into the bottom of a tree well and using your snowshoes dig an area big enough to build a fire. By the time it is bedtime, enough snow is melted to have a place to sleep. Walter pointed to the Clore River and Burnie River area and said, "This area the best trappers and the tough guys, they go in there. My uncle Dan, he considered himself a tough guy." The upper Clore River area Walter speaks to is shown in Figure 67.



Figure 67. View southwest to the upper Clore River area.

Wet'suwet'en
CNS

480. The area, during Walter Joseph's lifetime, was used for trapping and hunting between New Years until the end of March. During one of their trips to Clore River, Walter and his Uncle Dan Joseph visited with two other Wet'suwet'en trappers. Using the Wet'suwet'en right of Bi kyi ya ggi at'en, Gordon Hall, who is the husband of Tsayu Head Chief Kweese (Florence Hall), and Sam Dennis of the Tsayu Clan came to visit them at their camp near 'Uyenii. Other people Walter recalled who used to hunt and trap in that territory was the late Rose Brown and her son Amos Brown.
481. Gallughun, Rita George, mentioned that her late-husband Tsebesa, Andy George Sr., fought in WWII. Once Andy returned from the war he spent a large part of the following winter traveling From Telkwa via Starr Creek out to his distant territory, past the Burnie River, and in the Clore River watershed.
482. Wet'suwet'en elder Goheh', Lucy Verigan, explained that her late husband Frank Bazil Skiy ze' of the Tsayu Clan traveled to the Burnie River watershed with his uncle Mutt, Joshua Holland, who was wing-chief of the Tsayu Clan. After Frank spent 8 years in Lejac Indian Residential School, he had difficulty speaking Wet'suwet'en and recognizing his parents, let alone his siblings. He was subsequently groomed by his uncle Mutt and brought out to the Burnie River area to reconnect with his language, land, and culture.
483. Alec Dennis of the Tsayu Clan, and nephew of Sam Dennis, traveled to the Burnie Lakes with his parents. He was thirteen years old at the time and spent the whole winter trapping the length of Burnie Lakes and Burnie River. Alec returned to the Burnie Lakes and Burnie River area many times following his initial trip, either with his late brothers or as an elder advisor during the Wet'suwet'en Culture Camps.
484. For the past few decades, Wing Chief Mutt, Bill Naziel, of the Tsayu Clan's Tsa Yikh traveled out to Talhdzi Wiyez Bin with his late brother, the former Mutt, Amos Naziel. They sometimes traveled together, took turns, or traveled with their sons to Shea Lake and Burnie Lakes. According to Bill, his late mother Sa'itne, Jeannie Naziel, traveled to Talhdzi Wiyez Bin with her late husband Head Chief Madeek, George Naziel, of the Gitdumden Clan. They traveled from Telkwa and Starr Creek and over the pass into Talhdzi Wiyez Bin. Bill also mentioned that his uncle, the late Joshua Holland, who was the former chief Mutt, traveled to Talhdzi Wiyez Bin on more than one occasion.
485. From this evidence and related evidence put forward and accepted in the Delgamuukw court case, Wet'suwet'en traditional and resource use from the territories is longstanding and significant. The proposed pipeline construction and activity would irreversibly alter these territories, potentially destroying the delicate balance that provide the Wet'suwet'en with their traditional berries and plants, game and fish, and sense of place.
486. The Wet'suwet'en are deeply concerned with the impacts of the pipeline corridor, access roads, and transmission lines entailed in the proposed project. These roads have serious implications on the territories, wildlife habitats, and Wet'suwet'en life. Non-aboriginal hunters will be able to gain further intrusive access to the territories, contributing to a decrease in the current diminished wildlife. To date, roads have destroyed and fragmented the cultural landscape.
487. There has been an involuntary and forced reduction of the traditional use of the territories due to the "social institutions of the Canadian society," which include establishment of Indian Reserves, the adverse effects of the church and residential schools, as well as increasing pressure on the land by settlers and corporations (Daly

2005). Also the “modern seasonal round of the Wet’suwet’en has been more severely curtailed because their forest lands have been extensively transformed by non-Native settlement, clearing, homesteading... mining, and logging” (Daly 2005). Even though the seasonal round is not currently practiced to the same degree as it was traditionally, the Wet’suwet’en continue to seasonally harvest resources from their territories.

488. Wet’suwet’en territories continue to be at the center of Wet’suwet’en life and culture. The territories remain somewhat healthy, though they have suffered a century of abuse. Fish form the basis of Wet’suwet’en sustenance and culture. Wet’suwet’en title and the integrally associated system of governance rely upon the relationship between the house group and the house territory. Healthy territories and healthy waterways are integral to feasting, and feasting is integral to the Wet’suwet’en’s identity and distinctive culture.

489. In the context of the proposed Coastal GasLink project, it is important to consider the cumulative effects on the territories to date. It is the Wet’suwet’en position that the additional impacts posed by the pipelines project would irreversibly and seriously damage territories and a people that have already been made vulnerable by development in the form of mines, forestry, pipelines, railways, highways and other roads, agriculture and the privatization of lands. We urge the BC EAO to consider this project in light of the current state of Wet’suwet’en territories and of the Wet’suwet’en people.

490. Coastal GasLink activities would undoubtedly impact all Wet’suwet’en but especially, hunters, trappers, fishermen, and plant gatherers. In Wet’suwet’en, the word for the land is Yintakh. Yintakh incorporates not only the physical environment, animals, plants, water, geography, but the human world as well. Yintakh understands all parts of the territories as interconnected and related to a greater whole. If the physical territories are harmed, then the social world of the Wet’suwet’en is irreversibly and significantly harmed as well.

491. Wet’suwet’en continue to use the territories today and have growing concerns regarding the integrity of what remains of their territories. The children of traditional land users find it more and more difficult to utilize traditional areas, which were introduced to them as children. Ongoing impacts from a variety of western settlement and industrial activities are impacting these areas in a devastating manner. Carla Holland illustrates this point as she says,

“Yeah, when the mine, when Equity moved in, that killed off quite a bit of the wildlife that was out there. I remember there used to be lots of beaver. I remember being like, really small, probably about 6-7 years old and we used to go trapping for beaver all the time. And I know there was a big drastic change when I was 12-13 years old because there was practically nothing left... those mines have been shut down for quite a few years and it’s still doing a lot of damage.”

492. Carla continues to use her father’s traditional territory, Nelhdzi Tezdli Bin, on a weekly basis to teach her children the values instilled in her as a young child – values that incorporate health and well-being amongst her family and community.

493. Forestry has had significant impacts on Wet’suwet’en territories. Some Wet’suwet’en have expressed they no longer recognize the landmarks once relied upon to navigate the landscape. They have lost their trails and trap lines due to logging activities. Wah Tah K’eght (Henry Alfred), a hereditary chief of the Laksilyu clan’s Tsekal Bi Yikh “House on top of flat rock,” described his loss:



"My uncle told me not to use that trail too many, not two winters at a time, break between, so I did. The third year I come back, clear-cut. My trap was still there and they clear-cut the whole thing. Didn't even see my trap anymore. I don't know if they find the traps, I don't know what they do with it. Same back in here. I got skidoo trail, to way back to here. I didn't go one winter the winter after I come back, same thing the whole thing, the whole thing is clear-cut, I can't even see my trail anymore, all clear-cut. And all these months and months during the summer getting ready putting a trail for the next winter trapping. My son-in-law John Dumont, my son Tony Alfred, they wanted to help me.

494. Took us two weeks to put that trail in, used one winter, gone. All that two weeks we spend, I was going to pay them when I do really good on that trail. Never did. I owe my son-in-law, Tony, for his time, or their time. To help me out, put that trail in. So every time we're talking about trails and trapping trails, it hurts me. All these weeks after weeks to put in a trail. It's gone, just like that cause they use machine to cut the trees, to clear-cut. That machine can clean right out on my trail just a week. That's why I'm hurt, every time where talked about trails and trails I put how many hours and hours to fix that trail for the winter after the trap. Gone."

495. Not only have the Wet'suwet'en lost trap lines; the practice of trapping in general has been severely affected. For example, when the trees are removed, the squirrels leave the area. When the squirrels leave the area, the pine martin leaves the area. The absence of animals eliminates the ability to practice traditional trapping culture.

496. Forest practices have also given rise to the transition of one animal species to another. Caribou were once a rich staple in the Wet'suwet'en diet. However, with the cutting of old growth forests, coupled with the flooding of the Nechako Reservoir by Alcan, the caribou habitat has been destroyed. The few remaining caribou are now protected, and the Wet'suwet'en diet has altered to Moose. Wide ranging wildlife such as grizzly bears and wolverine have had their abundance depleted and are seldom seen.

497. A somewhat recent practice has been to follow the clear cutting with herbicides. The forestry companies spray the area with chemical herbicides to prevent the growth of undesirable plant and shrub species. This practice is a direct attack on Wet'suwet'en culture in that the plants and shrub species targeted include Saskatoon bushes, blueberry bushes, and so forth. The Wet'suwet'en will not consume the plant and shrub species from the area after the application of pesticides and herbicides. However, the problems of contamination are both local and offsite. Rain and snowmelt runoff transport the herbicides into and contaminate groundwater and downstream areas.



Figure 68. Typical clearcut in the Gosnell area.

498. The development that has taken place on Wet'suwet'en territories has led to the reduction of resources traditionally used by Wet'suwet'en. The Wet'suwet'en now travel farther to gather culturally important resources such as huckleberries, devils club, beaver, moose, and so on.

499. Russell and Elsie Tiljoe expressed their concerns:

"The best berry patches or the best moose hunting areas now are all private property. Ranchers and farmers, but we have to go a lot further out now to get what we used to get just walking from our home."

500. In the case of severe reduction to access of resources, some people have been moving from their original House territory onto other House territories to obtain their basic cultural necessities. This creates problems for the traditional House group organization, Wet'suwet'en law, and maintenance of the territorial resources. Increased pressure on the resources leads to an overall decrease in the resources to the larger Wet'suwet'en community, thus forcing the Wet'suwet'en further away from their cultural practices and traditional territories.

501. In some cases, members of the larger Wet'suwet'en group harvest extra resources to be distributed to other members of the Wet'suwet'en community, who are no longer able to gather their own resources. Some Wet'suwet'en people have resorted to purchasing items at local retail stores in substitution of their traditional goods gathered from the territories. The events surrounding Alcan's (now Rio Tinto) construction of Nechako dam and the flooding of Cheslatta Carrier Nation traditional territories are an illuminating example of the movement of other First Nation groups onto Wet'suwet'en territories.

502. Francis Daum of the Nee Tahi Buhn Band articulates the impacts of development on the land as it relates directly to the health of the Wet'suwet'en people:

"The health of the land and the health ... the spiritual and emotional health of our people, and that's a direct connection to our land! ...I think bringing that connection back, of learning how to be family again and that'll just innately bring us back with the natural connection to the land again."
(Francis Daum, May 11, 2007)

503. Chief Goheh' (Lucy Verigan) of the Laksilyu Clan, expressed the challenges the Wet'suwet'en people face today. She states that the Wet'suwet'en Yintah (territories) are paramount to the health and well-being of the Wet'suwet'en people:

"Why didn't they leave things alone? This earth was there for purpose. And it belongs to every one of us. Why [do] they have to ruin it like that? Like, I talk about how many animals are ruined, and how much vegetation is ruined... Leave everything as is, there would be no problem" (Goheh' Lucy Verigan, May 30, 2007).

504. In light of the development that has already taken place on the Wet'suwet'en traditional territories, Goheh' (Lucy Rose Verigan), a great-great grandmother, traditional medicine gatherer, revered Wet'suwet'en elder, and hereditary chief of the Laksilyu Clan's Kwin Bi Yikh "House beside the fire," is not surprised. As the map of the proposed pipeline development was presented to her, Goheh' paused, sighed, and said:

"I went through a lot of changes. Now, its big changing coming, I see it, it's coming. Now, with this, what kind of pollution we gonna get from that? There'll be no life left in the earth. No, it's no good, they gotta do



something. It's uh... who's gonna put stop to it? Those big business people, they make up their mind, the governments, they wanna do it. They don't care who says no. They gonna do it. All the young people, they got no life, where they gonna go? It's already ruined. Our country, it's ruined. We got nothing left. What more they gonna do?"

505. This is an example of perceived impacts from the proposed project and resource development in general; despite what the real impacts are, perceived impacts affects the spiritual, emotional health and well-being of our elders, which in turn has adverse effects on the children.

506. The proposed pipeline must be considered in terms of the cumulative social, cultural, health, and economic impacts to the Wet'suwet'en people. The Wet'suwet'en are a people strongly rebuilding and reclaiming our identity following over a century of colonial abuses and industrial development on our lands. Like other aboriginal peoples of Canada, the Wet'suwet'en have been forced off their traditional territories and onto reserves, governed not by their former system of clans and chiefs but by the state imposed Indian and Northern Affairs (INAC).

507. Our people have been killed by epidemic and disease. Our language has been taken from us, cultural practices have been made criminal, and our children have been sent to residential schools. We have been and continue to be the target of racism and physical, sexual, and emotional abuse. Though recent years have seen successes in some land claims and rights negotiation, non-natives and the government are still reluctant to address longstanding inequalities resulting from these violent histories. It is the Wet'suwet'en position that the current consideration of the Coastal GasLink project be made in light of these cumulative social and cultural impacts.

508. The BC EAO process has to realize that for the Wet'suwet'en people, we have made a decision in determining our future, in protecting our traditions. In this vein, Richard Sam notes:

"We hear: Everything is mine in the white world. We as Wet'suwet'en pass our land generationally. For me to say that's my land, it's a way for me to say I will fight for that land. I view it as a commitment to protect that land, not personal ownership. They kept us hungry and we are eager to succeed."

509. The actual, as well as potential, adverse impacts of the BC EAO include unjustified infringement of Wet'suwet'en people's title-related jurisdiction to make the decisions regarding Wet'suwet'en territory. Any external decision-making body that purports to impose its decisions on Wet'suwet'en title territory in total disregard of the Wet'suwet'en hereditary system of governance and formal decision-making, undermines the authority of the Wet'suwet'en Hereditary Chiefs and thus violates Wet'suwet'en title, a constitutional right. The very exercise of assessing, making recommendations on, and deciding in regard to Coastal GasLink's Project is a constitutional and international human rights affront to the Wet'suwet'en Chiefs, who have formally deliberated and unanimously declared that the proposed project would cause serious harm to the Wet'suwet'en people.

510. The BC EAO acts as an information-gathering body with respect to Aboriginal rights and title, and to assess the adequacy of consultation. The BC EAO is prevented from doing this assessment by procedural guidelines that Canada has designed and unilaterally imposed. Without the ability to make an assessment of the



Wet'suwet'en strength of claim, the BC EAO will not be able to assess the adequacy of the Crown's consultation with us.

511. Under the current process, the information provided by Aboriginal groups to the BC EAO will be summed up for inclusion in the BC EAO Environmental Assessment report for consideration by the Province. BC's Consultation Coordinator will then "consult with Aboriginal groups" on the content of the Environmental Assessment report.
512. The Environmental Assessment report will not be the result of a meaningful consultation and accommodation process due to not having done a Strength of Claim for the Wet'suwet'en Nation. Any report by the BC EAO will be in advance of a Crown consultation process; therefore, there will have been no consultation process for the BC EAO to review and assess.
513. If and when a Crown consultation process finally does occur, the ability then to address potential impacts by changes to the proposed project, through the give and take of meaningful consultation, will have passed. There must be opportunity for responsive engagement: "Consultation that excludes from the onset any form of accommodation would be meaningless" (Mikisew). The Wet'suwet'en have a strong case for title and rights to their territory, as confirmed by the Delgamuukw case. The deep consultation required by our strength of claim and the significance of the Project's adverse impacts necessitate concerns about our fisheries and Aboriginal rights be meaningfully addressed and our rights fully respected.
514. The Office of the Wet'suwet'en is mandated by the Hereditary Chiefs to represent the title, rights, and interests of all Wet'suwet'en; to find a balance between economic land use and resource development, and the sustainability of our waters, lands, resources, people, and communities.
515. The Wet'suwet'en Territories comprise 22,000 km² with approximately 5,000 members covering 38 house territories. Each house group must be properly informed about the BC EAO process, and must select representatives to speak on behalf of their house territory.
516. The Wet'suwet'en Hereditary Chiefs and the Office of the Wet'suwet'en have been pressed by the provincial Crown (especially BC EAO) and circumstance (the desire to participate in the imposed process to the best of our ability) to fulfill our internal consultation obligations to clan members and for full engagement in the assessment process.
517. To date, the BC EAO process has proceeded without any input from the Wet'suwet'en on project impacts to title, rights, and interests. Wet'suwet'en Hereditary Chiefs and members are entitled to a meaningful and effective communication process.
518. If Coastal GasLink is granted rights in Wet'suwet'en territory, such as the right to enter onto and acquire land, and the right to construct a pipeline, this will be a clear infringement of Wet'suwet'en title and other rights on unceded lands, which will cause harm to the rightful owners of each specific territorial house clan.

7.0 Conclusion

519. 190 km of the proposed Coastal GasLink Project, from Honeagh Bin in Yextsowiten territory to Uyenii in Lho Kwah, lie within Wet'suwet'en Territory over which the Wet'suwet'en maintains Aboriginal Title and Rights. In relation to the



Coastal GasLink project, Wet'suwet'en territory is overlaid from Kilometer Post (KP) 424 to KP 614.

520. The purpose of this Wet'suwet'en submission is to provide a high level view and identification of Wet'suwet'en rights, title, practices, and values in the proposed energy project corridor, and also to identify potential impacts to these rights, title, practices, and values. The proposed corridor, with its rich resources, has been traditionally and continuously occupied by Wet'suwet'en Clan and House members for at least 6,000 years. Wet'suwet'en continue to exercise land and stewardship rights, prerogatives, and responsibilities into the present.
521. Section 35(1) of the Constitution Act, 1982 recognizes, affirms, and protects existing aboriginal and treaty rights of the Aboriginal peoples of Canada. The Supreme Court of Canada held that Section 35 requires the reconciliation of pre-existing Aboriginal title and rights with asserted Crown sovereignty through good faith negotiations. A necessary component of this reconciliation process is to consult and accommodate Wet'suwet'en title, rights, and interests in order to protect them prior to their final reconciliation.
522. The Wet'suwet'en have never relinquished or surrendered Wet'suwet'en title and rights to the lands and resources within Wet'suwet'en territory and continue to occupy and use the lands and resources and to exercise existing title and rights within the territory. We have an inherent right to govern ourselves and our territory according to our own laws, customs, and traditions. This was affirmed in the Supreme Court of Canada Delgamuukw decision.
523. This submission show that Wet'suwet'en have an intricate cultural relationship to their lands, resources, and environment. This long-standing relationship encompasses social, cultural, spiritual, economic, political, and legal dimensions and connections to the environment.
524. This submission also illustrate how accumulated effects from various post-contact developments have changed and shaped specific Wet'suwet'en foundational resources and in turn, values. Specific resources such as upper Endako or upper Bulkley sockeye stocks have gone extinct over the last century, resulting in the loss of an irreplaceable salmon stock and diminishment of species diversity. Further added effects have modified habitats and biological communities to the extent that ecosystems no longer function to support once bountiful fish and wildlife species, and other species have moved in to fill the niche. This is astounding, yet true.
525. It is clear that past and present development both within and external to Wet'suwet'en territories have had environmental effects on:
- Wet'suwet'en health and socio-economic conditions;
 - Physical and cultural heritage;
 - The current use of lands and resources for traditional purposes.
526. These cumulative effects have significantly affected the sustainability and well-being of the Wet'suwet'en, their communities, and culture. More specifically, they have affected Wet'suwet'en cultural expression associated with harvesting and processing activities, language transfer, spiritual teachings, and respect for the environment.
527. It is important to note that the above stated development and subsequent environmental effects have occurred without good faith negotiations, treaties or agreement, consultation and accommodation, or free, prior, and informed consent.



This situation is in conflict with the principles and findings of the Canadian Constitution, the Canadian courts, and international law.

528. In regard to the proposed Coastal GasLink pipeline project, the Office of the Wet'suwet'en, on behalf of potentially affected communities and members, has carefully assessed the proponent's regulatory application. The assessment results indicate that major key components related to the regulatory application are in deep conflict with core Wet'suwet'en laws and values.

529. Neither British Columbia nor its agencies, such as the BC EAO, nor the proponent Coastal GasLink have disclosed information with any depth of understanding regarding potential direct and indirect impacts on the aboriginal title and rights to the Wet'suwet'en, who have lived here for over 6,000 years. This information could enable meaningful consultation regarding the significance, duration, and value of singular impacts and cumulative effects.

530. The Wet'suwet'en, who have constitutionally protected rights, have determined that the proposed Coastal GasLink project will have further significant environmental effects and cumulative impacts that include: loss and deterioration on lands and resources, unlawful infringement of our rights, and deterioration of our health and community well-being.

531. The Wet'suwet'en note that the domestic tools available to manage lands and resources such as British Columbia's acts and legislation were developed prior to the recognition of Aboriginal rights in the Canadian Constitution. Hence the tools needed to address and resolve aboriginal rights infringements are yet to be developed, and the Office of the Wet'suwet'en has been and are currently seeking solutions to this issue.

532. Recommendations by the Office of the Office of the Wet'suwet'en were not adhered to, such as utilizing Delgamuukw/Gisdaywa Court transcripts and Affidavits; and alternate routing through the McDonnell Lake area that would avoid major cultural values to the Wet'suwet'en. Considering the magnitude of cumulative environmental effects on Wet'suwet'en territory and the lack of recovery plans or strategies to address those effects, and as well, the lack of Crown-Wet'suwet'en title, rights, and interests reconciliation, the Wet'suwet'en and the Office of the Wet'suwet'en protests and rejects the Coastal GasLink concept and Application.

533. It is the Wet'suwet'en position that both the Coastal GasLink Project and the BC EAO process pose serious and irreversible infringements to Wet'suwet'en title and rights. In accordance with Wet'suwet'en law and authority, the thirteen Wet'suwet'en Hereditary Chiefs assert our Wet'suwet'en title to our entire territory, including the area through which the proposed pipeline would pass.

534. The Wet'suwet'en Chiefs are:

Chief Kloum'Khun (Alphonse Gagnon)

Chief Smogelgem (Gloria George)

Chief Nedabees (Warner William)

Chief Samooh (Herb Naziel)

Chief Hagwilnegh (Ron Mitchell)

Chief Wah'Tah'Kwets (Frank Patrick)

Chief Wah'Tah'keght (Henry Alfred)



Chief Nam'oks (John Ridsdale)
Chief Wigitamschol (Dan Michell)
Chief Kweese (alternate Bill Naziel – Mutt)
Chief Madeek (Jeff Brown)
Chief Gisday'wa (Dr. Alfred Joseph)
Chief Woos (alternate Darlene Glaim – Gyolo'ght)



8.0 References

- Anderson, B.C. J.S. Macdonald, and L.B. MacDonald. 1997. Temperatures in Nadina River and Slim Creek watersheds, 1993-1996. Can. Data Rept. Fish. And Aquat. Sci. No. 1017. Department of Fisheries and Oceans Canada.
- Andrew, F.J. 1970. Proposed artificial spawning channel for Nadina River sockeye salmon. International Pacific Salmon Fisheries Commission. On file at Pacific Salmon Commission library, Vancouver, B.C.
- Andrew F.J. and Geen G.H. 1960. Sockeye and Pink Salmon Production in Relation to Proposed Dams in the Fraser River System. IPSFC Bull. XI. New Westminster, B.C.
- Bilby, R.E., B.R. Fransen, and P.A. Bisson. 1996. Role of salmon carcasses in maintaining stream productivity: ecological significance and management considerations. *In* Abstracts from the annual meeting of the North Pacific International Chapter of the American Fisheries Society, Vancouver, BC.
- Asch, M. 1997. Aboriginal and treaty rights in Canada: essays on law, equity, and respect for difference. Vancouver: UBC Press.
- Beacham, T.D., R.E. Withler, C.B. Murray and L.W. Barner. 1988. Variation in body size, morphology, egg size, and biochemical genetics of pink salmon in BC. *Trans. Am. Fish. Soc.* 117: 109-126.
- Beacham, T.D., S. Pollard, and K.D. Le. 2000. Microsatellite DNA Population Structure and Stock Identification of Steelhead Trout (*Oncorhynchus mykiss*) in the Nass and Skeena Rivers in Northern British Columbia. *Marine Biotechnology*, Vol. 2, No. 6:587-600.
- Beere, M.C. 1993. Juvenile steelhead surveys in the Kitwanga, Morice, and Zymoetz Rivers, 1993. Skeena Fisheries Report SK-90. MELP, Skeena Region. Smithers, BC.
- Bilby, R.E., B.R. Fransen, and P.A. Bisson. 1996. Incorporation of nitrogen and carbon from spawning coho salmon into the trophic system of small streams: evidence from stable isotopes. *Canadian Journal of Fisheries and Aquatic Sciences* 53:164-173.
- Brett, J.R. 1952. Skeena River sockeye escapement and distribution. *J. Fish. Bd. Can.*, 8 (7) 1952.
- Brown, W. 1823. Summary report for New Caledonia 1822-23. Hudson's Bay Company Archives, B188/e/1.
- Brown, W. 1826. Report of the Babine country and countries to the westward. Hudson's Bay Co. Archives B/11/e/2&3.
- Bustard, D. R. 1983a. Juvenile salmonid winter ecology in a northern British Columbia river – a new perspective. Smithers, BC.
- Bustard, D. 1998. Assessment of rainbow trout recruitment from streams tributary to Francois Lake.
- Bustard, D. 1992. Juvenile steelhead surveys in the Kitwanga, Morice, Sustut, and Zymoetz Rivers, 1991. Smithers, BC.
- Bustard D.R. 1993. Juvenile steelhead surveys in the Kitwanga, Morice, Sustut, and Zymoetz Rivers, 1992. Smithers, BC.
- Bustard, D. and Associates and Limnotek Research and Development Inc. 1998. Aquatic resource baseline studies Telkwa Coal Project 1997. Prepared for Manalta Coal Ltd.



- Bustard, D. and C. Schell. 2002. Conserving Morice Watershed fish populations and their habitat. Prepared for CFDC Nadina.
- Cadden, V. 2000. Review of historical white sturgeon distribution within the Nechako River watershed.
- Costella, A.C., B. Nidle, R. Bocking, and K.S. Shortreed. 1982. Limnological results from the 1980 lake enrichment program. Can. Man. Rept. Fish. And Aquat. Sci. No. 1635.
- Cox-Rogers, S. 2000. Skeena sockeye and Nanika sockeye production trends. Memorandum. DFO. Prince Rupert, BC.
- Cox-Rogers, S., J.M.B. Hume, and K.S. Shortreed. 2004. Stock status and lake based production relationships for wild Skeena River sockeye salmon. CSAS Research Document 2004/010.
- Cox-Rogers, S., J.M.B. Hume, K.S. Shortreed, and B. Spilsted. 2010. A risk assessment model for Skeena River sockeye salmon. Can Man. Rep. Fish. Aquat. Sci. 2920.
- Crouter, R.A. and R.N. Palmer. 1965. The status of Nanika–Morice sockeye population.
- Daly, R. 1987. The Gitksan – Wet’suwet’en Economy: Our box was full. Expert Opinion report for Delgamuukw – Gisdaywa et al vs. the Queen. On file at the Office of the Wet’suwet’en Library. Smithers, BC.
- Daly, R. 2005. Our box was full: An Ethnography for the Delgamuukw Plaintiffs. UBC Press. Vancouver, BC.
- Department of Fisheries of Canada. 1964. Fisheries problems associated with the development of logging plans within the Morice River drainage system. Vancouver, B.C.
- DFO. 1984. Towards a fish habitat decision on the Kemano Completion Project: A discussion paper. Fisheries and Oceans. Vancouver, BC.
- DFO. 1991b. Stream summary catalogue Fish habitat inventory and information program SISS Stream Summary Catalogue. Subdistrict 4B Terrace. Department of Fisheries and Oceans, Vancouver, B.C.
- DFO. 1991e. Fish habitat inventory and information program SISS Stream Summary Catalogue. Subdistrict 4D, Smithers (Volume 2). Bulkley. North Coast Division, Department of Fisheries and Oceans. Prince Rupert, BC.
- DFO. 2008. SEDS. (Salmon escapement data system) Department of Fisheries and Oceans. Stock Assessment Division. Prince Rupert, BC.
- Dillon, M.J. 2011. Hagwilneghl et al. vs. Canadian Forest Products and her Majesty the Queen. B.C.S.C. Vancouver, BC.
- Donas, B.G. 2001a. Upper Bulkley River coho assessment fence program report for 2001. Prepared for DFO, Strategic Stock Enhancement Program.
- Donas, B.G. and R. Saimoto. 2001. Upper Bulkley River and Toboggan Creek overwintering study 2000–2001 Prepared for Fisheries Renewal B.C.
- Dyson, J.B. 1949. Bulkley Falls investigation report.
- Envirocon Ltd. 1980. Kemano completion hydroelectric development environmental impact assessment. Volume 4: Fish Resource Studies, Morice System.



- Envirocon Ltd. 1984a. Physical and hydrological baseline information. Vol. 2. Environmental studies associated with the proposed Kemano Completion Hydroelectric Development. Aluminum Company of Canada. Vancouver, BC.
- Envirocon Ltd. 1984b. Fish resources of the Morice River system: baseline information. Vol. 4. Environmental studies associated with the proposed Kemano Completion Hydroelectric Development. Aluminum Company of Canada. Vancouver, BC.
- Ewasiuk, J. 1998. Bulkley River fish fence report 1998. Prepared for DFO and Community Futures Development Corporation of Nadina.
- Fielden, R.J. 1995. Endako and Nadina rivers biophysical and fishery survey, 1994.
- Finnegan, B. 2006. Morice Lake Sockeye Program. Unpublished data. DFO, Stock Assessment, Smithers, B.C.
- Gitksan Wet'suwet'en Tribal Council. 1987. Fishing Sites and Research 1982-86. File containing various fish research and management studies. On file at the Office of the Wet'suwet'en library. Smithers, BC.
- Glass, A. 1999. Bulkley River fish fence 1999. Prepared for DFO and Community Futures Development Corporation of Nadina.
- Glass, A. 2000. Upper Bulkley River coho assessment fence 2000. Prepared for DFO and Community Futures Development Corporation of Nadina.
- Golder Associates Ltd. 2004. Recovery Plan for Nechako White Sturgeon. Prepared for Nechako White Sturgeon Recovery Initiative.
- Gottesfeld, A. S. and K.A. Rabnett. 2008. Skeena River fish and their habitat.
- Gottesfeld, L.M.J. 1991. Plants that we use: Traditional plant uses of the Wet'suwet'en people. Kyah Wiget Education Society. Moricetown, BC.
- Groot, C. and L. Margolis, (eds). 1991. Pacific salmon life histories. UBC Press. Vancouver, BC
- Grant, S.C.H., MacDonald, B.L., Cone, T.E., Holt, C.A., Cass, A., Porszt, E.J., Hume, J.M.B., and Pon, L.B. 2011. Evaluation of Uncertainty in Fraser Sockeye (*Oncorhynchus nerka*) Wild Salmon Policy Status using Abundance and Trends in Abundance Metrics. CSAS Research Document 2011/087. Department of Fisheries and Oceans Canada.
- Hancock, M.J., A.J. Leaney-East and D.E. Marshall. 1983. Catalogue of salmon streams and spawning escapements of Statistical Area 4 (Upper Skeena River). Can. Data. Rep. Fish. Aquat. Sci. 394: xxiii + 324p.
- Harding, D.R. and J.D. Buxton. 1971. Meristic characteristics of Pacific salmon and steelhead trout captured at Moricetown Falls 1961-1966. Canada Dept. of Fisheries and forestry. Fish. Serv. Man. Rep. 1971-3. Vancouver, B.C. 32p.
- Harmon, D. 1957. Sixteen years in the Indian country: The journal of Daniel Williams Harmon. Ed. W.K. Lamb. MacMillan, Toronto, Ontario.
- Heard, W.R. 1991. Life history of pink salmon (*Oncorhynchus gorbuscha*). In. Groot C. and L. Margolis Eds. Pacific salmon life histories. UBC Press Vancouver, Canada. 119-230.
- Holtby, B., B. Finnegan, D. Chen, and D. Peacock. 1999. Biological assessment of Skeena River coho salmon. Canadian Stock Assessment Secretariat Research Document 99/140.



- Jenness, D. 1943. The Carrier Indians of the Bulkley River: Their social and religious life. Bureau of American Ethnology 133(25):469-586.
- Kellerhals, R., M. Church, and L.B. Davies. 1979. Morphological effects of interbasin river diversions. Canadian Journal of Civil Engineering, 6: 18-31.
- Korman, J., and Walters, C.J. 2001. Nechako River white sturgeon recovery planning: summary of stock assessment and Oct. 2–3, 2000 Workshop, Prince George, B.C. Prepared for B.C. Fisheries, Victoria, B.C.
- Kussat, R. and K. Peterson. 1972. An assessment of the effects on the Morice and Bulkley River systems of a pulp mill at Houston, B.C. Fisheries Service, Dept. of Environment. Northern Operations Branch, Prince Rupert, BC.
- Lough, M.J. 1981. Commercial interceptions of steelhead trout in the Skeena River – radio telemetry studies of stock identification and rates of migration. BC Environment, Skeena Fisheries Report #SK-32.
- Mainville, R. 2001. An overview of aboriginal and treaty rights and compensation for their breach.
- Martin, N.V. and C.H. Oliver. 1980. The lake char, *Salvelinus namaycush*, In E.K. Balon [ed.] Chars: Salmonid fishes of the genus *Salvelinus*. Dr. W. Junk Publishing, The Hague, Netherlands.
- Mitchell, S. 2001b. Bulkley/Morice steelhead assessment, 2000. Submitted to Steelhead Society of British Columbia, Bulkley Valley Branch.
- Morrell, M. 1985. The Gitksan and Wet’suwet’en fishery in the Skeena River system. Gitksan-Wet’suwet’en Tribal Council, Hazelton, BC.
- Naziel, W. 1997. Wet’suwet’en traditional use study. Office of the Wet’suwet’en, Moricetown, BC.
- NWSRI. 2008. Nechako White Sturgeon Habitat Management Plan. Nechako White Sturgeon Recovery Initiative.
- O’Neill, M. 2003. Toboggan Creek Hatchery manager. Personal communication.
- Palmer, R.N. 1964. A re-assessment of Moricetown Falls as an obstruction to salmon migration. DFO. Vancouver, BC.
- Palmer, R.N. 1986b. Observations from studies of sockeye salmon stocks of the Nanika–Morice system, 1961-66. Unpublished note. DFO. Vancouver, B.C.
- Peacock, D., B. Spilsted, and B. Snyder, B. 1997. A review of stock assessment information for Skeena River chinook salmon. PSARC Working Paper S96-7.
- Pendray, T. 1990. Habitat improvement and outplanting possibilities–Upper Bulkley/Morice systems. Draft report for discussion purposes. Department of Fisheries and Oceans.
- Quinn, T.P. 2005. The behavior and ecology of Pacific salmon and trout. University of Washington Press.
- Rabnett, K., K. Holland and A. Gottesfeld. 2001. Dispersed traditional fisheries in the upper Skeena Watershed. Gitksan Watershed Authorities, Hazelton, BC.
- Ray, A. 1987. The early economic history of the Gitksan–Wet’suwet’en–Babine Tribal territories, 1822–1915. *Delgamuukw* Expert Opinion report. Exhibit 960. On file at the Office of the Wet’suwet’en.
- Reimchen, T.E., D.D. Mathewson, M.D. Hocking, J. Moran, and D. Harris. 2003. Isotopic evidence for enrichment of salmon-derived nutrients in vegetation, soil, and insects



- in riparian zones in coastal British Columbia. In Stockner, J.G. editor. 2003. Nutrients in salmonid ecosystems: Sustaining production and biodiversity. American Fisheries Society, Symposium 34. Bethesda, Maryland.
- Ricker, W.E. 1987. Effects of the fishery and of obstacles to migration on the abundance of Fraser River sockeye salmon (*Oncorhynchus nerka*). Can. Tech. Rept. Fish. And Aquat. Sci. No. 1522. Department of Fisheries and Oceans Canada.
- Ricker, W.E. 1997. Cycles of abundance among Fraser river sockeye salmon (*Oncorhynchus nerka*). Can. J. Fish. Aquat. Sci. 54: 950-968.
- RL&L. 2000. Fraser River white sturgeon monitoring program: Comprehensive report (1995-1999). Report by RL&L Environmental Services Ltd. for BC Fisheries, Victoria, BC.
- Roos, J.F. 1964. Summary of extracts on Stellako and Nadina River sockeye runs from Hudson Bay journals. International Pacific Salmon Fisheries Commission. On file at Pacific Salmon Commission library, Vancouver, B.C.
- Saimoto, R.S. and M.O. Jessop. 1997. Assessment of overwintering habitat and distribution of coho salmon in the mid-Bulkley Watershed (Houston to Bulkley Lake) January to March 1997. Prepared for DFO. Smithers, BC.
- Saimoto R.S. and R.K. Saimoto. 2001. Coho salmon in the Upper Bulkley River Watershed. Unpublished report prepared for the Bulkley/Morice Salmon Preservation Group. Nadina Community Futures and Fisheries and Oceans Canada.
- Scheuerell, M.D., P.S. Levin, R.W. Zabel, J.G. Williams, and B.L. Sanderson. 2005. A new perspective on the importance of marine-derived nutrients to threatened stocks of Pacific salmon (*Oncorhynchus* spp.). Can J. Fish. Aquat. Sci. **62**: 961-964.
- Schnorbus, M. 2011. A synthesis of the hydrological consequences of large-scale mountain pine beetle disturbance. Mountain Pine Beetle Working Paper 2010-01.
- Schwab, J.W. 2011 Hillslope and fluvial processes along the proposed pipeline corridor, Burns Lake to Kitimat, west central British Columbia.
- Shepherd, B.G. 1979. Salmon studies associated with the potential Kemano II hydroelectric development: Volume 5 Salmon studies on Nanika and Morice River and Morice Lake. Dept. of Fish and Environ. Vancouver, BC.
- Shortreed, K.S., J.M.B. Hume, K.F. Morton, and S.G. MacLellan. 1998. Trophic status and rearing capacity of smaller sockeye nursery lakes in the Skeena River system. Can. Tech. Rep. Fish. Aquat. Sci. 2240: 78p.
- Shortreed, K.S., K.F. Morton, K. Malange, and J.M.B. Hume. 2001. Factors limiting juvenile sockeye production and enhancement potential for selected B.C. nursery lakes. Canadian Science Advisory Secretariat. FOC, Cultus Lake, BC.
- Shortreed, K. and J.M.B. Hume. 2004. Report on limnological and limnetic fish surveys of North Coast area lakes in 2002 and 2003. Cultus Lake Salmon Research Laboratory. Cultus Lake, BC.
- Smith, J.L. and G.F. Berezay. 1983. Biophysical reconnaissance of the Morice River system, 1979-1980. SEP Operations, Fisheries and Oceans Canada.
- SKR Consultants. 2001. Reconnaissance (1:20,000) fish and fish habitat inventory of four sub-basins in the Nadina River watershed.
- SKR Consultants. 2004. Re-sampling of the Nadina Watershed, including a summary of previous sampling results. Reconnaissance (1:20,000) fish and fish habitat inventory.



- SKR Consultants and Oikos Ecological Services. 1999. Watershed Restoration Program Level 1 Detailed aquatic and riparian habitat assessment: lower Nadina River watershed 1998.
- Stokes, J. 1955. Upper Bulkley River survey, 1956.
- Tetreau, R.E. 1999. Movement of radio tagged steelhead in the Morice River as determined by helicopter and fixed station tracking, 1994/95. Skeena Fisheries Report SK-125. MELP, Skeena Region, Smithers, BC.
- Tredger, C.D. 1981 to 1987. Various Morice River stock assessment and fry monitoring reports. BC Environment, Smithers, BC.
- Tredger, C.D. 1982. Upper Bulkley River reconnaissance with reference to juvenile steelhead carrying capacity. Habitat Improvement Section, BC Environment. Victoria, BC.
- Vernon, E.H. 1951. The utilization of spawning grounds on the Morice River system by sockeye salmon. B.A. Thesis, UBC. Vancouver, BC.
- Weiland, I. R. 1995. Stream bank stability and erosion potential of the Lower Nadina River.
- Wet'suwet'en Chiefs. 1910. MacDougall Map. *Delgamuukw/Gisdaywa vs. Queen*. Exhibit 1016.
- Wet'suwet'en Chiefs. 1997. *Delgamuukw/Gisdaywa vs. Queen*. Supreme Court of Canada. Wet'suwet'en Factum, On file at the Office of the Wet'suwet'en.
- Wet'suwet'en Fisheries. 2003. Unpublished data on file at Wet'suwet'en Fisheries. Moricetown, BC.
- Wet'suwet'en Treaty Office. 1996. Morice Watershed restoration project. Smithers, BC.
- Whately, M.R., W.E. Chudyk, and M.C. Morris. 1978. Morice River steelhead trout: the 1976 and 1977 sport fishery and life history characteristics from anglers' catches. Fish. Tech. Circ. No. 36. Smithers, BC.
- Wilford, D.J. 2003. Forest stand characteristics as indicators of hydrogeomorphic activities on fans. Phd. Thesis. University of British Columbia.
- Wilson, M.F. and K.C. Halupka. 1995. Anadromous fish as keystone species in vertebrate communities. *Conservation Biology* 9:3489-3497.



Appendix 1. Supporting Maps & Photographs

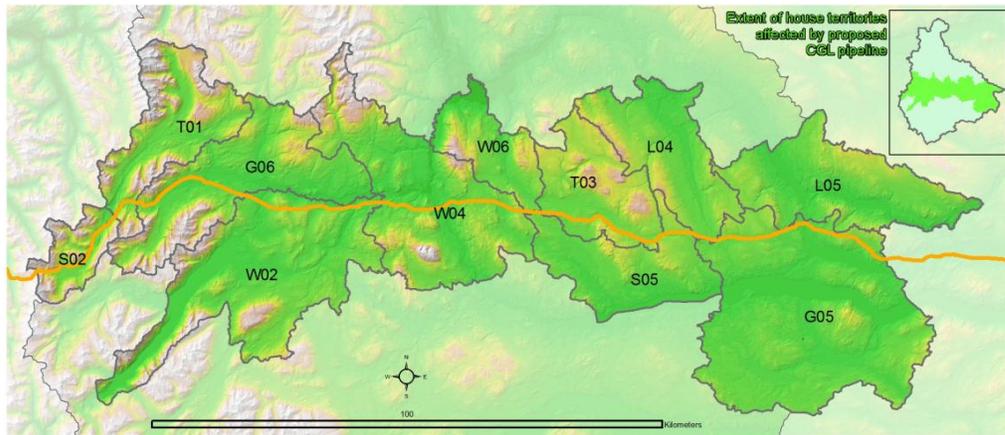


Figure 69. Wet'suwet'en Territories with proposed pipeline route overlaid.



Figures 70 and 71 show gaffing in Moricetown Canyon, ca. early 1950s prior to fish ladders.



Figure 72. Fishing Gear. Present Day Gaffing, and dipnetting



Figure 73. Processing salmon and P.Lamprey



Figure 74. Culture Camp



Figure 75. Building our future



Figure 76. Sustenance gathering passing onto our children



Figure 77. Plants used traditionally by Wet'suwet'en.



Figure 78. Wet'suwet'en Trails