Wet’suwet’en Title and Rights

Regarding

Canada Department of Fisheries & Oceans

And

Pacific Trails Pipeline

Table of Contents

1.0 Scope & Approach 4
1.1 Purpose 4
1.2 Introduction 4
1.3 Wet'suwet'en Interest 6
1.4 Approach 7
1.5 Wet'suwet'en Context 7
1.6 Wet'suwet'en Territories Crossed by Proposed PTP Pipeline 8
1.7 Yintahk – Everything is Connected to the Land 14
1.8 Wet'suwet'en Title 14
1.9 Wet'suwet'en – Crown Relationship 21
1.10 Wet'suwet'en Interests Summary 22
2.0 Wet'suwet'en Fisheries Management 23
2.1 Salmon Fishery Management 23
2.2 Harvest and Processing 24
2.3 Post-Contact Fisheries Context 26
2.3 Fisheries Management Summary 29
3.0 Wet'suwet'en Fish and Fish Habitat 31
3.1 Fraser Watershed 31
3.1.1 Wendzil Keen Kwe Watershed 32
3.1.2 Neetl'anlii Ts'anlii Watershed 37
3.1.3 Misdzi Kwah Watershed 45
3.1.4 Fraser Watershed Fish Health 46
3.1.5 Fraser River Salmon & Habitat Status 48
3.2 Skeena Watershed 49
3.2.1 Wedzen Kwah Watershed 50
3.2.2 Wedzen Kwah Watershed Salmon & Habitat Status 74
4.0 CEAA 2009 KSL Screening Report 76
4.1 Overriding Wet'suwet'en Concerns 76
4.2 General Wet'suwet'en Concerns 77
4.3 Specific Wet'suwet'en Concerns 79
5.0 PTP Environmental Assessment Certificate Commitments 87
6.0 Wet'suwet'en Rights & Title Conclusion 88
6.1 Recommendations 90
7.0 References 91
8.0 Appendices 100

1.0 Scope & Approach

1.1 Purpose

1. The Office of the Wet'suwet'en (OW) presents this submission to the Canada Department of Fisheries and Oceans (DFO). This submission is a component of the Wet'suwet'en response in respect of the proposed Pacific Trails Pipeline (PTP) project within Wet'suwet'en territory. The PTP project was originally known as the Kitimat-Summit Lake Natural Gas Looping project (KSL). In this submission, both the KSL and PTP names are used.

2. The purpose of this submission is to provide Wet'suwet'en perspective in regard to fish and their habitat within the territory and the proposed Pacific Trails Pipeline, and in particular, the proposed PTP Fish Habitat Compensation Plan (PTP FHCP). The intent of this submission is to protect Wet'suwet'en (Aboriginal) title and rights from infringement, and to ensure that the principles of Wet'suwet'en Governance are being met.

3. The proposed corridor, including its resources, is traditionally occupied by Wet'suwet'en Clan and House members, who exercise land and stewardship rights, prerogatives, and responsibilities.

4. This submission presents:

   - A high level view of Wet'suwet'en rights, title, practices, and values in the proposed energy project corridor and identifies several potential impacts to these rights, title, practices, and values;
   - A brief summary of Wet'suwet'en Fisheries Management;
   - The current status of Wet'suwet'en fish and their habitats and their relationship to Wet'suwet'en culture and well-being, and constitutional rights;
   - Comments regarding the status of the proponent's commitments;
   - Comments regarding the adequacy of the proponent's application;
   - Comments regarding the federal government's 2009 Screening Report;
   - Wet'suwet'en conclusion regarding the proposed PTP project;
   - Recommendations on moving forward with a government to government relationship in order to reconcile Wet'suwet'en title and rights;

5. This submission does not constitute a traditional use study. This submission utilizes the PTP Environmental Assessment Application, the BC Environmental Assessment Office–Assessment Report, the BC Environmental Assessment Certificate including the Commitments, the Fish Habitat Compensation Plan, the CEAA Screening Report, and other relevant information presented to OW prior to September 13, 2013.

1.2 Introduction

6. 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.

7. 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 the Indian Reserve concept, organized religion, residential schools, regulatory agencies, 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.

8. 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 proposed market access pipelines.

9. The adverse effects associated with these types of development are seen in: the contamination caused by herbicides and chemical dust suppression on unpaved roads; contamination from acid mine drainage, access developed to enable mineral exploration; the loss and destruction of animal habitats through forestry and rural and urban development; and massive loss of aquatic ecosystem.

10. This submission considers the proposed Pacific Trails Pipeline project from 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 with their own culture.

11. The proposed Pacific Trails Pipeline currently involves a new 467 km pipeline system delivering unconventional gas from Summit Lake to the proposed Kitimat LNG plant and marine terminal in Kitimat, British Columbia. The proposed pipeline would cross through approximately 170 km of Wet'suwet'en territory. In addition, proposed associated infrastructure includes, but is not limited to compressors, transmission lines, access roads, staging and storage areas, and other ancillary development. However, since its conception, the proposed pipeline has continued to morph from one functional concept to another, and is anticipated to change many more times. Changes to date include being approved by the federal and provincial environmental assessment processes as an import pipe, then changing to an export pipe, and then being increased in size twice.

12. The government of Canada has not adequately consulted or accommodated the Wet'suwet'en. 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. To date there has been a lack of clarity regarding the federal and provincial Crown consultation processes; what types of consultation components and their specifics have been delegated to the proponent; and how these are meaningful to the constitutionally mandated Crown–Wet'suwet'en consultation process.

13. With respect to Wet'suwet'en title, a Federal decision for the exploitation and use of our title lands for the benefit of the proposed PTP pipeline is itself an

infringement of our title related property rights under Canada's constitution and international human rights law.

14. The Wet'suwet'en consider that a decision Canada makes regarding the proposed PTP pipeline mandates the reconciliation of pre-existing Aboriginal sovereignty with assumed Crown sovereignty and imposes a duty of honorable 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. To date, this has not occurred.

15. The Wet'suwet'en are in agreement with "environmental effect", as defined and set out in the Canadian Environment Assessment Act 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.

1.3 Wet'suwet'en Interest

16. 170 km of the proposed PTP project, from CesteK'et Tl'enlii (Tchesinkut Creek) in Honeagh Bin territory to Hope Peak in Lho Kwah, lie within Wet'suwet'en Territory over which the Wet'suwet'en maintain Aboriginal Title and Rights.

17. The Office of the Wet'suwet'en has been straightforward in their response to the proposed PTP project in order to implement components 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 Environmental Assessment process such as potential impacts or indirect effects of the proposed project to Wet'suwet'en rights and interests;
- the determination and justification of any or real infringements; and
- Crown–Wet'suwet'en consultation, as may be appropriate, regarding issues related to the PTP project that fall outside the scope of regulatory processes for the project.

18. With these objectives in mind, the Office of the Wet'suwet'en present this submission that is centered around real and current direct and indirect impacts to fish and their habitats, as well as any potential direct and indirect impacts from the proposed PTP 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. They are also

concerned about potential impacts to Wet'suwet'en cultural heritage, to Wet'suwet'en socio-cultural structure including governance, and to Wet'suwet'en fish, wildlife, vegetation, and territorial values.

1.4 Approach

19. 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 below.

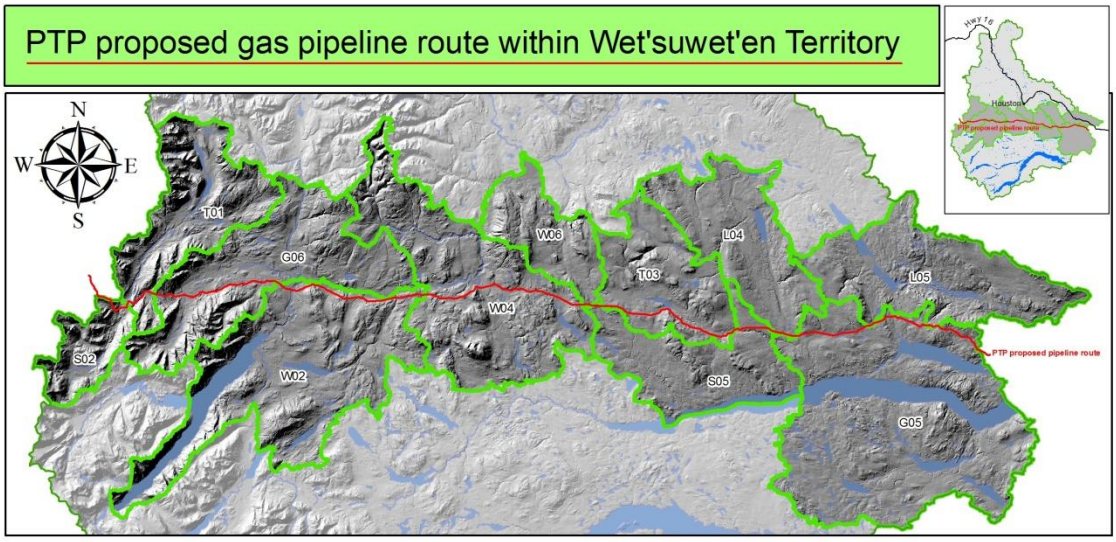


Figure 1. Wet'suwet'en Territory is bisected by the proposed PTP project.

20. 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.

21. 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.

1.5 Wet'suwet'en Context

22. 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.

23. 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 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.

24. 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 Wet'suwet'en central governance institution. 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.

1.6 Wet'suwet'en Territories Crossed by Proposed PTP Pipeline

25. The proposed PTP pipeline enters Wet'suwet'en Gilseyhyu (Big Frog) territory close to the Tchesinkut Creek crossing. The Honeagh Bin territory is managed by the Yextsowiten (Thin House) and is shown in Figure 2.

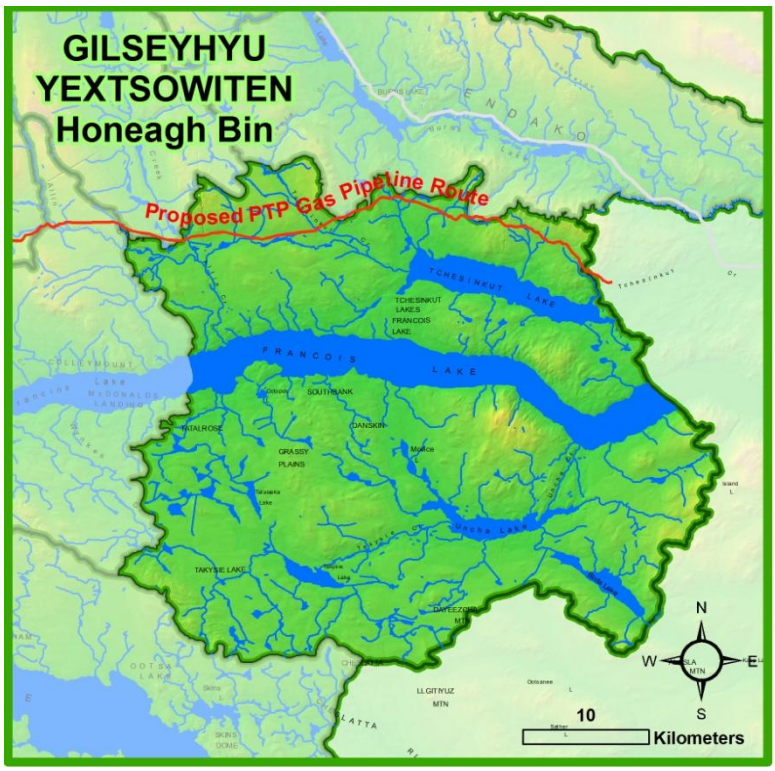


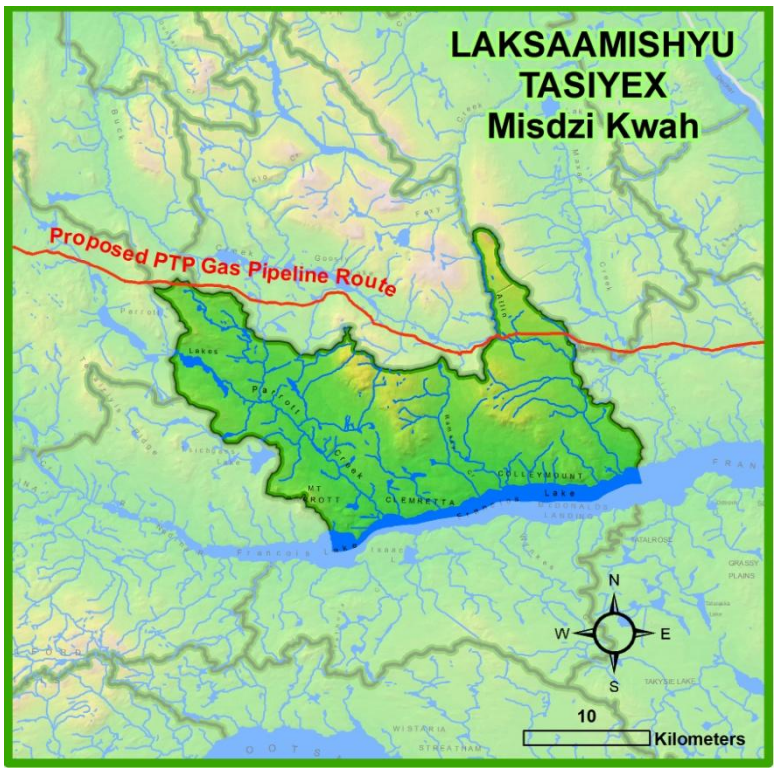
Figure 2. Honeagh Bin Territory and the proposed pipeline route.

26. As the proposed pipeline corridor moves westward, it goes through the Laksilyu (Small Frog) territory, Tsel K'iz Bin. The territory is managed by the C'in Negh lhiy Yikh (House of Many Eyes) and shown in Figure 3.

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

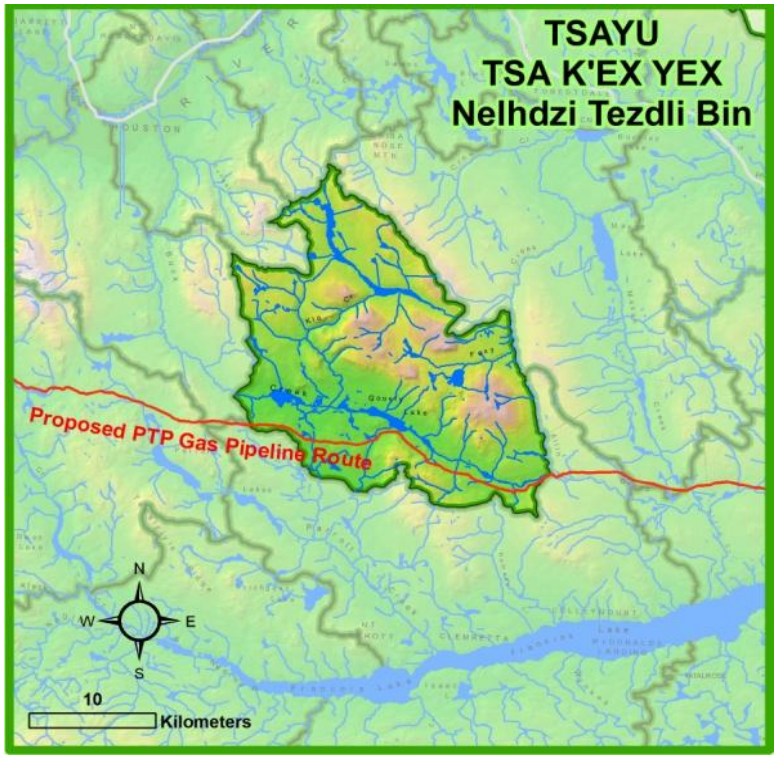
27. As the proposed pipeline corridor moves westward, it would skirt the Laksilyu (Small Frog) territory, Tasdlegh. The territory is managed by C'in Negh lhiy Yikh (House of Many Eyes) and shown in Figure 4.

Figure 4. Tasdlegh Territory and the proposed pipeline route.



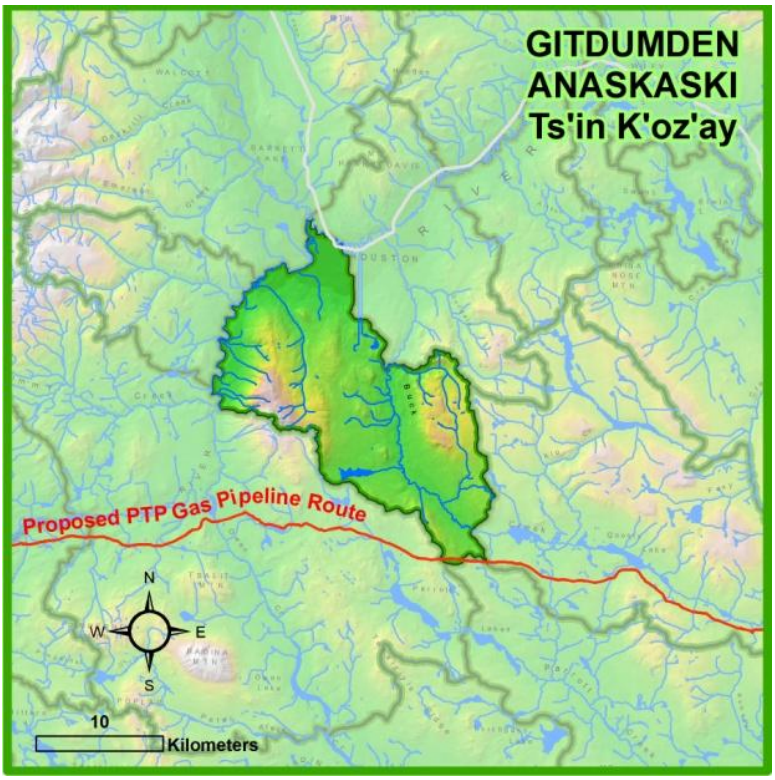
28. The pipeline would next enter the Laksaamishyu (Fireweed) territory, Misdzi Kwah. The territory is managed by Sayax (Sun House) and is shown in Figure 5.

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



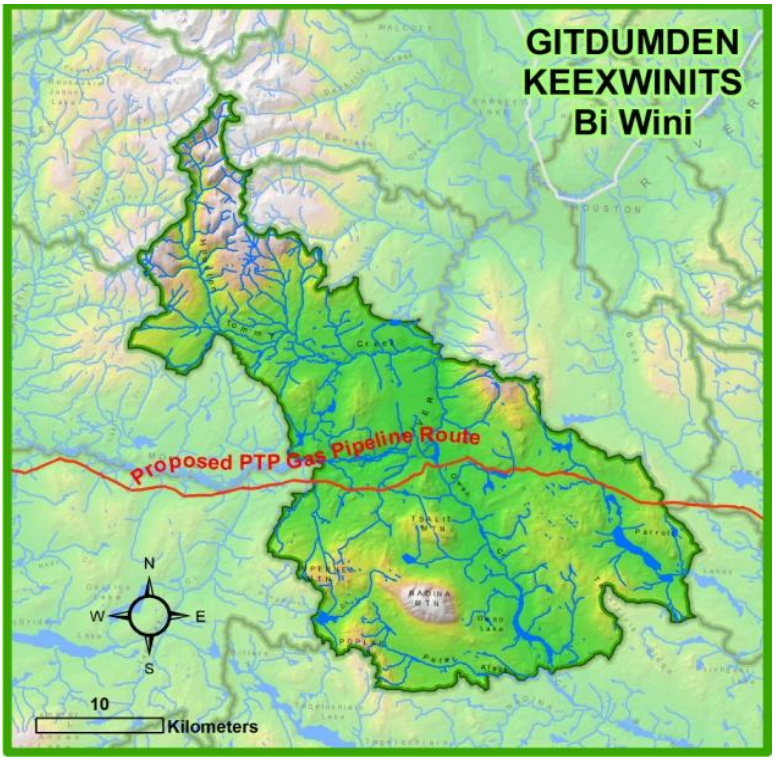
29. The pipeline would next enter the Tsayu (Beaver) territory Nelhdzi Tezdli Bin. The territory is managed by Tsa Ken Yikh (Beaver Lodge House) and shown in Figure 6.

Figure 6. Nelhdzi Tezdli Bin Territory and the proposed pipeline route.



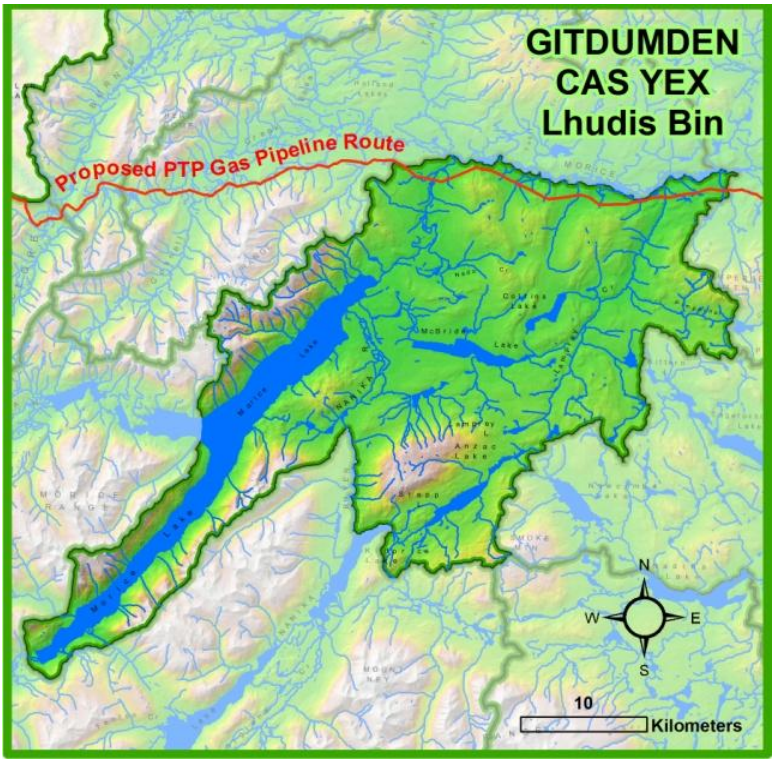
30. As the proposed pipeline corridor continues westward it would briefly skirt the Gitdumden (Bear) Ts'in K'oz'ay territory. The territory is managed by Anaskaski (Where it Lies Blocking the Trail) and shown in Figure 7.

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



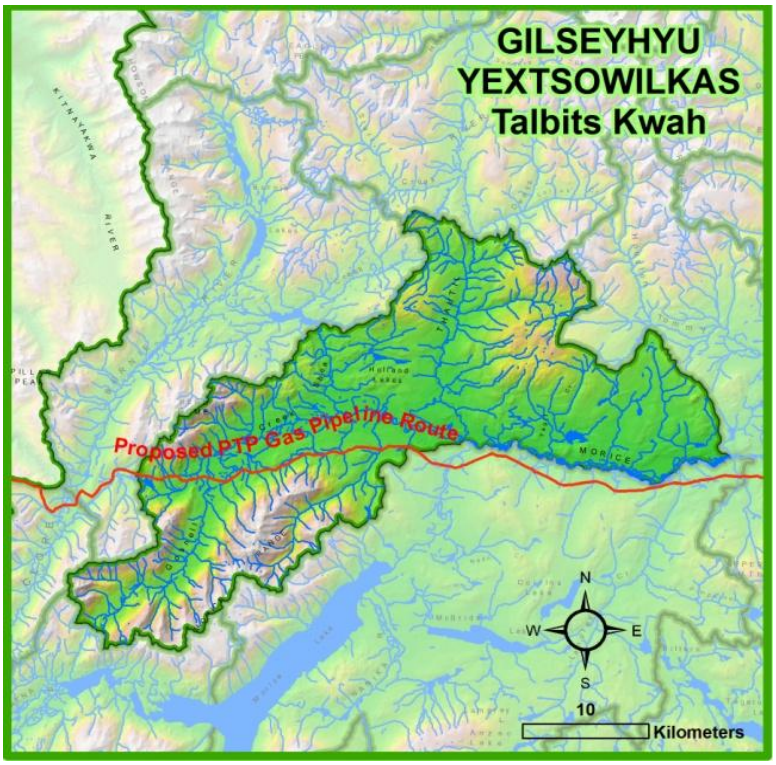
31. The proposed pipeline corridor would then bisect the Gitdumden (Bear) Bi Wini territory. The territory is managed by Kiyikh Winiits (House in the Middle of Many) and is shown in Figure 8.

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



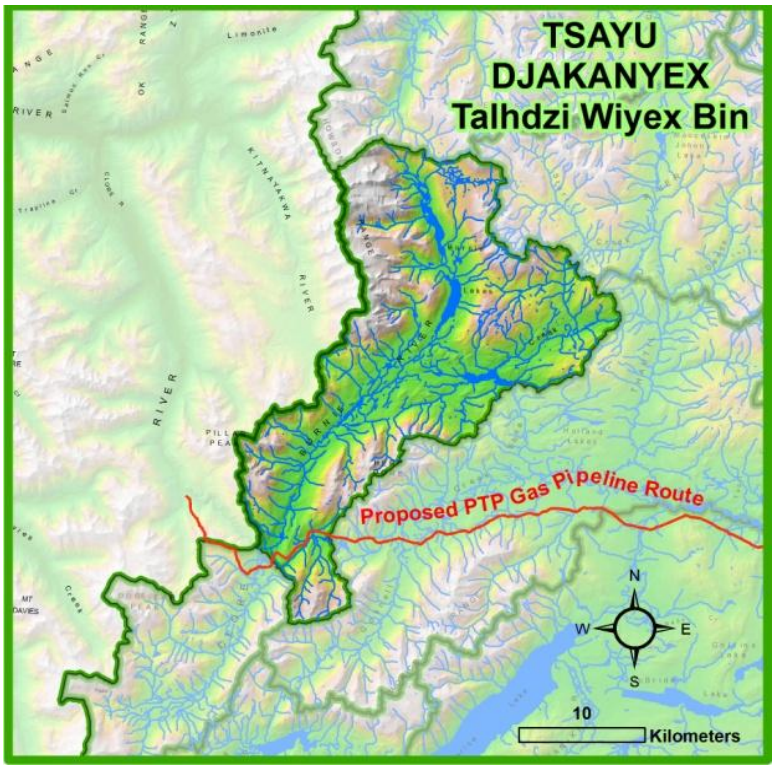
32. The proposed, pipeline would cross the Gitdumden (Bear) Lhudis Bin territory belonging to Cas Yikh (Grizzly House), which is shown in Figure 9.

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



33. The proposed pipeline would then move westward into the Gilseyhyu (Big Frog) Talbits Kwa territory. The Territory is managed by Yikh Tsawilhggis (Dark House) and shown in Figure 10.

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



34. The proposed pipeline would continue towards the Loox Kwa (Clore River) and Taldzi Wiyez T'sonlii (Burnie River) confluence and cut across the Tsayu (Beaver) Talhdzi Wiyez Bin territory. Djakanyex (Beaver Lodge House) manages Talhdzi Wiyez Bin, which is shown in Figure 11.

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

35. The proposed PTP would pass Hope Peak near the Loox Kwa (Clore River) and Taldzi Wiyez T'sonlii (Burnie River) confluence and cut across the Laksaamishyu territory Lho Kwah. Tsaiyex House manages Lho Kwah which is shown in Figure 12. The proposed pipe then leaves Wet'suwet'en Territory.

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

1.7 Yintahk – Everything is Connected to the Land

36. 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 territory 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.

37. 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.

38. 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 well being of each and every Wet'suwet'en member, and will be viewed as an infringement to Wet'suwet'en title, rights and culture.

1.8 Wet'suwet'en Title

39. 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 – is understood in the context of the processes dealing with the proposed Pacific Trails Pipeline's project.

40. There is strong evidence in support of Wet'suwet'en title to the area through which the proposed pipeline would pass. That strength is grounded in the use and occupancy from approximately the end of the last Ice Age and confirmed by the Delgamuukw/Gisdaywa v. the Queen (*Delgamuukw*) court case. The proposed pipelines would pass through the Wet'suwet'en House territories of Yextsowiten, Ginehklaiyex Tsa K'ex Yex, Anaskaski, Keexwinits, Cas Yex, Yextsowilkas, Djakanyex, and Tsaiyex in which the Wet'suwet'en maintain Aboriginal Title. These geographical areas belonged to and were under the authority of Wet'suwet'en ancestors prior to contact. This was demonstrated by the oral assertions and by other knowledgeable elders. The territories were proved through the filing of, cross examination on, and testimonial affidavits of each individual territory in the Wet'suwet'en land claim area, and as well, by the oral testimony of chiefs at trial.

41. 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 their title. The Wet'suwet'en express their special relationship through how they organize ourselves on the land, though their governance system, their laws, their feast, and clans, houses, and chiefs. Wet'suwet'en identify with their territory through their crests, Kungax, totem

poles, and Baht'lats. Individually and together, these expressions of their special relationship to the land are integral to the distinctive Wet'suwet'en culture, and their title includes exclusivity and incorporates present-day needs.

42. 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.

43. Aboriginal title provides them with the right to occupy and use the land exclusive of all others. It provides them with an exclusive right to decide whether and how land and resources will be occupied and used according to our cultural values and principles. This is exclusive not only of Pacific Trails Pipeline and its investors, but also of Canada DFO. It provides them alone – exclusive of Pacific Trails Pipeline and its investors - with the 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.

44. The Wet'suwet'en have continually organized their livelihood around the seasonal return of the salmon. Wet'suwet'en title provides them with exclusive rights, including management, in regard to fish and fisheries management activities. This includes not just harvesting fish for food, social, ceremonial and/or trade purposes, but also the conservation, protection, and management of the fish and their habitat within Wet'suwet'en traditional territories, as conducted for thousands of years through our governance structure.

45. Wet'suwet'en title provides exclusive rights not only to their fisheries, but also to the aquatic ecosystem – streams, lakes, wetlands, water – on which they must rely on for their existence within their traditional territory. The context 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. This land use on and adjacent to the proposed pipelines is shown at a high level in Figure 13 below.

46. 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 Gitxsan 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 jurisdiction (entitlement to govern by Aboriginal laws) over separate portions of territory totaling 55,000 km^2. This litigation is commonly known as *Delgamuukw*.

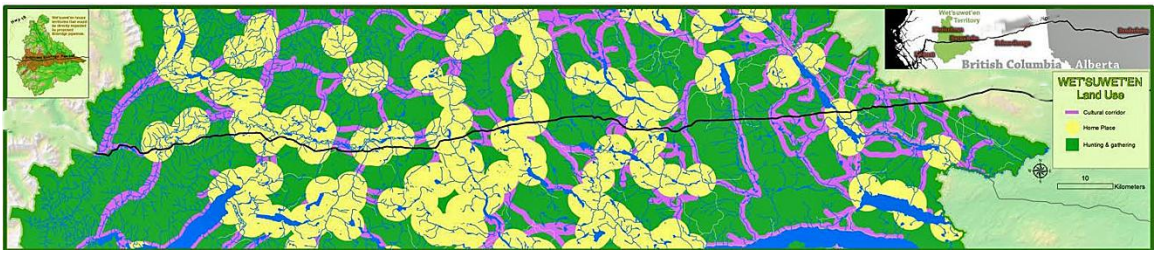


Figure 13. Wet'suwet'en Land Use overlaid by the proposed pipeline.

47. It is important to 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.

48. During Delgamuukw, evidence was given including 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 1910 map matches with Wet'suwet'en territory mapped and claimed in *Delgamuukw*. No evidence was called or elicited by the Crown 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.

49. There was also a wealth of documentary evidence supporting the Wet'suwet'en assertion of ownership. Wet'suwet'en land subject to Aboriginal rights and title are contained within the external boundary of *Delgamuukw* Map 2 and was proved by four types of evidence including:

- 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, Wet'suwet'en territory and activity sites are shown by the activity and presence of chiefs and their House members on the land. Emma Michell. Chief Liiloos of Namox House 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 recorded habitation, boundaries, and place names throughout the territories and these are noted in various court transcripts and exhibits;
- Fourth, over 50 chiefs testified they know from oral statements their ancestors own this land. The evidence of ownership was given

through affidavits. The chiefs' ancestors expressed these assertions of ownership since contact and through to the present.

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

51. While understanding the Wet'suwet'en connection and relationship to the land and water evidenced within *Delgamuukw*, 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.

52. 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 maintain Aboriginal rights, including title, over their entire territory and its resources, and it seeks the Crown and third-party interests such as industry to respect, recognize and accommodate those rights, including the recognition of their traditional system of governance.

53. 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 the territory. The Wet'suwet'en have an inherent right to govern themselves and their territory according to their own laws, customs, and traditions. This was affirmed in the Supreme Court of Canada *Delgamuukw* decision.

54. Traditionally, the Wet'suwet'en inhabited the whole of Wet'suwet'en territory, congregating in the summer at Kya-Wiget (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 presented at trial regarding sites covering Wet'suwet'en territory where Houses, Clans, and families lived during most of the year.

55. The first written evidence available with respect to the Wet'suwet'en at the time of European contact 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.

56. 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 concept of territorial possession. 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."

57. 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, it is an unusual situation for them to run into."

58. The observations of the Hudson's Bay traders are of major importance and clearly indicate 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 territory (Ray 1987).

59. 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 10 years before Brown. In 1811 and 1812 Harmon spent time with the Stuart Lake Carrier neighbors of the Wet'suwet'en and there he came into contact with Babine Carriers attending Feasts at Stuart Lake (Harmon 1957).

60. 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 1810-12 records provide the first recorded description of the social and political culture of a traditional northwest Carrier village. Regarding the concept of territory within the 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."

61. Harmon's records also provide a detailed description of a northwest 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.

62. Similarly, the Hudson's Bay documents describing feasts to settle disputes between the Wet'suwet'en and the neighbouring peoples are 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, Ray 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.

63. 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."

64. There was considerable evidence presented in *Delgamuukw* concerning Wet'suwet'en land use for harvesting, processing and storage of berries, timber and other resources for sustenance, trading and ceremonial purposes.

65. 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 Mills (1987) reported.

66. The above text highlights the longstanding Wet'suwet'en dependence on and management of land, forest and plants, and fish and wildlife and their habitats, particularly in the areas potentially impacted by the proposed Pacific Trails Pipeline project. The evidence presented in the *Delgamuukw* trial demonstrates that the Wet'suwet'en maintain aboriginal title, rights, and interests over these lands.

67. 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"

68. Aboriginal title is a critically important concept to recognize. It is important 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 and irreconcilable damage has occurred to First Nation people throughout the colonialist era in Canada.

69. 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".

70. But how does this understanding of aboriginal title relate to the proposed Pacific Trails Pipeline project? It is significant to the Pacific Trails Pipeline 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.

Figure 14. Moricetown Canyon Bridge. Unknown date.

71. The Wet'suwet'en, in their response to Pacific Trails Pipeline, 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.

72. In Delgamuukw (1997), the Supreme Court of Canada (SCC) overturned the trial judge's factual findings because he had given no independent weight to the oral histories which had been used to prove occupation and use of the territory to which aboriginal title was claimed. The SCC concluded that, had the trial judge given proper weight to oral history, his conclusions on the requisite degree of occupation to prove "ownership" might have been very different (Delgamuukw (SCC), para. 107).

73. The SCC discussed the Kungax, the sacred "official" oral histories of the Wet'suwet'en, which were offered as proof of the existence of a system of land tenure laws (Delgamuukw (SCC), paras. 93-94). The oral histories to which Lamer C.J. in Delgamuukw referred to are a central element of the "aboriginal perspective," which the SCC has repeatedly emphasized is an essential part of assessing evidence concerning aboriginal title.

74. The SCC stated that affidavits containing Wet'suwet'en House territory evidence were relevant to the existence and nature of their land tenure system, and therefore material to the proof of aboriginal title (Delgamuukw (SCC), para. 102,148).

75. The existence of the Wet'suwet'en land tenure system and its connection to Wet'suwet'en governance and social structure was noted more recently by the BC Supreme Court case – Canadian Forest Products Inc. v. Sam, BCSC 676, 2011 wherein Dillon J. noted:

> *"To fully appreciate the background facts to these applications and to ultimately assess factors of irreparable harm and balance of convenience, it is important to understand the relationship of the Wet'suwet'en to the land, and, in particular, to the lands in question here, known as the Redtop. It is the relationship to particular lands that defines the social structure of Wet'suwet'en society, that places the land as the foundation of cultural identity, and that determines the structure of governance."*

1.9 Wet'suwet'en – Crown Relationship

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

77. 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 connections are not easily communicated to the non-Native community.

78. 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 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."

79. The modern history of Wet'suwet'en territory has been and continues to be shaped by the Canada and BC government's belief in the right to access and develop Wet'suwet'en land and resources: water storage for hydroelectric power, mining minerals, fishing salmon, and cutting timber. In the last six decades, the scope and pace of development within Wet'suwet'en territory has increased dramatically.

80. Wet'suwet'en are not opposed to development, but desire that their decision making based on cultural values and principles is respected. They also desire net positive gains, centered on sustainable cultural, social, economic, and environmental benefits, accrue to themselves and their territory.

81. 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 WK because it is woven into conversations as opposed to explicit facts.

82. Wet'suwet'en Knowledge needs to be recognized as an important part of the proposed Pacific Trails Pipeline process. The Wet'suwet'en alerted Pacific Trails Pipeline that baseline studies must incorporate Wet'suwet'en Knowledge and these studies should be conducted to reflect local values.

1.10 Wet'suwet'en Interests Summary

83. There is strong evidence confirmed by the Delgamuukw case supporting Wet'suwet'en title to the area through which the proposed pipeline would pass. Three aspects of Aboriginal title that came out of Delgamuukw are particularly relevant to the Wet'suwet'en:

- The right to choose what uses land can be put to is a foundation for Wet'suwet'en jurisdiction, including stewardship responsibilities and management;
- The right to exclusive use and occupation—reflected in the principle of aboriginal priority—means that the Crown must demonstrate that both the process by which a resource is allocated and its actual allocation reflect that priority. Consultation and accommodation is required to respect this priority;
- The inescapable economic component: Wet'suwet'en are entitled to share in the benefits from the fisheries regardless of whether First Nations or others are engaged in the resource activity. Wet'suwet'en have a legal right to access and use the land and resources within their territory. Compensation is required where there is infringement.

84. To establish an aboriginal fishing right — apart from aboriginal title — Courts ask whether the right in issue is an integral part of the distinctive culture of the First Nation in question. Within this context, a number of specific aboriginal fishing rights arising from the facts raised in various cases have been recognized by the Courts including R. v. Sparrow, wherein the right to fish for individual and community food, social and ceremonial purposes was found to exist, and to have priority after conservation goals are met.

85. Common law coming out of Delgamuukw (1997) and subsequent litigation has helped define Wet'suwet'en title and the Wet'suwet'en–Crown relationship. This includes the need for reconciliation, especially regarding potential infringements to Wet'suwet'en title and/or rights and the justification for those infringements.

86. The government of Canada has not adequately consulted or accommodated the Wet'suwet'en prior to or post the CEAA 2009 Screening Report. This effectively means the Wet'suwet'en are 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.

2.0 Wet'suwet'en Fisheries Management

87. 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.

88. 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.

89. 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.

90. These practices are in jeopardy due to the infringements by DFO regarding the proposed Pacific Trails Pipeline project. The following section illustrates 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 potential infringements to these title and rights by the proposed PTP project. One of the focuses of this submission is on the threat of the pipeline to our aquatic ecosystems, as the risks to our water, fish, and their habitat form some of the most substantial infringements to Wet'suwet'en title and rights.

2.1 Salmon Fishery Management

91. 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 with 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.

92. 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.

93. 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).

94. 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

95. 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.

96. The first salmon, the early upper Bulkley chinook run, usually reaches the area in early to mid June, and marks 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 spring freshet concentrate them at particular points.

97. 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, Maxan and Bulkley lake outlets, Nadina River, and at the outlet of Endako River downstream of Burns Lake.

98. 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 Endako and Nadina salmon were abundant and annual runs were usually reliable.

99. Coho and steelhead migrate into the Bulkley watershed in early to mid-August though coho are harvested 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 were often harvested and processed in headwater locations.

Figure 15. Typical smokehouse with sockeye strips drying.

100. Similarly, lake and stream fish such as rainbow trout, steelhead, Dolly Varden char, bull trout, lake trout, burbot, lamprey, and whitefish were and are fished and processed in their respective habitats. Salmon are eaten fresh during the summer, but the major fishing effort was focused on salmon for use during the rest of the year. The salmon are split and 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 and are usually located in drier (sandy or gravelly) soil types close to the village, winter camps, or other home places.

101. 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 ingenuously made with 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 and 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 Wet'suwet'en traditional use of salmon and freshwater fish for sustenance needs.

102. 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.

103. 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 16. Wet'suwet'en fishing a hlamgan trap in Hagwilget Canyon.

2.3 Post-Contact Fisheries Context

104. 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.

105. 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 fish.

106. 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.

107. 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 and traps by aboriginal fishers. Legislation was accordingly crafted prohibiting weir use by aboriginal fishers, and the sale of fresh and processed fish throughout northern BC.

108. 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 Wet'suwet'en fisheries found it difficult to continue feeding their people compared to the past.

109. 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 targeted coho and steelhead were often positioned at tributary mouths to easily exploit the fish resource. Dispersed fisheries away from the Bulkley mainstem included the fisheries at the outlets of Toboggan and lower Reiseter lakes (Rabnett et al. 2001).

110. 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 (outlet of Decker Lake), and between Xee Dles Kwe (Shovel Creek) and Tseel K'ez Teezdlii (outlet of Burns Lake), and particularly at the Tseel K'ez Tl'aat and Nde Teezdlii village sites.

111. Wet'suwet'en salmon fisheries continue into the present at Sde Keen Teezdlii and Keel Weniits Tl'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 Tl'oogh K'et is located at Six Mile Flat close to the outlet of Dennis Lake.

112. 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.

113. 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.

114. 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 harmful effects, which added to the considerable impact to the Wet'suwet'en in their social and political encounters with the newly arrived Euro-Canadians.

115. 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 and downstream of Moricetown Canyon, the Wet'suwet'en fished twenty-two known trap and net sites. In 1928, DFO blasted the big rock and 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.

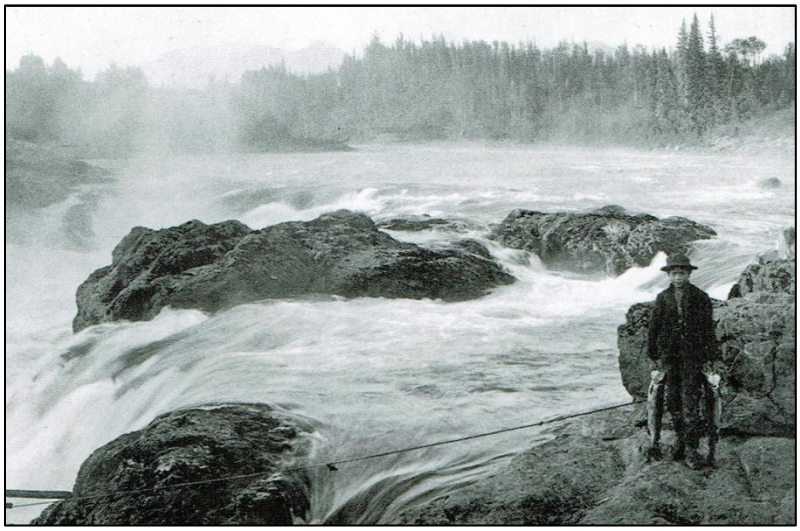


Figure 17. Moricetown Canyon, ca. 1903-14, prior to DFO blasting the big rock and constructing the fish ladders.

116. 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 the canyon.

117. 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 thirty-five year period, 1955–1990, an annual average of 2,660 sockeye returned annually to the Morice watershed. Since 1954, and other than a few years in the mid-1990s, sockeye abundance has fluctuated at low levels.

118. From the late 1950s to 2000, the Moricetown Canyon fishery fulfilled much of 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.

119. 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 100-year 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, the relatively small amount of Wet'suwet'en salmon that are harvested for food, societal, and ceremonial use (FSC) are harvested with dipnets as shown in Figure 18.

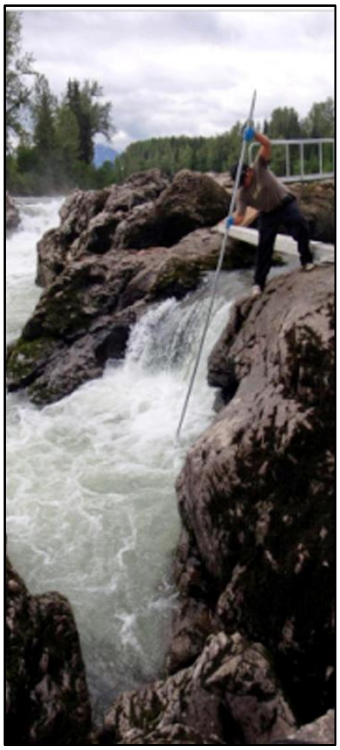


Figure 18. Moricetown Canyon, fishing with dipnet.

120. 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, and as well as the Gitxsan have supplied the Wet'suwet'en with 8,000 sockeye on a periodic basis.

121. 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.

2.3 Fisheries Management Summary

122. The Wet'suwet'en salmon resource formed the core of the economy. Not only has salmon nourished Wet'suwet'en people for thousands of years, but salmon are articulated in many aspects of the non-material culture. The role of salmon to the Wet'suwet'en appears to have been underestimated by non-Natives.

123. In assessing the results of traditional fish management, it is a matter of record that Wet'suwet'en salmon and freshwater 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.

124. The Canadian government prohibited Wet'suwet'en traditional fisheries technology, then demanded that the food fish permit policy be adhered to. This essentially determined where and when Wet'suwet'en food fishing could be exercised. Since 2001, the Wet'suwet'en have not directed a food fishery on the Morice–Nanika sockeye stocks due to a lack of abundance. This has had profound

effects including generations growing up without this essential knowledge and the means to pass that knowledge to younger generations.

125. Canada has fallen short regarding their efforts to manage the Wet'suwet'en fishery. These efforts are viewed as part of the wider effort to colonize and assimilate Wet'suwet'en into Euro-Canadian society that failed. The spectrum of Section 35 constitutionally protected aboriginal rights confirmed by Canadian courts established the legal foundation for direct participation by Wet'suwet'en in the protection, management, allocation, and benefits of fisheries resources within the territory.

126. A willingness on the part of Canada to change the status quo and engage in meaningful consultations that address and accommodate Wet'suwet'en title and rights is necessary. Only then will reconciliation of Wet'suwet'en and Crown interests that Section 35 is intended to achieve, be possible.

127. 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 Wet'suwet'en are concerned with the potentially serious adverse impacts and infringements to Wet'suwet'en fish, their habitat, and associated water quality issues caused by the proposed PTP project and the 2009 Screening Report approval.

128. The Crown and the proponent will infringe upon Wet'suwet'en governance by imposing and allowing the proposed pipeline.

3.0 Wet'suwet'en Fish and Fish Habitat

3.1 Fraser Watershed

129. Eleven Wet'suwet'en territories drain into the northwestern portion of the upper Fraser Basin via the Nechako River and its tributaries. 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.

130. Four territories in the Fraser drainage would be crossed by the proposed Pacific Trails Pipeline project: Honeagh Bin, Tselh Ki'z Bin, Misdzi Kwah, and Bi Wini. Direct effects from proposed pipeline construction and operation 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

Territory	Salmon Present	Development Concerns[1]	Potential Pipeline Effects[2]	Biophysical Concerns[3]	Sensitive Watershed Features[4]	Cultural Considerations[5]
Tatl'at Bin	✓	✓	✓	✓	✓	✓
Tselh Ki'z Bin	✓	✓	✓	✓	✓	✓
Honeagh Bin	✓	✓	✓	✓	✓	✓
Netanli		✓	✓	✓	✓	✓
Tac'its'olh'en	✓	✓	✓	✓	✓	✓
Yin Bi Wini	✓	✓	✓	✓	✓	✓
Tscc'ulh Tesdliz Bin		✓	✓	✓	✓	✓
Wesel Bin		✓	✓	✓	✓	✓
Misdzi Kwah	✓	✓	✓	✓	✓	✓
Tsehl Tse Ki'z	✓	✓	✓	✓	✓	✓
Bi Wini	✓	✓	✓	✓	✓	✓

1. Development concerns include forestry, agriculture, linear, mining, hydro, & cumulative effects.
2. Potential pipeline effects include construction, operations, accidents, malfunctions, and environmental effects.
3. Biophysical concerns include terrestrial, aquatic, and climate change.
4. Sensitive watershed features include sensitive biological, physical, and unique features.
5. Cultural considerations include culturally significant heritage, wildlife and fisheries features and cultural and community well-being.

131. The Wet'suwet'en sockeye stocks in the upper Fraser watershed include Endako River sockeye and the three 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.

132. Nechako River is the largest and coldest tributary of the Fraser system. Alcan dammed the Nechako River and from October 1952 to June 1956, no water entered the Nechako River from above the dam as the reservoir filled. When Alcan

dammed the Nechako River, it reversed the flow of water through a 16-km tunnel to the Kemano hydroelectric station located on the Pacific coast. The Kenney Dam flooded a significant portion of Wet'suwet'en territory, with neither consultation nor accommodation.

133. Flow reduction and increased temperatures are the principal impacts that have and continue to adversely impact Nadina and Endako salmon stocks. The reservoir littoral zone and stream riparian zones are subjected to severe and abnormal fluctuations in water level, temperature, and erosion processes, which greatly reduce productive capacity.

134.

135. Wet'suwet'en concerns due to diminished salmon abundance include four 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);
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);
3) reduction in water flow and increased temperatures resulting from the damming of the upper Nechako River;
4) degradation of the aquatic ecosystem due to development exacerbated by the mountain pine beetle outbreak.

136. 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 additional proposed pipelines.

3.1.1 Wendzil Keen Kwe Watershed

137. 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. The northwest portion of the watershed is Tsayu territory–Taatla't Bin (Decker Lake), while the southeast portion is Laksilyu territory–Tselh K'iz Bin (Burns Lake).

138. 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, redside shiner, and prickly sculpin. The highest densities of resident fish in the Endako system from the Shovel Creek confluence upstream are redside shiner and northern pike minnow.

3.1.1.1 Endako River Sockeye

139. Wet'suwet'en Knowledge records four sockeye spawning subpopulations in the upper Endako system: at the outlet of Decker Lake (as shown in Figure 19), 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 19. Endako River at the outlet of Decker Lake showing the proximity of linear and urban development.

140. 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.

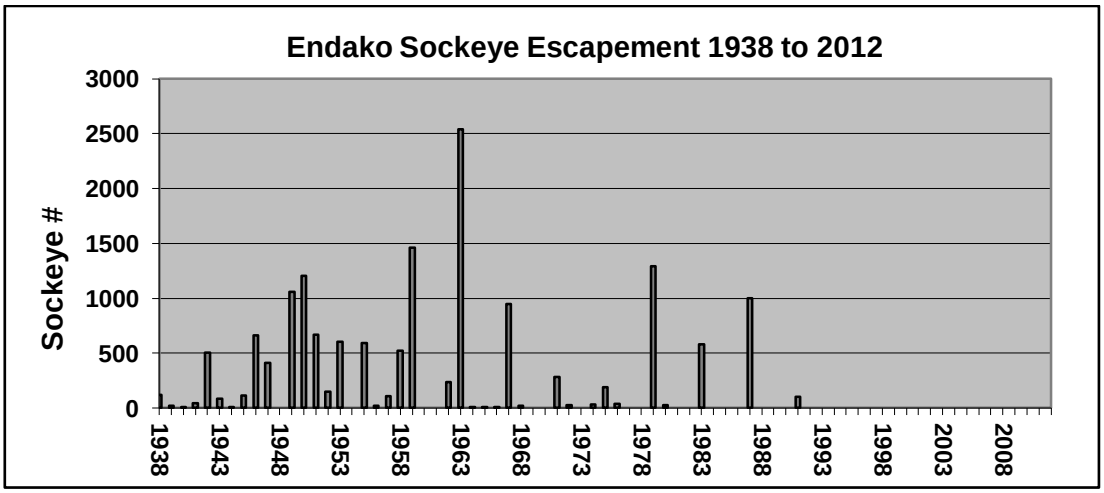


Figure 20. Endako River sockeye escapement 1938 to 2012.

141. The last recorded spawning of Endako River sockeye was documented 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 to mid levels into the late-1980s, when the stock appears to have diminished entirely as shown in Figure 20.

142. 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 pre-spawn mortality events, which raise further concerns about the long-term viability of the Endako River sockeye.

3.1.1.2 Endako River Chinook

143. Wet'suwet'en Knowledge records four chinook spawning locations in the upper Endako system: at the outlet of Decker Lake (as shown in Figure 19), 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.

144. 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 21. 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 moderate to high risk of extirpation.

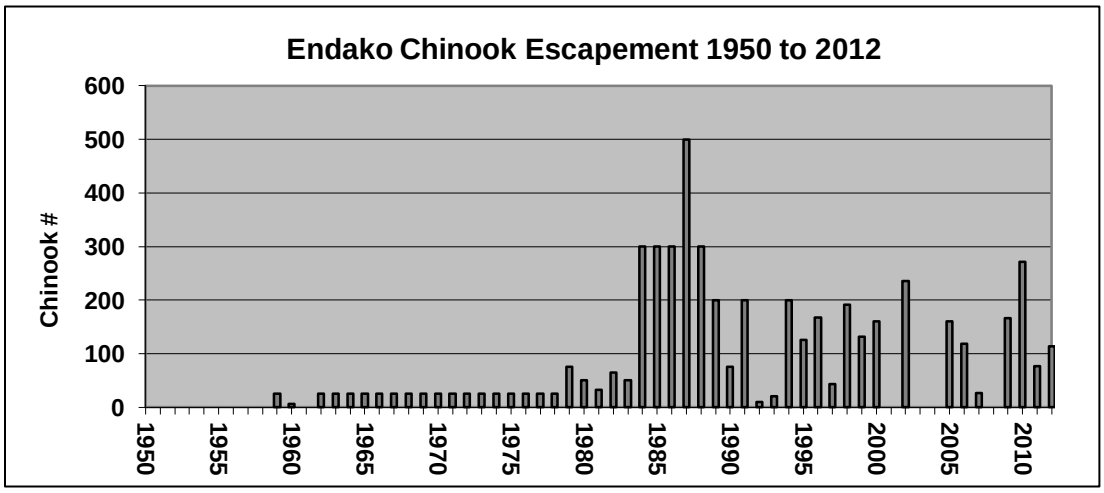


Figure 21. Endako River chinook abundance from 1950 to 2012.

3.1.1.3 Endako River Sturgeon

145. Wet'suwet'en Knowledge, archival records (BC Government Records), and anecdotal history notes white sturgeon presence in the Endako River and in Burns, Francois, 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).

146. 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, four barbels preceding 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.

147. 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.

148. Over the past century, white sturgeon populations have been reduced by over-fishing and the construction of Kenney Dam in 1952. The dam has resulted in reducing 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.

149. 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 and Ootsa Lakes sturgeon is unknown.

150. 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.

151. 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

152. 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.

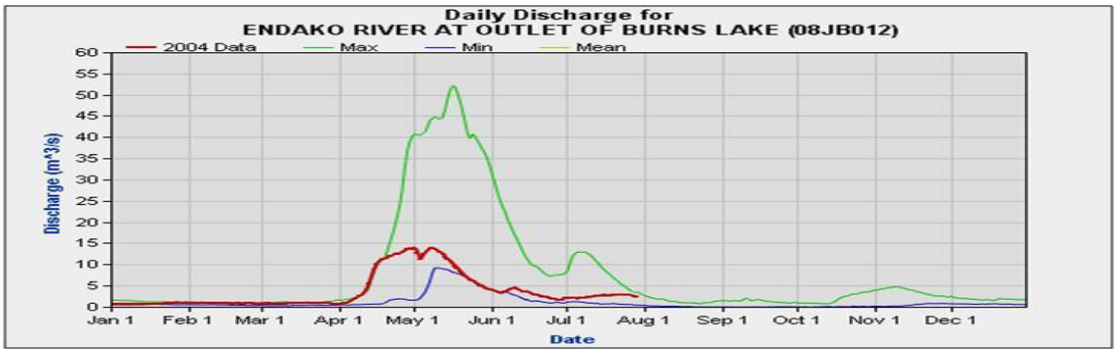


Figure 22. Endako River discharge at the outlet of Burns Lake.

153. 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 22, low flows – 1 m^3/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. The demand for licensed water withdrawal for agricultural summer irrigation as well as the all-season demand from industrial users causes high concern.

154. 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 impacted 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 likely indicating an increase in sediment input;
- Types and distribution of fish species are changing, with a decrease in cold water fish and an increase in coarse fish.

155. The predominant land use is forestry, with the land base allocated to various tenure holders and two large-scale lumber mills located in the watershed. Currently, mountain pine beetle (MPB) 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).

156. 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, which is 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.

157. 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 regarding agriculture development as a result of impacted riparian conditions, water withdrawals, and the extent of valley-bottom agriculture in upper Endako watershed.

158. Past and present land and resource use concerns, as noted above, have impacted key Wet'suwet'en environmental and cultural values, and are rated as cumulative effects. Fast-paced watershed change, driven by anthropogenic-based development and exacerbated by the MPB outbreak, is threatening the sustainability of freshwater resources in the upper Endako watershed. Developments within Endako watershed have interacted in a manner that is additive and synergistic over space and time. The present cumulative effects are not well-known, documented, or understood.

159. 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.

160. 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. 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.

161. 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

162. 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.

163. 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 Pacific Trails Pipeline project, which crosses the system downstream. As well, indirect impacts for the proposed PTP project include methane release in the well production phase as well as end-user emissions, both these factors will increase global warming and negatively impact Nadina fish.

164. The Nadina River fish community assemblage consists of 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, redside 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, as 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. It is unknown if white sturgeon utilized Nadina River.

3.1.2.1 Nadina River Sockeye

165. 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 and the late Nadina run usually appearing in early September. 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.

166. 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 in the mid-1970s following the establishment of the spawning channel (Ricker 1997). Historical records suggest the Late Nadina sockeye run was on the same cycle as the Early Nadina run until 1909 (Andrew 1970).

167. 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).

168. 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 and that allowed salmon easy passage through the Fraser Canyon.

169. 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.

170. 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, Early Nadina spawners annually averaged 5,482 sockeye and Late Nadina spawners 6,722 sockeye with a range from 9 to 29,994 fish. Early and Late Nadina sockeye abundance is shown below in Figure 24 and 25, respectively.

171. 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 23. Nadina Spawning Channel.

Nadina Spawning Channel counting weir.

172. 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.

173. 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 could be possibly lost and replaced by a new single population, the Nadina channel sockeye.

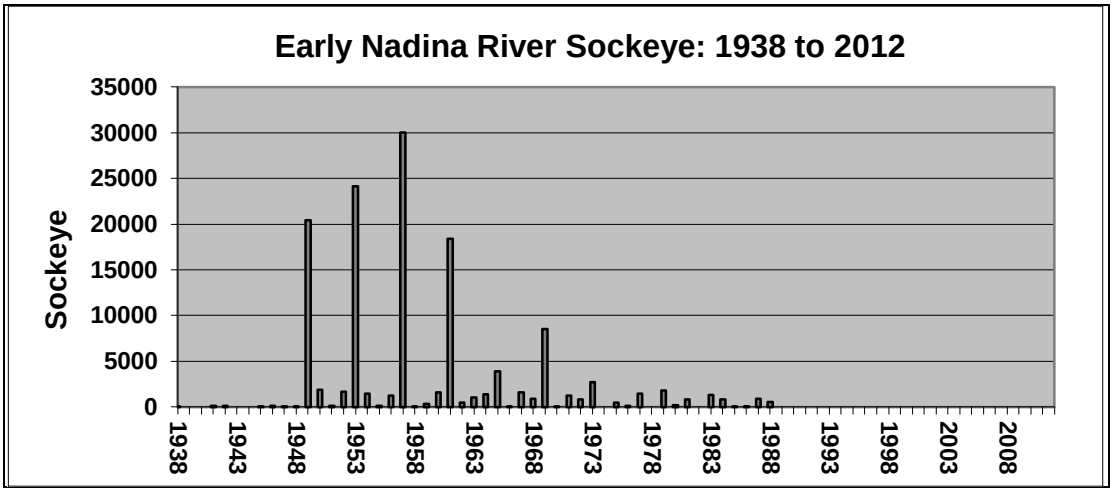


Figure 24. Early Nadina River sockeye escapement from 1938 to 2012.

174. It is important to note there have been no fry to smolt studies conducted for Nadina sockeye and the only known evaluation of the channel is based solely on escapements. It is generally understood 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. Since 2011, DFO reports that they have opened the top of the channel during early migration, in order to enable the Early sockeye run, or parts of it that are not extirpated, to revert to their past behaviour of migrating up and into Nadina Lake and holding before dropping back down or swim into the channel. Results from this experiment are yet to be recorded.

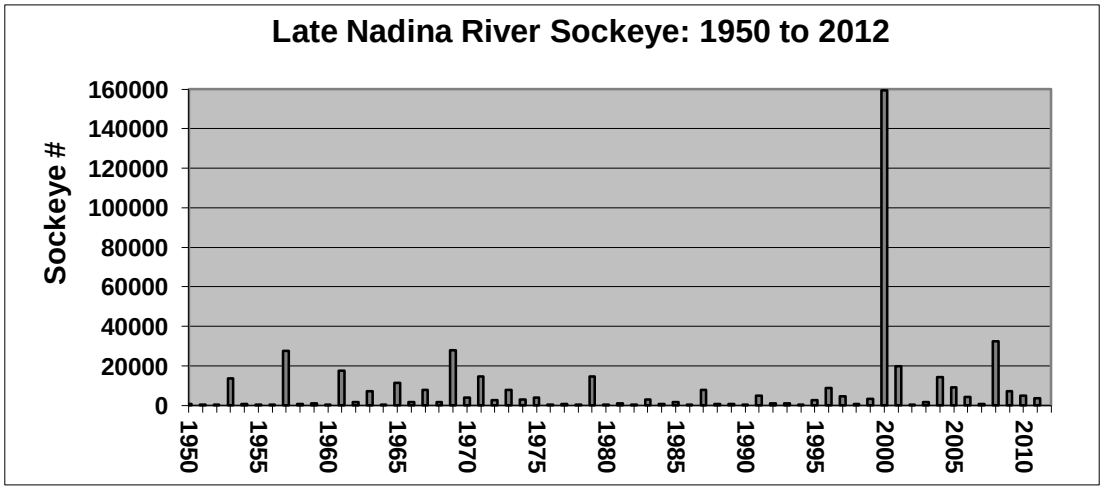


Figure 25. Late Nadina River sockeye escapement from 1950 to 2012.

175. Sockeye escapements have been recorded for the original Nadina River spawning sites; however, Figure 24 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 26.

176. 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). 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.

177. Sockeye spawning in Tagetochlain and Glacier creeks has been assessed inconsistently since the 1950s, and productivity, escapement, and trends in abundance are essentially unknown. Glacier Creek sockeye are thought to rear in Nadina Lake and Grant et al. (2011) note that they do not appear to be genetically distinct from the Early Nadina run.

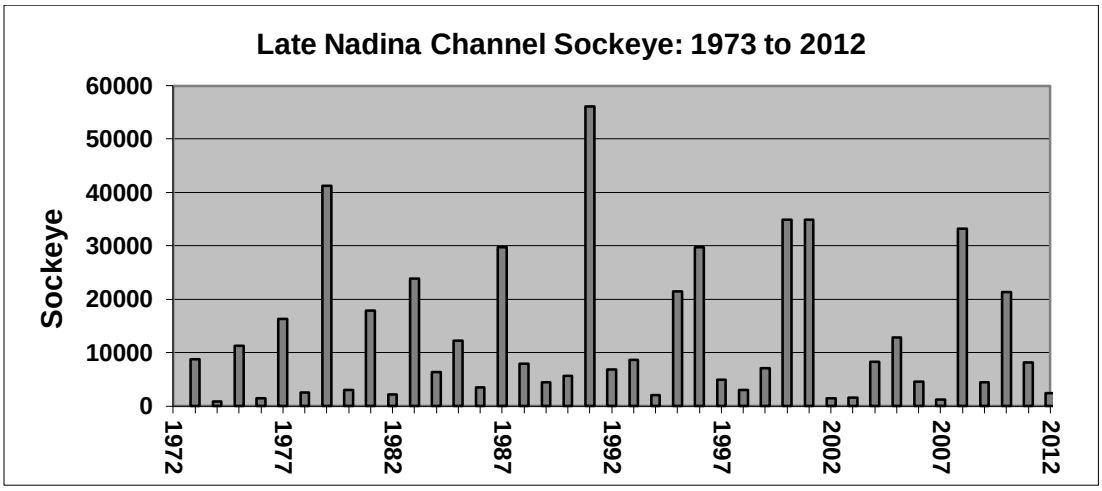


Figure 26. Nadina River sockeye channel escapement from 1972 to 2012.

3.1.2.2 Nadina River Chinook

178. 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 chinook escapement surveys conducted by DFO on Nadina River; however, the spawning channel 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.

Figure 27. Prime chinook spawning habitat downstream of Nadina River sockeye channel.

3.1.2.3 Nadina Watershed Fish Habitat

179. 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 provide a moderating influence to upper Nadina River resulting in stable flow and relatively clear water conditions. Peter Aleck Creek and Tagetochlain Creek, which drains the relatively large Tagetochlain Lake (Poplar Lake) are the two major tributaries.

180. 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 km^2. 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. Flows then decrease until late September, when fall rains and early snowmelt increase stream flows until the end of October, as shown in Figure 28. Stream flows decline in late November and December when precipitation falls as snow, with minimum discharges recorded in January through March, prior to snowmelt.

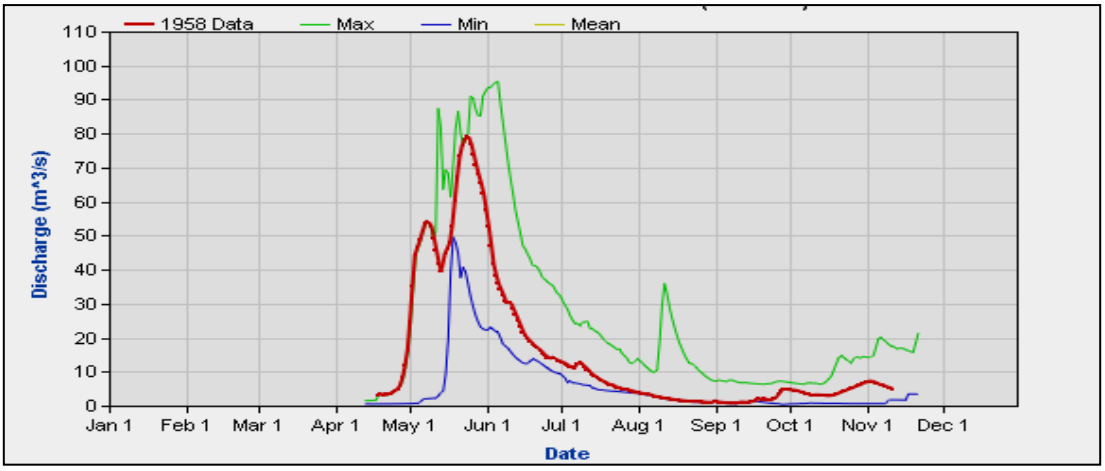


Figure 28. Daily discharge from Nadina River at Francois Lake (08JB006)

181. A series of cascades and chutes located immediately downstream of Nadina Lake as shown in Figure 29 restricts upstream fish movement during certain flow conditions. 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 29. View upstream on Nadina Falls

182. 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 ^{o}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.

183. 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 that up to 1998, 366 cut blocks had been logged in the watershed.

184. 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 instability and erosion;
- Scouring of stream channels;
- Lack of fish passage at various road crossings.

185. 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.

Figure 30. Clearcut block at Biit Wenii (Hill Tout Lake).

186. 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 starting to provide shade and conifers were established.

187. 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). Due to concerns with impacting the excellent quality of spawning and rearing in the Nadina River, the 1993 Nadina LRUP 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 management conditions were furthered with the Morice LRMP (2004), which directs maintenance of the ecological structure and function with a 500 m buffer beyond the 100 year floodplain.

188. Currently, impacts to fish habitat in the Nadina are rated moderate. Wet'suwet'en have concerns regarding the extent and rate of logging, the extent and condition of impacted riparian areas, the high density of forestry roads, and the high number of stream crossings.

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

190. A large impact to Wet'suwet'en values from forestry activities in Nadina watershed has resulted in adverse effects to cultural heritage resources that include:

- Loss of trails, cache pits, house pits, camps, cabins, barns, corrals, hunting areas, fishing areas, gathering areas, and archaeology sites;
- Loss of the ability of the Wet'suwet'en to provide for social, ceremonial, and sustenance needs of their communities by destroying cultural infrastructure; and

- Disintegration of the links of Wet'suwet'en Knowledge chains that are passed down from generation to generation and are an integral component of Wet'suwet'en culture.

191. 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 proposed downstream pipeline development. Any pipeline development will be an infringement to Wet'suwet'en governance and protection measures.

3.1.3 Misdzi Kwah Watershed

192. 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.

193. 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.

194. There are no 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.

195. Lower Parrott Creek supports spawning and rearing for rainbow trout, redside shiners, 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 31. Typical kindling tree on esker trail east of upper Parrot Lake.

196. 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 32. 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.

197. Wet'suwet'en concerns regarding Parrott watershed are similar to concerns with the Nadina watershed, particularly regarding the extensive road network, the high number of stream crossings, and the massive loss of or impacts to cultural heritage resources.

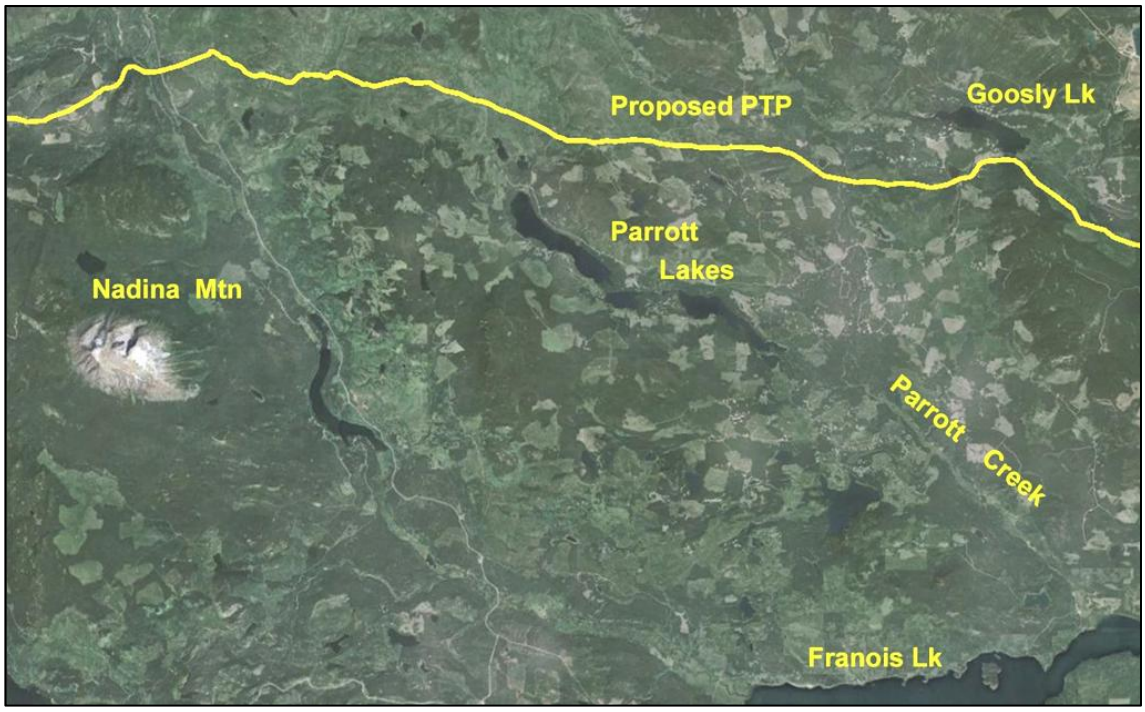


Figure 32. Parrott watershed showing the proposed Pacific Trails Pipeline route through the Parrott headwaters and extent of forest development.

3.1.4 Fraser Watershed Fish Health

198. Fraser salmon are exhibiting strong disease-associated symptoms and it is important to explore the potential that they could be infected with diseases originating from the several million Atlantic salmon fed on fish farms located on the BC central and south coast (Miller et al. 2011). Disease testing and disclosure of results are the responsibility of Canada; however, as Justice Cohen heard in his Commission hearings, the detection by DFO of infectious salmon anemia viral sequence in Fraser sockeye was not reported to the Commission or elsewhere and there was no follow-up to determine the accuracy of the test results. He warned in his report "devastating disease could sweep through wild salmon populations..." Since that time in early 2012, SFU fisheries scientists have confirmed the presence of piscine reovirus (PRV) in Fraser system salmonids at Cultus Lake.

199. Infectious hematopoietic necrosis virus (IHNv) is endemic to BC salmon and both Pacific and Atlantic salmon reared in fresh water or sea water can be severely affected by outbreaks of IHNv, which can induce severe mortality. There are several strains of Viral Hemorrhagic Septicemia (VHS) in BC, but they are not highly pathogenic. The European strain can cause hemorrhaging of the internal organs, bulging eyes, and bloated abdomens with fish appearing listless or spinning in circles. Four viruses originating from Europe and introduced with imported Atlantic salmon eggs include:

- European Infectious Salmon Anemia virus (ISA): a virus of farmed Atlantic salmon (*Salmo salar*), inducing a systemic and lethal condition comprised of severe anemia, variable hemorrhages, and necrosis in several organs. It causes lethargy, poor health, and can result in significant mortality (up to 90%);
- European Piscine Reovirus (PRV): a novel reovirus that can infect Atlantic and Pacific salmonids, leading to further vulnerability to infections and/or syndromes, extreme weakness in the heart muscle. It occurs in the flesh, gill,and heart of the fish;
- Cardiomyopathy Syndrome (CMS): a severe disease of Atlantic salmon (*Salmo salar L.*) associated with significant economic losses in the aquaculture industry. CMS is diagnosed with a severe inflammation and degradation of myocardial tissue caused by a double-stranded RNA virus named piscine myocarditis virus (PMCV);
- European Salmon Alpha virus (SAV): considered a serious pathogen of farmed Atlantic salmon and rainbow trout in Europe it is closely associated with pancreas disease (PD) and the sleeping disease virus.

200. Kibenge et al. (2013) report that the PRV found in BC, left Norway in 2007, and matches virus taken from a sick Atlantic salmon in a salmon farm in Norway's, Lofoten Archipelago. The scientific literature suggests piscine reovirus spreads over large distances and efforts need to be made to contain it to prevent spread to wild fish (Kristoffersen et al. 2013, Palacios et al. 2010). As noted in a joint publication by the Center for Infection Immunity, Columbia University, NYC, and by Norwegian government scientists: "It is urgent to control piscine reovirus not only because it threatens domestic salmon production but also due to the potential for transmission to wild salmon populations."

201. In order to manage virulent disease in Fraser salmon, there needs to be knowledge and certainty that these types of diseases are present or absent; sampling and analysis is needed. Norwegian virus experts suspect that a wild salmon exhibiting the Heart and Skeletal Muscle Inflammation (HSMI) disease, which is associated with piscine reovirus, will have great difficulty swimming up a river (Salmon Confidential 2013). They report the virus has spread widely through Norway with no known way to contain it. Whether this Norwegian virus is killing wild Pacific salmon has not been tested and this appears to be a function of Canadian Food Inspection Agency politics. However, Marine Harvest lists HSMI as the #2 killer of their fish farmed worldwide. Clearly it kills salmon.

202. Because viruses are reportable to the World Organization of Animal Health, it appears the Canadian Food Inspection Agency (CFIA) is reluctant to test for and acknowledge virus presence due to international trade restrictions. Cohen (2012) clearly documents the lack of fish health management and notes DFO's lack of research, particularly diagnostic work regarding unknown viruses, and as well,

having DFO's fish health research being controlled and directed by the CFIA. The health implications for all salmonids are significant.

3.1.5 Fraser River Salmon & Habitat Status

203. The status of Endako and Nadina sockeye and chinook stocks is rated as high risk with likely extirpation of Endako sockeye and the Early Nadina sockeye stocks. Nadina salmon abundance and productivity are below biological and conservation status benchmarks and require management intervention by Canada DFO and the Wet'suwet'en. It is important to note that in some cases, such as the Glacier and Tagetochlain sockeye subpopulations, the status is unknown.

204. The upper Endako sockeye and chinook habitat status is rated poor due to the degradation of the aquatic ecosystem mostly resulting from forestry, linear, agriculture, and urban development and exacerbated by the MPB breakout. Nadina fish habitat status is rated moderate due to effects from the high road density, the high number of stream crossings, and the amount of riparian disturbance.

205. Both the Nadina and Endako salmon particularly during their migratory travel up through the Fraser system to their natal streams were and continue to be impacted by the construction of the Kenney Dam and operation of Nechako Reservoir. Principal impacts resulting from impounding the upper Nechako include flow reduction and increased temperatures.

206. A review of Nechako Plateau annual temperature records from the early 1970s to the present show an increasing trend in temperature that is predicted to further increase. The potential exposure of salmon to water temperatures above 20 °C, which may degrade their spawning success, is predicted to increase by a factor of 10. A review of annual precipitation records for the similar period show a lower portion of the precipitation has fallen as snow since the mid-1970s. The hydrological profile is anticipated to continue changing with less snow and more rain resulting in changes to streamflow volume and timing.

207. Cumulative impacts include: specific habitat impacts from poor land and resource use practices that have resulted in modified aquatic ecosystem functioning, fish passage obstructed by the Fraser Canyon slides, and the commercial coastal fishery that has heavily exploited the upper Fraser salmon stocks.

208. 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 could be expressed in poor freshwater and marine survival rates and increased incidence of disease. In adult salmon, climate change effects will likely result in increased pre-spawning mortality; for freshwater fish increased precipitation and temperatures will result in cold-water fish decline and change in the hydrological profile;
- Proposed development such as the Pacific Trails Pipeline creating additional cumulative impacts;
- European diseases – particularly highly pathogenic viruses, which were and continue to be introduced to the Pacific coast by open-net salmon farm operations.

3.2 Skeena Watershed

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

210. All the territories support freshwater fish communities. Anadromous fish presence includes chinook, pink, chum, coho, and sockeye salmon, and steelhead, 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.

211. Six territories in the Bulkley drainage and two territories in the Zymoetz (Copper) drainage would be crossed by the proposed Pacific Trails Pipeline as shown in Figure 33. The proposed pipeline will bisect territories draining into the Morice and Bulkley systems. Adverse effects from pipeline construction and operation will impact these systems.

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

Wet'suwet'en Territories in Skeena Watershed						
Territory	Salmon Present	Development Concerns[1]	Potential Pipeline Effects[2]	Biophysical Concerns[3]	Sensitive Watershed Features[4]	Cultural Considerations[5]
Ut'akhgit	✓	✓	✓	✓	✓	✓
Cel Winits	✓	✓	✓	✓	✓	✓
De'ilkwah	✓	✓	✓	✓	✓	✓
Cosl'et Bin	✓	✓	✓	✓	✓	✓
Ilh K'il Bin	✓	✓	✓	✓	✓	✓
Nelgi Cek	✓	✓	✓	✓	✓	✓
Tasdlegh	✓	✓	✓	✓	✓	✓
Nelgi'l'at	✓	✓	✓	✓	✓	✓
K'az Kwah	✓	✓	✓	✓	✓	✓
Gguzih Keyikh	✓	✓	✓	✓	✓	✓
Talbits Kwah	✓	✓	✓	✓	✓	✓
C'iniggit Nenikekh	✓	✓	✓	✓	✓	✓
Dets'ingeh	✓	✓	✓	✓	✓	✓
Tahldzi Wiyez Bin		✓	✓	✓	✓	✓
Nelhdzi Tezdli Bin	✓	✓	✓	✓	✓	✓
Cas Nghen	✓	✓	✓	✓	✓	✓
Ggusgi Be Wini	✓	✓	✓	✓	✓	✓
C'idi To Stan	✓	✓	✓	✓	✓	✓
Lho Kwah		✓	✓	✓	✓	✓
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 effects.
2. Potential pipeline effects include construction, operations, accidents, malfunctions, and environmental effects.

3. Biophysical concerns include terrestrial, aquatic, and climate change.
4. Sensitive watershed features include sensitive biological, physical, and unique features.
5. Cultural considerations include culturally significant heritage, wildlife and fisheries features and cultural and community well-being.

3.2.1 Wedzen Kwah Watershed

212. Wedzen Kwah watershed is known in English as the Bulkley River watershed. 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;
- Upper Bulkley sockeye stocks with the Bulkley and Maxan subpopulations;
- Sockeye stream spawners in the Morice and Bulkley rivers and their tributaries.

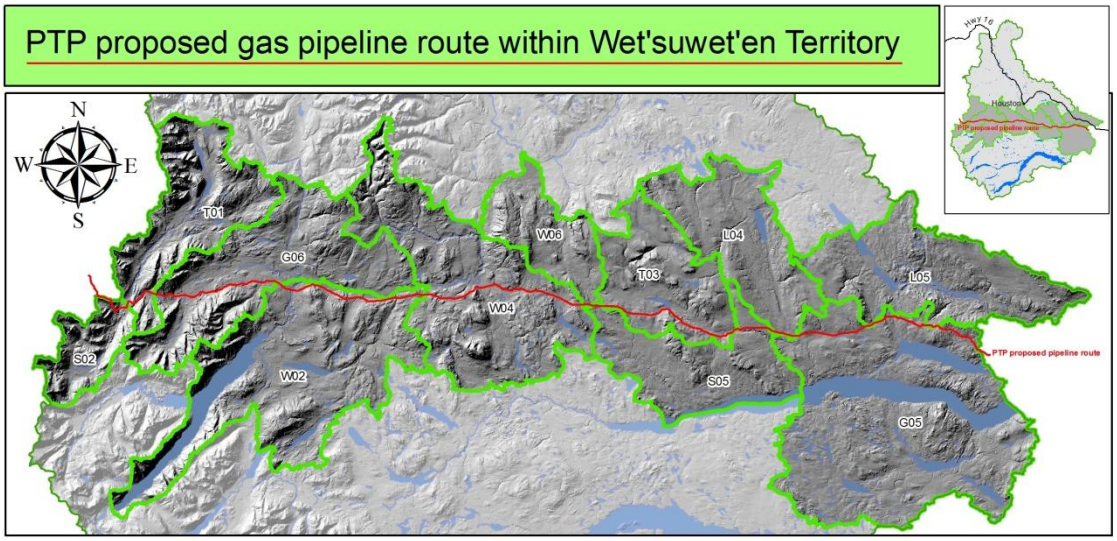


Figure 33. Map shows the proposed PTP crossing Wet'suwet'en territory in the Bulkley and Zymoetz drainages.

213. Wet'suwet'en Knowledge documents three sockeye stocks now extinct that formerly used Toboggan, Owen, and Lamprey lakes as nursery lakes. These relatively small sockeye salmon stocks have been greatly affected by coastal mixed-stock fisheries and by a series of habitat alterations which have mostly affected water quality and stream channels, but as well, have had impacts to holding, migrating, spawning, incubation, and rearing habitats.

214. 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 has had adverse effects on the Bulkley sockeye stocks in regard to abundance, rearing environment, and productivity.

215. Morice–Nanika 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'eek the (Morice–Owen confluence), Lhet Lii'nun Teezdlii (outlet of Morice Lake), as shown in Figure 34, and Neenekeec (Nanika River).

Figure 34. Fishing site at Lhet Lii'nun Teezdlii, village located at the outlet of Morice Lake.

216. 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 were productive as well, such as the stone trap shown in Figure 35. Basket traps and dipnets were banned in 1935 (Palmer 1964) and gaffing was introduced and promoted as the legal and primary fishing method up until the mid-1990s.

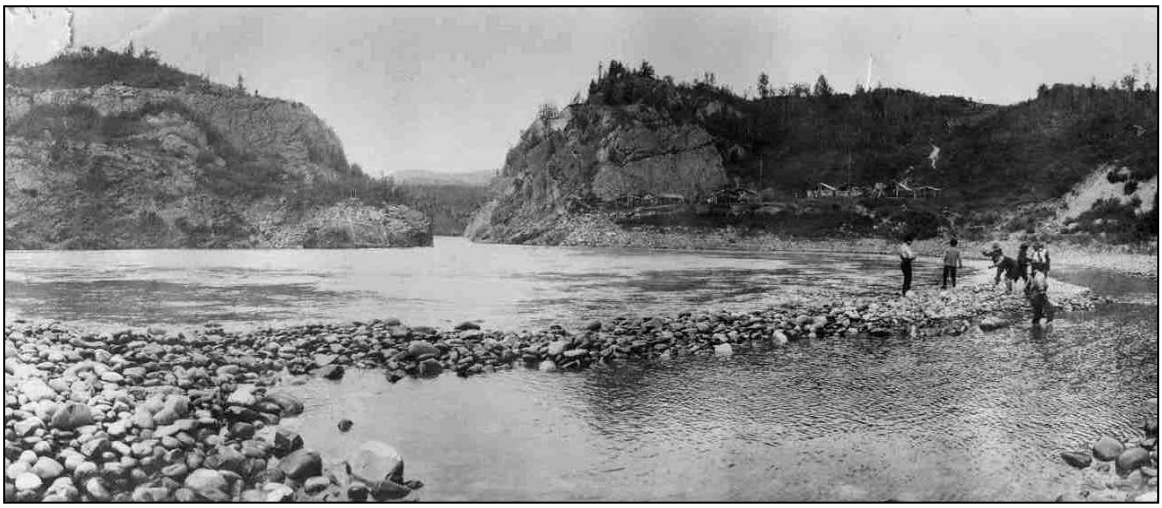


Figure 35. Wet'suwet'en stone trap at Hagwilget Canyon ca. 1890.

217. As noted above, since 2001, the Wet'suwet'en have not directed a food fishery on the depleted 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 supplied the Wet'suwet'en with 8,000 sockeye on a periodic basis since 2001. The Wet'suwet'en are thankful for these fish. However, they have suffered in numerous ways due to government mis-management of the coastal fishery and their in-river

fisheries that limits their ability to fish, limits their ability to feed their families, reduces interconnection of families to get together to harvest and process fish, increases the decline in the number of knowledgeable fishers and processors, and prevents the transfer of knowledge to younger generations. These factors are considered infringement on Wet'suwet'en culture. Receiving donated fish from fish processing sectors or First Nations does not warrant the loss of the fisheries resource to the Wet'suwet'en, it creates a dependency on others to provide for the loss.

218. Morice–Nanika sockeye are critically important for food, social, and ceremonial (FSC) needs. Morice–Nanika sockeye 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

219. The Morice sockeye stock is composed of two sub-components: Nanika River spawners and Morice and Atna lakes beach spawners. Morice sockeye spawn and rear in the Gitdumden–Lhudis Bin territory and the Gilseyhyu–C'iniggit Nenikekh territory. Morice sockeye are commonly termed Morice–Nanika sockeye as the majority – roughly two-thirds – spawn in Nanika River and rear in Morice Lake.

220. 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). Six years of escapement records from 1945 to 1963, show annual averages of 42,600 sockeye with a range from 7,500 to 75,400 fish. In 1954, the population collapsed and in the following thirty-five year period, 1955–1990, an annual average of 2,700 sockeye returned to the watershed. 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. Since 2000, returns to the Nanika appear to be decreasing; escapements have ranged between 3,000 to 10,000 sockeye with an annual mean of 6,685 sockeye as shown in Figure 36.

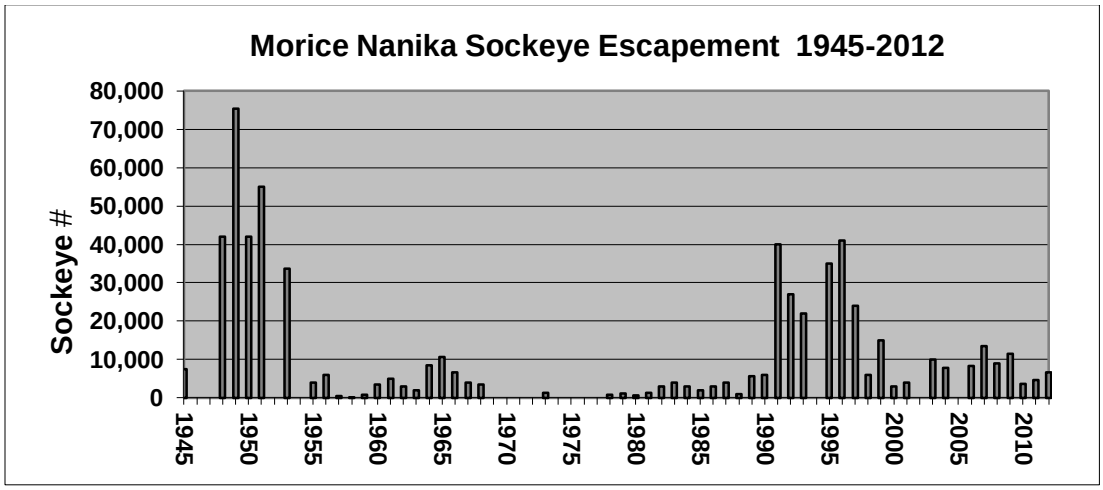


Figure 36. Morice – Nanika sockeye escapement 1945 to 2012.

221. Since the mid-1950s, Morice–Nanika sockeye abundance has mostly fluctuated at levels below historical escapements with low fry densities in relation

to the juvenile sockeye rearing capacity in Morice Lake. Constraints to sockeye abundance 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 land-based development activities. However, as noted below, the loss of adequate spawner returns has limited primary and secondary production in Morice lake, especially in the northern end.

222. 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). When sockeye were counted past the Alcan counting tower near Owen Creek, the peak migration occured in early to mid-August (Farina 1982). 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).

223. Secondary Nanika River spawning grounds are scattered downstream to Glacier Creek. Shepherd (1979) notes 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, which 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).

224. Morice Lake sockeye spawners, who 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 37. The main beach spawning occurs for 3 km north of Cabin Creek (Vernon 1951, Bustard and Schell 2002).

Figure 37. View across Morice Lake to sockeye beach spawning areas near Delta Creek.

225. Studies in Atna Lake during 1980 , indicated approximately 400 sockeye shore 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 5_3's, (two years in freshwater and 3 years in the ocean). The primary difference is with the subdominant group (4_2's) representing approximately 29% of the run that had spent one year and three years in freshwater and the ocean respectively.

226. Nanika River sockeye 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 visibility at 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 illustrated by Finnegan (2006) and shown in Figure 38.

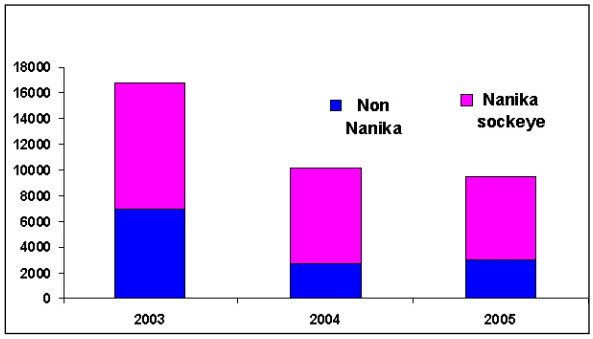


Figure 38: Sockeye composition upstream of Moricetown.

227. Finnegan (2006) reports recent sockeye abundance estimates have been generated from the Wet'suwet'en Fisheries mark-recapture program 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 39. 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 lakes to account for lake spawners (Finnegan 2006).

Figure 39. Seine tagging below the canyon.

Recapturing sockeye at the fishway.

228. 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).

229. 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, understanding is still evolving in regard to juvenile sockeye rearing and smolt production dynamics such as age and growth, distribution and abundance, movement timing, and predation.

230. Due to the low nutrient input into Morice Lake, phytoplankton and zooplankton biomass levels are relatively 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- (4_2's) and five- (5_3's) 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).

231. Since the early 1950s, a major research theme of fisheries biologists studying 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.

232. 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 40. View upstream on upper Nanika River.

233. 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.

234. Decreased availability of salmon carcass material can significantly reduce the nutrient influx to natal streams and nursery lakes, and over time, diminish productivity. The resulting decrease in juvenile fish size can reduce freshwater and early 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 or reduced ocean productivity of the now, diminished stock. Thus a negative feedback loop from nutrient–food chain impacts can be very significant to lake and stream rearing species.

235. 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.

236. The abundance, productivity, and carrying capacity status of Morice sockeye are rated as poor. The 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 governance.

3.2.1.2 Upper Bulkley Sockeye

237. Sockeye salmon used to spawn in Maxan Creek and most likely in Bulkley and Maxan lakes, which lie in Laksilyu–Tasdlegh territory. 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 41.

238. 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. It is unknown if these are displaced Bulkley–Maxan sockeye so a separate stream spawning population.

239. There is little information concerning upper Bulkley sockeye life history, such as run timing, age structure, persistent spawning locations, and productivity.

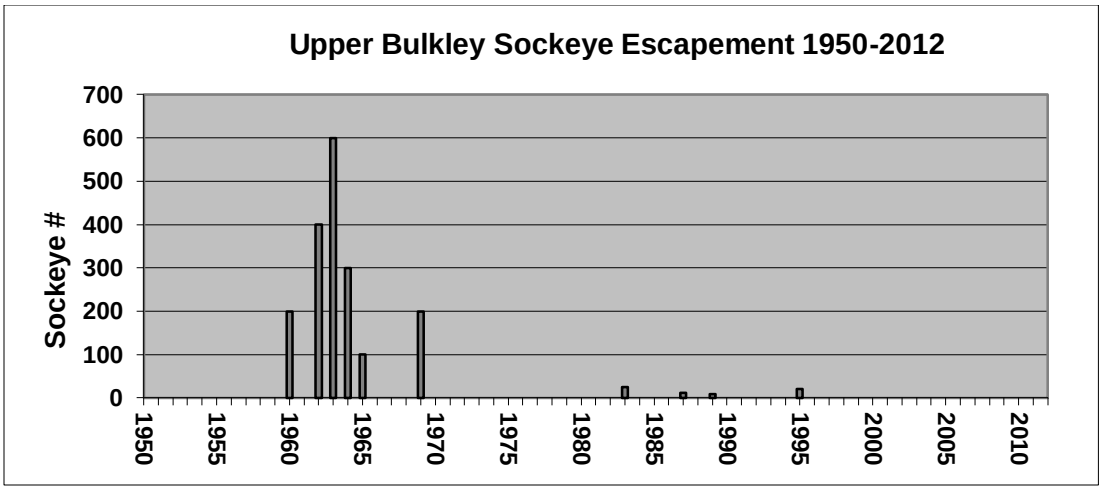


Figure 41. Bulkley and Maxan lakes sockeye escapement 1950 to 2012.

240. The Upper Bulkley River runs downstream for 57 km from Bulkley Lake 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 42. View across Bulkley Falls at a moderate to high flow level.

241. Fish access issues involve the Bulkley Falls (shown in Figure 42), which at low flows can impede upstream fish passage, as well as beaver dams, high stream temperatures, and 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.

242. The two principal reasons why sockeye are not spawning in the upper Bulkley are:

- Lack of long-term escapement due to high exploitation rates in the coastal mixed-stock fishery;
- Severely degraded habitat.

243. Upper Bulkley sockeye are at high risk of extirpation and require a fully resourced recovery plan.

3.2.1.3 Upper Zymoetz Sockeye

244. Sockeye salmon spawn in the upper Zymoetz (Copper) River and rear in the headwater lakes chain, which lies in Laksilyu–Cel Winits territory. Two significant Wet'suwet'en communities, Sde Keen Teezdlii and Keel Weniits Tl'oogh K'et were supported by the sockeye fishery. Sde Keen Teezdlii was located on the north shore of McDonell Lake at the outlet and connected by the grease trail to 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.

245. Homeplaces or historic cabin sites and campsites, gravesites, and spiritual areas are situated from east of Aldrich Lake generally along the upper 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. In years of suitable abundance, Wet'suwet'en from Moricetown continue to harvest their fish in the upper Copper.

246. Sockeye escapement records for the Zymoetz River indicate moderate fluctuations of abundance in the last sixty years as shown in Figure 44. 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 2013). A decade of surveys from 2000 to 2010 averaged 2,687 spawners ranging from 140 to 4,553 sockeye.

Figure 43. View west across McDonell Lake.

247. Sockeye enter the Zymoetz River in July, spawning primarily during the months of August and September in the upper watershed. Important spawning areas are in the Zymoetz River mainstem from Serb Creek to McDonell Lake, and the reaches upstream of McDonell Lake to Aldrich Lake, notably the 3 km reach upstream of Passby Creek. Upstream of McDonell 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.

248. Several inlet streams to McDonell, Dennis and Aldrich lakes, as well as lower Silvern and lower Passby creeks, are reported to be also used for spawning (DFO 1991b). The upper Copper sockeye stock rears in three co-joined headwater lakes: McDonell, Aldrich and Dennis lakes. Cox-Rogers (2010) notes that the optimum escapement for the upper Copper sockeye nursery lakes is McDonell–3,600, Dennis–550, and Aldrich–1,100 sockeye for a system total of 5,250 sockeye.

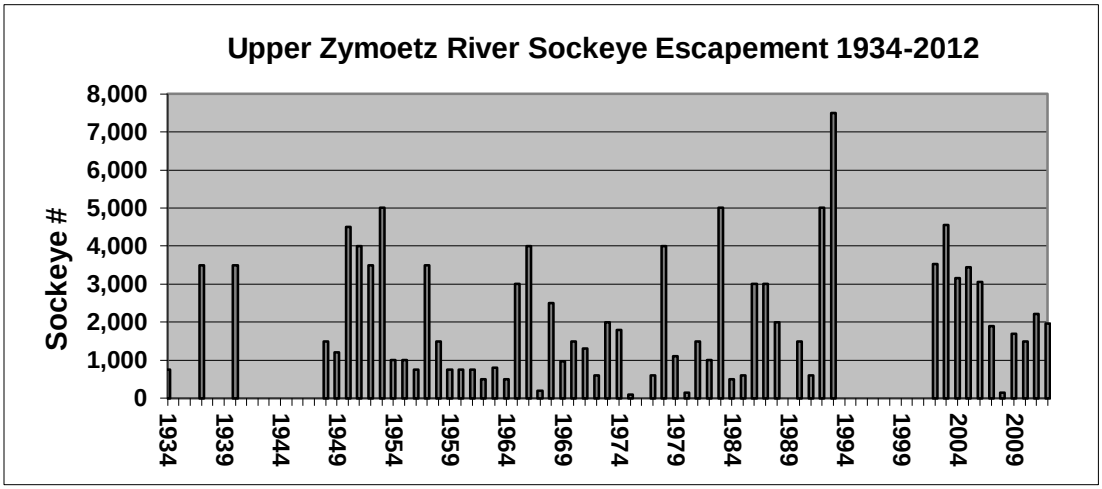


Figure 44. Upper Copper sockeye escapement 1934 to 2012.

249. Forestry is the main economic development activity. The Laksilyu have concerns regarding the extent and rate of logging, and specifically 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 low to moderate, but stable. Future threats include the proposed Pacific Northern Gas Looping project, which would add to current cumulative effects adversely affecting upper Copper salmon.

3.2.1.4 Morice Chinook

250. Morice River chinook salmon are an important salmon stock to the Wet'suwet'en. Morice chinook contribute 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; this is attributed to the reduced catch provisions in the Pacific Salmon Treaty. The 1990s and 2000s returns averaged 17,900 and 10,600 respectively and is similar to the late 1950s returns (~15,000) as shown in Figure 45.

251. 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 and ending by mid-October. Approximately 80% or more of Morice chinook spawning occurs principally in the upper 2 km of the Morice River downstream of the lake outlet.

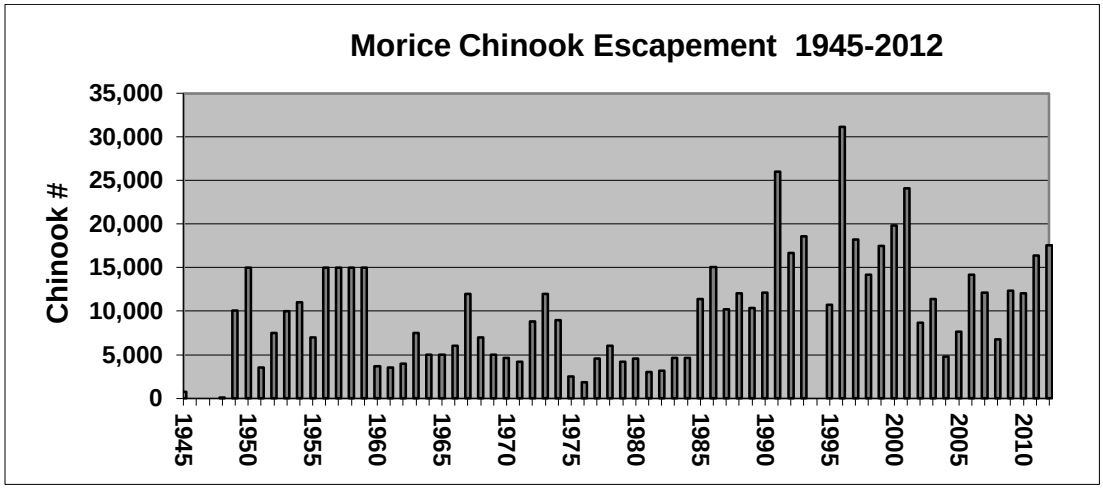


Figure 45. Morice River chinook escapement 1945 to 2012.

252. 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 46. These dunes are constructed by chinook during redd excavation and considered an unique feature. Scattered minor spawning also occurs downstream to Lamprey Creek and in the Nanika River, downstream of the falls.

Figure 46. Chinook Island and spawning dunes at Morice River.

253. 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%).

254. 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 large woody debris is considered the most productive rearing area.

255. Morice River chinook spawning and rearing habitat is currently intact; however, the construction and operation of the proposed Pacific Trails Pipeline will potentially directly impact the very productive chinook rearing habitat and contribute to existing cumulative effects.

256. 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 fiber and the social order. Any change to chinook abundance, behaviour, and habitat due to industrial activity, including the Pacific Trails Pipeline project, will be an infringement to the Wet'suwet'en title and the integrally associated rights of management and governance.

3.2.1.5 Upper Bulkley Chinook

257. The 57 km long Bulkley mainstem upstream of the Morice River confluence is termed the upper Bulkley. The upper Bulkley River is an important migration route for the run that swims through to the upper Bulkley above the Bulkley Falls and a slightly later run. In many years, low water levels do not allow chinook passing the falls. The slightly later run spawns in Buck Creek and the mainstem downstream of there. The upper Bulkley run is genetically distinct. Since 1985, there has been a considerable history of chinook fry and smolt enhancement from Toboggan Hatchery to Maxan, Bulkley mainstem, and the Buck that served as a CWT indicator stock. The wild status of upper Bulkley chinook is uncertain.

258. Estimates of upper Bulkley River summer chinook escapements have been recorded continuously since 1950. 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, with the 2000 decade annual average of 1,990 chinook as shown in Figure 47; however, there have not been any escapement counts since 2006. Escapement estimates from 1989 to 2004 are based on the upper Bulkley River Fence counts. Chinook spawn in the mainstem, Buck Creek, Byman Creek, Richfield Creek, Maxan Creek, and Foxy Creek, with the latter four streams being subject to seasonal fluctuations in water levels and temperatures.

259. 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.

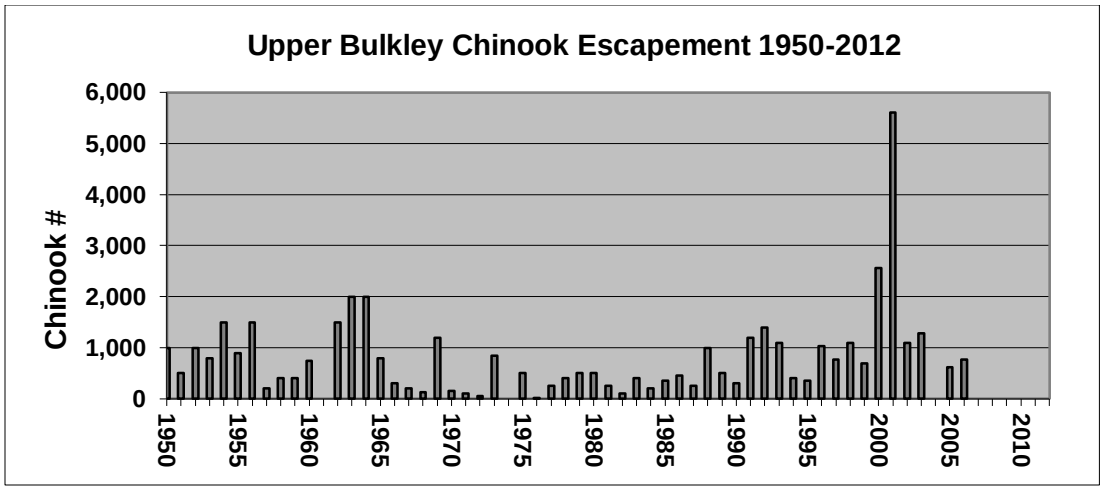


Figure 47. Upper Bulkley River chinook escapement 1950 to 2012.

260. 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, avulsions, seasonal low flows, and drying.

261. There are serious issues with upper Bulkley chinook habitat, which overall, is regarded 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 are shown in Figure 48.

Figure 48. Upper Bulkley River floodplain bisected by CN Rail and Highway 16.

262. 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). Peacock et al. (1997) indicate the upper Bulkley enhanced chinook stock served as a coded wire tag indicator stock between 1987 and 2002.

263. 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 significant habitat modifications. Wet'suwet'en have serious concerns regarding the diminished chinook abundance and the state of the spawning and rearing habitat. Construction and operation of the proposed Pacific Trails Pipeline will cause impacts to the chinook stock and its habitat and contribute to existing cumulative effects. This is considered a serious infringement to Wet'suwet'en culture.

3.2.1.6 Upper Bulkley Coho

264. 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.

265. From 1949 up until to the 1970s, coho spawner escapement was annually recorded in the upper Bulkley mainstem. 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).

266. 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 as shown in Figure 49. 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 increased through to 2005, with average annual returns of 1,501 coho with a range of 380 to 2,508. There are no escapement records post-2005.

267. 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 riprap sites, which provided artificial cover.

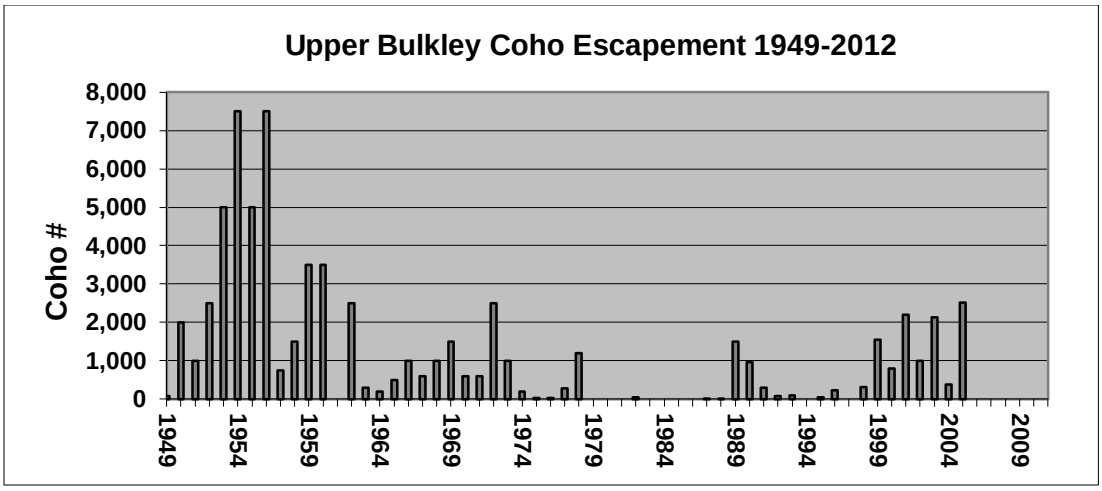


Figure 49. Upper Bulkley coho escapement 1949 t0 2012.

268. 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) note 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.

269. 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%. Coho tend to 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 50. Typical upper Bulkley off-channel coho rearing habitat.

270. A counting weir on the upper Bulkley River located at Houston operated from 1989 to the mid 2004, 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.

271. 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 in off-channel habitats from the Morice confluence upstream to Topley and in lower Buck Creek.

272. 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 50. Many of the small tributaries flowing into the Bulkley River serve as auxiliary juvenile coho habitat as migrants move downstream and into these tributaries.

273. Wet'suwet'en have concerns regarding the depressed coho abundance and the degraded state of coho spawning and rearing habitat. Upper Bulkley coho abundance is rated as threatened. Construction and operation of the proposed Pacific Trails Pipeline will cause impacts to the coho stock and their habitat as well as contributing to existing cumulative effects. 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 culture, 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

274. 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 low flow years, often the only tributary streams with adequate flow for coho access and spawning are Gosnell Creek, the Thautil River, Atna River, Nanika River and Houston Tommy Creek.

275. In years with higher flows, other tributaries used for spawning include Owen Creek, McBride Creek, and Lamprey Creek. 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.

276. 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 2013). The decline is in absolute numbers as well as relative to the overall Skeena escapement.

277. The highest ten-year period of abundance in aggregate escapement numbers, the 1950s, shows an annual average escapement of 10,700 fish. In the 1960s and 1970s, the average annual escapement was approximately 4,300 fish, with the annual escapement diminishing to 1,650 fish in the 1980s, and remaining low in the 1990s with an average annual escapement of 840 fish. Since the mid-1970s, the Lamprey, Owen, and Thautil systems have not been enumerated. Since 2000, there have only been six counts for Gosnell Creek and one count for Morice River which is not adequate to discern abundance or trends.

278. 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 1983).

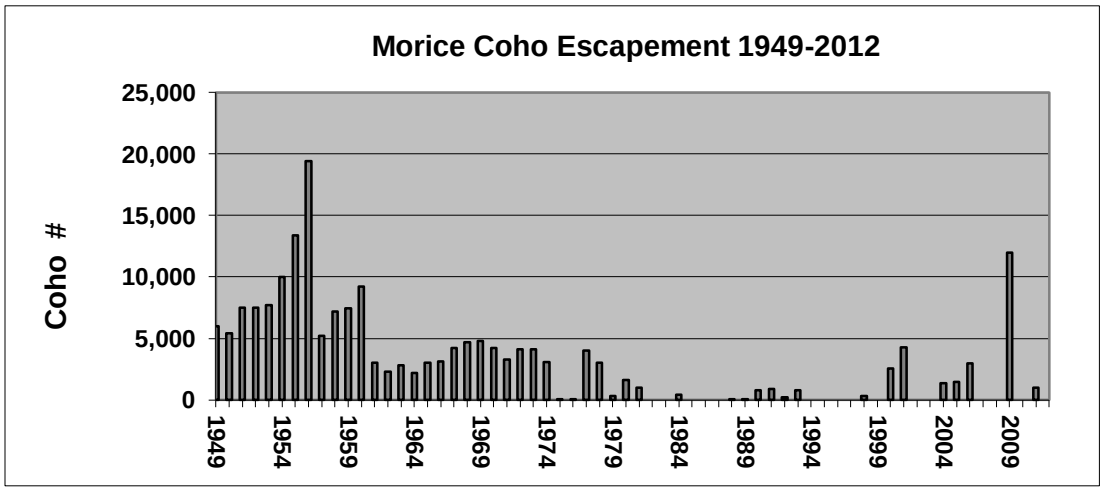


Figure 51. Morice River coho escapement 1949 t0 2012.

279. Morice coho habitat considered degraded at the watershed level with significant impacts to approximately one half of the subbasins while the undeveloped subbasins are in good condition. Impacts to the developed subbasins are rated moderate to high impacts to migration, holding, and spawning habitat and due to forestry land use. These impacts are currently the limiting factor to coho production. Coho abundance is rated as unknown due to a lack of escapement surveys in the Lamprey, Owen, and Thautil systems since the mid-1970s, and in the Morice mainstem, Nanika, and Gosnell systems since 2000.

Therefore, escapement abundance and trends are unknown and may require recovery planning.

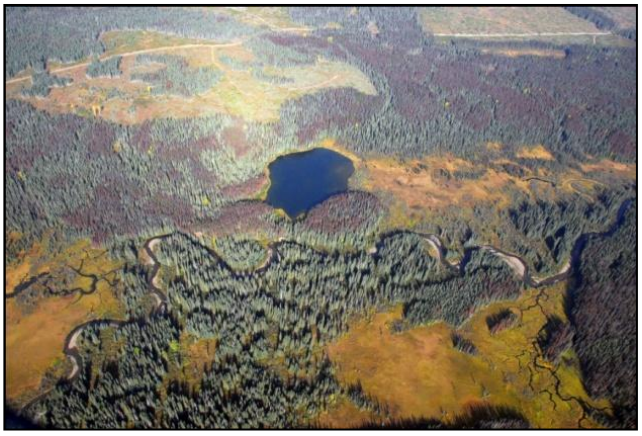


Figure 52. Gosnell Creek coho spawning habitat, mountain pine beetle disturbance, and logging blocks.

3.2.1.8 Morice Pink

280. Pink are the smallest salmon at maturity and posses a single age at maturity; they are exclusively two years old when spawning. 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 odd-year pink salmon have a moderately developed dominance, though abundance can vary exceptionally on an inter-annual basis.

281. Pink salmon life history is distinguished by an emphasis on marine habitat, with pinks only entering freshwater for spawning, egg incubation, and alevin development into fry. Overall, they have a relatively short life cycle with rapid growth. The important periods up to adult survival include egg to fry, juvenile emigration, estuarine and near shore marine, ocean feeding, adult return migration, and escapement through the mixed stock fishery. Juvenile pink salmon time in the estuarine and near shore marine habitats is the most critical survival period. 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.

282. 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 53 and 54.

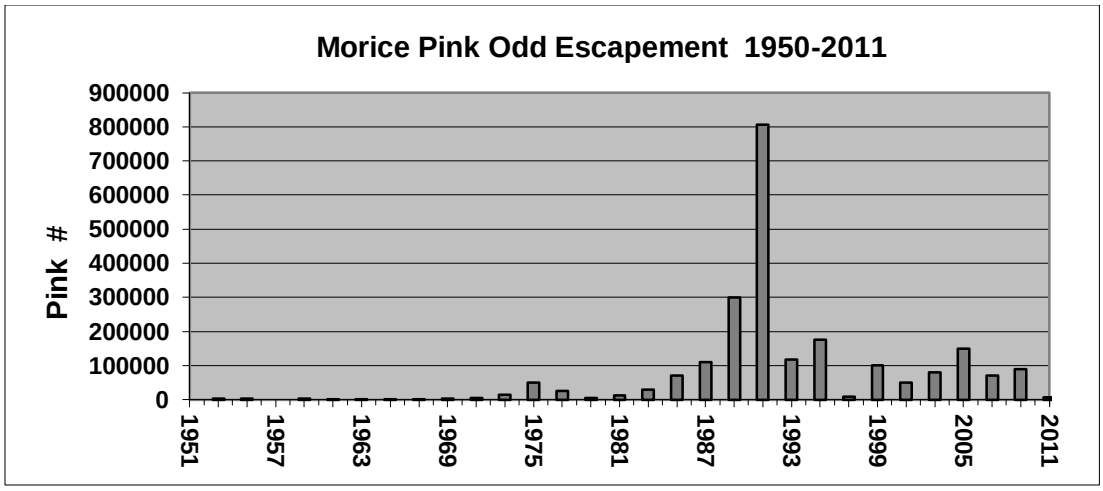


Figure 53. Morice River odd year pink escapement 1950 to 2011.

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

284. 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.

285. Currently, Wet'suwet'en concerns regarding levels of pink salmon abundance and habitat issues center on climate change and how future hydrologic regime changes will support pink salmon egg-to-fry survival and early marine survival. Additional concerns center on potential adverse effects to pink spawning habitat from the construction and operation of the proposed pipeline.

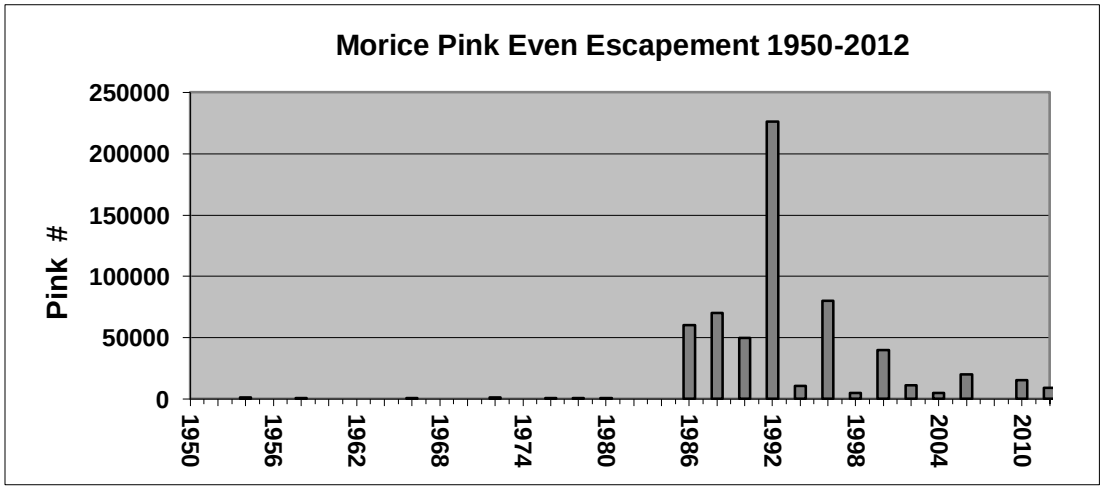


Figure 54. Morice River even- year pink escapement 1950 to 2007.

3.2.1.9 Bulkley Chum

286. 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.

287. Kussat and Peterson (1972) note that the chum escapement had never been enumerated or recorded, but observations indicate that the population numbers only a few hundred fish. Wet'suwet'en Fisheries (pers. Comm. 2012) and DFO (Finnegan pers. comm. 2010) observations indicate persistent chum spawning in sidechannels approximately 0.6 km upstream from the Bulkley confluence. At the Moricetown Canyon, no chum was observed in 1992 to 1995 with only three in 2001.

3.2.1.10 Morice Steelhead

288. Wet'suwet'en harvest steelhead in the Morice mainstem and major tributaries in the summer, fall, and winter for food fish. Winter and spring 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'eek the (Morice–Owen confluence), Lhet Lii'nun Teezdlii (outlet of Morice Lake) and Neenekeec (Nanika River).

289. In recent years, the Bulkley-Morice likely accounts for 30% to 40% of the total Skeena steelhead escapement based on population estimates, genetic markers, and data from the Tyee Test Fishery (Beacham et al. 2000, Mitchell 2001). The significant Morice system summer-run 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, most Morice tributaries do not support overwintering steelhead due to insufficient discharge (Envirocon 1980, Tetreau 1999).

Figure 55. Steelhead holding and spawning habitat at the Thautil–Gosnell–Morice confluence.

290. Steelhead spawning coincides with an increase in Morice River snowmelt flows and an increase in stream temperatures typically occurring 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 occurs in the upper Morice River and scattered downstream pockets to the Thautil confluence, as well as the lower reach of Gosnell Creek (DFO 1991b). Recent observations indicate steelhead spawning in late February and early March in the mainstem close to Owen Flats (Hudson pers. comm. 2013).

291. 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).

292. 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).

293. The population status of Morice steelhead is considered moderate to good. Morice steelhead habitat status is rated as poor to moderate due to extensive forestry development including the effects from the high road density, the high number of stream crossings, and the moderate to high amount of riparian disturbance. These impacts vary by sub-basin with Lamprey and Owen exhibiting the highest impacts.

294. Construction and operation of the proposed Pacific Trails Pipeline will cause impacts to steelhead life history phases, particularly in their rearing period as well as contributing to existing cumulative impacts affecting their habitat.

3.2.1.11 Bulkley Steelhead

295. Similar to the Morice system, steelhead were and are fished in the Bulkley mainstem and major tributaries in the summer and fall, and augment winter food 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).

296. 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.

297. 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.

298. The upper Bulkley steelhead population is considered poor and at high risk. The habitat is considered severely degraded at the sub-basin level.

3.2.1.12 Bulkley–Morice Lamprey

299. 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, though especially abundant 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 spawning habitat is similar to that used by salmon. 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.

300. 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 large 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 56. Pre-spawning lamprey.

301. 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 using traps and nets. 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.

302. 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 relatively moderate to high diminished returns. This reduced abundance has increased fishing effort and impacted sustenance regimes.

303. Wet'suwet'en fishers have noticed a sharp decline in this food resource. There is no current data towards abundance. The key component of Wet'suwet'en management regarding lamprey is to ensure their sustainability and well-being remains intact for FSC purposes. Lampreys are sensitive to environmental change, especially in regards to water quality. Any adverse change to this Wet'suwet'en management mandate is an infringement to Wet'suwet'en title and governance.

3.2.1.13 Bulkley Morice Resident Fish

304. Of the thirteen resident freshwater fish present in the Bulkley drainage, six resident fish species–all salmonids–are predominant in Wet'suwet'en diets; 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.

305. Martin and Oliver (1980) note lake trout are the top aquatic predator in most lakes where they are found. Lake trout may prey on kokanee and whitefish while in deep water, and aquatic insects and shore dwelling minnows while in shallow water. Typically, maturity occurs at age eleven with mature adults leaving lake waters to return in-river to spawn.

306. 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 resulting from the extensive 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 lake trout conservation concerns in McBride, Owen, and Maxan lakes.

307. Rainbow trout are the most widely distributed and most 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 Morice drainage mountain streams. Dolly Varden are yellow listed by the BC CDC as a species of concern due to loss of habitat. Dolly Varden habitat preference is small coldwater streams, but they also live in lakes and spawn in streams. Spawning occurs late-September and into October at water temperatures of about 6 ^{0}C. Dolly Varden and bull trout hybridize wherever they come into contact and while the hybrids are fertile, the two species maintain their distinctiveness in the face of gene flow.

308. 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.

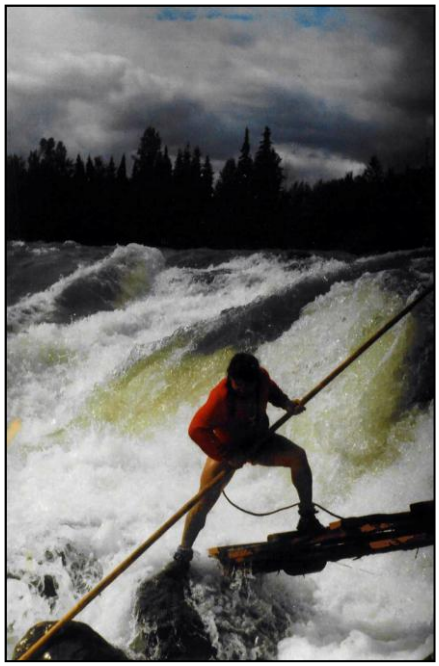
309. Bull trout are a long-lived repeat spawning fish that can exceed twenty years of age and 10 kg in weight. Bull trout are a popular sport fish and are frequently harvested by sport anglers as by-catch during recreational fisheries targeted on

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 57. Redslide Creek–Nanika River confluence is a preferred bull trout habitat.

310. 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 tasty and fine eating fish. Wet'suwet'en primarily used traps to catch kokanee; however, current harvest is typically by lake trolling.

311. 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 Tasdleegh (Maxan) systems.



312. 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, as well as for the general public. These values are in place for ecosystem health and function related to Wet'suwet'en Yintahk.

Figure 58. Wet'suwet'en fisher at Moricetown Canyon.

3.2.2 Wedzen Kwah Watershed Salmon & Habitat Status

313. 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 currently appears to be stalled due to a lack of resources and commitment. Morice–Nanika sockeye are rated as threatened and will become endangered if limiting factors are not reversed.

314. The Toboggan, Owen, and Lamprey sockeye stocks are considered extirpated.

315. 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 fully-resourced 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 low to moderate, but stable.

316. 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 severely affected by habitat modifications. The upper Bulkley chinook stocks are rated as threatened and require a fully-resourced recovery plan initiative.

317. Wet'suwet'en have concerns regarding the diminished upper Bulkley coho abundance and the degraded state of their spawning and rearing habitat, and rate them as special concern and require recovery planning. Morice coho abundance is depleted and sensitive to human activity and natural disturbance events. Morice coho are rated as special concern and may require recovery planning.

318. Currently, Wet'suwet'en concerns regarding levels of pink salmon abundance and habitat issues center on current climate change factors and how future hydrologic regime changes will support pink salmon egg-to-fry survival and early marine survival. There are currently no Wet'suwet'en concerns regarding pink salmon abundance levels or habitat issues.

319. Morice steelhead abundance and productivity are considered stable; however, their juvenile rearing habitat is rated at moderate to high risk. There are issues with steelhead abundance and their habitat in the upper Bulkley with their status currently considered uncertain due to insufficient information. Steelhead habitat in the upper Bulkley is severely degraded.

320. Future key threats to the well-being of Bulkley and Morice salmon and their habitats include:

- Proposed development such as the Pacific Trails Pipeline, the Coastal GasLink pipeline project, the Enbridge Northern Gateway pipeline, and the Pacific Northern Gas Looping pipeline projects creating additional cumulative impacts;

- Continuing lack of habitat management in the upper Bulkley and Morice drainages;
- Coastal mixed stock and in-river fishing leading to over fishing small and less productive salmon populations;
- European diseases – particularly highly pathogenic viruses, which were and continue to be introduced to the Pacific coast by open-net salmon farm operations;
- Changing freshwater and ocean conditions that are linked to global climate change, which could be expressed in poor freshwater and marine survival rates.

4.0 CEAA 2009 KSL Screening Report

4.1 Overriding Wet'suwet'en Concerns

321. The Office of the Wet'suwet'en has multiple concerns grounded in maintaining Aboriginal Title and Rights regarding the proposed PTP project. The proposed project is but one of four pipelines proposed, and additional proposals are anticipated in the near future.

322. In essence, there are major conflicts between the proposed development and Wet'suwet'en visions of sustainable land and resource use, cultural strengthening, and cultural continuity. Key Wet'suwet'en sustainability objectives include ensuring net gains to the physical and human environments as bridges to a desirable and durable future.

323. Canada and BC have not yet held discussions with OW in regard to policies and strategies related to the market access for import and export of natural gas and crude oil through Wet'suwet'en territory. This higher level component is required under Canadian Constitution and common law in order to inform and justify potential infringement affecting Wet'suwet'en aboriginal title and rights. The courts have repeatedly stated that this needs to occur by Canada and British Columbia, not the third party proponent.

324. OW is still waiting for CEAA to respond to their concerns regarding potential infringements and justification of those infringements arising out of the 2009 Screening Report for the KSL Natural Gas Pipeline Looping Project (aka proposed PTP Project). Wet'suwet'en aboriginal rights are entrenched in the Canadian Constitution and further defined and upheld by common law.

325. Wet'suwet'en are still awaiting commitment-related information required by BC EA Certificate E08-01 and the CEAA 2009 Screening Report in order to determine potential infringements and apply justification to any infringements. Wet'suwet'en require that all required information be gathered, and then discussion could focus on potential infringements, applicable justification, and accommodation measures, if any. The Wet'suwet'en governance system believes this to be a reasonable and straightforward approach, yet discussions to this end have not occurred.

326. For over sixty years, forestry activities have occurred at a steady rate resulting in most of the easily accessible timber being cut. Conversion of the forest from an old growth state to a young stands has resulted in dramatic landscape-level changes affecting fish, wildlife, and their habitats.

327. Climate change has been the driver of natural disturbance, which has also radically modified the landscape in Wet'suwet'en territory. The majority of natural disturbance is due to large-scale forest insect epidemics with a small amount due to wildfire. Due to these changes in forest ecology, there are accompanying changes: in the terrestrial ecology, in the aquatic ecology, in the hydrologic cycle, in resource economics, and in cultural adaptation. The insect epidemic compelled BC and the forest industry sector to ramp up forestry activity. This in turn has exacerbated cumulative development and adverse effects in regard to the short and long-term sustainability of Wet'suwet'en lands and resources.

4.2 General Wet'suwet'en Concerns

328. On October 11, 2006, CEAA determined that an environmental assessment was required for the Kitimat-Summit Lake Natural Gas Pipeline Looping Project because Fisheries and Oceans Canada considered taking action in relation to subsection 35(2) of the Fisheries Act and Transport Canada considered taking action in relation to paragraph 5(1)(a) of the Navigable Waters Protection Act.

329. The CEAA environmental assessment review was conducted in accordance with the Canada-British Columbia Agreement on Environmental Assessment Cooperation. Accordingly, a harmonized BCEAA/CEAA review was undertaken and the BC EAO Assessment Report was prepared and used in preparation of the CEAA screening report. The Province of BC issued the EA certificate on June 26, 2008. CEAA considered only those issues under federal jurisdiction and set forth the Screening Decision in March, 2009. The decision was based on consideration of:

- PTP's Application for Environmental Assessment Certificate and supplementary information;
- BC EAO Assessment Report and associated appendices;
- Compendium of Proponent Commitments as per the EA Certificate E08-01;
- Comments from government agencies, First Nations and the public;
- Responses from the Proponent;
- All relevant factors required by Subsection 16(1) and (2) of CEAA.

330. The CEAA Screening Decision noted:

> "Provided the Proponent implements the mitigation measures and commitments described in the documents above, in accordance with Paragraph 20(1)(a) of the Canadian Environmental Assessment Act, Fisheries and Oceans Canada and Transport Canada, as the federal Responsible Authorities, have determined that the proposed KSL Pipeline Project is not likely to cause significant adverse environmental effects."

331. The Office of the Wet'suwet'en respectfully disagreed with the Screening Decision given what it did and did not factor and consider. Consequently, OW wrote four federal entities with questions regarding Wet'suwet'en interests. There has been no response to date as described below.

332. The Office of the Wet'suwet'en's (D. de Wit) July 25, 2008 letter to CEAA (Jason Quigley – Director, Pacific & Yukon Region) questioned who and what agency would be leading the discussion on Aboriginal Rights and Title. Quigley responded that the responsible authorities would take forward such discussions with the Office of the Wet'suwet'en. OW is still waiting for those discussions to occur.

333. The Office of the Wet'suwet'en's (D. de Wit) February 6, 2009 letter to Fisheries and Oceans Canada (Pat Lim, Environmental Assessment Analyst), explicitly responded to the draft Screening Report. OW stated concerns and issues focusing on, and noting specifically:

- Strong evidence of their title within their traditional territory as clearly documented in the Delgamuukw/Gisday'wa SCC decision;
- The lack of meaningful consultation and accommodation;

- CEAA seemingly not hearing nor responding to Wet'suwet'en concerns regarding adverse impacts to Wet'suwet'en House territories and consequently affecting the ability of those House members to exercise and protect their Section 35 rights of the Canadian Constitution;
- Lack of discussion with the Wet'suwet'en regarding justification of infringement issues in regard to Section 35 rights;
- The proposed pipeline project will potentially impact most important Wet'suwet'en salmon stocks that are relied on by all of our Nation's members. These said stocks are currently fluctuating at low levels of abundance and are in recovery plan mode;
- Wet'suwet'en recommendations regarding alternate routes, which would minimize impacts to our rights were brought forward, but quickly refuted by the third party proponent engineers. The lack of due diligence required under the CEAA assessment to provide alternate means to the proposed project is duly noted;
- Wet'suwet'en seeking justification from the federal government for potential infringements to our rights and title resulting from the proposed project;
- The lack of response from FOC in providing salmon escapement data relevant to the Morice/Nanika stocks that illustrated their diminished abundance and sensitivity to habitat modifications, as well as noting the self-imposed sockeye conservation strategy and the inability of Wet'suwet'en to meet their constitutionally protected food, social, and ceremonial (FSC) needs;
- Wet'suwet'en concerns regarding inconsistencies and the inadequacy of the current CEAA regulatory process, particularly where Wet'suwet'en aboriginal rights and title are overlooked and denied;
- The Wet'suwet'en need for the federal government to address these issues with immediate and direct action.

334. There was no response from CEAA to the Office of the Wet'suwet'en communication, which is interpreted as a signal regarding non-consultation. The CEAA Screening Report and Screening Decision and Course of Action were subsequently approved in March, 2009.

335. The Office of the Wet'suwet'en's (D. Pierre) February 5 2009 letter to the Privy Council and Prime Minister's Office re Wet'suwet'en Title expressed concern with regulatory process and the inadequacy of processes to address Wet'suwet'en Rights and Title specifically regarding the proposed Pacific Trails Pipeline. The letter requested a meeting with a representative of the Federal government to discuss a constructive work plan to proceed forward in addressing this long outstanding issue.

336. There is no known response to OW's February 5, 2009 letter to the Privy Council and Prime Minister's Office. The lack of response to the Office of the Wet'suwet'en letters is interpreted as a signal regarding non-consultation.

337. On April 30, 2009 the Office of the Wet'suwet'en wrote to the CEAA Senior Program Manager, Margaret Bakelaar, regarding Wet'suwet'en Strength of Claim and infringement of title and rights. The focus of this second letter was similar to the February 6, 2009 letter, but emphasized:

- Wet'suwet'en title and rights to our territory have never been ceded nor surrendered;
- Justification sought from the Federal Government for the potential infringements to Wet'suwet'en Rights and Wet'suwet'en title resulting from this proposed project, as the Province of British Columbia has failed to do so;
- Expressed concerns with inconsistencies of the current regulatory process, and inadequacy of these processes in terms of overlooking Aboriginal Rights and Title.

338. There is no known response to OW's April 30, 2009 letter to CEAA. There was no response from CEAA to the Office of the Wet'suwet'en communication, which is interpreted as a signal regarding non-consultation.

339. It is important to not and make the distinction that the responsible authorities' determination: that the proposed KSL Pipeline Project is not likely to cause significant adverse environmental effects means just that. It does not mean that there are not significant adverse effects impacting Wet'suwet'en title and rights, particularly centered on society, economy, and culture with varying levels of significance of those effects across various House territories. The Office of the Wet'suwet'en reiterate that the proposed PTP project will result in adverse significant effects on Wet'suwet'en health and socio-economic conditions, Wet'suwet'en culture heritage, and the Wet'suwet'en peoples current use of lands and resources for traditional Wet'suwet'en purposes.

340. In summary, the CEAA environmental assessment process culminating in the March 2009 Screening Report is not considered consultation, rather, it is considered information given to the Wet'suwet'en. There has been a wall of silence and lack of response from the federal government regarding consultation and accommodation regarding adverse effects potentially affecting Wet'suwet'en rights and title. The Wet'suwet'en have never received:

- Notification from the government of potential direct and indirect adverse effects to their rights and title;
- Justification from the government for any potential infringements;
- Accommodation of any potential infringements.

4.3 Specific Wet'suwet'en Concerns

341. In regard to the proposed PTP project, specific concerns related to Wet'suwet'en title and rights include, but are not limited to the following:

- Cumulative effects to the biophysical environment at the territorial level;
- Cumulative effects to the human environment including cultural and community well-being;
- Adverse effects to Wet'suwet'en health and socio-economic conditions;
- Additional cumulative effects affecting the ability to gather food and thereby creating greater scarcity;
- Continued erosion of lands and resources for traditional purposes;

- Increased land access which diminishes opportunities for exercising rights and exclusive use;
- Loss of the ability to determine durable and sustainable future on Wet'suwet'en territories therefore affecting Wet'suwet'en title and rights;
- Less secure future with the increased likelihood of significant adverse impacts.

342. In reviewing the Screening Report, various issues and concerns come to mind including:

1) Part 2, Section 3, Alternative Means of Carrying out the Project. This part of the Screening Report appears to have missed the mark with the alternative water crossing techniques table. The BC EAO Assessment Report (Part 1, Section 3 and Attachment 1) provides a description of potential pipeline routes and in regard to the CEAA Requirements, notes:

> "the Comprehensive Study report will provide a brief background of the alternatives studied by the Proponent and the rationale that led to the preferred route option."

It is important to note that alternative routes, particularly distant to the Morice Water Management Area (MWMA), were key issues and of concern to the Wet'suwet'en. Any risk of impacts to water and fish habitat in the MWMA is unacceptable. There appears to be no evidence that DFO considered alternate routes such as the Tahtsa and upper Zymoetz locales as proposed by the Office of the Wet'suwet'en that would avoid high value fisheries and their habitats. Nor does it appear DFO considered the risk and the degree of risk to the high value fisheries and their habitats.

2) Part 2, Section 4.1, Fish and Fish Habitat. It is clear that DFO relied solely on the fish and fish habitat information contained in the Proponent's EA Application. The Wet'suwet'en take issue with and are concerned with DFO's course of action due to the inadequate aquatic environment baseline information in Wet'suwet'en territory.

The inadequate baseline information is significant due to it being further utilized for the environmental and socio-economic assessments. If the information assessed is inadequate, then attempting to clearly determine potential effects, potential mitigation, and residual effects and their significance is indeed very difficult. This in turn could create and problems for the Crown in determining potential and real effects to Wet'suwet'en title and rights.

It is not clear or even coherent how risk to environmental values can be assessed and decisions made regarding levels of impacts when information required to evaluate the value is yet to be collected and interpreted. The interpretation may include many factors including evaluation of past, present, or future human-caused or natural disturbance, if any, and potential impacts and risks given natural conditions and historic variability. Without the required baseline data, decision-making appears very difficult, if not impossible, in regard to the Screening Decision that noted:

> "…federal Responsible Authorities, have determined that the proposed KSL Pipeline Project is not likely to cause significant adverse environmental effects."

It is of interest to note that PTP is presently still collecting aquatic resource baseline information as per commitment conditions of the federal and provincial regulatory approvals; this more than five years after they received project approval.

3) Part 2, Section 4.2, Species and Ecosystems at Risk. It is unfortunate that DFO did not communicate with their local DFO colleagues and discuss the Morice-Nanika Sockeye Recovery Plan. This planning initiative was conceived by DFO and Wet'suwet'en Fisheries in late 2004. The purpose of the Morice-Nanika Sockeye Recovery Plan was to provide a framework for the Wet'suwet'en, Department of Fisheries and Oceans, industry, and public groups to work together towards stock recovery. More information is available from Rabnett (2005) conducted on behalf of Skeena Fisheries Commission and Wet'suwet'en Fisheries (2006) conducted on behalf of the Pacific Salmon Commission.

   This is apparently the case of one hand not knowing what the other hand is doing. What is important is the fact that currently, anadromous and freshwater stock status and habitat status is essentially unknown by DFO, BC, and the proponent. Yet the provincial and federal regulators approved the project and concluded that no significant effects will occur.

   The Wet'suwet'en are concerned with and take issue with the regulators as follows: a) the lack of knowledge regarding fish and their habitats potentially affected by the proposed project; b). the regulators conclusion regarding risk and impacts to fish and their habitats; c) and information regarding fish abundance and the lack thereof, taking into account Wet'suwet'en FSC needs not being close to fulfilled. Wet'suwet'en understand their constitutionally protected rights to harvest fish come prior to the Crown providing rights to industry interests such as the proposed PTP project.

   It appears to be cutting a very fine line, and one that is not clearly understood, between a stock needing recovery and species that are listed at risk. If fish species at risk need to be listed, it is recommended that DFO and Office of the Wet'suwet'en immediately begin discussions regarding listing the six salmon stocks requiring recovery that are noted in Sections 3.1.4 and 3.2.2 above.

4) Part 2, Section 4.6, Cumulative Effects Assessment (CEA). It is clear that DFO relied solely on the cumulative effects assessment information contained in the Proponent's EA Application. The CEA is fatally flawed in several ways at multiple scales. The proponent's CEA analysis is essentially meaningless in regard to the Wet'suwet'en, their territory, and aquatic resources.

   The Screening Report concurs with the Proponent's conclusion that less than significant adverse cumulative effects are anticipated. Significant adverse cumulative effects already exist from development such as that shown in Figure 60. Cumulative effects from harvesting close to 50% of the Lamprey Creek watershed has resulted in major loss of fish habitat due to increased peak flows, increased production of sediment, loss of riparian function, and channel scouring.

Other than being advantageous to the Proponent, there is no apparent rationale as to why the CEA spatial boundaries were established as they were. It is illogical to consider sub-basins, as selected, particularly when conducting analysis of a linear development such as a pipeline corridor. The Wet'suwet'en requires the CEA analysis to be conducted at the House territory level in order to determine adverse effects to Wet'suwet'en rights and title. Secondarily, the Wet'suwet'en also prefer the CEA analysis to be conducted at the individual sub-basin level to be meaningful to current and the proposed development. The indicator thresholds utilized may require peer-review to be meaningful.

The access corridor density analysis is commonly termed road density and typically noted in km/km^2. The Proponent's CEA road density thresholds are much higher than and do not correspond to thresholds utilized by DFO's Wild salmon Policy or the Office of the Wet'suwet'en.

Figure 60. View east over lands south of Morice River showing extensive forestry development and the location of the proposed PTP project.

The total cleared or disturbed area is not relevant due to the spatial boundaries. The total cleared or disturbed area thresholds are typically measured as percent of total House territory, sub-basin, and/or watershed area. Thresholds used are relatively higher than and do not correspond to thresholds utilized by DFO's Wild salmon Policy or the Office of the Wet'suwet'en.

Riparian disturbance is mis-named and should be re-labeled stream crossing density. Riparian disturbance is typically measured in km disturbed/km. The stream crossing density indicator thresholds as defined are higher compared to DFO's Wild Salmon Policy and Wet'suwet'en thresholds.

The Office of the Wet'suwet'en will provide DFO with a review of fish and aquatic habitat including GIS-based analysis of pressure and state indicators. This will help provide a clear understanding and awareness of current cumulative effects in Morice watershed. This will also be helpful facilitating a cumulative effects assessment management discussion and

provide means for the Crown to clearly see what the potential impacts are and how they may affect the Wet'suwet'en.

The Wet'suwet'en request DFO to provide information from Commitment 3.80 that notes:

> *PTP commits to continue to work with DFO, TC and the CEA Agency during the Comprehensive Study Process to provide additional information regarding the manner by which the conclusions of the Cumulative Effects Assessment were reached.*

It is hoped this requested information will provide clarity as to what the Proponent's CEA is trying to convey as well as DFO's interpretation of the CEA as stated in Appendix B of the Screening Report.

5) Part 2, Section 4.7, Capacity of Renewable Resources.

Under the *CEAA,* the KSL / PTP environmental assessment needs to include a consideration of the capacity of renewable resources that could be affected by the proposed project to meet the needs of the present and those of the future.

Development of the proposed project may affect renewable resources such as soils, vegetation, water, and aquatic and terrestrial species. This could affect the capacity of these resources to support future and present uses such as agriculture (including ranching), forestry, fishing, hunting, trapping and First Nations traditional land use activities.

Water Resources:
Surface water quality is an indicator of environmental health because it is linked to other key ecosystem components such as fish and fish habitat, aquatic resources, soil, vegetation and wildlife.

The Screening Report concluded:

> Since significant adverse environmental effects on water resources are not anticipated, the project is not likely to cause significant adverse environmental effects on the capacity of the freshwater resource to meet the needs of the present and those of the future.

The Wet'suwet'en note that in many sub-basins the proposed project would traverse, that stream flows, water temperature, riparian integrity, adequate fish passage structures, stream channel structure, and sub-surface flows are already currently impacted to varying, but significant degrees. These sub-basins include: upper Endako, Maxan, Buck, Parrott, Owen, Fenton, Lamprey, Cedric, Morice mainstem-east and west, and Gosnell. The freshwater habitat is mostly rated high risk to future development and is currently not meeting the needs of the present.

Fisheries Resources:
A significant adverse environmental effect on fish and fish habitat is defined in the CEAA Screening Report as an effect that would alter valued habitat physically, chemically and/or biologically to the extent that instream habitat productivity would not recover through mitigation or compensation.

The CEAA Screening Report notes: the potential impacts of the Project on fish and fish habitat include: smothering of important gravel and cobble

substrates due to sedimentation; contamination of watercourses from spills of hazardous substances; loss or alteration of fish habitat; alteration of water and/or sediment quality; alteration to the productive capacity of fish habitat; fish mortality; and loss of food input from riparian areas.

The CEAA Screening Report goes on to note: the potential for these impacts was reduced through project design and the selection of least-risk instream work windows. For example, the route was selected to avoid sensitive wetlands and other critical fish habitats. The Proponent developed a Stream Crossing Atlas and an extensive table outlining methods and timing for pipeline and access road crossings of streams, which proposed a variety of mitigation strategies meant to avoid or reduce adverse effects where habitat avoidance is not possible. In addition, where mitigation would not be possible (i.e., due to habitat loss), the Proponent committed to developing compensation plans to ensure no net loss of fish habitat. A conceptual Fisheries Habitat Compensation Plan was included in the Application. Finally, a Post-Construction Monitoring Program will be implemented to evaluate the effectiveness of the environmental protection measures and to monitor the health of aquatic ecosystems associated with the Project.

The CEAA Screening Report continues with: while the construction, operation, and decommissioning of the Project may impact fisheries valued ecosystem components, the residual effects of these impacts are predicted to be insignificant in terms of productive capacity, habitat loss, mortality, and fish health. In light of mitigation and compensation measures and the commitment to implement an ongoing monitoring and follow-up program, it is anticipated that the Project would not have significant adverse effects on fish and fish habitat. *Consequently, the Project is not likely to cause significant adverse environmental effects on the capacity of the freshwater fisheries resource to meet the needs of the present and those of the future* (emphasis added).

The CEAA responsible authorities must be confusing Wet'suwet'en territory, the fish stocks and their habitat with another or different location. Currently, due to diminished salmon abundance, the Wet'suwet'en are not able meet their constitutionally rights such as food, social, and ceremonial needs. For this reason, since 2001, freezers in the Wet'suwet'en communities do not have fish. Salmon are a scarce commodity in the present day. As noted above, freshwater habitat is at high risk to further development. These factors are in conflict with the CEAA Screening Report conclusion noted above.

Unfortunately, the CEAA Screening report did not discuss how the currently impacted Water Resources and the Fisheries Resources affect fishing, hunting, trapping and First Nations traditional land use activities; all of which the Wet'suwet'en are actively involved in. This issue needs to be resolved.

343. It is noted that the Proponents environmental assessment application did not discuss subsurface flows, also commonly referred to as groundwater. Nor did the regulatory agencies provide discussion regarding groundwater. Groundwater-fed streams and rivers are among the most important fish habitats in Wet'suwet'en territories because groundwater determines the extent and volume of overwintering habitat. Groundwater can comprise most or all water feeding surface

streams and rivers during low flow periods, especially in regional alluvial systems. Baseflow conditions exist when dry or freezing conditions occur or persist affecting surface flows and groundwater provides all flow to surface streams.

344. Differing fish species utilize groundwater habitats in varying ways. Sockeye, chinook, and chum salmon preferentially spawn in upwelling groundwater, whereas coho prefer downwelling groundwater regions. Groundwater protects fish embryos from freezing during winter incubation and, after hatching, ice-free groundwater allows salmon to move both down and laterally into the hyporheic zone to absorb yolk sacs. Groundwater provides overwintering juvenile fish, such as rearing coho and chinook salmon, refuge from ice and predators. Groundwater represents a valuable resource that influences salmon spawning behavior, incubation success and egg-to-fry survival, extent of overwintering habitat, and biodiversity, all of which can influence salmon sustainability.

345. Current high-level fish habitat studies in the upper Bulkley and Morice drainages are touching upon groundwater and impacts, if any, from past development. However, groundwater investigations in the upper Endako, upper Bulkley, and the Morice drainages, especially pertinent to the proposed PTP project corridor are lacking, and yet to be completed by the regulatory agencies or the proponent. Without good information it is difficult or impossible to make good decisions regarding the extent and level of impacts or mitigation if applicable.

346. Effects on groundwater from the proposed PTP project are expected to be changes to groundwater quantity and flow patterns as well as changes to groundwater quality. These changes are expected to affect groundwater flows and quality into the far future, given that decommissioning of the proposed project includes leaving the pipe in place. Office of the Wet'suwet'en note that the other adjacent proposed gas and oil pipelines consider groundwater and any potential effects on groundwater.

347. Could DFO explain why the proposed PTP project did not consider groundwater and the potential effects thereof given its importance to maintaining high value fish habitat?

348. Granted that *CEAA* is complicated and convoluted legislation, the Wet'suwet'en take issue with and are concerned with how CEAA was applied to the proposed PTP project, particularly the application of CEAA to the aquatic environment. Predicting the probability of adverse impacts on aquatic values such as salmon and their habitat, and including cultural and economic risks and their significance is complicated and the assessment requires adherence to the following principles:

- Inclusion of all known as well as pertinent unknown information including natural baseline conditions must be taken into effect;
- Inclusion of Wet'suwet'en Knowledge in order that risk and significance in regard to Wet'suwet'en title and rights is clearly known and potential or real adverse effects can be determined;
- It must consider "environmental effect" as defined and set out by *CEAA*;
- The environmental assessment must be conducted in a respectful and even-handed method.

349. The Office of the Wet'suwet'en conducted a review of the CEAA screening level environmental assessment and the review results indicate missed or low quality assessments, discretionary interpretations of poor data posing as science, lack of attention to "environmental effects" as defined and set out by *CEAA*, and a lack of coherent decision-making, especially regarding reconciliation of Wet'suwet'en title and rights. If is true, it is suggested there are deep conflicts with the federal 2009 Screening Report in relation to the *CEAA* purpose as stated in Section 4(1) of the legislation.

5.0 PTP Environmental Assessment Certificate Commitments

350. The March 2009 Screening Report noted:

> Provided the Proponent implements the mitigation measures and commitments described in the documents above, in accordance with Paragraph 20(1)(a) of the Canadian Environmental Assessment Act, Fisheries and Oceans Canada and Transport Canada, as the federal Responsible Authorities, have determined that the proposed KSL Pipeline Project is not likely to cause significant adverse environmental effects.

351. Could DFO please inform the Wet'suwet'en as to the status of: the completion of, the monitoring of, and the compliance of any DFO related commitments and mitigation measures regarding the PTP Environmental Assessment Certificate (EAC) (E08-01) and the 2009 Screening Report?

352. Is there a tracking report record that indicates level of completion, indicates regulatory roles and responsibilities including the OW, and indicates in the opinion of the RAs in consultation with the OW that the commitments have addressed issues related to the PTP project in Wet'suwet'en territory?

353. Does DFO have a monitoring and compliance plan in regard to the PTP EAC Commitments? If so, how does the Office of Wet'suwet'en fit in regarding roles and responsibilities? What does the communication component look like?

354. The Office of the Wet'suwet'en consider consultation as an ongoing process and note that the Crown is falling short in regard to upholding their legal obligations.

6.0 Wet'suwet'en Rights & Title Conclusion

355. As noted above, the OW is committed to principles of economic sustainability, environmental stewardship, and self-determination in respect of their lands and resources and wishes continuing development of a long-term, respectful relationship with Canada and British Columbia in keeping with these principles.

356. 170 km of the proposed PTP Project, from Honeagh Bin territory to Lho Kwah in the west, lie within Wet'suwet'en territory over which the Wet'suwet'en maintain Aboriginal Title and Rights. Concerns raised by Office of the Wet'suwet'en in 2007, and articulated prior to and following the granting of the BC Environmental Assessment Certificate and the 2009 *CEAA* Screening Report prepared by Fisheries and Oceans Canada and Transport Canada, remain to this date.

357. The proposed pipeline 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 decision-making responsibilities into the present.

358. 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.

359. 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.

360. This submission shows 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, legal dimensions, and connections to the environment.

361. This submission also illustrates 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 the upper Endako and upper Bulkley sockeye stocks have gone extinct over the last century, resulting in the loss of irreplaceable salmon stocks and diminished species diversity. Further development pressures 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.

362. It is clear that past and present development both within and external to Wet'suwet'en territories have had adverse effects on:

- Wet'suwet'en health and socio-economic conditions;
- Physical and cultural heritage;
- The current use of lands and resources for traditional purposes.

363. 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.

364. It is important to note the above stated development and subsequent adverse 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. This is an infringement on Wet'suwet'en rights.

365. In regard to the proposed Pacific Trails Pipeline project, the Office of the Wet'suwet'en, on behalf of the potentially affected Clans, Houses, and members, has carefully assessed the proponent's regulatory application and the regulator's decision. The environmental assessment results indicate that major key components related to the regulatory application are in deep conflict with core Wet'suwet'en laws and values.

366. Office of the Wet'suwet'en do not support market access for oil and natural gas through their territory due to potential infringement issues and concerns as well as the lack of reconciliation regarding Crown–Wet'suwet'en title, rights, and interests.

367. Neither Canada nor its agencies, such as CEAA, nor the proponent Pacific Trails Pipeline, have disclosed information with any depth of understanding regarding potential direct and indirect impacts on the Wet'suwet'en title and rights. This information should enable meaningful consultation regarding the significance, duration, and value of singular impacts and cumulative effects. This information should form the foundation of which potential adverse effects to Wet'suwet'en title and rights are assessed. This information was required prior to the Screening Report release; it still has not occurred.

368. The Wet'suwet'en, who have constitutionally protected rights, have determined that the proposed Pacific Trails Pipeline 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.

369. The Wet'suwet'en note that the domestic tools available to manage lands and resources such as Canada's and 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.

370. Considering the magnitude of cumulative effects on Wet'suwet'en territory and culture, 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 Pacific Trails Pipeline concept and its associated Fish Habitat Compensation Plan.

371. It is the Wet'suwet'en position that the Pacific Trails Pipeline project poses 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 pipelines would pass.

372. 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 (Darlene Glaim)

6.1 Recommendations

373. The Office of the Wet'suwet'en recommends in good faith that senior federal and provincial representatives engage in a government to government reconciliation arrangement to provide a bridging step towards reconciliation and a constructive step towards strategic level discussions creating and enabling a positive and enduring relationship.

374. The government to government reconciliation arrangement could focus on shared decision-making respecting resources on Wet'suwet'en territory and other collaborative arrangements including socio-cultural and economic matters.

375. It is suggested that the reconciliation arrangement be implemented by both parties in accordance with their respective laws, policies, customs, and their decision-making processes and authorities.

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8.0 Appendices

Appendix 1: Office of the Wet'suwet'en correspondence to CEAA.

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OFFICE OF THE WET'SUWET'EN

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February 6, 2009

Pat Lim
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Oceans, Habitat and Enhancement Branch
220-401 Burrard St.
Vancouver, BC
V6C 3S4
Fax: 604-666-7907

Re: Wet'suwet'en Comments on Screening Report

Hadih Pat,

We are responding to the Screening Report Document for the KSL Pipeline Looping Project on behalf of the Wet'suwet'en Hereditary Chiefs through the Office of the Wet'suwet'en.

The Wet'suwet'en assert Aboriginal Rights, including Title, over their entire 22,000 sq. kilometers of territory, and its resources within that territory. The Wet'suwet'en, in accordance with their vital oral history, have occupied the aforementioned 22,000 square kilometers since time immemorial. The Wet'suwet'en also have high expectations that the Crown respect and recognize the attached Rights and Title that live with the occupation and ownership over this territory. The Wet'suwet'en continue to implement their traditional system of governance and demand the Crown to recognize and respect those traditional systems. The Wet'suwet'en have strong prima facie evidence of their title within their traditional territory. Traces of this evidence were clearly documented in the Delgamuukw/ Gisday'wa Supreme Court Decision. The Wet'suwet'en are not only demanding recognition of their Right and Title over their traditional territory, they are also seeking meaningful consultation and accommodation from 3rd parties who enter on and impact their territory.

The proposed Kitimat Summit Lake Pipeline Looping Project, proposed by Pacific Trails Pipeline, will adversely impact seven Wet'suwet'en House Territories and affect the ability of these House members to exercise and protect their Section 35 Rights of the Canadian Constitution. In the violation of section 35, there is an infringement causing irreparable harm that is void of justification. The Wet'suwet'en community know that this proposed project will ultimately transect the most important salmon spawning watershed that all of our Nation's members rely on.

The Screening Report does not address the outstanding demand for recognition of Aboriginal Rights and Title, the extent of the potential and lasting impacts that affect future Wet'suwet'en generations as a result of project implementation, Salmon and country foods, nor water quality.
The recent penalties a Canadian pipeline company received in Wisconsin illustrate the reality of impacts of pipeline construction. The scope of viewing impacts to salmon from only a stream or river crossings

perspective does not encompass the reality of effects pipeline construction will have of the Wet'suwet'en salmon fisheries.

From the inception of the BC Environmental Assessment Office (EAO) process, the Wet'suwet'en have expressed serious concern with the proposed pipeline route and required more detailed cost/ impact information on alternate routes. Recommendations on alternate routes which would minimize impacts to Wet'suwet'en Rights and Title were brought forth and quickly refuted by the proponents engineers.

Only after these discussions did the Wet'suwet'en find out that the engineering complication of traversing the Coast Mountains related South Oosta/ Tahtsa Route could be alleviated by utilizing the partially constructed tunnel abandoned from the Kemano Two Completion Project. Due diligence required of the proponent to seek and provide alternate means to their proposed project is non-existent.

The Wet'suwet'en are seeking justification from the Federal Government for the potential infringements to Wet'suwet'en Rights and Title resulting from this proposed project, as the province of British Columbia has failed to do so.

On numerous occasions the Wet'suwet'en have sought Salmon escapement data from the Department of Fisheries and Oceans (DFO), first, during the October, 24 2007 EAO Technical Working Group and second, during a meeting with DFO staff in Smithers on January 11, 2008. Unofficial DFO Salmon Escapement representation graphs were provided almost one year later, on January 9, 2009. Finally, official Salmon Escapement Data was received February 5, 2009, one day prior to the deadline for comments on the KSL Screening Report.

This data is relevant and critical to illustrate the sensitivity of the Morice/ Nanika Salmon stocks and despite Wet'suwet'en recommendations, this information was never included in PTP's Environmental Assessment Application. Our data shows that the Nanika Sockeye stock is in a state of recovery; numbers dropped from 80 000 spawners in 1996 to just under 5000 in 1998. The Wet'suwet'en are in midst of a self-imposed Nanika sockeye conservation strategy, any further impacts to the salmon in this watershed will result in the inability of the Wet'suwet'en to meet their food fish needs.

The Wet'suwet'en are expressing their concerns with the inconsistencies of the current regulatory process and the inadequacy of these processes, particularly in situations where they overlook and deny Aboriginal Rights and Title. The Province has failed to up-hold the honor of the Crown, therefore it is incumbent that the Federal Government address these issues with immediate and direct action.

Missiyh,

David de Wit
Natural Resources Manager,
Office of the Wet'suwet'en

cc: Canadian Environmental Assessment Agency, Margaret Bakelaar
Skeena-Bulkley Valley, MP, Nathan Cullen

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April 30, 2009

Attention: M. Bakelaar, Senior Program Officer
320-757 West Hastings Street
Sinclair Centre-Vancouver, BC
V6C 1A1
FAX: 1-604-666-6990

RE: Wet'suwet'en Strength of Claim –Infringement of title and rights

Hadih: Margaret,

The Wet'suwet'en Hereditary Chiefs, as represented by the Office of the Wet'suwet'en (OW) hold title and rights to 22, 000 sq. kms of territory through which the proposed KSL pipeline is planned. The title and rights to these lands and resources within these territories have never been ceded, nor surrendered.

We understand that the Canadian Environmental Assessment Agency (CEAA), Department of Fisheries and Oceans (DFO) and Transport Canada (TC) recently concluded a screening assessment in relation to the KSL Pipeline project, and determined that DFO and TC may proceed to issue permits and authorizations to enable the project to proceed. However, we have not yet received notification from the Crown of its determination. We seek clarification and confirmation of the decision made. We are very troubled by the manner in which our concerns appear to have been dismissed. We ask that you immediately forward a copy of the report, along with the supporting documents to my attention at the office of the OW. Further, we are expressly requesting that DFO and TC not proceed with any authorizations and permits until we have had an opportunity to address our concerns with you.

CEAA, DFO and TC are well aware of the Wet'suwet'en Hereditary Chief's strong interest in, and concern about, the KSL pipeline, and in particular its potential impacts to the Morice River watershed which contains fisheries and fish habitat of critical importance to our people. We have also underscored the fundamental importance of our traditional use and occupation of this area, including the impact on our Aboriginal rights. It is unacceptable that these Federal agencies have concluded the screening assessment and issued a final report without notice to the OW.

Any decision to proceed with the current proposed routing of the KSL Pipeline through the Morice river watershed is premature, and taken without regard for our clearly and consistently expressed concerns that the current pipeline route poses unacceptable, and unnecessary, risks to the already vulnerable fish stocks upon which our people rely. We have from the outset of the EA process requested that the Provincial and Federal agencies consult with us about alternative routes which would remove the pipeline from the Morice river watershed. However, no such consultation has occurred. Instead, DFO, TC or CEAA seem to have relinquished all responsibility to consult with us about alternative routes. Yet, these discussions are essential in order to minimize the infringement on our rights. Based on the draft screening report we earlier reviewed, it is also clear that the Federal assessment has failed to examine alternative routes as part of the "alternative means of carrying out the project" assessment mandated through *CEAA*.

The Federal agencies failure to meaningfully consider and consult with the OW regarding alternative routes for the pipeline is a significant omission in the consultation process. The OW has a strong case for title and rights to the Morice river watershed, as confirmed by the EAO's preliminary assessment of strength of claim. The deep consultation required by our strength of claim necessitates that our concerns about our fisheries and Aboriginal rights be addressed. We look forward to your immediate response to this matter and we request a meeting with you as soon as possible to address how our concerns might be meaningful addressed as required by law.

Sney kal ya,

David de Wit
Natural Resources Manager
Office of the Wet'suwet'en

CC: DFO – Pat Lim, Fax: 1-604-666-7907
TC – Harp Gill, E-mail: gillh@tc.gc.ca
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February 5, 2009

Jeremy Hunt Executive Assistant Prime Minister's Office Langevin Block 80 Wellington Street Ottawa, Ontario K1A 0A3 Fax: (613) 995-0101 jhunt@pmo.gc.ca	Kevin G. Lynch Clerk Privy Council Office Room 1000 85 Sparks Street Ottawa, Ontario K1A 0A3 Fax: (613) 957-5043 info@pco-bcp.gc.ca

RE: Wet'suwet'en Title

Dear Respective Representatives;

We write regarding our Wet'suwet'en Aboriginal Rights, including Title, over our territory and its resources. We are very concerned that the Crown neither recognizes or respects these rights nor our traditional system of governance. The Wet'suwet'en have strong prima facie evidence of title. Portions of this evidence can be found the Delgamuukw Gisday'wa Supreme Court case.

In accordance with section 91 (24) of the Canadian Constitution, the Crown must protect Aboriginal rights and must not disturb these rights without proper consultation, accommodation and/or negotiated agreement in place. This has not been achieved within Wet'suwet'en Territory. Wet'suwet'en rights and title have been and continue to be infringed and there are administrative and operational decisions which are being made without consultation with the Wet'suwet'en Hereditary Chiefs and without any tangible recognition of our rights. For example resources are being extracted without any agreement and without our consent.

One of the many projects we are dealing with is the Kitimat Summit Lake Pipeline Looping Project, proposed by Pacific Trails Pipeline. Despite the strong opposition by the Wet'suwet'en Hereditary Chiefs, due to unresolved Aboriginal Title issues, the province of British Columbia has granted an Environmental Certificate for this project but we have significant fisheries and other concerns relating to our Aboriginal rights that have not yet been addressed.

We are expressing our concerns with the current regulatory process and the inadequacy of these processes to address Aboriginal Rights and Title. Since the Province has failed to up-hold the honor of the crown, we are relying on the Federal Crown to do so.

The Wet'suwet'en Hereditary Chiefs are requesting that a meeting be immediately arranged with the appropriate representative of the Federal Government to discuss a constructive work plan and how we will proceed in addressing this long outstanding issue.

We look forward to hearing from you about a meeting time.

Thank you,
Office of the Wet'suwet'en

Debbie Pierre
Executive Director

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